



Occidental
Petroleum
Corporation

James W Cook
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May 10, 1983

PRINCIPAL STAFF	
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Mr Jay Harrison
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND ENERGY CENTER PROJECT
DOCKET NOS 50-329 AND 50-330
HOLD TAG QUESTIONS; FILE 16.0 SERIAL 22709

Attached is a copy of the 12/9/82 response I received from Howard Wahl after the Hold Tag question came to my attention last November. I believe the material I gave you on Friday contains all but the first four pages of this attachment. If you have any further questions, please let me know.

I hope we can respond quickly and completely to any and all questions you and your team may have. It is fortunate that you brought this particular issue to my attention; otherwise, we would not have been able to provide you with our complete actions.

By copy of this letter, I am asking Don Miller, Roy Wells and John Rutgers to reflect on how we can best coordinate our responses to the NRC's information requests so as not to omit any relevant material. This is not a simple question, and we would appreciate any thoughts you might have on this subject.

James W. Cook

JWC/lr

CC: DBMiller, Midland
JARutgers, Bechtel
RAWells, Midland

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Links file *McAfee* *EJ-2* *mmcl*

Bechtel Power Corporation

777 East Eisenhower Parkway
Ann Arbor, Michigan



Mail Address: P.O. Box 1000, Ann Arbor, Michigan 48106

December 9, 1982

Consumers Power Company
1945 West Palmall Road
Jackson, Michigan 49201

Attention: Mr. J.W. Cook
Vice President
Projects, Engineering and Construction

Subject: Midland Plant Units 1 and 2
Consumers Power Company
Bechtel Job 7220
Investigation of Hold Tags

In accordance with our discussion of November 24, 1982, an investigation, independent of Midland Project personnel, has been conducted into several cases of potential violation of CPCo hold tag procedures.

The investigation was assigned to the Division Quality Assurance Management Audit Staff who reviewed evidence and conducted a series of interviews pertinent to three individual instances described to them by MPQAD personnel. Confusion of Bechtel personnel based on the differences between CPCo and Bechtel procedures was noted but it was concluded that no intentional violation was in evidence.

The following summary and recommendations were included as part of the final report:

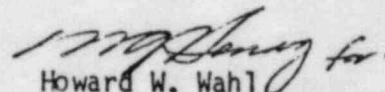
- a) No intentional violation of the CPCo hold tag procedure was noted. Three instances were investigated in which violations did occur or could be construed to occur. Each case was classified as confusion within existing procedures or activities.
- b) Two separate site NCR systems (Bechtel and CPCo), having sufficiently different rules relative to hold tags, are in existence and were found to be contributive in two of the three instances investigated. Continued existence of the two procedures could lead to future similar violations.
- c) Two separate electrical cable reinspection programs (Bechtel Field Engineering and MPQAD) are in existence, each issuing paper to control and make disposition of noted nonconformances. This may have lead to miscommunication between parties.

- d) Bechtel Electrical Field Engineers were not sufficiently aware of the rules of the CPCo procedure. Bechtel Field Procedure FIG 1.500, paragraph 2.1 relating to CPCo hold tags could have been and probably was misinterpreted to allow rework per the immediate instructions on a CPCo NCR rather than obtaining a second authorization. New instructions were in process of being routed to field engineers but this process had not been completed.

Recommendations

- a) Implement one NCR system on the site, or if one system is not feasible, change the rules regarding hold tags so that identical rules apply to both types of hold tags.
- b) Improve communication at the working level between Bechtel electrical field engineering and MPQAD so that each group is familiar with the basic activities and work systems of the other as related to electrical work.
- c) Establish training/retraining of all Bechtel field engineers as to the requirements of the current or any revised hold tag procedures.
- d) Clarify Bechtel Field Procedure FIG 1.500, paragraph 2.1 in accordance with the requirements of hold tag procedures, particularly resolving the difference between instructions written directly on the tag versus instructions written directly on the NCR.

The complete report has been turned over to John Rutgers, Bechtel Midland Project Manager to assist him in preparing a positive response to CPCo MCAR/R EJ-2 on this same subject. His response will address the recommendations and their implementation from the viewpoint of the project.



Howard W. Wahl
Vice President and General Manager

HWW/bm

REPORT OF INVESTIGATION OF HOLD TAG VIOLATIONS
MIDLAND PROJECT (7220)

Executive Summary

At the request of the General Manager an investigation independent of project assigned personnel was conducted to determine the circumstances and probable causes of several reported Bechtel violations of CPCo procedures established to control nonconforming material.

Included in this investigation were the following reported problems:

- A. CPCo Management Corrective Action Request/Report (MCAR/R) No. EJ-2, 11/22/82, in which rework of a documented discrepancy was accomplished in spite of the presence of a CPCo hold tag (Ref. NCR No. M01-9-2-156).
- B. CPCo NCR No. M01-9-2-158 in which equipment was released from the warehouse which included both Bechtel and CPCo hold tags.
- C. CPCo NCR No. M01-9-2-145 in which four cables were reworked based upon a Bechtel Field Engineering Rework Notice at or about the same time as issuance of the CPCo NCR.

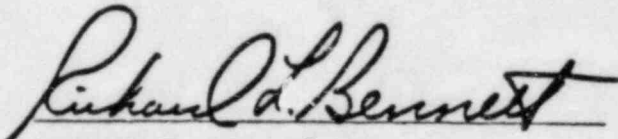
Summary

- A. No intentional violation of the CPCo hold tag procedure was noted. Several cases of miscommunication were noted which could have lead to some degree of misunderstanding.
- B. Two separate site NCR systems (Bechtel and CPCo), having sufficiently different rules relative to hold tags, are in existence and were found to be contributive in two of the three instances investigated. Continued existence of the two procedures could lead to future similar violations.
- C. Two separate electrical cable reinspection programs (Bechtel Field Engineering and MPQAD) are in existence, each issuing paper to control and make disposition of noted nonconformances. This may have lead to miscommunication between parties.

- D. Bechtel Electrical Field Engineers were not sufficiently aware of the rules of the CPCo procedure. Bechtel Field Procedure FIG-1.500, paragraph 2.1 relating to CPCo hold tags could be and probably was misinterpreted to allow rework per the immediate instructions on a CPCo NCR rather than obtaining another authorization. New instructions were in process of being routed to field engineers but this process had not been completed.

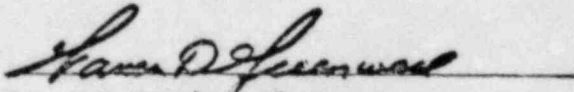
Recommendations

- A. Implement one NCR system or the site, or if one system is not feasible, change rules regarding hold tags so that identical rules apply to both types of hold tags.
- B. Improve communication at the working level between Bechtel electrical field engineering and MPQAD so that each group is familiar with the basic activities and work systems of the other as related to electrical work.
- C. Establish training/retraining of all Bechtel field engineers as to the requirements of the current or any revised hold tag procedures.
- D. Clarify Bechtel Field Procedure FIG-1.500, paragraph 2.1 in accordance with the requirements of hold tag procedures, particularly resolving the difference between instructions written directly on the tag versus instructions written directly on the NCR.



Report Prepared By:

for Lloyd J. Grant
Manager - Audits/Programs



Report Reviewed By:

Warren F. Greenwell
Division Manager of QA

REPORT OF INVESTIGATION OF HOLD TAG VIOLATIONS
MIDLAND PROJECT (7220)

I. OBJECTIVE

The objective of this investigation was to determine the circumstances surrounding and causes of the discrepancy identified in Consumers Power Company (CPCo) Management Corrective Action Request/Report (MCAR/R) No. EJ-2, 11/22/82. The discrepancy regarded Bechtel construction personnel fixing a nonconformance identified by CPCo without obtaining a required conditional release. The MCAR/R recommended three specific actions which are as follows:

1. Determine how the violation of Hold Tag/Nonconformance Control could happen.
2. How the specific violation did happen.
3. Measures that will be taken to prevent recurrence.

This report not only addresses the above three items, but also includes two other incidents of similar nature that were identified and used as part of this investigation.

II. SCOPE

Midland project (7220) construction site.

III. INVESTIGATOR

Lloyd J. Grant, AAPD QA Manager - Audits/Programs.

IV. DATES OF INVESTIGATION

November 29 and 30, 1982 (Midland site)

December 1, 1982 (Ann Arbor office)

V. METHOD OF INVESTIGATION

- A. Interview of CPCo, Bechtel and Craft personnel
- B. Review of Documentation

VI. INVESTIGATION RESULTS

- A. Data/information was collected as pertinent to the following:
 - 1. Performance of work on incorrect electrical cable colored markers without obtaining CPCo conditional release.
 - 2. Release of equipment from warehouse without obtaining CPCo conditional release.
 - 3. Replacement of four incorrect electrical cables.
 - 4. Knowledge of personnel as to Hold Tag requirements.
 - 5. Pertinent Bechtel field procedures.
 - 6. Control of Bechtel NCR Hold Tags vs. CPCo Hold Tags.
 - 7. Parallel and separate inspection programs as pertinent.
- B. Summaries of collected data/information:
 - 1. Incorrect electrical cable marker:

Electrical field engineers have an independent reinspection program for 24 attributes in process. This reinspection program covers all electrical cables not turned over to Consumers. During this reinspection process, the marker on the cable in question was identified as "illegible". T-Req #T4147 was issued on 10/26/82 to correct the illegible marker. On 10/27/82 a craftsman corrected the illegible marker, however, he replaced it with a wrong colored marker.

On 11/5/82, MPQAD during their reinspection program identified the wrong colored marker and issued their nonconformance report. CPCo Nonconformance Report M01-9-2-156, 11/5/82 identified an incorrect electrical cable color coded marker (i.e. green instead of red marker on cable 2AB237A). A hold tag had been placed on the nonconforming item. (Note: The NCR itself showed that no tag had been issued. This may have created some confusion.)

Electrical field engineer, G. Hitt, cable rework group, issued a one page memorandum (11/16/82) to lead electrical superintendent Bob Bane to correct the wrong colored marker on the cable in question. G. Hitt issued this memorandum based on information received from an electrical field engineer, D. Freye, who had observed the incorrect color marker. Electrical superintendent Bane issued the memorandum to craft and the wrong colored marker was corrected on 11/16/82. G. Hitt was aware of the hold tag as the NCR number was on the memorandum issued, however he was not aware at that time (11/16/82) that a conditional release was necessary prior to taking the remedial action of correcting the wrong colored marker. G. Hitt on 11/16/82 when he issued his memorandum was aware of the existence of T-Req #T4147 and knew that QC would have to perform a QC inspection once work on that T-Req was completed. Therefore he thought he had an authorizing document under which he could work and issued his memorandum on 11/16/82.

An electrical field engineer within the terminations group named S. Wishowski while working on the T-Req on 11/20/82 saw the Consumers nonconforming hold tag on the item, contacted Consumers MPQAD electrical engineer D. Cochran, and wanted to know why the tag was on the cable as the cable marker was correct. This information apparently was upsetting to MPQAD because they knew a nonconformance had existed and they had not issued a conditional release to correct the nonconforming condition (resulting in the MCAR/R No. EJ-2).

Unknown to MPQAD an independent action had been initiated and completed by the electrical discipline cable rework group, resulting in the conflict which was completely unintentional.

2. Release of Equipment from Warehouse:

A piece of equipment was in the warehouse and was tagged nonconforming with both Bechtel and CPCo NCR tags (CPCo NCR No. M01-9-2-158). A conditional release had been obtained for the Bechtel nonconformance, however, a conditional release had not been obtained for the CPCo nonconformance tag. The item was issued from the warehouse. Question was why was the equipment issued without getting the conditional release for the CPCo NCR tag. This item had been investigated independently by Marv Curland, MPQAD Manager, who had come to the conclusion that

confusion had existed and no intent of breaching the CPCo Hold Tag system was apparent.

3. Incorrect Electrical Cable Sizes:

MPQAD through their cable reinspection program identified four cables that were of incorrect size, and informed field engineering of this condition.

Field engineering (electrical) issued Rework Notice #3177 and completed the rework about the same time they received CPCo NCR No. M01-9-2-145, 10/22/82. The cables had not been hold tagged.

Resident engineers, when they obtained the NCR, looked at the cables and saw that the cables were of correct size, apparently unaware that the rework had already been accomplished under field engineering Rework Notice #3177. Resident engineers questioned MPQAD as to why an NCR had been issued as the cables were of correct size. This again is a case of one group not communicating with another resulting in an unintentional conflict.

4. Knowledge of Personnel as to Hold Tag Requirements:

Investigator interviewed craftsmen, a superintendent and field engineers and all indicated awareness of Field Procedure FIG-1.500 and the requirements regarding Hold Tags. Regarding the particular cable marker in question, when the investigator talked to the foreman in charge of the crew that corrected the cable, the foreman indicated that he was aware that a release to go through a hold tag was required and that his crew was aware of such a need. He did not remember who the craftsman was that put the new marker on the cable, however, he did indicate that the G. Hitt memorandum of 11/16/82 may have indicated authorization to change the cable marker.

Lead electrical superintendent, Robert Bane had issued a memorandum on 11/8/82 to all electrical superintendents and general foreman, and lead electrical field engineer Dave Scott, had issued a memo on 11/10/82, to all electrical group leads and all electrical superintendents. Both memos reiterated the need to obtain a conditional release before working on an item tagged with a CPCo Hold Tag. G. Hitt, electrical field engineer who issued 11/16/82 memorandum to replace incorrectly colored cable marker indicated he had not seen the memo of 11/10/82 issued by Dave Scott. There was no indication as to why this occurred since Hitt works for Scott.

5. Bechtel Field Procedure:

Bechtel Field Procedure FIG-1.500, Rev. 1, is the document providing instruction to Bechtel construction personnel and paragraph 2 addresses CPCo QA Hold Tags. This paragraph is reiterated below:

"2. CPCo QA Hold Tags:

- 2.1 Items to which client QA Hold Tags are attached require that Bechtel QA shall be notified to obtain CPCo concurrence prior to accomplishing work other than that work specifically authorized by the Hold Tag."

An interpretation provided to the investigator by Project Field Engineer (J. Gilmartin) is that work authorized by the hold tag would also include a deposition on the corresponding nonconformance. With this interpretation, a field engineer or superintendent could accomplish the work identified in the recommended action block on a CPCo hold nonconformance without obtaining a conditional release to do that work.

6. Bechtel NCR Hold Tags vs. CPCo Hold Tags:

On the site two NCR systems are in existence - Bechtel's and CPCo's.

Both systems utilize similar Hold Tags, each with different "logos", Bechtel and CPCo respectively.

Two important differences regarding the hold tags are as follows:

- a. All Bechtel nonconformances are Hold Tagged.
CPCo nonconformances are not all Hold Tagged per CPCo rules. Existence of CPCo Hold Tags is indicated by checking a Hold Tag block on their nonconformance report and indicating the location of the Hold Tags. The investigator randomly checked 13 CPCo nonconformance reports and 3 indicated Hold Tags were applied.
- b. A conditional release is required for Bechtel nonconformance when a nonconforming item is released from storage for installation, and when work other than to fix the nonconformance is performed on the item. A conditional release is not required to implement an approved disposition to correct a nonconformance.

A conditional release is required for all CPCo nonconformances which are hold tagged.

7. Two Independent Electrical Cable Reinspection Programs

Two independent electrical cable reinspection programs by two separate groups are currently in process at the site and are as follows:

- a. MPQAD sponsored cable routing reinspection program of all Q cables. This includes somewhere between 8,000 and 10,000 cables for about four attributes - cable routing, damage to jacket, cable code and permanent markers.
- b. Bechtel electrical field engineering has a reinspection program in progress to reinspect all Q cables not turned over to CPCo for 24 attributes.

Both programs are checking for some common attributes (i.e. damage to jackets and marker).

Two concurrent reinspection programs may lead to some confusion and mis-communications.

VII. CONCLUSIONS

- A. The Bechtel Electrical Field Engineer, G. Hitt, should have obtained a CPCo conditional release prior to issuing his memorandum of 11/16/82 to correct the incorrectly colored cable marker identified by CPCo NCR M01-9-2-156.
- B. The existence of two separate NCR systems with different rules relative to Hold Tags may lead to future violation of Hold Tag rules.
- C. The Bechtel field procedure FIG-1.500, paragraph 2.1, could be misinterpreted and should be further clarified.
- D. Even though instructions were reiterated via memos from the lead electrical superintendent and field engineer, all field engineers did not receive and/or read them.
- D. Several cases of miscommunications existed (wrong colored marker and wrong size cables) which lead to some degree of misunderstanding. Future miscommunications and/or misunderstandings may result from existence of two independent electrical cable reinspection programs.

VIII. RECOMMENDATIONS

- A. Implement one NCR system on the site or if one system is not feasible, change the rules regarding Hold Tags so identical rules apply to both Bechtel and CPCo Hold Tags. Two systems with separate rules impose additional parameters which require cognizant personnel in both areas. This tends to make the total system more complex rather than more "stream-lined".
- B. Improve communication at the working level between Bechtel electrical field engineering and MPQAD so each group is familiar with the basic activities, work systems and intents of the other group. This might be accomplished by a series of short, structured (agenda) meetings attended by members of each group and chaired by a independent management representative. Subjects might include MPQAD electrical cable reinspection program, Bechtel electrical field engineering reinspection program, and Bechtel electrical cable rework process.

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- C. Provide some additional training/retraining of Bechtel electrical field engineering as to the requirements regarding NCR Hold Tags. This training/retraining should not be accomplished prior to resolution of Recommendation No. 1 above and might be accomplished via implementation of Recommendation No. 2 above.
 - D. Clarify Bechtel Field Procedure FIG-1.500, paragraph 2.1. This should be done in conjunction with resolution of Recommendation No. 1 above.

IX. PERSONS CONTACTED BY INVESTIGATOR

Ed Jones, MPQAD Electrical Group Supervisor
D. Cochran, MPQAD Electrical Engineer
Robert Bane, Bechtel Lead Electrical Superintendent
Steve Poortinga, Bechtel Asst. Lead Electrical Field Engr.
Gary Hitt, Bechtel Cable Rework Engineer
Dave Scott, Bechtel Lead Electrical Field Engineer
Marv Curland, MPQAD Manager
Stan Wishowski, Bechtel Electrical Field Engineer
Joe Butch, Electrical Craft Foreman
Ron Jones, Electrical Craft General Foreman
Buck Prevost, Electrical Craft General Foreman
Dick Pfruender, Electrical Craft Foreman
Hank Simmons, Electrical Craft Foreman
Eugene Quayle, Bechtel Electrical Terminations Lead Engr.
(Recently reassigned to Ann Arbor)
Eugene Smith, Bechtel PFQCE
*Leo Davis, Bechtel Site Construction Manager
*Jack Gilmartin, Bechtel PFE
*Short briefing of tentative investigation results.

X. ATTACHMENTS

1. Consumers Management Corrective Action Request/
Report No. EJ2, 11/22/82 with copy of Bechtel
Field Procedure FIG-1.500, Rev. 1 and Consumers
Nonconformance Report M01-9-2-156, 11/5/82.
2. Consumers Nonconformance Report M01-9-2-158.

3. Bechtel Construction Organization Chart, page 3-3, Electrical Engineering, Rev. 11.
4. Bechtel Action Item QA AI-S-1788 (#J-212) with preliminary response from D. Scott, Bechtel Lead Electrical Field Engineer.
5. Bechtel cable/raceway card requisitions (T-Req) #T4147 with first issue card and second issue card attached.
6. Bechtel memorandum from Gary Hitt to Bob Bane, 11/16/82.
7. Memorandum from Bob Bane to: All Electrical Superintendents and General Foremen, 11/8/82, Subject: QC and MPQAD Hold Tags.
8. Memo from QE (Dave Scott), 11/10/82 to: All Electrical Group Leads and All Electrical Superintendents.