



STONE & WEBSTER MICHIGAN, INC.

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Mr. J. J. Harrison
Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

November 17, 1983
P.O. NO. 14509

Re: DOCKET NO. 50-329/330
MIDLAND NUCLEAR COGENERATION PLANT
MONTHLY THIRD PARTY ASSESSMENT MEETING

The protocol governing communications for the Remedial Soils and Construction Completion Programs at the Midland Plant, specifies a monthly meeting to discuss third party assessment activities and assigns preparation of the minutes of those meetings to Stone & Webster.

Enclosed are minutes of the meeting held on November 10, 1983.

A. P. Amoruso
Project Manager
CIO

A. S. Lucks
Project Manager
Underpinning and Remedial Soils

Enclosures

cc:
JWCook, CPCo
DLQuamme, CPCo
RAWells, CPCo

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MINUTES OF THE MEETING ON NOVEMBER 10, 1983

INDEPENDENT ASSESSMENT OF UNDERPINNING AND REMEDIAL SOILS WORK

Purpose

To discuss Third Party Overview activities of Stone & Webster (S&W) and observations encountered regarding underpinning and remedial soils work.

Summary

A.S. Lucks opened the Assessment Teams presentation by describing the tracking and closure system for open items identified during the daily meetings. This system was developed to address the concerns expressed by the Nuclear Regulatory Commission during the October Public meeting. Items are now classified as Open, Closes Item xx-xx, Closed, Information, and Opinion. Open items will not be closed until the required action is verified by the Assessment Team. Verbal commitments will no longer be used as a basis for closing open items.

The revised classification and tracking system has been in use for the last four weeks and Assessment Team procedures are being revised to reflect this new system.

A.S. Lucks also stated that past weekly reports are being reviewed to determine if open items have been closed without verification of required action. The review of reports 30 through 57 has been completed and five such items have been identified. The required action had not been taken in only one of these five items. Reports 1 through 29 are

currently being reviewed.

P.J. Majeski described the Assessment Team activities during the period October 9 through November 5, 1983, as follows:

- Due to Stop Work Order presently in effect there has been little progress in the underpinning since last month. For the auxiliary building, sixteen underpinning piers have been completed and the Pier E/W8 grillages have been installed.
- Typical Assessment Team activities included overseeing reinforcing installation for the Borated Water Storage Tank (BWST) foundations, removal of 36 inch diameter casings, interorganizational weekly meetings, installation of struts between underpinning piers, concrete crack monitoring, review of previous weekly reports for verification of closure of open items, and the change document Stop Work Order.
- The Assessment Team has found that operations associated with the above mentioned activities were being performed in accordance with project procedures and good practice with two exceptions. The first exception was the slurring and concreting operations associated with the 36 inch diameter casing removal. The contractor took steps to make sure that the hole was completely backfilled. The slurring procedures are being reviewed. The second exception concerned the most recent crack mapping at the auxiliary building. The mapping had been performed using a procedure that had a "hold" indicated on a relevant part of the procedure. This resulted in the issuance of Nonconformance Identification Report No. 16. It was noted

that the no deficiencies were noted in the actual mapping operations.

- The current status on Nonconformance Identification Reports (NIRs) is, NIR No. 15 has been closed, NIR No. 14 remains open but a response has been received by the Assessment Team, and NIR No. 16 has been issued.
- There are currently 17 open items requiring action or responses by Consumers Power Company (CPCo) or the Contractor.

A.S. Lucks described the results of the Assessment Team overview of the change document Stop Work Order and the plan of action that has been developed to address the potential problem. A Stone & Webster Engineering Assurance specialist visited the site to assist the Assessment Team in this review. The Assessment Team determined that:

- The extent of the potential impact of the problem cannot be determined until the change documents have been evaluated. Therefore, the Stop Work Order was warranted.
- The plan of action that has been developed to the identification, evaluation, and correction of potential problems is thorough and appropriate. The plan provides for trackability of corrective actions.
- The organizations involved in executing the plan realize that changes to the plan might be required based upon the findings.

All of the parties involved in work related to the resolution of the Stop Work Order cooperated with the Assessment Team staff making this review.

A.S. Lucks described two Assessment Team concerns that should be addressed during the resolution of the Stop Work Order. The first concern involves

the large number of change documents that are attached to some drawings (this is also a concern that has been expressed by Dr. Landsman). The second concern involves the time delay between interim and final approval of Field Change Requests (FCRs).

Questions and Answers

Mr. J.J. Harrison asked several questions concerning items included in Assessment Team Weekly Reports Nos. 55 through 58:

1. There have been several instances where the Assessment Team has identified time delays in the underpinning work. For example, in Weekly Report No. 55 there was an observation on a delay due to a concrete pour card not being signed off in a timely manner. Is Stone & Webster tracking such items and what is CPCo doing to respond to these observations? Stone & Webster stated that time delays are continuing to be evaluated as part of the ongoing assessment. If a delay impacts quality it will be identified as an Open Item or an NIR. CPCo stated that they were aware of the Assessment Teams concerns with respect to time delays and were trying to improve. For example, the interorganizational weekly meetings should help to improve performance in this area.
2. On page 3 of Weekly Report No. 55, the Assessment Team commented on problems with U.S. Testing. Has there been progress in correcting the problems? Stone & Webster stated that the Assessment Team is continuing to follow this item. Progress is being made in correcting the problems. The problems include management problems, training of staff, and the availability of certified staff when required.

3. Item 59.17 in Weekly Report No. 59 concerns Nonconformance Reports on concrete for Carlson meters. Does this have anything to do with U.S. Testing? CPCo did not believe that this item concerned U.S. Testing but a positive answer could not be given. This item will be responded to at the December Public meeting.
4. Item 55.14 in Weekly Report No. 55 refers to correspondence between MPQAD and FSO on PQCI's that require updating. Could Stone & Webster explain the purpose of this communication? The purpose of the communication is to provide MPQAD advance warning of upcoming work that may require revision of PQCI's and retraining of inspectors. It is for scheduling purposes and intended to help in avoiding delays.
5. Item 55.15 in Weekly Report No. 55 identifies a problem with a Fox-Howlet couplers being installed by a noncertified installer. Did Stone & Webster identify this problem before the NCR was initiated? No.
6. Item 55.20 in Weekly Report No. 55 refers to a work stoppage at the Standish fabrication shop. What was the problem and was it a formal Stop Work Order? The work stoppage arose after a QC Inspector discovered an Incorrect Design Change Notice. Inspection of the work could not proceed and Standish then elected to stop work. It was not a formal Stop Work Order. Mr. Harrison commented on the importance attached to the phrase "Stop Work" and the problems that could be caused by incorrect usage.
7. Item 55.22 in Weekly Report No. 55 the Assessment Team questioned why the Contractor removed beam seats that had previously been

installed. Item 55.22 is closed with the response given in 55.30. Explain the basis for closing Item 55.22. The Contractor removed the beam seats upon realizing that because the required levels of the beam seats were indeterminate and they might not have been located within the required tolerances. When the required level was determined, the beam seats were reinstalled in accordance with the required tolerances. This explanation answered the original question asked in Item 55.22 thus closing the item.

8. In Weekly Report No. 55, Item 55.27 refers to a type of audit report issued by field engineering on U.S. Testing. Is field engineering now conducting audits? This was not a formal audit but a result of a review of U.S. Testing operations by field engineering. There were no quality items identified. A copy of the observations was available to MPQAD. Mr. Harrison requested that MPQAD compare their audit findings to the field engineering observations and report on the comparison at the December Public meeting.
9. Item 55.32 in Weekly Report No. 55 mentions that prior to discharging concrete the mixing drum on the concrete truck was observed to be stationary. This has been a recurring problem. What is CPCo doing to avoid recurrence of this problem? CPCo will evaluate this problem and report on it at the December Public meeting. Stone & Webster noted that this item is classified as open and is being tracked. FSO is preparing a response to the Assessment Team.
10. Item 55.33 in Weekly Report No. 55 mentions a new piece of equipment may be used for concrete removal. Could CPCo

described the new equipment? CPCo stated that they are evaluating several types of skid mounted industrial type impact hammers.

11. In Weekly Report No. 56 the Assessment Team identifies concerns with the slurring and concreting associated with the 36 inch diameter casing removal. Are these concerns being tracked by Stone & Webster? The items concerning the slurring procedures are being tracked. Our concern with respect to the lag between reaming and backfilling with concrete was resolved by the drillers checking to make sure that the hole remained open.
12. Item 56.1 in Weekly Report No. 56 identifies sub-items A through F. Only sub-item F is identified as an Information Item. What about A through E? The Classification of Information Item was intended to apply to all sub-items.
13. Item 56.32 in Weekly Report No. 56 refers to the use of green tags with QC hold tags. Can you explain when green tags are used? The green tags were used to identify the items not impacted by the hold tag. They were only in use for a few weeks. The use of green tags were discontinued because they were not included in the non-conformance procedures.
14. Page 3 of Weekly Report No. 57 refers to the change document Stop Work Order. Is Stone & Webster evaluating the action being taken by CPCo? Yes, this was covered during the Stone & Webster presentation. Will this evaluation continue until the corrective action is completed? Yes. Can CPCo give the projected date for completion of the action? Everything should be completed by December 1. The soils related action could be completed between November 17 and December 1. Will it include the effect on non-soils related items as they effect soils? Yes.

15. Item 57.7 in Weekly Report No. 57 refers to the phased inspection of the reinforcing steel for the Borated Water Storage Tank foundations. How will this ensure that the reinforcing steel inspected in the initial phases will not be disturbed prior to completion of the work? The concrete is being poured in circumferential segments so as soon as a segment of reinforcing steel is inspected, concrete will be poured in that segment.
16. Item 57.10 in Weekly Report No. 57 concerns lessons learned from the auxiliary building underpinning. It states that no formal program exists for evaluating and transferring lessons learned to date. Mr. Landsman requested that all lessons learned on the auxiliary building underpinning be incorporated into the Service Water Pump Structure underpinning. CPCo agreed to work with the NRC on this.
17. Item 57.11 in Weekly Report No. 57 concerns welding required for lagging at the Service Water Pump Structure. Mr. Landsman pointed out that he had the same observation.
18. Item 57.13 in Weekly Report No. 57 mentions additional penetrometer testing. Why are additional penetrometer tests being conducted? The testing is a continuation of the existing program that was interrupted by the drilling Stop Work Order.
19. Item 57.14 in Weekly Report 57 closes out Item 57.11 as discussed above. An FCR is being prepared to reduce the amount of welding. Should there also be an NCR issued? No. The welding was being completed in accordance with the existing documents.

20. Item 57.25 in Weekly Report 57 concerned the use of fly ash for back-fill and for backpacking behind lagging of the Service Water Pump Structure. Explain the difference between the use of fly ash that requires NRC approval on a case-by-case basis and the backpacking use at the Service Water Pump Structure that does not require NRC approval. NRC approval is required for use of fly ash for soil stabilization in area fills. The use at the Service Water Pump Structure lagging is a temporary backpacking use and does not require approval.
21. Item 57.60 in Weekly Report No. 57 deals with the certification of QC staff and requests further information on the availability and use of Level III Certified Staff. Has CPCo responded to this request? No. Has work that required a Level III Certified Signature been affected by this item? No. Will this be verified before the item is closed? The Assessment Team's concern is not that staff signing off on various items are not certified to Level III but we would like to see organizationally how Level III advice is made available to Level II and Level I Staff.
22. Item 57.70 in Weekly Report No. 57 concerns QC inspection of pre-heat on non-structural welds. Is QC verifying the preheat on these welds? Yes. The preheat is 100 percent verified. The final weld is inspected by the field welding engineer. QC verifies that this inspection has been done by verifying that the field welding engineer has signed off for the weld. Based upon a possible concern that this sounds as if field engineering is doing QC functions CPCo was asked to respond more fully to this idea at the December Public meeting.

23. In Weekly Report No. 58, page 2, it is noted that with reference to the change document Stop Work Order, the effort to date has been directed towards change documents that are a problem. How do you know what is a problem unless every change document is reviewed? All change documents are being reviewed as part of Phase I of the action plan. The problem change documents identified in Phase I will then be evaluated in Phase II.
24. Item 58.4 in Weekly Report No. 58 mentions that approximately 500 change documents have been reviewed and 30 percent had some type of problem but only 6 percent required any form of corrective action. What type of problems existed that did not require corrective action? The numbers given were very preliminary and based upon an initial review, more current data is now available. The 30 percent represented potential problems. Mr. Harrison requested that this item be discussed in more detail at the December Public meeting with specific numbers related to the soils work.
25. Item 58.12 in Weekly Report No. 58 identified an Assessment Team concern with respect to the number of change documents attached to drawings. The NRC is still concerned about this item. This is an Assessment Team Open Item and the concern is being addressed by CPCo.
26. Weekly Report No. 59, page 2, Item 59.5, and Item 59.18 deal with Assessment Team concerns with respect to crack mapping. These items raise concerns with respect to the status of the crack mapping. CPCo should address these concerns before the lifting of the Stop Work Order.

27. With reference to the closing of Open Items, will the Assessment Team closure take place after action is taken? Yes.
28. With reference to the review of previous Weekly Reports for Open Items that were closed without verification of required actions, how many items have been identified and how will they be documented? Five items without verification of required actions have been identified to date. They are being listed as Open Items in the revised tracking system.
29. With reference to the Assessment Team report entitled, "Evaluation Change and Non-conformance Documents," will the NRC routinely receive copies of such reports? In accordance with Assessment Team Procedures, the NRC will receive copies of all reports. Have there been other reports? There have been no other free standing special reports. There might have been shorter reports attached to the Weekly Reports. The Assessment Team should be prepared to discuss this report at the December Public meeting.

The discussion of the soils work concluded with the following statement by Mr. J.J. Harrison:

"I have a few general comments, and then we will move on to the CIO area. I want to point out that Stone & Webster continues to identify problems which all seem to relate to various delays caused by lack of planning or coordination of activities, lack of action or taking positive action in given areas. To me, this indicates a continuing lack of attention to detail, and in general, the management of this activity still needs improvement.

Mr. Mooney stated a few minutes ago -- earlier in this meeting that Consumers Power did not wish to act expeditiously in resolving issues. They wanted to make sure they do it right.

And in regards to the statements that Consumers Power Company offered in the newspapers yesterday about the NRC being the delay, I would like to simply say that we also like to act expeditiously, but we also like to do the job right the first time.

I would expect Consumers Power Company to act on this issue and to act responsibly and to stop passing the buck and placing the blame on the NRC."

Required Actions

The following actions are required by the Assessment Team:

1. Present additional information on Item 59.17 at the December Public meeting,
2. Present an update of the Status of the Stop Work Order resolution activities at the December Public meeting,
3. Discuss the report entitled "Evaluation of Change and Non-conformance Documents" at the December Public meeting.

The following actions are required by CPCo:

1. MPQAD will compare the findings from their audit of U.S. Testing with the field engineering observations of U.S. testing operations (Refer to discussion item 8). The results of this comparison will be presented at the December Public meeting.
2. At the December Public meeting CPCo will report on an evaluation of the concrete truck mixer drum rotation problem discussed above in item 9.
3. CPCo agreed to make sure that the lessons learned in the underpinning at the Auxiliary Building are transferred to the Service Water Pump Structure.

4. At the December Public Meeting CPCo will respond to the NRC concerns with respect to the QC inspection of non-structural welding on Q materials.
5. CPCo will address concerns expressed with respect to crack mapping before the Stop Work Order is lifted.

MINUTES OF THE MEETING ON NOVEMBER 10, 1983

STATUS OF CONSTRUCTION IMPLEMENTATION OVERVIEW (CIO) PROGRAM

Purpose

To discuss Third Party Overview activities of Stone & Webster (S&W) and problems encountered regarding the Construction Completion Program (CCP) during October 1983.

Summary

Mr. A. P. Amoruso, Project Manager for the CIO Program, presented a summary of Program activities for October 1983. Three main topics were covered:

• Assessment Activities

Due to stop - work orders involving concerns about the control of design changes, assessment efforts continued to be focused in October on monitoring management meetings, checking preparations for the statusing and verification part of the Construction Completion Program (CCP), and evaluating Quality Assurance and Construction Training Programs.

Thirty-one management meetings were monitored to check attention being given by management to current problems and the soundness of corrective measures being implemented. Some 550 hours were expended checking prerequisites to the statusing and verification effort to identify potential weaknesses that should be followed during accomplishment of those activities. Three training presentations involving the crafts were evaluated to check the quality of formal training being given under the CCP. Some 770 hours were expended updating the 109 inspection checklists to be used by the CIO team.

Assessment activities involving the three areas outside the CCP, but within the scope of the CIO, were limited during October. Because previous checks of the Spatial System Interaction Program did not identify any significant problems, surveillance activities for this program were reduced. Because of stop-work orders that affected the Nuclear Steam Supply System and Heating, Ventilation, and Air Conditioning (HVAC) program, surveillance activities for those programs were reduced. Thirty-six training records from the HVAC program were checked to determine compliance with requirements. Tensile tests of 90 welding specimens from the HVAC program were witnessed to verify that welds made under superseded procedures met design requirements.

• Observations, Nonconformances, and Hold Points

Two observations were made during October, both related to training records. One of the observations involved four nonconformances in Quality Assurance Department training records. The other observation was a nonconformance in Construction training records. A third observation remained open from the last meeting. That observation addressed the need to develop a vendor equipment verification program.

Four of the six nonconformances that have been identified since the beginning of the CIO Program remain open. The four address discrepancies in training records. A seventh nonconformance that addresses discrepancies in the training records of supporting groups was issued in November and will be discussed at the next meeting.

Four hold points that were established by the CIO Program remain open. Two of the hold points require correction of training records before the people involved can be used in the CCP. One of the hold points requires

the development of a vendor equipment verification program before remaining work can start. The fourth hold point requires a review of management actions after completing the statusing and verification effort but before starting remaining work.

- Highlights of October

The original plan for assessing the CCP was to check that the latest approved documents were being used in the field. This was to be accomplished by comparing field holdings against the master project register. This plan will still be followed to ensure that corrective action for the difference between field and project engineering FCR/FCN registers has been effective.

An anonymous telephone call was made to the CIO office on October 26, 1983, alleging that welding had been performed contrary to authorized procedures; i.e. numerous carbon steel socket welds in the Turbine and Auxiliary Buildings had been made by STICK welding and repaired by TIG welding. The call was reported to the site NRC office and Consumers Power Company, and the CIO conducted an investigation. The results of the investigation were that some socket welds had been made as alleged but nothing was wrong with welding in that sequence. The ASME Code and Bechtel Technical Specification for welding authorized that sequence.

The discrepancies noted in training records for Quality Assurance Department and Construction personnel are administrative in nature. Consumers Power Company has provided actions being taken to correct Quality Assurance records, and the CIO concurs in those actions. A reply that addresses corrective actions for Construction training records is expected shortly.

The plan for staffing the CIO team was stated at the last meeting as reaching 21 people by the end of October. This plan has been modified due to the stop-work orders. Seventeen people are currently assigned with more people to be added as CCP activities dictate.

During last month's meeting, questions were asked about craft training and the adequacy of the training matrix. Three training sessions for the crafts were monitored and evaluated as satisfactory. Craft training records will be checked after the records are assembled. The matrix was checked to ensure that applicable procedures were covered and that an adequate level of training had been prescribed. Procedural coverage was evaluated as satisfactory. Four out of 50 items sampled in the matrix were evaluated as requiring an increased level of training. Additional checks on the matrix are on-going.

Questions and Answers

- Mr. J. J. Harrison, NRC, asked why the issue on welding criteria in Project Quality Control Instructions (PQCIs) had been closed out in August but had to be reopened in October because corrective action had not been completed. Mr. A. P. Amoruso, S&W, replied that an observation had been opened in early August addressing the potential problem of having welding criteria in multiple PQCIs. The observation was classified as a Request for Clarification and was closed at the end of August when Consumers Power Company provided clarification about the action they intended to take. In October, Consumers Power modified their plan and that modification was reported in CIO Report Number 18. The observation had not been maintained open because there was nothing wrong with having welding criteria in multiple instructions as long as all the instructions

were maintained up-to-date. A discussion then took place about the need to keep such information/clarification items open until intended actions are completed. The topic was tabled until the December meeting. As a second part of the question, Mr. Harrison asked Consumers Power Company (CPCo) why the stop-work order was not issued until November 3rd although the problem had been identified in August and re-identified in October. Mr. R. A. Wells, CPCo, replied that the first look at the item did not show anything necessarily wrong but did show that some clarification was needed. Later, concerns about some specific areas developed. Therefore, use of the PQCI's was stopped until all issues are clarified.

- Mr. J. J. Harrison, NRC, referred to CIO Report Number 20 and the statement made at a meeting that all inaccessible items did not have to be evaluated during Phase I of the CCP. He asked Consumers Power Company when the evaluation was going to be done. Mr. R. A. Wells, CPCo, replied that the statement at the meeting pertained to releasing new work and resulted from an understanding that inaccessible items would not have to be addressed until all accessible items were completed. He said that the statement would be looked at again.
- A member of the Public asked if any changes to original procedures were not being followed regarding the investigation into welding that was initiated after an anonymous telephone call was received. Mr. J. C. Thompson, S&W, replied that the investigation showed that nothing wrong was done.

Action Items

- S&W review method of classifying and tracking observations and discuss at December meeting.
- Consumers Power Company discuss at the December meeting when inaccessible items will be evaluated.