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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

In the Matter of:                    )  
  )  
CONSUMERS POWER COMPANY        )     Docket Nos. 50-329 OM  
  )                    50-330 OM  
  )     Docket Nos. 50-329 OL

TESTIMONY OF  
BRUCE H. PECK

My name is Bruce H. Peck. I am Construction Superintendent at the Midland Plant. I received a B.S. degree in Physics from Illinois Institute of Technology in 1965, and a MBA Degree from Central Michigan University in 1975. From 1965 to 1970 I was an officer in the United States Navy in the nuclear submarine program. In 1970 I joined Consumers Power Company and served in various capacities in Company's construction program. For the first two years I held a supervisory position in the construction of a fossil plant at Bay City, Michigan. For the past eleven years I have held a number of construction supervision positions in the Midland Project. For the past year and a half I have been Construction Superintendent.

Shortly after the NRC issued the Notice of Violation and Report on the diesel generator building inspection on February 8, 1983, Mr. Cook asked me to take the lead in developing the Company's Response to the specific items identified in Part B of the Notice of Violation. I and several members of my

staff investigated the circumstances of each of the 32 individual items of non-compliance identified in Part B and developed first draft responses for those items. We went through several review cycles in which members of MPQAD, Bechtel Construction, Bechtel Engineering, Bechtel Project management, and Consumers project management reviewed the drafts for accuracy and completeness.

As a result of our discussions with the NRC Staff in meetings in November and December of 1982 and January, 1983, concerning the October, 1982 to November, 1982 inspection we identified a number of areas of programmatic concern. Our analysis of the 32 specific items set forth in Part B of the Notice of Violation indicated that the items with programmatic implications fell under areas of programmatic concern which the Company had already identified as a result of the meetings with the Staff. The Construction Completion Program has been specifically tailored to address all identified concerns and achieve the necessary improvements. In Attachment 2 of the Company's Response we indicated how the specific portions of the CCP address the generic implications raised by specific remedial actions to be taken to address the individual items. Further details are contained in Attachment 2 of the Company's Response, which is appended to this testimony.



James W Cook  
Vice President - Projects, Engineering  
and Construction

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March 10, 1983

Mr R C DeYoung  
Director, Office of Inspection and Enforcement,  
US Nuclear Regulatory Commission  
Washington, DC 20555

MIDLAND ENERGY CENTER PROJECT -  
DOCKET NO 50-329 AND 50-330 - MIDLAND PROJECT RESPONSE  
TO NRC NOTICE OF VIOLATION EA83-3 DATED FEBRUARY 8, 1983 -  
FILE 0485.16 SERIAL 21775

Attached is Consumers Power Company's (CP Co) Response to the Notice of Violation ("Notice") transmitted by J G Keppler's February 8, 1983 letter to J D Selby. In addition to this cover letter, the response consists of attachments in accordance with 10 CFR 2.201, addressing the two violations (Attachments 1 and 2), and a request for mitigation of the civil penalty under the General Statement of Policy and Procedure for Enforcement Actions 47FED.REG. 9987 March 9, 1982 (Attachment 3).

Attachment 1, in addition to specifically providing the items of information requested on page 9 of the "Notice", reports on the results of the Company's investigation into In Process Inspection Notices (IPIN's) and answers the questions on page 2 of Mr Keppler's letter. The Company found that all quality control disciplines had been given the option to terminate an inspection (when multiple nonconforming conditions were observed), document observed findings of the partial inspection on IPIN's, and return work to construction. The Company also found that some individuals would limit reinspection to reported deficiencies. As noted in Attachment 2, the Company admits to the noncompliances listed under Violation B.

The Company admits the two violations and does not contest the basis for imposing a civil penalty, although we respectfully request that the NRC reconsider the amount of the penalty in light of the corrective actions the Company has taken, as set forth more fully in Attachment 3. In late 1982, upon receipt of preliminary information concerning NRC inspection findings, the Company took major corrective actions. We halted most Category I work of the prime contractor pending initiation of an effort to verify previous inspections and status of incomplete work. We initiated steps to correct the deficiencies and, as part of an overall program revised production and

quality processes, changed and realigned the management team, and expanded project resources to complete the job. The description of this effort is described in my letter to Mr J G Keppler dated January 10, 1983, regarding the Midland Project Construction Completion Program. We are confident that as we implement these corrective actions the Midland Project will achieve compliance with regulatory requirements.

*James W. Cook*

JWC/JEB/dlm

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D B Miller, Site Manager (3)  
J A Mooney, P14-115A  
NRC Correspondence File, P24-517  
S J Poulos, GFO TECH  
J A Rutgers, Bechtel AA  
J R Schaub, P14-305  
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CONSUMERS POWER COMPANY  
Midland Units 1 and 2  
Docket No 50-329, 50-330

Letter Serial 21775 Dated 3-10-83

At the request of the Commission and pursuant to the Atomic Energy Act of 1954, and the Energy Reorganization Act of 1974, as amended and the Commission's Rules and Regulations thereunder, Consumers Power Company submits the response to Notice of Violation.

CONSUMERS POWER COMPANY

By           /s/ J W Cook            
J W Cook, Vice President  
Projects, Engineering and Construction

Sworn and subscribed before me this 10th day of March 1983 .

          /s/ Patricia A Puffer            
Notary Public  
Bay County, Michigan

My Commission Expires           3-4-86

ATTACHMENT 1RESPONSE TO NOTICE OF VIOLATION ITEM ASTATEMENT OF VIOLATION (Item A)

"NRC inspectors determined that quality control inspectors were not documenting as nonconformances all of the deficiencies which they observed during their inspections. Inspections were suspended by the QC inspector if too many nonconformances were observed. In-process inspection notices (IPINs) 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. Several QC inspectors interviewed, confirmed that inspections were closed after reviewing only the deficiencies documented on the IPIN. As a result, measures were not established to prevent the continued installation and use of these nonconforming items. In addition, corrective actions were not implemented to prevent recurrence of these nonconformances."

SUMMARY OF RESPONSE TO VIOLATION (Item A)

1. The violation is admitted.
2. The reasons for the violation are as follows: (1) failure of QC management (a) to recognize potential for adverse impact, on the inspection process, of terminating inspections on activities with multiple deficiencies and partially documenting findings on IPINs, ("return option")\*, (b) to communicate specific direction on the use of the "return option" to avoid adverse impacts; (2) lack of sufficient specificity in procedures defining responsibilities of Quality Control Engineer's, (QCEs) signing off on Inspection Report activities; (3) lack of full understanding among all QCEs of responsibilities for inspecting all multiple items before closing IR line activities when conducting follow-up inspections on activities subject to an IPIN.
3. Corrective action in place is as follows: IPINs have been discontinued at the Midland site. QCEs have been instructed by memorandum to complete all activities which have been submitted for inspection regardless of number of nonconforming conditions observed and to document findings on nonconformance reports (NCR's).
4. Planned or in-process corrective actions:
  - (a) Procedures PSP 6.1 and PSP 3.2 are being revised in accordance with the direction given in Paragraph 3 above.
  - (b) QCEs will be trained in the revision to the procedures in accordance with the general training procedure B-3M-1. During this training, emphasis will be placed on the requirement described in Paragraph 3 above.



- (c) All closed inspection report activities upon which IPIN's have been issued will be verified. An investigation of Deficiency Reports\* is ongoing to determine whether closed Inspection Reports were affected by this problem.

5. Dates for full compliance

Item a - by March 22, 1983

Item b - start training April 1, 1983

Item c - as part of the verification step in the Construction Completion Program

DETAILED RESPONSE

Background Information

Inspection activities are defined in specific instructions, Project Quality Control Instructions (PQCI's). These instructions describe how inspections are carried out and the attributes to be inspected. Each inspection activity is documented on an "Inspection Report," (IR) which contains blank spaces to be initialed by the individual Quality Control Engineer (QCE) who conducts this inspection and only after completing the inspection activity. There is a one-to-one correspondence between activities defined in the PQCI and listed on the IR. When all activities on the IR are appropriately initialed, the IR is reviewed and "closed out" by a Quality Control Engineer Level II by signing on a designated line on the IR's last page.

In-Process Inspection Notices (IPINs), instituted on June 1, 1981, were one of two basic types of reports used to document nonconforming conditions observed during primary inspections at the Midland jobsite. IPINs could be used to document deficiencies which were found prior to acceptance of completed work. Nonconformance Reports (NCR), the other basic means of formally reporting nonconforming conditions, were used either before or after acceptance of completed work.

If, during the course of an inspection activity, a QCE found a deficiency, he was required to document the condition. Prior to June 1, 1981, procedures specifically allowed a QCE to return certain deficiencies to construction without documentation, providing the deficiency could be corrected within the same shift. The procedures would not allow the QCE to initial the space corresponding to such an activity on the IR unless and until the deficiency was corrected by project construction or the condition had been properly recorded on an NCR. Activities on an IR that were not initialed were said to be "open." Because the activity could not be "closed" until correction of any identified problem (or submission of an NCR), the "open" activity formed a basis for controlling deficiencies identified during inspections.

\* The Deficiency Report ("DR") is a predecessor document to IPINs, and as such is under investigation to determine if corrective action regarding it is warranted.

The IPIN procedure was designed to provide construction with prompt feedback of information concerning deficiencies or incomplete work. A copy of all IPINs was sent immediately after issuance to construction for disposition. When construction made necessary corrections, the IPIN was returned to Quality Control, indicating that the hardware was ready for further inspection. Subsequent inspections which determined that the problem documented on the IPIN had not been corrected, or that other nonconforming conditions existed, would result in further IPINs or NCRs. In any case, an IR activity would remain open until QC had verified all problems were corrected or an NCR was submitted.

The particular practice giving rise to the Notice of Violation involved the termination of inspection activities when multiple nonconforming conditions were observed part way through an inspection. If a QCE conducting an initial inspection determined that parts or components covered by a given inspection activity had a large number of nonconforming conditions, he had the option to terminate his inspection before completing the activity, document the deficiencies observed to that point on an IPIN and return the hardware to construction ("the return option"). Region III determined that items not inspected initially when this return option was exercised may have escaped later inspection. The postulated mechanism for this outcome is as follows: As previously described, once construction had corrected a problem noted on an IPIN, the IPIN was transmitted to Quality Control for further inspections. Procedures then required that the QCE inspect the hardware to determine that corrections of the IPIN-identified deficiency were carried out and that all other items had been inspected before closure of the activity on the IR. Thus, if a return option had been exercised, then before closing out the activity, a QCE would have to inspect not only those hardware items written up on the IPIN, but also all others which he had not satisfied himself as being previously inspected before the initial inspector terminated his inspection. Region III concluded that this may not have been done in all instances, resulting in a possible missed inspection. Region III also faulted the process by pointing out that items beyond those noted on an IPIN which were corrected by construction following a return of the item after a partial inspection were not itemized and submitted for trending analysis.

#### CPCo INVESTIGATION FINDINGS AND RESPONSE TO NRC QUESTIONS

The Notice of Violation asks the Company to conduct an inspection to determine (1) the extent to which QC supervisors at the Midland site have been instructing QC inspectors to limit findings of deficiencies and (2) the extent to which QC inspectors have been conducting reinspections based only on reported deficiencies.

The Company was informed on January 18, 1983, that the use of the IPIN was a major NRC concern. In response to this meeting on inspection findings a task force was chartered to start an immediate investigation. The task force was composed of a project attorney and two consultants.

When the NRC inspection report was received on February 8, 1983, the task force was directed to carry out the specific inspection requested by NRC. The task force work involved interviews with all QC supervisory personnel and a

majority of the QCE staff. The task force also debriefed the 13 QCEs interviewed by Region III.

It reviewed and evaluated existing quality assurance and quality control procedures and instructions, in light of other information obtained. Finally, in conjunction with MPQAD, it recommended and initiated corrective actions. As a result of the IPIN task force's extensive efforts, the Company has a good understanding of particular inspection practices regarding use of IPIN's at the Midland site.

Virtually all nuclear construction projects have some means of documenting inspections conducted while construction work is in process. IPIN's, used for that purpose at Midland, were established under a system of closed loop procedures requiring that documented conditions be returned to construction, reworked, and then reinspected by QC to verify the implementation of corrective action. The concept behind the use of IPINs is fundamentally sound, and is founded on recognized QA/QC principles, although specific problems existed in connection with the use of a "return option" at Midland.

The return option (defined above) was established to provide a means of returning work to construction, when a QCE would otherwise have to occupy valuable time inspecting and documenting a large number of nonconforming conditions (referred to herein as "punchlisting"), on a hardware item which was actually not ready for inspection. The option permitted the QCE to return the work to field engineering, which had the responsibility for checking the item and ensuring its readiness for inspection in the first instance. Thus, the option was motivated by legitimate concerns and objectives.

Although the option was not established for the purpose of "limiting findings of deficiencies" by QC, obviously, to the extent deficiencies existed in the uninspected portion of the work, they were not recorded during this initial inspection, nor could they be accounted for in the trending analysis. The return option was used in all disciplines, although some supervisors within disciplines elected not to use it in their particular area.

The return option, by itself, would not result in a missed inspection covered by a closed IR activity, so long as the inspector closing out the IR satisfied himself that all items not encompassed by the IPIN and included in the activity were inspected, either by him or by the previous inspector. QC procedures, in fact, required the signer of the IR activity to vouch for the inspection of all items before signing. It is a basic principle of quality control that an inspector should not sign for something he has not verified, either by documentation, inspection, or some other means. The Company found that the answers provided by some individuals indicated a lack of a full understanding of the requirement to satisfy themselves that all items had been inspected before closing out an IR activity subject to an IPIN. The IPIN procedures did not specify exactly how a return option should be handled, either initially or in closing out IR activities, and thus may have contributed to any misunderstandings which existed.

As part of its corrective action, described more fully above, the Company will ensure that procedural shortcomings in defining the requirements for QCE

closure of IR activities are corrected, and will retrain QCEs, emphasizing their responsibilities to conduct full, complete inspections and document all deficiencies before signing off IR activities. The Company also decided to discontinue the "return option" at Midland and require that all initial inspections be completed with non-conforming conditions fully documented. The IPIN form has also been eliminated and all deficiencies will be documented on a revised NCR form. (The particular findings of the extensive Company investigation into the use of IPINs are recited more fully below under responses to the NRC's questions contained in the Notice of Violation.)

#### Question 1

"Determine the extent to which QC Supervisors at the Midland Site have been instructing QC Inspectors to limit findings of deficiencies."

There are two aspects to this question. A first aspect concerns the extent to which QC Inspectors were instructed not to completely inspect activities prior to turning work back to construction. A second aspect relates to directions, if any, given to QCEs, not to document deficiencies actually observed. Regarding the first aspect, the Company found that QCEs were directed to use a "return option" which resulted in initial inspection activities not being completed. With regard to the second aspect of the question, QC management intended that, in the exercise of a return option, all deficiencies actually seen would be reported on an IPIN. Project management personnel encouraged the use of a return option and QC management, instructed QC leads, who reported directly to them, in its use.

The QC management interviewed by the task force stated that the option was intended to provide a means for returning work to construction and avoid occupying QCE's time punchlisting work for construction. There was no intent to avoid reporting deficiencies, although the inadvertent result of the practice was that deficiencies on the portion of the work not inspected before return would not be documented. QC leads who instructed their personnel to use the option agreed with the QC management's purpose in using the option.

Of the 16 QC leads and supervisors interviewed, one individual was in the documentation area, for which the return option was inapplicable, and eight stated either that the option was not applicable to their activity, or that they had not used it for other reasons. Of the latter, one stated that he had never been told to use the return option.

Two stated that their group had used it only infrequently. One of these understood that all observed deficiencies were to be documented but could not recall whether he had so instructed his group. The other indicated that the only instance when an inspection was halted before completion was when it was obvious that cable insulation damage would require a completely new termination. In this instance the inspection for other termination deficiencies would not be performed, but the observed damage would be documented.

Three individuals indicated regular use of the option. One stated that he had instructed his subordinates to document all observed nonconformances, one

could not recall giving specific instructions but knew that his subordinate's practice was to document all observed nonconformances and one knew that that was the proper practice, assumed that his subordinates did it that way, but could not recall whether he had so instructed them.

Two other individuals were relatively new in the position. One indicated that it was his practice to document everything observed but that it had not been the practice of his predecessor (no longer at the plant). The other continued the practice of his previous supervisor to document all observations.

The task force found that from a quarter to a half of the individual inspectors (QCEs) contacted, depending on the discipline, were aware of and made use of a "return option". A few individuals stated that they documented some, but not all, deficiencies observed in an inspection in which the return option was used.\*

The company's corrective action on this point is described above. The company considers it of fundamental importance that all QCEs and supervisors understand the requirement to document deficiencies observed when an item has been submitted for inspection rather than using an "oral" communication process. This aspect will be emphasized in training on the new procedures.

#### Question 2

"Determine the extent to which QC inspectors have been conducting re-inspections based only on reported deficiencies."

The Company determined, based upon investigation, that almost all QCEs at Midland were completing their inspections properly. However, because a few individuals may not have completed inspections fully, the Company concluded that the NRC inspection finding was valid.

The precise question to be addressed here is whether and to what extent QCEs closed out inspection record activities subject to IPINs which do not encompass the entire activity, without fully inspecting the activity. The

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\* Approximately one-half of the QCEs contacted also indicated that in some circumstances they allowed repairs or reworks to take place within a fixed period of time without documenting the deficiencies observed during the initial inspection. Virtually all of those utilizing this practice had been advised by their supervisors to do so.

This practice was specifically allowed prior to June 1, 1981, and through an apparent lack of clear communication continued after the option was removed from QC procedures on this date. The upper tier policy document allowed the practice on a one shift basis until February 1983. Since this practice would not lead to missed inspections with regard to use of IPINs, it was not addressed further as part of the task force investigation. An NCR was written on December 10, 1982 regarding the optional practice not to document deficiencies corrected during a one shift period; MPQAD will further track and disposition this issue utilizing the results of the task force investigation.

IPIN task force determined that although a few individuals stated they would not necessarily reinspect all items before closing out the IR activity. There were several reasons for this response. Some would not lead to an inspection miss.

When asked to describe the types of inspections for which they would not reinspect all examples, it became evident that nearly all individuals followed practices which would not have led to an inspection failure. Many individuals stated that they did not reinspect all items when they conducted the initial inspection and remembered items they had previously inspected. Others answered that they limited their reinspection to items covered by the IPIN, but only when the activity covered only one item. Still others limited their reinspection if the inspection of all other items was documented. Thus, in specific circumstances an inspector following all applicable procedures could have limited his reinspection to hardware items encompassed by the IPIN and accomplished a complete inspection of the activity. Only a few individuals appeared to lack sufficient understanding of the requirement that the reinspection verify inspection of all items within an activity.

The IPIN task force concluded that not more than ten percent of the individuals contacted reported unacceptable practices. Although the task force's conclusions on this question were more positive than NRC's from a statistical standpoint, the task force concluded that NRC's inspection finding and notice of violation were valid.

It is the Company's conclusion that the cause of this violation was unclear management direction regarding documentation associated with use of the "return option".

ATTACHMENT 2

RESPONSE TO NOTICE OF VIOLATION ITEM B

OVERVIEW

As a result of the Company's assessment of overall project status in the fall of 1982 and based on information regarding the identified findings from NRC inspections and their generic implications, Project management carefully evaluated the needs for corrective actions. The Construction Completion Program (CCP) was conceived to address all identified concerns and to achieve desired improvements in project performance.

The project presented the Construction Completion Program concept to Region III personnel on December 2, 1982 after having initiated action to implement the plan the previous day. A description of the CCP was sent to the NRC in our January 10, 1983 letter and a public meeting was held with the NRC on February 8, 1983 to discuss the plan. This overview summarizes how major portions of the CCP cover the individual findings of the Notice of Violation and the generic implications of these findings.

The specific portions of the CCP that address the generic implications of the NRC Diesel Generator Building Inspection are as follows:

A. System Team Organization

The organization for completion of construction is being reorganized to emphasize a systems approach. A team made up of construction and engineering personnel (with close QC coordination) will be assigned to complete all work on a specific system or systems. This team concept will also be applied to remaining area work.

The team concept provides for very close coordination between all major activities required to produce and demonstrate a quality product. The development of this organization involves a review of existing field procedures and preparation of improved procedures for defining work requirements. A major element of this approach will be preparation of expanded instructions to the crafts that will improve performance to design and specifications and will insure proper coordination with inspection as the work proceeds. The team members will be trained in the new procedures.

An assessment of current system construction and inspection status will be made by the team prior to initiation of construction activities. This will provide a baseline of existing quality and allow any existing problems to be identified and corrected.

The specific NRC inspection findings\* covered by this activity are:

B-1b, B-1c, B-1d, B-1h, B-1j, B-1l through p, B-1q, B-4a and B-6.

B. Review PQCI's and Update As Required

The procedures for carrying out inspections (PQCI's) are being reviewed to insure all important inspection attributes are specifically described and, to the extent practicable, all reference material is incorporated directly in the PQCI.

The specific NRC inspection report findings covered by this activity are:

B-1a, B-1b, B-1c, B-4a, B-4b and B-8a.

C. Review the Inspection Process (See note below on inspection backlog)

The inspection process including construction procedures for initiating inspections will be modified so that:

- 1. The procedure for documenting non-conformances ensures that all non-conforming conditions are properly identified and tracked.
- 2. The process for providing instructions for construction activities ensures all required inspections are performed when required.

The specific NRC inspection report findings covered by this activity are:

B-1l-p, B-4b, B-8b(1) and B-8b(2)

D. QC Training and Certification

The QC Department has been reorganized under direct Consumers Power Company control. All QC personnel have been or are undergoing a training program leading to re-certification to the revised PQCI's.

The specific NRC inspection report findings covered by this activity are:

B-1l-p and B-4b.

E. Program Reviews

General QA Program reviews have been initiated in the areas identified below in addition to the specific responses required from the inspections findings. The results of these reviews and any requirements for program revision will be incorporated in CCP activities.

- 1. Receipt Inspection Review covers findings B-1g and B-3.
- 2. Material Traceability Review covers findings B-1e, B-1f, B-2a and B-8a.

\*Findings are identified by the item designation in the Notice of Violation transmitted by the NRC and letter of February 8, 1983 J G Keppler to J D Selby.



3. Design and Document Control Review covers findings B-1i, B-1j, B-1k, B-2b, B-2c, B-2e, B-5 and B-7.

F. Safety-related classification.

The NRC is reviewing the project licensing position on this issue. This covers findings B-2d and B-2f.

The response to each individual finding follows:

\*\*Note on inspection backlog.

The Company specifically reviewed the NRC concern regarding, "...a backlog of almost 16,000 inspections...", the status of inspection records (IR) as of November 26, 1982 was actually as follows:

IR Issued 190,000; IR Closed 174,000; IR "Open" 16,000

The 16,000 "Open" IR are categorized as follows:

- (1) Opened in anticipation of an inspection request but construction not yet ready for inspection, 7,200.
- (2) Fully ready for inspection, 1,200.
- (3) Open but waiting for next complete step in construction, 5,700.
- (4) Open pending NCR/IPIN disposition, 800.
- (5) Open pending Level III approval, 700.
- (6) Miscellaneous, 400.

Therefore, the actual backlog of inspections is more correctly identified by the 1,200 IRs where construction is done and waiting for inspection.

NCR Item B - 1.a (82-22-02A)

"Installation of diesel generator engine control panels 1C112, 2C111, and 2C112 was not 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."

1. The violation is admitted, in part.
2. (1a) No Electrical or Civil QC instruction required specific verification of the bevelled washer installation. Therefore, documented proof that bevelled washers were installed could not be provided since the foundation is grouted. (bevel washers)  
(2a) The inspection records for panels 1C-112, 2C-111 and 2C-112 are open with attributes such as washers and torquing not yet inspected. Therefore, this is not a violation. (flat washers)
3. (1a) NCR M01-9-2-138 was written by MPQAD on October 15, 1982 to document the non-conformance and was closed on December 8, 1982. (bevel washers)  
(1b) FCR M-7026 was written on November 10, 1982 to make the bevelled washers optional, because in this case, bevelled washers did nothing to aid in support or leveling of the panel. The FCR was approved November 23, 1982. (bevel washers)  
(2a) Due to insufficient quantities of flat washers and nuts this portion of the installation was not completed. The field has subsequently procured sufficient quantities to complete the bolt down and are awaiting Construction Completion Program approval to install them. (flat washers)
4. Electrical and Civil PQCI's will be reviewed and revised as applicable to include specific verification for mounting requirements and will incorporate applicable hold points.
5. QC inspection plan E-6.0 and C-1.10 (if required) shall be modified to incorporate full inspection and hold points for all un-installed electrical equipment by March 28, 1983 and required training to the revised plan is scheduled for completion by April 11, 1983. (bevel washers)

NOV Item B - 1.b (82-22-02B)

"Unscheduled pull box associated with conduits 2BN006, 2BN007, and 2BDA002 was not 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 42."

1. The violation is admitted.
  
2. (1) Failure of Field Engineering to specify correct size pull box for Construction to install.  
(2) Failure of QC, during inspection of conduits 2BN006, 2BN007 and 2BDA002, to identify non-conforming condition.
  
3. FCR E-3157 was written on November 8, 1982 and approved on November 17, 1982. This FCR clarified the intent of E-42(Q) SH 42 to include minimum bend radius as a criterion for pull box sizing. Given the revised criteria, the pull boxes cited conform to the requirements, as documented in an NCR written by MPQAD on March 7, 1983.
  
4. (1) PQCI E-1.0 will be revised to verify and record pull box size and bend radius of cable will be verified on applicable PQCI's.  
(2) Team training programs, required by the Construction Completion Program, will emphasize the importance of following all requirements of design documents.  
:
  
5. (1) PQCI E-1.0 to be revised by March 29, 1983 and required training is scheduled for completion by April 29, 1983 to verify and record pull box size.  
(2) Reinspection of installed work will be carried out during the implementation of the Construction Completion Program.

NOV Item B - 1.c (82-22-02C)

"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 not 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"."

1. The violation is admitted.
  
2. Craft, Supervision, Field Engineering and QC did not provide sufficient attention to detail to assure correct locations of P1001 strut on tube steel as delineated on Drawing E-796(Q) SH 2 detail 1.
  
3. FCN E-7040 was written to approve installed conditions and has been incorporated. NCR M01-9-3-084 was written by MPQAD on March 7, 1983 to document this condition, and for purposes of trending.
  
4. (1) Revise PQCI E-2.1 and provide QC training to properly inspect supports.  
(2) Team training programs, required by the Construction Completion Program will emphasize the importance of following all requirements of design documents.
  
5. Revision of E-2.1 and required qualification training is estimated to be complete by May 15, 1983.

NOV Item B - 1.d (82-22-02D)

"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 not 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"."

1. The violation is admitted.
  
2. (1) E-796(Q) SH 1 shows the proper dimension for Bay 4 but is incorrect for Bay 3. The dimension shown for Bay 3 is a drafting error.  
(2) The Field Engineer failed to write a FCN to correct drawing for Bay 3 prior to completing the installation of the support.
  
3. DCN #16 to Drawing E-796(Q) SH 1 was prepared and approved on November 9, 1982 to correct the drafting error. Incorporation has taken place. An NCR was written by MPQAD on March 7, 1983.
  
4. Team training programs, required by the Construction Completion Program will emphasize the importance of following all requirements of design documents.
  
5. Specific compliance will be achieved when team training is completed under the Construction Completion Program.

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NOV Item B - 1.e (82-22-05A)

"The inspectors identified high strength steel plate placed in the laydown area which was not marked with the material type and grade as required by Field Instruction FIG-9.600, Revision 1."

1. The violation is admitted.
2. Most steel was properly marked and some markings were not exposed, however, some pieces of high strength steel were not properly marked through failure to follow procedures.
3. All steel was re-marked with paint as to clearly show any grades other than A-36. QC inspections have been increased from monthly to weekly. An NCR was written by MPQAD on March 8, 1983. Procurement personnel responsible for the marking of steel have been retrained to the requirements of FIG-9.600.
4. N/A
5. Complete.

NOV Item B - 1.f (82-22-05B)

"The inspectors identified various stock steel shapes in the "Q" area with yellow-colored paint on the ends (indicating the material was "non-Q") and various steel stock shapes in the "non-Q" area without painted ends (indicating "Q" material), contrary to the requirements of Field Instruction Fig-9.600, Revision 1."

1. The violation is admitted, in part.
2. All steel in "Q" area was identified in accordance with procedures but some manufacturers markings led to confusion. Some steel in "non-Q" areas was not marked in accordance with procedures.
3. All steel in "non-Q" area was painted or repainted yellow as to conform with the procedure. QC inspections have been increased from monthly to weekly. To avoid confusion, manufacturers color coding was removed from the ends of steel in question in the "Q" area. An NCR was written by MPQAD on March 8, 1983. Procurement personnel responsible for the marking of steel have been retrained to the requirements of FIG-9.600(Q).
4. Field Instruction FIG-9.600(Q) will be revised to designate the marking requirement for non-Q steel to be a Q attribute.
5. The required procedure revision will be completed by May 1, 1983.

NOV Item B - 1.g (82-22-09A)

"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."

1. The violation is admitted.
2. These slots were manufactured incorrectly by the vendor prior to receipt at the jobsite. The slots in Diesel Generator muffler supports are required for thermal expansion. The vendor drawing calls for these slots to be machined, but they were torch cut and exceeded required dimensions.
3. Following the NRC inspection, Bechtel NCR 4693 was written to determine if, as fabricated, the slots would perform their intended function.
4. NCR 4693 is currently being reviewed by Project Engineering and the vendor.
5. NCR 4693 expected to be dispositioned by April 1, 1983.



NCR Item B - 1.h (82-22-09B)

"Jacking plates were not installed beneath the center support plates of Bay 1 diesel generator muffler as required by Drawing M18-250-6."

1. The violation is admitted.
  
2. Jacking plates for Diesel Generator muffler supports were not installed in Bay 1 beneath the center support, as shown in vendor drawings, due to failure to install according to the design drawing.
  
3. Following the NRC inspection an NCR was written against the condition. A subsequent NCR was also written after the NRC inspection, based on inspections of other Diesel Generator mufflers which resulted in identification of similar deficiencies in Bays 3 and 4. Both NCRs were dispositioned "Use As Is", since loadings from the jacking screws on the concrete were acceptable.
  
4. Team training programs required by the Construction Completion Program will emphasize the importance of following all requirements of vendor drawings.
  
5. The implementation of the disposition of NCRs will provide full compliance for the "As Built" condition. Subsequent revision to vendor drawings required to complete NCR 4738 follow-up actions is forecast for completion by April 1, 1983. Specific compliance will be achieved when team training is completed under the Construction Completion Program.

NOV Item B - 1.i (82-22-18A)

"Procedure FID-2.100, (Outstanding FCR/FCN Retirement), Revision 2 was inadequate in that the design drawings were not changed when an FCR/FCN had been retired and no further reference to the FCR existed on the revised drawing. As a result, the retired FCR C-2103 relating to HVAC structural steel was lost and could not be traced to the design drawing to ensure a complete quality record."

1. The violation is admitted.
  
2. Field Procedure FID-2.100(Q) was inadequate in that it did not contain a requirement to provide for indication on design drawings that applicable FCNs and FCRs had been retired. Retired FCR/FCNs address one time approved deviations to generic design which are not incorporated into base design drawings due to their applicability to a limited number of locations. (It is noted that this procedural deficiency is not the reason the FCR was lost. The FCR was lost due to a clerical error and a copy was obtained from the design office within twenty-four hours. It is also noted that the FCR could be traced to the design drawing through the FCR/FCN retirement computer printout.)
  
3. Field Procedure FID-2.100(Q) was revised to formalize the practice of requiring design drawings to be annotated with a circled letter "R" denoting a retirement. The Field Document Control Department has performed a 100% review of all drawings, with retired FCR/FCNs against them, to verify compliance to this new requirement.
  
4. N/A
  
5. Complete.

NOV Item B - 1.j (82-22-18B)

"Field Sketch CY-1035 which illustrated the bottom gusset plates for HVAC fan supports was not identified 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.)"

1. The violation is admitted.
2. The requirement for this designation and reference is contained in Field Procedure FPD-5.000 and was not followed. Field Sketch CY-1035 for the Diesel Generator Building HVAC support steel gusset plate was not designated "Q", nor referenced to the original design drawing.
3. Field Sketch CY-1035 has been revised and designated "Q", and referenced to design drawing C-1004. NCR M01-0-2-155 was issued by MPQAD to document the identified discrepancy. Field Procedure FPD-5.000 was reviewed and determined to be adequate in regard to the stated requirement.

Training of responsible personnel in the specifics of FPD-5.000 has been conducted.

4. A review of other FSKs will be conducted by Field Engineering for compliances with FPD-5.000.
5. The review by Field Engineering will be completed by April 22, 1983.

NOV Item B - 1.k (82-22-18C)

"Procedure FPD-5.000, (Preparation of Field Sketches), Revision 1 did not require design drawings to reference appropriate field sketches to ensure a complete quality record."

1. The violation is admitted.
2. Although field procedures do not control what is placed on design drawings, no cross reference log existed to enable one to readily find what Field Sketches (FSK's) apply to each design drawing.
3. A reverse reference log was created listing applicable civil miscellaneous steel FSK's for each civil design drawing depicting miscellaneous steel.
4. Reverse reference logs listing applicable FSK's will be created for the remainder of all FSK's prepared in accordance with FPD-5.000. FPD-5.000 will be revised to address the requirements for reverse reference logs.
5. FPD-5.000 will be revised by April 15, 1983, addressing these requirements and including an effectivity date of June 15, 1983 for reverse reference logs.

NCR Item B - 1.1,m,n,o,p (82-22-16)

- "(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 diesel generator bays. This change was neither reviewed nor properly authorized.
- (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 having separate welds for each brace. This change was neither reviewed nor properly authorized.
- (n) None of the sixteen 1/4" bracing angles identified on Drawing C-1004 were constructed utilizing 1/4" material. This change was neither reviewed nor properly authorized.
- (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, without review nor proper authorization.
- (p) The column cover plate identified on FCR C-4401 was not constructed in Bay No. 3 as required. The plate was slotted instead of solid as required. This change was neither reviewed nor properly authorized."

1. The violations are admitted.
2. Diesel Generator Building HVAC fan support steel installation was not done in accordance with the drawings due to a lack of attention to detail during construction and inspection for Items (l), (m) and (n). For Item (o), the specific item was constructed to an earlier approved drawing and failure to identify the discrepancy occurred during the inspection process. For Item (p) the finding was due to the lack of attention to detail during construction.
3. (1) With regard to the undersized gusset plates, a subsequent evaluation by Project Engineering indicated the smaller 1/4" size plates were acceptable. Nevertheless, the plates will be replaced with 5/16" plates by Bechtel per NCR 4690.
  - (m) The gusset plate connection in Bay 1 has been removed and will be reworked per NCR 4690.
  - (n) The 5/16" and 3/8" bracing angles have been removed and will be reworked per NCR 4690.
  - (o) After the NRC inspection, NCR 4690 was written and dispositioned "Use As Is" for bolted connections constructed in Bay 3. It should be noted that these connections were constructed to design drawings approved at that time which allowed bolted connections.

NOV Item B - 1.1.m.n,o,p (82-22-16) Continued

(p) NCR 4690 dispositioned the cover plate on the steel column to be "reworked".

4. Team training programs, required by the Construction Completion Program will emphasize the importance of following all requirements of design documents. In addition, as part of the Construction Completion Program, a review of PQCI's is being done to assure that correct design requirements are specified for inspectors. The Program also calls for a QC inspector recertification program.
5. Specific compliance will be achieved when rework is completed under the Construction Completion Program.

NCR Item B - 1.g (82-22-24)

"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 obtaining approval as required by FIG-1.111, Revision 4, Concrete Drilling Permit."

1. The violation is admitted.
  
2. Field procedures (FIG-1.111, Revision 3) in effect at the time of work did not require concrete drill permits for chipping because damage to reinforcing steel and other embedded items is not as likely as with drilling.
  
3.
  - (1) Field Procedure FIG-1.111, Concrete Drill Permits, has been revised and approved to include chipping.
  - (2) Steps have been taken to insure concrete chipping repairs are performed using approved guidelines. FCR C-5206 was prepared and has been approved by Project Engineering to establish guidelines for concrete chipping repair. This FCR has subsequently been incorporated into Specification 7220-C-231(Q). Field Procedure FPT-3.000, has been revised to specifically include inspection of repairs to chipped areas as part of area turnover. This procedure is being designated as Quality Related, and is currently under review.
  - (3) The above steps are summarized on NCR M01-2-154 which was issued by MPQAD to request process corrective action. The Project Engineering response to this NCR concludes there is no safety impact, or affect on quality of the structure, due to the chipping of concrete identified in the Containment Purge Room 702.
  
4.
  - (1) Field Procedure FPT-3.000 requires approval.
  - (2) The chipped area in question requires repair.
  - (3) NCR M01-9-2-154 requires closing.

NOV Item B - 1.g (82-22-24) Continued

5. (1) April 15, 1983.
- (2) Specific compliance will be achieved when the rework is completed under the Construction Completion Program.
- (3) Following rework.



NOV Item B - 2.a (82-22-08)

"Measures were not established for the selection and review for suitability of application of "Q" materials associated with the diesel generator exhaust muffler in that design drawings and specifications did not indicate the material identity of the installed muffler saddle supports and plates."

1. The violation is indeterminate at this time.
2. Material specification and identification is the responsibility of the emergency diesel generator prime vendor. No documentation was available on site to show that the material used in the fabrication of the Diesel Generator exhaust silencers met the requirements for seismic Class I installation.
3. The vendor has been requested to provide the necessary documentation for material traceability and identification of applicable QA requirements applied to the exhaust silencers.
4. A status update and identification of any corrective steps which may be required will be provided by Project Engineering by May 2, 1983.
5. To be determined by results Project Engineering report of May 2, 1983.

NOV Item B - 2.b (82-22-15B)

"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. This design change was neither properly reviewed nor approved.

1. The violation is admitted.
2. Note 14 on drawing 7220-C-147 was not clear. It has always been the intent of Project Engineering to allow Field Engineering to substitute welded for bolted connections when detailing steel bracing connections; however, no specific instructions were provided.
3. FCR C-5174 was issued and approved to clarify that Note 14 on drawing 7220-C-147 is applicable to bracing connections.
4. None required.
5. Completed.

NOV Item B - 2.c (82-22-15C)

"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."

1. The violation is admitted.
  
2. The Diesel Generator Building HVAC fan support gusset plate dimensions were only identified on a field fabrication shop work order. The field sketch for this work was inadequate in that it did not contain necessary details for fabrication.
  
3. The fan support gusset plate dimensions have been added to field sketch CY-289. FCR C-5174 was issued and approved to clarify on the design drawing the criteria to be utilized for detailing bracing connections.
  
4. Review all civil miscellaneous steel field sketches to assure that proper information for gusset plates is included and specified in accordance with FCR C-5174.
  
5. May 2, 1983.

NOV Item B - 2.d (82-22-15A)

"The licensee failed to analyze the four diesel generator building monorails as seismic Category I as described in their commitment to Regulatory Guide 1.29, in Appendix 3A of the FSAR."

1. The violation is admitted in that the Diesel Generator Monorail had not been analyzed seismically through the normal project design process, or after the initial walkdown under specification 7220-L-001(Q) had been performed to verify project compliance to Regulatory Guide 1.29 commitments. The Proximity and Seismic Category II/I Site Walkdown Program described in Specification 7220-L-001(Q) provides method for identification, evaluation and resolution of all potential situations where non seismic Category I commodities are installed above safety related systems, components or structures.
2. The Diesel Generator Building monorails were reviewed during the preliminary walkdown, but were not identified for further analysis due to the walkdown teams verbal understanding that the monorails had been seismically analyzed previously.
3. Seismic analysis was subsequently performed addressing adequacy of the Diesel Generator Building monorails. The analysis concluded that failure of the monorails under seismic loading would not occur.

The training program for all walkdown teams was revised to require that seismic analysis on non-seismic components that would potentially effect safety related structures, systems or components are documented. If documentation is not available at the time of walkdown then the potential interaction must be identified on an interaction identification sheet in accordance with applicable walkdown program requirements.

All areas walked down prior to the revised training program were rewalked to assure that any other non-seismic components that could potentially effect safety related structures, systems or components had documented seismic analysis on file.

NOV Item B - 2.d (82-22-15A) Continued

4. Engineering records will be compiled to support walkdown teams.

5. May 15, 1983

NOV Item B - 2.e (82-22-11)

"The licensee designed and constructed thirty-two diesel generator building exhaust system hangers without ensuring that the applicable requirements for "Q" components were included in the design documents."

1. The violation is admitted.
  
2. (a) All design documents associated with installation of the Diesel Generator exhaust (B31.1) pipe hangers were not identified as "Q" even though the P&ID identified the piping as "Seismic Category 1" and the FSAR specified the Diesel Generator exhaust system to be safety related.  
  
(b) In accordance with project commitments any structure system or components identified "Seismic Category 1" is considered "Q" and project quality assurance program requirements should be applied. In general, only ASME III hangers are "Q", however, because of the uniqueness of "Seismic Category 1", B31.1 hangers, Project Engineering failed to translate the "Q" identification through all of the sub-tier documents.
  
3. The exhaust piping for the Diesel Generators is "Q" as documented in the isometric M-652, SH 1 and P&ID 7220-M-452 Sht 1A & 1B. The applicable hanger sketches have subsequently been revised to identify the supports as "Q". Bechtel Specification 7220-M-326(Q) has been revised to provide special provisions for QC inspections of the "Q" B31.1 support and lists the pipe hangers in question. A review has been performed which determined that no other situation similar to the Diesel Generator exhaust piping (B31.1-Seismic Category 1) exists in the plant. In addition project confirmed that no other unique situations in the plant exist where Seismic Category 1 structures, systems or components are identified and the quality assurance program requirements had not been applied. There were several instances of drawing inconsistencies that require correction as result of project reviews, and NCR M01-5-2-166 was written by MPQAD to document this item.

NCR Item B - 2.e (82-22-11) Continued

4. (a) Project drawing changes are required to correct inconsistencies identified during project review for B31.1 piping in other project areas that were Seismic Category 1 without being identified as "Q".
  - (b) QC inspection of Diesel Generator exhaust system hangers will be required in accordance with project specification 7220-M-326(Q).
- 
5. (a) Project drawing correction will be complete by June 1, 1983.
  - (b) Required Diesel Generator exhaust system hanger inspections and closure of NCR M01-5-2-166 will be completed when the Construction Completion Program is initiated.

NOV Item B - 2.f (82-22-26)

"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."

1. The violation is admitted.
2. Part 2 of enclosure 7 of the NRC letter on Completion of Soils Remedial Activities Review dated May 25, 1982 required that the activities of the Armorstone placement program be "Q" controlled. The Project failed to translate this requirement into the design and procurement documents for this material due to a misunderstanding of NRC requirements.
3. Bechtel drawings C-45, C-109, C-111 and C-112 have been revised to designate the total area of the dike adjacent to the ultimate heat sink as "Q" as opposed to that which was designated "Q" in the initial implementation of the NRC requirements.
4. Technical specification C-209 will be revised as "Q" and will identify the portion of installation work to be done as "Q". In addition, Bechtel drawing C-1096 will be revised to specify the installation of Armorstone to be "Q" in the "Q" designated areas of the dike. No Armorstone has yet been placed in these areas.
5. Full compliance will be achieved when applicable specifications and drawings referred to above are revised as "Q". This will be done by June 1, 1983.



NOV Item B - 3. (82-22-01)

"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." An 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 strands 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."
- 
1. The violation is admitted.
  
  2. The violation occurred due to poor electrical workmanship at the vendors facility, inadequate vendor QC inspection plus inadequate source inspection. Although MPQAD performed an overinspection on the four panels in question, the discrepant conditions had been missed.
  
  3. (1) MPQAD initiated a 100% overinspection program (01E-7B) in July, 1980 to verify workmanship according to vendor workmanship standards and the technical specification. During the overinspection 27 NCR's were written, and 14 have been closed. Seven QAR's were written, and 5 closed. The lack of identification of conditions in this violation by the overinspection program has been investigated and is felt to be an isolated case.

NCR Item B - 3. (82-22-01) Continued

- (2) NCR MO1-9-2-139, dated October 22, 1982, was issued to track these four panels. MCAR 66 was prepared on December 30, 1982 with Interim Reports No 1 & 2 submitted to NRC Region III on December 30, 1982 and February 25, 1983, respectively. The scope of the MCAR 66 Task Force is to review the NCR's and QAR's written, verify that Project Engineering disposition is consistent between vendors and formulate an action plan that will preclude any further recurrence.
  
4. Implementation at the vendors facilities of E-24 Revision 0 "Overinspection of Vendor Supplied Printed Circuit Board Assemblies" and E-25 Revision 0, "Overinspection of Vendor Supplied Electrical Equipment/Components" will be carried out by MPQAD and Project Supplier Quality for the few future procurements shipped to the jobsite. Project representatives will witness in-process fabrication, functional testing and final inspection prior to release for shipment depending on the nature of the commodity. E-24 and E-25 were approved February 21, 1983 and February 18, 1983 respectively and have been issued for use.
  
5.
  - (1) For equipment on site; MPQAD has inspected nearly 100% of all "Q" electrical panels and cabinets. MPQAD overinspection will continue until the source inspection program is fully implemented - forecast completion of overinspection is July 1, 1983.
  - (2) Programs are now in place to prevent recurrence of poor vendor workmanship for remaining panels and cabinets that are yet to be shipped.
  - (3) Full compliance will be achieved upon the closure of MCAR 66.

NOV Item B - 4.a (82-22-25)

"An inspection program was not established to ensure segregation of cables installed in horizontal trays which used metal dividers to segregate control and instrumentation cables in accordance with design requirements."

1. The violation is admitted. The violation involved three cables that had been inadvertently looped in and out of the incorrect side of a divided tray section.
2. The cables in question could have been improperly segregated in the raceway for a variety of reasons: temporary rework situation, installation techniques, etc.

Although there was no formal program to "train" or tie down cables in horizontal tray sections the current cable reinspection program should have found the discrepant condition. The reinspection program had not yet been implemented in this specific area.

3. (1) NCR M01-9-2-151 was issued November 1, 1982. Supervision was verbally informed and the non-conformance was immediately corrected.
- (2) Generic resolution involves revision of Field Procedure FPE-4.000 (pending approval) which will require an even distribution of cables across the tray, tying cables to rungs within two rungs of a change in direction and Project Engineering disposition of cables that exceed the height of the barrier on a case by case basis.
4. (1) Cable reinspection that is now ongoing is verifying the routing as an inspection attribute. Information developed from the cable reinspection program will be used to verify voltage segregation.

NOV Item B - 4.a (82-22-25) Continued

- (2) Final training and tie down of cables will be accomplished (per FPE-4.000) when "Q" cable pulling resumes, at the time the last "Q" cable is pulled through a tray section.
  
5.
  - (1) MPQAD reinspection is estimated to be complete by June 14, 1983. Review results of reinspection by July 1, 1983.
  - (2) Approval of Field Procedure FPE-4.000 scheduled for March 18, 1983.

NOV Item B - 4.b (82-22-17)

"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 B.1.(1) through (o) of this Notice of Violation. These nonconformances were associated with installation of the diesel generator building HVAC fan support steel."

1. The violation is admitted.
2. In general, the violation occurred because of a lack of attention to detail during QC inspections and a lack of specificity in the PQCI's. In one case (item o) an incorrect design drawing was used by the QC inspector to perform his inspection.
3. The Construction Completion Program has been instituted.
4. As part of the Construction Completion Program, a review of PQCI's is being done to assure that essential design requirements are specified for inspectors. In addition, the Program calls for a QC inspector recertification program. The verification portion of the Program will verify quality of completed work.
5. Full compliance will be achieved when PQCI reviews and QC inspector recertifications and the verification program are complete.

NCR Item B - 5. (82-22-10)

"The licensee did not implement a maintenance program to prevent five of sixteen installed diesel generator slide bearing muffler plates from accumulating dirt and dust as required by the vendor's manual."

1. The violation is admitted.
2. The requirements to specify cleanliness of these bearing plate surfaces was not established upon receipt of this material. The vendor documents supplied to Project Engineering did not contain a requirement for bearing plate maintenance.
3. Bechtel has initiated a storage maintenance program for the exhaust silencer bearing plates. An NCR was written on March 9, 1983 by MPQAD to track this item.
4. Direction has been given to develop an installation and maintenance program for all flouorocarbon bearing plates on site.
5. The maintenance program for the bearing plates will be fully implemented under the Construction Completion Program in conjunction with the closure of NCR 4693 which allows access to the bearings plates.

NOV Item B - 6. (82-22-13)

"During welding of the diesel generator building exhaust piping hanger support steel, the licensee did not verify preheat of existing safety-related structural steel at a temperature of 70°F as required by site specifications and the AWS 1974 Code."

1. The violation is admitted.
2. The ambient temperature was not verified for the welding operation observed by the NRC inspector. Documentation for preheats of all welds made between 32° and 70° were covered by the random preheat verification program contained in PQCI W-1.60. The program in place requires 100% verification for preheat temperature over 70°.
3. Bechtel's "Instructions to Welders" have been revised to provide preheating instructions, and each welder signs for receipt of these instructions. The welder's rod withdrawal requisitions are also stamped in red with preheat instructions. The in-place verification program will be continued.
4. All Bechtel site welders will be retrained in the site preheat requirements, and all new welders will have this preheat training emphasized as part of their indoctrination.
5. All Bechtel site welders will be re-trained by May 1, 1983.

NCI Item B - 7. (82-22-21)

"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 controlled utilizing the Site Document Control Center."

1. The violation is admitted.
2. The control of Redline changes to work prints was not performed through the Construction Document Control Department, however, it was being done in accordance with established field procedures.
3. Revisions to Bechtel Field Procedures now require all changes (redlines) to piping isometrics and hanger drawings to be controlled utilizing the site Document Control Center.
4. N/A
5. Complete.



NOV Item B - 8.a (82-22-23)

"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."

1. The violation is admitted.
2. Failure to initially apply QC hold tags on suspect material, and failure to implement disposition of the NCR in a timely manner.
3. A letter was provided to B&W Construction Company, a subcontractor at the Midland jobsite responsible for the majority of Class I piping and hanger installation, on December 11, 1981, identifying restriction on usage of subject material from heats identified on NCR 3266 for Class I use.

100% of all completed Class I P-2.20 PQCIR documentation packages stored in the vault were reviewed for identification of the nonconforming material identified in NCR 3266. B&W has subsequently re-reviewed their documentation records to ascertain if any of the discrepant material identified through the PQCIR review was installed in the field. Any of the discrepant material is to be removed and replaced with acceptable material.

4. A specific review by a level II QCE of all future Class I P2.20 PQCIRs for discrepant material identified on NCR 3266 is being performed before final acceptance and their subsequent storage in the QC vault.

A QA survey of all applicable NCRs will be performed in accordance with QA Checklist S-23 to assure that material control procedures have been adequately implemented and subsequent actions associated with applicable NCR dispositions have been implemented.

NOV Item B - 8.a (82-22-23) Continued

Although not related directly with the above effort or this identified discrepancy, a complete material verification documentation review with special emphasis for ASME NCA 3700/3800 compliance for pipe support material is in process on the project by Bechtel procurement supplier quality group to assure acceptable material documentation for the Midland Project. Miscellaneous material such as rebars, paint, etc, are excluded from this review.

5. Full compliance with be obtained as follows:

- Specific Actions -
- 1) Rework required on Class I supports in field to be complete by March 15, 1983.
  - 2) Review of all new P-2.20 PQCIRs is ongoing.

- Generic Actions -
- 1) Review of all applicable project NCRs by QA to be complete by June 24, 1983.
  - 2) Follow-up actions as result QA survey to be determined later.

- General -
- 1) The review of all material documentation packages for proper verification documentation is an ongoing effort. As stated previously, this is considered additional effort not directly related to resolution of the identified discrepancy.

NOV Item B - 8.b(1) (82-22-12A)

"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" as committed to in the FSAR. (See item 2.e) ..."

1. The violation is admitted.
2. An NCR was not issued because MPQAD failed to act in a timely manner.
3. NCR M01-5-2-166 was written by MPQAD on November 16, 1982 to document the hangers listed on SCN #36 to Specification M-326 as being nonconforming as a result of their original "non-Q" designation.
4. Complete.
5. Complete.

NOV Item B-8.b(2) (82-22-12B)

"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 design of the diesel generator monorail was not analyzed to seismic Category I design requirements as committed to in the FSAR. (See item 2.d.)"

1. The violation is admitted.
2. There was a misunderstanding over whether a nonconforming condition actually existed.
3. On November 16, 1982, a Quality Action Request (QAR) was written to document the condition. A subsequent seismic analysis has been done (Calc #G-44(Q) Revision 1) which documents the acceptability of current design of the subject monorail.
4. Complete.
5. Complete.

ATTACHMENT 3REQUEST FOR REDUCTION OF CIVIL PENALTY

Pursuant to 10 CFR 2.205, Consumers Power Company respectfully requests that the NRC reconsider the amount of civil penalty proposed to CPCo for the violations cited in the NRC's letter, dated February 8, 1983, J G Keppler to J D Selby. The Company does not contest the validity of the violations and agrees that a civil penalty is warranted, but believes that certain mitigating factors should be considered.

The NRC's criteria for enforcement actions (at 47 Federal Register page 9991, March 9, 1982) sets forth specific criteria for increasing or reducing base civil penalties, and provides in part as follows:

"2. Corrective Action to Prevent Recurrence. Recognizing that corrective action is always required to meet regulatory requirements, the promptness and extent to which the licensee takes corrective action, including actions to prevent recurrence, may be considered in modifying the civil penalty to be assessed. Unusually prompt and extensive corrective action may result in reducing the proposed civil penalty as much as 50% of the base value shown in Table 1. On the other hand, the civil penalty may be increased as much as 25% of the base value if initiation of corrective action is not prompt or if the corrective action is only minimally acceptable. In weighing this factor consideration will be given to , among other things, the timeliness of the corrective action, degree of licensee initiative, and comprehensiveness of the corrective action - such as whether the action is focused narrowly to the specific violation or broadly to the general area of concern."

We believe that our actions to correct the situation at issue have been timely and have been conceived and organized mainly through our own initiative. Most important, however, is that our program to correct these deficiencies is comprehensive and far reaching.

Shortly after receiving feedback on the NRC's inspection findings, the Company launched major, extensive corrective action. The Company halted the majority of the Category I work of its prime contractor, and laid the groundwork for a verification of past inspections and statusing of incomplete work. The work stoppage resulted in the layoff of more than 1,000 workers. The Company also initiated major, generic corrective action addressing the specific areas of NRC inspection findings. The Company's entire plan is entitled the Construction Completion Program, and included steps responding broadly to the NRC's and Company's areas of concern. This was addressed at length in the Company's letter of January 10, 1983, J W Cook to J G Keppler and further discussed at a Public Meeting with the NRC at Midland on February 8, 1983.

The corrective action undertaken by the Company was not narrowly focused on the specific violations identified by the NRC. The work reduction extended to all major safety related structures on-site, not merely the diesel generator building which was the focus of NRC's inspection. The verification program begins in the auxiliary building, includes the reactor buildings and diesel generator building as well as the service water pump structure.

The Construction Completion Program, which is the organizational basis for the generic corrective action, will encompass and structure the remaining pre-turnover systems and area work to be done at the Midland site, (excepting soils, HVAC and NSSS work). The Company's willingness to accept the NRC's suggestion that we take direct control of the project QC staff formerly under Bechtel supervision extends broadly to the entire job, and involves a major commitment of additional manpower and resources in recertification, training, and inspection activities.

The Company does not contest the NRC's decision to increase the civil penalty on the basis of certain other factors specified in the enforcement guidelines. We request, however, that consideration be given in determining the amount of the penalty to the corrective action taken and planned by the Company.

DOCKETED  
USNRC

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION '83 APR 11 P4:54

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD  
SECRETARY  
DOCKETING & SERVICE  
BRANCH

In the Matter of	)	
	)	Docket Nos. 50-329-OM
CONSUMERS POWER COMPANY	)	50-330-OM
	)	50-329-OL
(Midland Plant, Units 1 and 2))	)	50-330-OL

CERTIFICATE OF SERVICE

I, Frederick C. Williams, hereby certify that I have this 11th day of April, 1983 caused to be served upon the persons listed in the attached service list the testimony of Consumers Power Company witnesses as follows: Testimony Of James W. Cook On Quality Assurance; Testimony Of Roy A. Wells, Jr. On Quality Assurance; Testimony of James A. Mooney On Remedial Soils Work; Testimony Of James A. Mooney And R.M. Wheeler Concerning The Alleged Violations Of The April 30 ASLB Order And The March, 1982 Cable-Pulling Incident; Testimony of Walter R. Bird On Quality Assurance; And Testimony of Bruce H. Peck. Service is by hand-<sup>delivered</sup> livery except as indicated by asterisk, in which cases service is by mail.

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