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SUBJECT: Responds to NRC 890501 ltr re violations noted in Insp Repts
 50-315/88-28 & 50-316/88-32.

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AEP:NRC:1060N

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
INSPECTION REPORTS 50/315/88028(DRS) and
50-316/88032(DRS); RESPONSE TO VIOLATIONS

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Attn: A. B. Davis

June 2, 1989

Dear Mr. Davis:

This letter is in response to Mr. H. J. Miller's letter dated May 1, 1989, which forwarded the report of a special safety inspection conducted by members of your staff from December 12, 1988 through March 16, 1989 on activities at Cook Nuclear Plant Units 1 and 2. The Notice of Violation attached to Mr. Miller's letter identified three violations in the area of design control. In addition, Mr. Miller's letter requested responses to certain unresolved items. The attachments to this letter address the specific violations cited and the unresolved items to which a response was requested. An extension of the due date of our response until June 2, 1989, was requested from Region III and subsequently approved.

We also note the overall concern expressed in the inspection reports as to the adequacy of Cook Nuclear Plant design practices, and in particular to the design of installed piping systems. We have therefore included a summary discussion of actions initiated to confirm the adequacy of installed piping systems and to further verify the acceptability of our past design control process. These actions were presented to members of your staff in a meeting on May 18, 1989 at the Region III offices. The recently implemented initiatives serve as a supplement to established internal programs to identify and correct deficiencies in our design control process. These supplemental actions are intended to conclusively demonstrate the adequacy of as-installed designs and to identify and correct any additional areas in the design control process found to be deficient (i.e., beyond those cited in the Notice of Violation).

The Executive Summary included in Mr. Miller's letter identified strengths in the technical competency of our engineering personnel and the qualification and experience of Cook Nuclear Plant craft personnel. It was also noted that the recent reorganization of various AEPSC engineering disciplines into one nuclear engineering department provides the potential for improvements in the performance of the engineering function. Concern, however, was raised in the areas of quality of design documentation, including documentation of engineering judgements made in the design process; adequacy of design verification and checking activities; definition of design interfaces between AEPSC and Cook Nuclear Plant; and the overall effectiveness of design process controls. Management has addressed these weaknesses by taking the following actions:

1. The new Nuclear Engineering organization is implementing uniform procedures to control engineering activities.
2. A team of multi-discipline engineers have been assigned to our QA organization to carry out performance-based engineering audits/surveillances. These engineers will be on two-year rotating assignments and we will continue this practice in the future as part of their career path development.
3. We recently completed a three-day training program on performance based audits which specifically addressed auditing of engineering activities. The training was provided to both the AEPSC QA organization and our Cook Nuclear Plant Site QA group.
4. Our General Procedure (GP) 3.0 has been revised to specifically require documentation of the basis for changes or deviations from design requirements. GP 3.1 was revised to require pertinent documents to be included or referenced in RFC packages.
5. We have retained an outside consultant to review, on a sample basis, the adequacy of current design methodology and calculations. The QA engineers are now planning periodic reviews of RFC documentation as part of a surveillance program.
6. A detailed audit to determine the effectiveness of each major area of the design change process covering all areas of engineering will be completed by September, 1989.

Mr. A. B. Davis

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7. For the current Cook Nuclear Plant Unit 1 outage, we appointed an outage manager as a full-time assignment. Teams of engineers and designers were assigned to the site in support of the modification and inspection work.

We have seen definite improvement as a result of these actions. In addition, the programs outlined in the first attachment to this letter are intended to further address the identified weaknesses and potentially disclose other areas in the design process in need of improvement.

This document has been prepared following Corporate procedures that incorporate a reasonable set of controls to ensure its accuracy and completeness prior to signature by the undersigned.

Sincerely,



M. R. Alexich
Vice President

MPA/eh

Attachments

cc: D. H. Williams, Jr.
W. G. Smith, Jr. - Bridgman
R. C. Callen
G. Charnoff
G. Bruchmann
A. B. Davis - Region III
NRC Resident Inspector - Bridgman

ATTACHMENT 1 TO AEP:NRC:1060N
CURRENT AEPSC INITIATIVES IN DESIGN CONTROL

Background

AEPSC management has been actively involved in implementing design control process improvements for the past several years. This management involvement has occurred in response to changing regulatory requirements, revisions in industry design standards, concerns identified by the NRC and areas of needed improvement identified by our internal programs. At the time of completion of the most recent NRC inspection of AEPSC, rapid management action was taken to increase the level and broaden the scope of our efforts to address design control concerns. A multi-discipline Design Confirmation Task Group was assembled to prepare detailed recommendations to be implemented in order to confirm the overall adequacy of our installed systems and design activities, as well as to expedite the implementation of any required enhancements to our design control program. The task group recommendations were provided to AEPSC management on March 30, 1989. Details of task group recommendations and actions completed to date were presented to NRC Region III on May 18, 1989.

Design Confirmation Task Group Recommendations

A management steering committee comprised of representatives from the AEPSC Design Division, Nuclear Engineering Department, Quality Assurance Division and Nuclear Safety and Licensing Section was established. The management steering committee is responsible for the coordination and direction of the implementation of task group recommendations. Steering Committee members are at the Assistant Section Manager level or above.

The recommendations of the task group are directed to the following areas: (1) address the specific concerns raised by NRC Region III as to the adequacy of design and installation of large and small bore piping systems at the Cook Nuclear Plant; (2) assess of the acceptability of existing design process controls as they are currently implemented throughout the major engineering areas at AEPSC; (3) confirm that inspections of piping supports conducted as required by IE Bulletin 79-14 adequately identified support system deficiencies; (4) enhance the problem report trending program to ensure a reliable early indication of design control adverse trends; and (5) evaluate in-service inspection (ISI) piping support system findings to determine if the ISI program should be expanded.

Implementation of Design Confirmation Task Group Recommendations

As a result of AEPSC management endorsement of the Design Confirmation Task Group recommendations, and in conjunction with other ongoing programs, the following actions have been initiated or completed:

- (1) During the ISI inspection of piping supports required by ASME Section XI, approximately 600 of the 2000 piping supports in our ISI program have been examined to date with only one case observed in which support modification was required to return the support to within its design safety function. The remaining supports will be inspected during our current 10 year ISI interval.

The evaluation of the extent of our ISI hanger inspection program is continuing. At present we are proceeding with the program as required by ASME Section XI. Further assessments based on our findings during the current Unit 1 outage as well as future outages will be made as necessary.

- (2) The results of our reanalysis of small bore piping systems in which Copes-Vulcan air-operated valves are installed showed that in no case would the as-installed configuration lead to a loss of system function. This reanalysis used new information from the manufacturer as to valve weight and location of center-of-gravity. These results, in conjunction with (1) above, provide us an assurance of the adequacy of as-installed small and large bore piping systems at the Cook Nuclear Plant.
- (3) A representative cross-section of large bore piping systems has been selected for detailed field walkdown and reanalysis of the as-found configuration. This reanalysis is intended to: (a) confirm as-installed piping/piping support system design acceptability; (b) identify deficiencies, if any, found in the calculation/analysis process for piping and piping support systems affecting the adequacy of the as-installed design; and (c) provide a further evaluation of the adequacy of walkdowns performed in response to IE Bulletin 79-14. The large bore piping system walkdowns are targeted for completion in October, 1989 with the analysis and report completed by the first quarter of 1990.
- (4) A detailed audit will be conducted to assess the overall design control process. The audit will address each of the major engineering disciplines (e.g., electrical, I&C,

mechanical) and the various phases (e.g.; scoping, design development) of the design process. The audit is targeted for completion in September, 1989.

- (5) An evaluation to confirm the acceptability of installed field run (small bore) piping systems will be performed. During this evaluation, 100% of installed small bore systems will be surveyed for critical attributes. The worse cases identified on the basis of these critical attributes will be analyzed by our consultant to bound the remaining installed small bore piping systems. This approach was used as part of the Sequoyah restart program and is being used elsewhere. This will upgrade the documentation and confirm the acceptability of the installed small bore piping systems. Additionally, this contract will provide clear implementing procedures for future safety related and safety interface field run piping work. Because the performance of a complete walkdown of these systems is in some cases dependent on a plant refueling outage, we plan to conduct the field survey in stages and anticipate completion of this task and issuance of the final report approximately 3 to 4 months after the Unit 1 1990 refueling outage.
- (6) As part of an existing effort to strengthen our problem report trending program, we have recently (April 26, 1989) adopted the cause code categories suggested by INPO. The new cause codes are being applied to problem reports previously generated in the area of design control. A trends report in the design control category, based on the new INPO cause codes, is targeted for issuance to AEPSC management in July, 1989. The new cause code categories will formally be applied to future problem reports.
- (7) In the area of piping and piping support system design, a consolidated design basis document (delineating codes, standards, etc., applicable to Cook Nuclear Plant piping/support design) and a design methodology document (specifying design responsibilities and organizational interfaces) are under development. These documents are targeted for completion in August and September, 1989, respectively.

Conclusion

Completion of the actions discussed above, including initiating any necessary corrective actions in conjunction with our existing internal review programs, will demonstrate that our process design

controls have been adequate to assure safe operation of the Cook Nuclear Plant. Items (1) and (2) above have provided assurance of the adequacy of as-installed small and large bore piping systems. Completion of the remaining items is expected to result in lessons learned about the design control process that can be applied to other engineering areas.

ATTACHMENT 2 TO AEP:NRC:1060N
RESPONSES TO NOTICE OF VIOLATION

NRC Violation 1a

"10 CFR 50, Appendix B, Criterion III, as implemented by the D. C. Cook Operations Quality Assurance Program requires that measures be established to assure design bases are correctly translated into drawings and that the design adequacy is verified and checked.

Contrary to the above, design bases were not correctly translated into drawings and design adequacy was not verified and checked in that:

- a. For Request for Change (RFC) No. 12-2718 a technical review was not performed nor documented for the substitution of lower grade nuts.

This is an example of a violation of 10 CFR 50, Appendix B, Criterion III (315/88028-01A; 316/88032-01A)."

Response to Violation

During development of RFC 2718, valve manufacturers' concurrences were sought on the use of ASTM A194 Grade 6F (416) nuts. Although most concurred, over half responded with alternative materials or expressed concern over lubricity or susceptibility to corrosion. On this basis the choice of nut materials was reevaluated, and in Revision 2 of RFC 2718 dated April 23, 1985, ASTM A-194 Grade 8F (303) was substituted for Grade 6F. The documented basis for this substitution in the RFC package was reduced galling potential and increased corrosion resistance. As stated in the inspection report, the documented basis did not address the lower strength of Grade 8F.

(1) Corrective Actions Taken and Results Achieved

As stated in the inspection report, additional evaluations were performed which documented the basis for acceptability of the lower strength material.

(2) Corrective Action Taken to Avoid Further Violation

Similar concerns regarding undocumented engineering judgments were raised in our self-initiated Safety System Functional Inspection in 1987. As a result, the Chairman of the Change Control Board issued a letter dated January 6, 1988 to all divisions involved in the

design change process emphasizing existing programmatic controls governing documentation and traceability of design inputs and design analyses. On August 25, 1988, the general procedure on design control was revised to require documenting the engineering justification for deviations from approved design documents.

(3) Date When Full Compliance Will be Achieved

Full compliance was achieved on February 17, 1989 when the engineering evaluation was completed justifying the acceptability of the lower strength nut material.

NRC Violation 1b

"10 CFR 50, Appendix B, Criterion III, as implemented by the D. C. Cook Operations Quality Assurance Program requires that measures be established to assure design bases are correctly translated into drawings and that the design adequacy is verified and checked.

Contrary to the above, design bases were not correctly translated into drawings and design adequacy was not verified and checked in that:

- b. For RFC No. 01-4091, the required pipe reinforcement calculation was not performed and the size of the reinforcement weld and socket fillet welds were not specified. Furthermore, the fillet size for socket welds was not specified for any RFC examined during this inspection.

This is an example of violation of 10 CFR 50, Appendix B, Criterion III (315/88028-01B; 316/88032-01B)."

Response to Violation

(1) Corrective Actions Taken and Results Achieved

RFC 01-4091 is currently scheduled for installation in 1991. Site design will provide design and related calculations for the 1" diameter branch connection to the 3" diameter header.

(2) Corrective Action Taken to Avoid Further Violation

Joint details have been developed by the Cognizant Engineer-Welding specifying weld sizes for socket welds, flange welds, half couplings, and integrally reinforced fittings. These joint details are being incorporated into the AEP Welding Manual and will be implemented through formal plant procedures.

As discussed in Attachment 1, an engineering and design review of piping methodology will be performed. This review will help ensure that interfaces and information flow exist to ensure that piping and piping support design methodology is a controlled and systematic evolution.

(3) Date When Full Compliance Will Be Achieved

Design work has not yet begun for 1991 RFCs. It is anticipated that design work for the subject branch connection will be completed by June 30, 1990.

As noted in (2) above, joint details have been developed by the Cognizant Engineer-Welding and will be included in the next revision to the AEP Welding Manual, scheduled for June 23, 1989. The joint details will be implemented by plant procedure at that time.

As discussed in Attachment 1, preparation of a design piping methodology document is targeted for completion by September 1989.

NRC Violation 1c

"10 CFR 50. Appendix B, Criterion III, as implemented by the Cook Nuclear Plant Operations Quality Assurance Program requires that measures be established to assure design basis are correctly translated into drawings and that the design adequacy is verified and checked.

Contrary to the above, design bases were not correctly translated into drawings and design adequacy was not verified and checked in that:

- c. For RFC DC-02-2892, the deflection calculation for support R936, did not properly account for the applied loads and contained a non-conservative mathematical error.

This is an example of a violation of 10 CFR 50, Appendix B, Criterion III (315/88028-01C; 316/88032-01C)."

Response to Violation

We had stated during the inspection that the calculation in question was performed to obtain y-displacement into x-load on the horizontal members which are comparatively longer than other components. Based on the small displacement value obtained, and knowing that the vertical member is stiffer, it was judged by a design engineer that other component displacements did not need to be calculated. The judgment that the other calculated displacements would be smaller than the allowable displacement was confirmed by later calculations. This engineering judgment, however, was not documented in the RFC package.

(1) Corrective Action Taken and Results Achieved

An analysis has been performed to verify the total y-displacement. This is found to be well within the allowable displacement.

(2) Corrective Action Taken to Avoid Further Violation

A representative sample of calculations developed in the last six months is currently under review by an outside consultant to determine the extent of calculation deficiencies. Corrective actions identified as a result of this review will be implemented as required. Training sessions are also planned to reinforce our pipe support calculation guidelines to design personnel. This program will address specific items to be considered when checking pipe support calculations. In addition increased emphasis has been given to documentation of engineering judgements and their bases when performing pipe support analyses through a recent revision to our general procedure on design control which now explicitly requires that such judgements and their bases be documented.

(3) Date When Full Compliance Will Be Achieved

Full compliance will be achieved by June 30, 1989, when the new calculations to verify the total y-displacement for pipe support R936 has been verified and incorporated as a formal part of the RFC DC-02-2892 package.

NRC Violation 1d

"10 CFR 50, Appendix B, Criterion III, as implemented by the Cook Nuclear Plant Operations Quality Assurance Program requires that measures be established to assure design bases are correctly translated into drawings and that the design adequacy is verified and checked.

Contrary to the above, design bases were not correctly translated into drawings and design adequacy was not verified and checked in that:

- d. For RFC No. 02-2892, the location specified for installation of support R926 was on the wrong piping system.

This is an example of a violation of 10 CFR 50, Appendix B, Criterion III (315/88028-01D; 316/88032-01D).

Response to Violation

(1) Corrective Actions Taken and Results Achieved

Upon confirmation that the support had been installed in the wrong location, a condition report (CR) was initiated by plant personnel. At a minimum a support is to be installed in the proper location and design drawings will be revised as required.

(2) Corrective Action Taken and Avoid Further Violation

An effort has been initiated to assure consistency between the various design documents issued to the plant. Plant personnel will be reminded to obtain clarification of any identified inconsistencies in design documentation before installation proceeds.

(3) Date When Full Compliance will be Achieved

Full compliance will be achieved by August, 1989 when the support will be installed on the correct pipe.

NRC Violation 1e

"10 CFR 50, Appendix B, Criterion III, as implemented by the Cook Nuclear Plant Operations Quality Assurance Program requires that measures be established to assure design bases are correctly translated into drawings and that the design adequacy is verified and checked.



Contrary to the above, design bases were not correctly translated into drawings and design adequacy was not verified and checked in that:

- e. For RFC No. 12-2665, the location specified for installation of support 12-ACS-L912 was different from the location assumed in the analysis by 46 inches. For support 12-CS-L916 structural components were not evaluated and proper loads were not included in evaluating the base plate and anchor bolts.

This is an example of a violation of 10 CFR 50, Appendix B, Criterion III (315/88028-01E; 316/88032-01E)."

Response to Violation

The location of Pipe support 12-ACS-L 912 as utilized in the pipe stress analysis was not correctly incorporated into the hanger detail location plan. However, an analysis of the existing configuration was performed during the Region III inspection that showed no impact on the safety design function.

(1) Correction Actions Taken and Results Achieved

For pipe support 12-ACS-L912, the pipe stress reanalysis performed during the inspection showed no safety impact.

For support 12 ACS-L916, a revised support calculation was performed and similarly showed no safety impact.

(2) Corrective Action Taken to Avoid Further Violation

Mechanical Design Section Guideline No. 5700-7 has been issued to preclude recurrence of discrepancies between stress analyses and the associated hanger detail sketches. This guideline requires the support designer to provide additional reference dimensions from elbows, tees, etc. to the pipe support location.

With reference to pipe support 12-ACS-L916, an outside consultant is reviewing calculations relative to pipe supports to determine the overall extent of calculations problems.

(3) Date When Full Compliance Will Be Achieved

Full compliance will be achieved by October, 1989, when the calculations discussed in (1) above have been formally verified and incorporated into appropriate design documentation.

NRC Violation 1f

"10 CFR 50, Appendix B, Criterion III, as implemented by the Cook Nuclear Plant Operations Quality Assurance Program requires that measures be established to assure design bases are correctly translated into drawings and that the design adequacy is verified and checked.

Contrary to the above, design bases were not correctly translated into drawings and design adequacy was not verified and checked in that:

- f. For RFC No. 02-2926, an unverified analytical technique was used to evaluate a structural component for supports R590, R593, R595, R596, R597 and R599. Also the load combination used in the evaluation did not give conservative moment results.

This is an example of a violation of 10 CFR 50, Appendix B, Criterion III (315/88028-01F; 316/88032-01F)."

Response to Violation

The intent of the analysis was to qualify a 1/2" by 2" bent plate subjected to lateral and vertical loads by assuring that the maximum calculated stress is within the applicable allowable limits. This was done by using pipe elements of equivalent section modulus as that of the 1/2" of 2" plate. It is recognized that the finite element program uses moment of inertia but for the specific calculation in question this should not have a significant effect.

Use of the piping analysis program had an insignificant affect on the result because of the flexibility introduced in the bend element. However, the purpose of the calculation was adequately met by obtaining stress values through the equivalent section modulus.

(1) Corrective Actions Taken and Results Achieved

Subsequent to the performance of the analysis referenced in NRC violation 1f, AEPSC procured the GTSTRUDL structural analysis computer code. This code is presently being used for these types of analyses. The analysis in question was redone using GTSTRUDL and no significant difference was noted.

(2) Corrective Action Taken to Avoid Further Violations

We will continue the use the GTSTRUDL computer code for analyses of pipe support components.

(3) Date When Full Compliance Will be Achieved

Full compliance was achieved in April, 1989, upon implementation of use of GTSTRUDL for pipe support components.

NRC Violation 1g

"10 CFR 50, Appendix B, Criterion III, as implemented by the Cook Nuclear Plant Operations Quality Assurance Program requires that measures be established to assure design bases are correctly translated into drawings and that the design adequacy is verified and checked.

Contrary to the above, design bases were not correctly translated into drawings and design adequacy was not verified and checked in that:

- g. For RFC No. 02-2907, support component material was not specified and component capacities were not evaluated for supports R0001, R0002, R0003, and R0004.

This is an example of a violation of 10 CFR 50, Appendix B, Criterion III (315/88028-01G; 316/88032-01G)."

Response to Violation

For vendor supplied U-bolts, specific catalog part numbers are usually written on the hanger bill of material. Since the subject U-bolts were to be field fabricated, the engineer judged that the material to be used would be identical to other structural steel available from plant stock typically utilized for this application. The steel used from plant

stock for this application would have been either Type A-479 or A-36. In the case of supports R001, R002, R003, and R004 the load to be supported was a maximum of approximately 15 pounds which is significantly less than the load carrying capacity of either A-479 or A-36. The judgement of the engineer in this case was therefore reasonable, however, the engineer failed to document the basis for this judgement in the appropriate RFC documentation.

(1) Corrective Actions Taken and Results Achieved

Action has been initiated to ensure that material types are explicitly specified on support details for non-standard or non-cataloged items.

(2) Corrective Action Taken to Avoid Further Violation

As indicated in (1) above, all design personnel have been instructed to define material types on support details for all non-standard or non-catalog items.

(3) Date When Full Compliance Will be Achieved

Full compliance was achieved in May, 1989, when instructions for defining material types for non-standard or non-catalog items were given to design personnel.

NRC Violation 1h

"10 CFR 50, Appendix B, Criterion III, as implemented by the Cook Nuclear Plant Operations Quality Assurance Program requires that measures be established to assure design bases are correctly translated into drawings and that the design adequacy is verified and checked.

Contrary to the above, design bases were not correctly translated into drawings and design adequacy was not verified and checked in that:

- h. For RFC No. 02-2908, the allowable installation clearances for U-bolts installed on the steam generator instrument piping were not specified.

This is an example of a violation of 10 CFR 50, Appendix B, Criterion III (315/88028-01H; 316/88-032-01H)."

Response to Violation

For Steam Generator Instrument Piping Systems (SGIPS) relative to RFC DC-02-2908, some U-bolts were found to have larger clearances than the design accounted for. The U-bolt clearances for the current design had not been indicated on the hanger detail drawing. The existing design was installed per our Alternate Analysis Criteria.

(1) Corrective Actions Taken and Results Achieved

Instructions were issued to field personnel, and U-bolts with excessive gaps pertaining to RFC No. DC 02-2908 were replaced to return the clearances to the required value.

Upon discovery of the error in U-bolt clearances, a consultant was retained to further analyze the as-found SGIP configuration. This analysis showed that the as-installed system configuration represented no safety concerns.

(2) Corrective Action Taken to Avoid Further Violation

Instructions have been issued to design personnel stipulating that clearances between pipe and component supports (U-bolts, structural members, etc.) be indicated on appropriate design documents.

(3) Date When Full Compliance Will be Achieved

Full compliance was achieved when field personnel replaced the U-bolts with proper clearances prior to Unit 2 start up on March 17, 1989.

Conclusion

Of the examples cited, the resolution of each has shown no adverse affect on safe plant operation. We do, however, understand the generic implications to our overall design control process when the cited examples are viewed as a whole. The programs discussed in Attachment 1 and changes in our general procedures in the areas of design, design change control and specifications are intended to resolve this generic concern. Furthermore, AEPSC senior management has stated very clearly to middle and lower management that inappropriate and inaccurate design/engineering practices are not acceptable. Supervisors have held in-depth discussions with the engineers/designers on the problems that have been identified and on the expectations to produce high quality work.

NRC Violation 2

"10 CFR 50, Appendix B, Criterion V, as implemented by the Cook Nuclear Plant Operations Quality Assurance Program requires that activities affecting quality be prescribed by documented procedures.

Contrary to the above "for RFC No. 12-2889," the design activities associated with small bore piping analysis were not prescribed by documented procedures."

Response to Violation

Small bore piping systems have generally been qualified by the installation contractor using guidelines in the Alternate Analysis Criteria (AAC). This criteria uses a simplified approach to qualify small bore piping systems, and provides a set of guidelines, tables and instructions to establish spacing of supports and support loads. This criteria does not provide specific direction for each design condition. With the development of Mechanical Design Standard MDS-601, additional guidance has been provided to a few specific cases. It is recognized that an engineer using the AAC would require use of documented engineering judgement. As part of our generic actions for small bore piping systems (discussed in Attachment 1) we plan to review this criteria and develop additional guidelines as required.

(1) Corrective Actions Taken and Results Achieved

Upon finding this discrepancy, a design confirmation task force group was assembled to address the activities associated with small bore piping design and its implementation.

(2) Corrective Action Taken to Avoid Further Violations

Alternate Analysis Criteria (AAC) was developed with built in conservatism for the design and installation of small bore piping. To verify the adequacy of small bore piping installed per AAC, the program outlined in Attachment 1 item 5 is being initiated. Additional guidance on the utilization of AAC will be a product of this activity.

(3) Date When Full Compliance Will be Achieved

Full compliance will be achieved when the small bore piping program outlined in Attachment 1 is completed. This program is currently targeted for completion approximately 3 to 4 months after the Unit 1 1990 refueling outage.

NRC Violation 3

"10 CFR 50, Appendix B, Criterion XVII, as implemented by the D. C. Cook Operations Quality Assurance Program, requires that sufficient records be maintained to furnish evidence of activities affecting quality.

Contrary to the above, the documentation associated with the non-destructive examination (NDE) inspections for piping fillet weld sizes was not sufficient to determine that the proper size weld had been installed in the field (315/88028-06; 316/88032-06).

This is a Severity Level IV violation (Supplement 1)."

Response to Violation

The cited violation resulted from insufficient detail contained in documentation of the welding examinations. Although non-destructive examination (NDE) technicians performing fillet weld examinations used approved procedures, no reference was made in welding documentation to delineate which visual examination procedure was used to determine the weld acceptance criteria.

(1) Corrective Actions Taken and Results Achieved

The Safety and Assessment Superintendent established interim measures to ensure that NDE technicians reference the specific examination procedure used on the welding documentation. These interim measures ensured that sufficient documentation existed to confirm that the weld reinforcement requirements were met.

(2) Corrective Action Taken to Avoid Further Violation

The welding documentation governing fillet weld installation will be reviewed to incorporate a sign-off blank for the purpose of documenting the visual examination procedure used to examine the weld. Updated

weld detail drawings that specify reinforcement requirements will be incorporated into the appropriate visual weld examination procedure. These actions will ensure that the proper acceptance criteria are used when examining a fillet weld and that the visual examination is adequately documented.

(3) Date When Full Compliance Will be Achieved

Full compliance will be achieved when procedures governing the welding documentation and the weld visual examination procedures are revised to incorporate the improved administrative controls as detailed above in (2) and in the response to violation 1b. These changes will be completed by July 31, 1989.

ATTACHMENT 3 TO AEP:NRC:1060N

RESPONSES TO INSPECTION REPORT UNRESOLVED ITEMS



NRC Unresolved Items

As stated in the Inspection Report forwarding letter, a request was made "...that you respond to the unresolved items identified in Paragraphs 3.b(16), 3.b(17), 3.b(18), 3.b(19), 3.b(20), 4 and 6 of the attached Inspection Report. In responding, we request that you address what actions will be taken to determine the extent of the deficiencies in the associated programs." These items address the adequacy of piping supports for large bore piping systems, and the adequacy of as-installed small bore piping.

Response to NRC Unresolved Items

1. Paragraphs 3.b(16); 3.b(17) and 6:

These items concern, in general, the adequacy of the IE Bulletin 79-14 program. Resolution of these unresolved items will be accomplished through the programs outlined in Attachment 1

2. Paragraphs 3.b(19); 3.b(20); 3.b(18) and 4:

These items address the adequacy of the original small bore design and implementation efforts. Again, these items will be resolved through completion of the programs outlined in Attachment 1.