U.S. NUCLEAR REGULATORY COMMISSION

REGION III

ZIMMER MONTHLY STATUS REPORT

October 1982

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A. Summary of the Project for the Month

Meetings were held on October 27, 1982 with senior NRC staff representatives and on October 28, 1982 with the Commission to discuss the status of the Zimmmer project and problems being identified. (These meetings precipitated followup Commission meetings in November and led to the Commission decision to issue an "Order to Show Cause and Order Immediately Suspending Construction" on November 12, 1982 (Attachment III).)

Region III inspection efforts at the Zimmer facility during the month of October were concentrated on the activities of Catalytic, Inc. (CI), the CG&E overview of CI, review of nonconformance reports, and the routine monitoring and inspection of other ongoing activities including the QCP.

The resident inspector conducted a tour of the Zimmer site for the U.S. Attorney, Southern District of Ohio, representatives of his staff, and a representative of the F.B.I.

A management meeting was conducted with the licensee on October 19, 1982, (open meeting) regarding the NRC inspection findings from a Catalytic, Inc. inspection. Details are provided in section C.1 of this report.

The National Board of Boiler and Pressure Vessel Inspectors is continuing inspection efforts onsite. The National Board issued interim reports on May 12, July 1, (August 6 supplement), and September 30, 1982. The findings of the National Board are consistent with and similar to NRC findings. The licensee responded on August 5 and 30, October 20 and 29, 1982, and plans to provide a bi-weekly status report.

In accordance with 10 CFR 50.55(e), the licensee reported the following potential construction deficiencies:

On October 13, 1982, design changes made to the fire protection system piping in the cable spreading room in 1979 to upgrade the piping to have seismic supports was done with no evidence of quality assurance of the modifications or of Sargent & Lundy calculations for the modifications.

On October 26, 1982, the licensee determined that Sargent & Lundy (S&L) dynamic analysis of small bore piping at Zimmer was questionable. The stress analyses are being reviewed by S&L and the licensee. A similar report was submitted concerning Clinton.

On October 27, 1982, the licensee reported a potential problem relating to division separation between non-essential cables and bundling with essential cables during cable pulling and termination.

On October 29, 1982, the licensee determined that fire dampers manufactured by Air-Balance, Inc. have a fusable link held by a "J Hook" and that one prevented the fire damper from closing when the damper was actuated.

On October 29, 1982, the licensee determined that pipe support installation procedures did not contain seismic clearance criteria between pipe supports and cable trays or conduit and associated supports as required by the specification. This may indicate a lack of proper interface on design.

Region III is continuing evaluation of the licensee's responses to the investigation report 81-13 and civil penalty, and some progress was made during the month because of a temporary personnel assignment to this project.

Since the July Monthly Status Report was prepared, two petitions, both dated August 20, 1982, have been received from the Government Accountability Project (GAP). The first is for reconsideration of the Commission's Order of July 30, 1982. The staff has considered this petition and made it's recommendations to the Commission. The second petition is to suspend construction of the Zimmer Station. On September 24, 1982, the RIII Regional Administrator issued a "Demand for Information" pursuant to the Commission's authority under Section 182 of the Atomic Energy Act and 10 CFR 50.54(f) of the Commission's regulations. This "Demand for Information" requires the licensee to admit or deny each of the allegations applicable to the licensee's and its principal contractor's or subcontractor's performance contained in paragraphs 19 through 273 of the petition. If the allegations are not admitted, they must explain the basis for not admitting the allegations. In addition, they must identify the manner in which the Quality Confirmation Program (QCP) addresses the type of existing or potential quality assurance or construction deficiencies and problems identified in each of the above allegations. If the QCP does not address such deficiencies or problems, CG&E must describe the manner in which they will ensure such deficiencies or problems are corrected. They have until December 31, 1982 to respond. On October 18, 1982, GAP issued a supplement to their August 20, 1982 petition. The staff is reviewing this supplement.

NRC Region III was advised of allegations that relevant documentation on the welders at the Zimmer site was prepared for, or reviewed at, a meeting between Cincinnati Gas and Electric Company (CG&E) and H. J. Kaiser (HJK) held on July 8, 1982, but that such documentation was not discussed with, or made available to, Region III at a meeting on this subject held on July 9, 1982, between CG&E, HJK and Region III. Substantial documentation was made available to Region III in connection with the July 9 meeting, but additional relevant documentation was allegedly not made available. The matter of the existence of such documentation was informally discussed on October 15 and 20, 1982, between Messrs. B. R. Sylvia of CG&E and R. F. Warnick and D. R. Hunter of NRC Region III. Further information was required to resolve these concerns and, if these concerns were found to be valid, to determine whether enforcement action, including modification, suspension, or revocation of CG&E license, is warranted.

Accordingly, pursuant to Section 182 of the Atomic Energy Act and 10 CFR 50.54(f) of the Commission's regulations, on October 27, 1982, CG&E was required by Region III to submit under oath and in writing, by November 16, 1982, a list of all reports or other documentation prepared

by CG&E's or HJK's document reviewers or other personnel in preparation for the meetings of July 8 and/or 9, 1982, or reviewed at those meetings. Copies of any such reports were requested to be made available at the Zimmer site for inspection by the NRC. (The licensee responded to this 10 CFR 50.54(f) "Request for Information" on November 15, 1982 (Attachment IV). This response is currently being reviewed by Region III).

B. Zimmer Section Manpower Availability and Utilization

1. Assigned Manpower

Section Chief (Assigned to Zimmer full time. Onsite part-time.)

Project Manager (Assigned to Zimmer full-time. Onsite as needed.)

Resident Inspectors

Senior Resident (Full-time onsite)
Resident Inspector (Full-time onsite)
Resident Inspector (Full-time onsite)

Investigators (Office of Investigations (OI))

Five Investigators (Full-time)

2. Summary of Manpower Utilization

Onsite and in office professional effort from January 3, 1982 through October 30, 1982 was approximately 8,949.5 manhours, with 1068 of these manhours occurring between October 3 and October 30, 1982. (These hours do not include those of OI investigators).

C. High Visibility Issues

1. Inspection of Catalytic, Inc. Activities

Special inspection performed by Region III during weeks of August 10 and September 7 and 13, 1982, regarding the adequacy of licensee control of Catalytic, Inc. work activities and to determine if the licensee had violated the December 24, 1980 NRC Immediate Action Letter (IAL) and the December 30, 1980 CG&E Stop Work Order (SWO).

Effort by Licensee

During the NRC inspection a number of corrective actions were taken by the licensee, including the issuance of a Limited Stop Work Order (SWO) on September 10, 1982, on miscellaneous work by Catalytic, Inc.; and a Stop Work Order (SWO) on October 11, 1982, for all essential work activities performed by Catalytic, Inc., following the discussion of the inspection findings with Region III on October 8, 1982.

Immediately prior to the inspection, the licensee notified the NRC that a Stop Work Order (SWO) was initiated on August 5, 1982, regarding Catalytic, Inc. work associated with the removal of Control Rod Drive (CRD) hangers and supports.

NRC Effort/Action

The NRC inspection identified a number of apparent programmatic concerns as well as individual findings in the field concerning the Catalytic, Inc. safety-related activities.

A management meeting was conducted at the Greater Cincinnati Airport (Open Meeting) on October 19, 1982, to discuss the inspection findings.

Additional working meetings were held on November 2-4, 1982, to discuss the specific technical and programmatic issues in more detail.

Findings to Date

The licensee and the NRC have identified a number of concerns in the areas of organizational description and interfaces, assignment of responsibilities and authority, training, design control, procedures, document control, inspections, nonconformance control, corrective action, records, and audits. A number of concerns are considered repeat items. The inspection results indicate a breakdown in the CG&E management controls regarding Catalytic, Inc. The above items were considered prior to the issuance of the November 12, 1982 NRC ORDER.

2. H. J. Kaiser (HJK) Internal Investigation Report

Region III anonymously received a partial copy of a report of a HJK investigation conducted at Zimmer. The report was mailed from Cincinnati, Ohio on March 23, 1982, and received by Region III on March 26, 1982. The NRC is investigating to determine the safety significance of the matters described in the investigation report and whether or not NRC reporting requirements were met.

Effort by Licensee

The licensee is conducting a review of the report.

NRC Effort/Action

The NRC investigation into the HJK investigation report and its significance has been transferred to the Office of Investigations.

Findings to Date

The findings will be discussed after the investigation is complete.

D. Quality Confirmation Program (QCP)

A summary of the progress of the QCP task areas is provided as Attachment I. The CG&E QCP Status Report as of October 30, 1982, is included as Attachment II. This attachment includes more detail than the following summary presents.

1. Task I, Structural Steel

Review of structural beams, beam welds, re-entrant corners, procurement of beams, beam and steel plate heat number traceability, and inspection of cable tray foot connections.

Effort by Licensee

The licensee is continuing to inspect structural steel items including foot connections, drywell steel, control room steel, gallery steel, and switchgear steel.

The task involves 26 personnel and is reported to 58% complete with an estimated completion date of December 1, 1982.

NRC Effort/Action

Reviewed 2,013 initial issue nonconformance reports (NRs) and 138 dispositioned NRs and inspected a selected number of those reviewed.

Resident and specialist inspectors performed field walkdowns of actual conditions and rework activities.

Findings to Date

The licensee has generated 977 NRs identifying about 9546 weld deficiencies. The majority of the 4963 deficiencies dispositioned have been dispositioned as "rework".

Three construction deficiency reports have been reported to the NRC concerning laminated angle iron, cable tray hangers/weld deficiencies, and cable tray hanger "Nelson stud" deficiencies.

2. Task II, Weld Quality

Review of welds performed, weld rod control, transfer of weld rod heat numbers, and deletion of weld inspection criteria.

Effort by Licensee

The licensee is continuing to review the areas of structural weld cards, welding procedures, welder qualifications, small-bore piping welds, and large-bore piping welds.

The task involves six people and is reported to be 78% complete with the completion date still to be determined. The licensee is reorganizing the task work with both HJK and CG&E performing the reviews to improve efficiency.

NRC Effort/Action

Reviewed 642 initial issue NRs and 74 dispositioned NRs and inspected a selected number of those reviewed.

Findings to Date

The licensee has identified nonconforming conditions regarding weld data sheets, heat numbers, welder qualifications, and welding procedures. Discrepancies being identified include lack of objective evidence, white-outs and cross-outs, signature differences, inconsistent data, and lack of adequate acceptance criteria. (Welder qualifications are being reviewed by a special HJK/CG&E task group.)

Due to the identification of the lack of adequate control of drawings, inadequate acceptance criteria, and restart of the review activity under a new program, the large-bore piping weld review has not progressed.

Three construction deficiency reports have been identified to the NRC concerning weld procedure deficiency, carbon weld rod in stainless steel weld, and lack of weld preheat or post weld heat treatment.

3. Task III, Heat Number Traceability

Review of installed large-bore and small-bore pipe heat numbers, heat numbers on isometric drawings, incorrect or marked-up heat numbers, and purchase orders.

Effort by Licensee

The licensee is continuing to review heat number traceability in the areas of large-bore piping, small-bore piping, and by purchase orders.

The task involves 5 people (the August-September monthly status report incorrectly showed 14 people on this task, the correct number for that time was 6 people) and is reported to be 36% complete with the estimated completion date still to be determined.

NRC Effort/Action

Reviewed 529 initial issue NRs and 36 dispositioned NRs.

Findings to Date

The licensee has identified a substantial number of discrepancies regarding small-bore piping, large-bore piping, and purchase orders.

The nonconforming conditions include documentation deficiencies, lack of design change control, unsigned reports, use of unapproved vendors, and upgrade of materials.

Three construction deficiencies have been identified to the NRC concerning 2400 ft. of SA-106 Grade B piping, some bolting material, and control of "gamma plugs."

4. Task IV, Socket Weld Fitup

Review of socket weld fitup to ensure adequate disengagement for small bore piping.

Effort by Licensee

The task is substantially complete with 29,821 fitups reviewed of a total of 32,000. The final reviews of the identified discrepancies and radiographs are being made.

The task involves one person, and is reported as 98% complete with an estimated completion date of December 1, 1982.

NRC Effort/Action

Reviewed 115 initial issue NRs and 84 dispositioned NRs and inspected a selected number of those reviewed.

Findings to Date

The licensee identified 695 weld joints which lacked evidence of disengagement and the joints have been radiographed. Of the 695 welds 111 have been rejected for lack of disengagement.

5. Task V, Radiographs

Review the radiographs which did not meet ASME Code requirements due to inadequately shimmed penetrameters.

Effort by Licensee

The licensee has completed the review of the radiographs and is preparing a code inquiry to ASME concerning the shimming of the penetrameters.

The selected, qualifying radiographs are being reviewed to assess the weld conditions. Of the 61 welds initially identified, 2 welds have been found to be duplicates, 1 weld had been replaced and was removed from the list, and 12 welds are inaccessible. This reduces the total to 46 welds identified. All 46 have been re-radiographed and accepted.

This activity is reported to be approximately 99% complete with a completion date of November 15, 1982.

NRC Effort/Action

The resident inspector reviewed 97 initial issue NRs and 4 dispositioned NR.

Findings to Date

A substantial number of the M. W. Kellogg radiographs were not shimmed adequately; however, the quality and sensitivity of the radiographs appears adequate.

Two construction deficiency reports have been identified to the NRC concerning radiographs.

6. Task VI, Cable Separation

Review cable separation regarding essential and associated cables.

Effort by Licensee

The licensee is continuing the review and evaluation of wall penetrations/sleeves, associated cables for Class 1E panels, all 1E panels, and responses to engineering evaluation requests (EERs).

The task involves nine persons and is reported to be 50% complete (scope expanded) with a completion date of June 1, 1983 (scope expanded).

NRC Effort/Action

Reviewed 879 initial issue NRs and 285 dispositioned NRs and inspected a selected number of those reviewed.

Findings to Date

Nonconforming conditions have been identified concerning cable separation, identification, and routing. The licensee has written 776 NRs and 345 NRs have been dispositioned (131 rework, 25 repair, and 189 accept-as-is) of which 217 NRs have been closed to date, with an additional 12 NRs cancelled because of duplication.

Three construction deficiency reports have been identified to the NRC concerning electrical cable separation.

7. Task VII, Nonconformance Reports

Review of noncomformances documented in surveillance reports, punch lists, and exception lists; and nonconformances not documented, not entered, and voided rather than adequately dispositioned. Review 300 closed NRs and solicit NRs not entered into the system.

Effort by Licensee

The licensee is continuing to review and evaluate nonconformances.

Approximately 200 letters to former QC inspectors soliciting nonconformances not entered into the system return receipt requested were mailed by the licensee. The responses were limited. One report has been received from an individual identifying four potential NRs.

Additional procedures, field walkdowns, and a material impound area are being provided.

The task involves three persons and is approximately 61% complete with an estimated completion date of January 30, 1983.

NRC Effort/ Action

Reviewed 367 initial issue NRs and 257 dispositioned NRs and inspected a selected number of those reviewed.

Findings to Date

Fifty eight NRs have been written due to reopening of previously voided NRs. Of these NRs, 43 have been dispositioned (15 rework, 1 repair, and 27 accept-as-is).

8. Task VIII, Design Control and Verification

Review procedures controlling design calculation completion, S&L program for controlling deviations from FSAR, correctness and consistency of FSAR, and design deviation identification and disposition.

Effort by Licensee

A programmatic audit of S&L design control was needed to complete this task. The audit was conducted on September 1-3, 1982 in Chicago. There were no findings. The audit will not be closed until the two recommendations given by the audit team have been resolved.

The task is 99% complete with an estimated completion date of December 15, 1982.

NRC Effort/Action

The activity is being monitored with a closeout inspection planned to verify completion of the QCP Task VIII items, to identify any generic implications, and to evaluate the licensee conclusions.

Findings to Date

No significant findings have been identified to date regarding the S&L work; although, the S&L system has been made more formal.

Four construction deficiency reports have been identified to the NRC regarding design control.

9. Task IX, Design Document Changes (DDC)

Establish an accurate and complete listing of DDCs, DDC records, and associated QC inspection records.

Effort by Licensee

This task was divided into five phases as follows:

Phase I Classification of CG&E, S&L, and HJK, DDCs as essential or nonessential.

Phase IA Classification of WY&B and other site contractor DDCs as essential or nonessential.

Phase II Review inspection documentation to determine if CG&E, S&L, and HJK DDCs have been incorporated and inspected.

Phase IIA Review inspection documentation to determine if WY&B and other site contractor DDCs have been incorporated and inspected.

Phase III Electrical inspections in the control room.

The original task (Phases I and II) is 40.8% complete. Phases IA and IIA are 9.2% complete and Phase III is 10% complete.

The task involves 14 persons for Phases I, II, IA, and IIA with an estimated completion date of January 1983. Phase III involves 6 persons with an estimated completion date of June 1983.

NRC Effort/Action

Reviewed 511 initial issue NRs and 3 dispositioned NRs and inspected a selected number of those reviewed.

Findings to Date

A number of deficiencies have been identified concerning missing documentation, misclassification of DDCs, inspection program deficiencies, failure to incorporate deficiencies, premature inspection, and incomplete inspection documentation.

10. Task X, Subcontractor QA Programs

Confirm the quality of the Bristol Steel work and review all subcontractor QA programs or safety-related work to ensure the safety-related activities performed were acceptable.

Effort by Licensee

Bristol field welds are being reviewed within Task I and 80 audits of subcontractors were identified encompassing 13 subcontractors. All 80 audits have been reviewed.

The task involves two persons and is 78% complete with an estimated completion date of December 1982.

NRC Effort/Action

None during this period.

Findings to Date

Six subcontractor audits may require audits of subsequent activities for confirmation of work that cannot be verified by document review or inspection.

Many of the 80 audits reviewed do not address all applicable criteria.

11. Task XI Audits

Review all past audits of HJK, S&L, GE, GED, EPD, EOTD, and GCD to determine depth and adequacy with respect to Appendix B to 10 CFR 50 and appropriate closeout of audit findings. Justify the acceptability of the areas not audited.

Effort by Licensee

Review of audits, audit summaries prepared, and all of the 296 past audits have been reviewed.

The task involves two persons and is 82% complete with estimated completion date of November 15, 1982.

NRC Effort/Action

None during this period.

Findings to Date

Coverage of the audits was not sufficient to verify adequate implementation of program requirements.

E. Ongoing Construction Activities

Major ongoing construction activities during October included installation and modification of pipe supports, drywell steel modifications, installation of drywell air coolers, seismic modification to switchgear, rework of control room structural steel, and installation of seismic columns.

As of November 12, 1982, all safety-related construction activities, including rework of identified deficient construction was suspended by an NRC ORDER.

F. Potential Plant Problems

The following is a list of areas or items which Region III considers as potential problems and are being monitored by the inspectors.

- Rust on the stainless steel liner plate in suppression pool
- Containment liner leak rate channel leakage (welds)
- Sacrificial shield weld inadequacies (records and actual weld conditions)
- Cable tray trapeze weld and support stud inadequacies
- Past personnel qualifications
- Past weld procedures
- Purchase of equipment
- Structural steel bolting
- Control panel and electrical switchgear mounting plug weld inadequacies
- Cable seperation inadequacies

G. Freedom of Information Act (FOIA) Requests

None during this period.

SUMMARY OF THE PROGRESS OF QUALITY CONFIRMATION PROGRAM (QCP) TASK AREAS
AS OF JUNE, JULY, AUGUST, SEPTEMBER, AND OCTOBER 1982

TASK AREA	PERCENT COMPLETE/EXPECTED COMPLETION AS OF				
	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
I. STRUCTURAL STEEL*	31% 12/01/82	35% 12/01/82	50% 12/01/82	57% 12/01/82	58% 12/01/82
II. WELD QUALITY*	58% **	58% **	62% **	68% **	70% **
III. HEAT NUMBER TRACEABILITY*	30% **	30% **	33% **	33% **	36% **
IV. SOCKET WELD FITUP	98% 08/01/82	95% 10/01/82	96% 10/01/82	98% 12/01/82	98% 12/01/82
V. RADIOGRAPHS	97% 08/01/82	97% 09/15/82	98% 11/15/82	98% 11/15/82	99% 11/15/82
VI. CABLE SEPARATION*	54% 12/31/82	52% 12/31/82	35% 06/01/83	44% 06/01/83	50% 06/01/83
VII. NONCONFORMANCES	61% 12/31/82	40% 12/31/82	52% 12/31/82	61% 01/30/83	61% 01/30/83
VIII. DESIGN CONTROL AND VERIFICATION	97% 07/15/82	99% 08/15/82	99% **	99% **	99% 12/15/82
IX. DESIGN DOCUMENT CHANGES	34% 12/31/82	35% 12/31/82	<32% 04/15/83	<33% 04/15/83	<35% 06/01/83
X. SUBCONTRACTOR QA PROGRAMS	60% 08/13/82	65% 09/15/82	75% 10/15/82	75% 10/30/82	78% 12/31/82
XI. AUDITS	70% 10/08/82	72% 10/08/82	74% 11/15/82	80% 11/15/82	82% 11/15/82

*Areas viewed by Region III as potentially requiring a significant amount of rework.
**Estimated completion date to be determined.

Attachment I

QUALITY CONFIRMATION PROGRAM

STATUS

(AS OF OCTOBER 31, 1982)

BY

J. F. SHAFFER

DIRECTOR, QUALITY CONFIRMATION PROGRAM

Attachment II

TASK I: STRUCTURAL STEEL

ACTION BEING TAKEN

A. 100% VISUAL INSPECTION OF ACCESSIBLE STRUCTURAL STEEL BEAM FIELD WELDS, BRISTOL SHOP WELDS, RE-ENTRANT CORNERS AND WELDED CABLE TRAY FOOT CONNECTIONS.

B. 100% OF ALL BEAMS INSPECTED ARE COMPARED TO THE DESIGN DRAWINGS AND DESIGN DOCUMENT CHANGES (DDC'S).

C. 100% VISUAL INSPECTION OF HVAC SUPPORTS IN THE CONTROL ROOM.

SUMMARY OF TASK

AREA	TOTAL # OF ITEMS	ITEMS COMPLETED THIS MONTH	ITEMS COMPLETED TO DATE	PERCENT COMPLETED THIS MONTH	PERCENT COMPLETED TO DATE	MANHOURS EXPENDED THIS MONTH	MANHOURS REMAININ
1)DRYWELL LESS 525 ELV	322	0	322	0	100	0	0
2)REACTOR, AUX SRV WATER BLDG	*2992	23	1628	1	55	1452	8184
3)CONTROL RM HVAC SUPTS	105	0	49	0	47	0	336
TOTAL	3419	23	1999	1	58	1452	8520

CURRENT STATUS AND RESULTS

1. NONCONFORMANCE (NR) SUMMARY

AREA	NR'S WRITTEN	QUANTITY DEFICIENCIES IDENTIFIED	NUMBER DEFICIENCIES DISPOSITIONED	ACCEPT AS IS	REWORK	REJECT	REPAI
FOOT CONN.	253	975	242	139	88	0	15
DRYWELL	279	1825	314	10	306	4	3
CONTROL RM	173	2488	2331	17	2312	4	1
GALLERY STL	40	122	121	0	121	0	1
SWITCHGR 567'5"	34	1953	1955	0	1933	0	2
SWITCHGR 546'	66	869	0	8	7	0	1
AUX BLD ROOF 591'	1	119	0	0	0	0	0
CABLE SPRD 546'	82	78	-	-	-	-	-
HVAC	49	1117	-	-	-	-	-
TOTAL	977	9546	4963	174	4767	8	23

TASK I: (CONT'D)

NOTE: MAJORITY OF THE DEFICIENCIES ATTRIBUTED TO: OVERLAP, UNDERSIZE WELD, UNDERCUT, WELD PROFILE, LACK OF FUSION, AND INCORRECT INSTALLATION.

2. BEAMS BEING INSPECTED ARE COMPARED TO DESIGN DRAWINGS AND DESIGN DOCUMENT CHANGES AT PRESENT, THE BEAMS THAT HAVE BEEN INSPECTED, AND HAVE GONE THROUGH THE DESIGN, DOCUMENT REVIEW, APPEAR ON THE DESIGN DRAWING AND/OR A DESIGN DOCUMENT CHANGE (DDC).

3. COSMETIC REWORK HAS BEEN REQUIRED ON 70% OF THE BEAMS INSPECTED, TO OBTAIN RESULTS IN COMPLIANCE WITH AWS D1.1 1972 ACCEPTANCE CRITERIA.

COMMENTS

1. TASK I PROVIDED INSPECTORS TO PERFORM 152 INSPECTIONS FOR TASK IX ON ELECTRICAL CONDUIT SUPPORTS.

2. THE STOP WORK ORDER #82-02 STOPPING ALL WORK ON SCAFFOLDING, PAINT REMOVAL, ETC., HAS GREATLY IMPACTED THE TOTAL NUMBER OF INSPECTIONS COMPLETED THIS MONTH.

3. THE RANDOM SAMPLE INSPECTION OF 100 CONNECTIONS IN THE SERVICE WATER BUILDING IS IN PROGRESS. DEFICIENCIES NOTED THUS FAR ARE PRIMARILY COSMETIC IN NATURE. COMPLETION IS CONTINGENT UPON THE RESOLUTION OF ITEM 2 ABOVE.

PRESENT MANPOWER SUMMARY	ACTUAL
TASK COORDINATOR	1
QUALITY SPECIALISTS	3
INSPECTORS	15
DOCUMENT REVIEWERS	7
TOTAL	26

STATUS

THIS TASK IS APPROXIMATELY 58% COMPLETE.

ESTIMATED COMPLETION DATE

DECEMBER 1, 1982

QUALITY CONFIRMATION PROGRAM

TASK II: WELD QUALITY

ACTION BEING TAKEN

A. PERFORM A 100% REVIEW OF CODE PIPING KE-1 WELD DATA SHEETS TO DETERMINE WELD ROD HEAT NUMBERS, INSPECTION STAMPS AND DATES, IDENTIFY MISSED HOLD POINTS, AND MISSING OR ALTERED DOCUMENTATION.

B. VERIFY PROPER WELD PROCEDURE AND WELDER QUALIFICATION.

SUMMARY OF TASK

AREA	TOTAL # OF ITEMS	ITEMS COMPLETED THIS MONTH	ITEMS COMPLETED TO DATE	PERCENT COMPLETED THIS MONTH	PERCENT COMPLETED TO DATE	MANHOURS EXPENDED THIS MONTH	MANHOURS REMAINI
1)STRUCT. KE-1 REVIEW	11,000	0	11,000	0	98	0	416
2)SM BORE PIPE	32,000 (APPX)	0	25,841	0	79	*160	837
3)LG BORE PIPE	9,400 (380 PSK'S)	0	0	0	0	0	1373
4)WELD PROCEDURE REVIEW	91 (PROCEDURES) 121 REV'S	14	24	15	26	187	1413
5)WELDER QUAL. REVIEW	4600 (DOCUMENTS)	357	2456	7.5	53	80	1223
5)WELD ROD CONTROL		0	0	0	0	0	416
TOTAL	57,121	371	39,321	2	70	427	5678

1) *SEE ITEM #2 BELOW

CURRENT STATUS AND RESULTS

1. AREA #1 PRELIMINARY REPORT DRAFTED ON KE-1 REVIEW CER TO BE INITIATED ON AREAS OF CONCERNS.
2. AREA #2 *REWRITE OF PROCEDURE 19-QA-14 TO INCORPORATE A FINAL REVIEW OF DOCUMENTS GENERATED, *MANHOURS EXPENDED IN THE REVISION OF 69 NR'S TO THIS TASK FOR CLARITY AND PROCEDURE REWRITE.
3. AREA #3 PROCEDURE TO BE WRITTEN, SEE TO BE RESOLVED, ITEM #1.

TASK II: (CONT'D)

4. AREA #4 24 CER'S HAVE BEEN GENERATED ON PROCEDURE'S REVIEWED.

5. AREA #6 PROCEDURE HAS NOT BEEN WRITTEN DUE TO LACK OF PERSONNEL - INVESTIGATION TO BE STARTED NOVEMBER 1982 WITH PROCEDURE DEVELOPED AT THE SAME TIME FRAME.

TO BE RESOLVED

1. COORDINATION WITH HJK REVIEW FOR NPP-1 PROGRAM TO EFFECT A COORDINATED N-5 PROGRAM INCLUDING ITEM (1) IN COMMENTS SECTION.
2. CONFIRM ACCEPTABLE HEAT NUMBERS ESTABLISHED BY TASK III.
3. COMPLETION OF REWRITE OF 19-QA-14 TO SUPPLY DIRECTION FOR A SECOND REVIEW.

MANPOWER SUMMARY	ACTUAL
TASK COORDINATOR	1/2
INSPECTORS	1
DOCUMENT REVIEWERS	4
CLERKS	1/2
TOTAL	6

STATUS

THIS TASK IS APPROXIMATELY 70% COMPLETE.

ESTIMATED COMPLETION DATE

TO BE DETERMINED BY HJK SCHEDULE OF NPP-1/N-5 PROGRAMS (TO DATE, SCHEDULE NOT POSTED).

TASK III: HEAT NUMBER TRACEABILITY

ACTION BEING TAKEN

A. PERFORM A 100% REVIEW OF SMALL BORE PIPING DOCUMENTATION AND CONDUCT A FIELD WALKDOWN OF THE SYSTEMS IDENTIFIED ON THE QCP LIST OF SAFETY-RELATED AND IMPORTANT TO SAFETY SYSTEMS.

B. PERFORM A 100% INSPECTION AND/OR REVIEW OF DOCUMENTATION OF LARGE BORE PIPING FIELD MODIFICATIONS OF SYSTEMS ON THE SAFETY-RELATED AND IMPORTANT TO SAFETY SYSTEM LIST.

C. PERFORM A 100% REVIEW OF ALL CODE AND STRUCTURAL PURCHASE ORDERS TO ESTABLISH A LIST OF ACCEPTABLE HEAT NUMBERS.

D. PERFORM A REVIEW OF PURCHASE ORDERS FOR STRUCTURAL STEEL AND STEEL SHAPES TO DETERMINE IF PURCHASED ESSENTIAL OR NONESSENTIAL (THESE P.O.'S SHALL BE PART OF ACTION C). RESULTS OF THE REVIEW WILL BE USED TO ANSWER TASK 1 CONCERNS REGARDING ACCEPTABILITY OF STRUCTURAL STEEL.

E. PERFORM INSPECTION AND REVIEW OF GAMMA PLUGS TO GAIN ADDITIONAL INFORMATION FOR EVALUATION AND DISPOSITION OF 10CFR50.55(e) REPORT M-56.

SUMMARY OF TASK

AREA	TOTAL # OF ITEMS	ITEMS COMPLETED THIS MONTH	ITEMS COMPLETED TO DATE	PERCENT COMPELTED THIS MONTH	PERCENT COMPLETED TO DATE	MANHOURS EXPENDED THIS MONTH	MANHOU REMAIN
A)SM BORE DOC	2691 ISK	27	52	1	2	226	2540
SM BORE WLKDWN	2691 ISK	0	2691	0	100	0	0
B)LG BORE DOC	(APPX) 380 PSK	0	0	0	0	0	74,600
LG BORE WLKDWN	(APPX) 380 PSK	0	0	0	0	0	
C)PURCHASE ORDER REVW	2688	26	44	1.0	1.6	215	2951
D)HJK STRCTL STEEL PO'S ESS/NONESS	1900	0	1900	0	95	0	40
E)GAMMA PLUG 50.55(e)M-56	404	179	219	44	54	223	209
TOTAL	11,134	232	4906	3	36	664	80,340

TASK III: (CONT'D)

1) *TOTAL MANHOURS SHOWN IS FOR BOTH LARGE BORE DOCUMENTATION AND WALKDOWN.

2) **INCLUDES STRUCTURAL STEEL PO'S IDENTIFIED IN ACTION D. TOTAL NUMBER OF ITEMS CHANGED DUE TO CHANGE IN METHOD OF ACCOUNTING, I.E. PURCHASE ORDERS RATHER THAN SHIPMENTS RECEIVED.

3) ***5% REMAINING TO COMPLETE IS TO PERFORM FINAL REVIEW.

CURRENT STATUS AND RESULTS

1. HJK IS VALIDATING CMTR'S FOR STRUCTURAL ITEMS RECEIVED ON NONESSENTIAL PO'S THROUGH USER TESTS OR QUALIFYING SUPPLIER. SIMILAR REVIEW AND ACTION BEING COMPLETED FOR ASME PIPING COMPONENTS.

2. 1900 STRUCTURAL STEEL PURCHASE ORDERS HAVE BEEN IDENTIFIED, OF THIS NUMBER, 1142 WERE ORDERED ESSENTIAL AND 758 WERE ORDERED NONESSENTIAL.

3. 219 OF 404 GAMMA PLUGS HAVE BEEN INSPECTED. THE DATA HAS BEEN SUBMITTED TO CG&E NUCLEAR ENGINEERING DEPARTMENT. ACTION ON THIS ITEM IS STOPPED PENDING NED EVALUATION.

TO BE RESOLVED

1. A METHOD OF SURVEILLING THE H.J. KAISER N-5 PROGRAM IS BEING RESEARCHED TO ADDRESS ACTION B.

COMMENTS

1. THE FIGURE SHOWN FOR LARGE BORE REFLECTS AN APPROXIMATE NUMBER OF MANHOURS NECESSARY FOR THE QCP TO PERFORM THE LARGE BORE WALKDOWN AND DOCUMENTATION REVIEW. THIS FIGURE WOULD BE MUCH LESS IF HJK PERFORMED THIS FUNCTION AND QCP PERFORMED A SURVEILLANCE OF THEIR ACTIVITY.

MANPOWER SUMMARY	ACTUAL
TASK COORDINATOR	1
TASK LEAD	1
INSPECTORS	1
DOCUMENT REVIEWERS	2
TOTAL	5

TASK III: (CONT'D)

STATUS

THIS TASK IS 36% COMPLETE.

ESTIMATED COMPLETION DATE

TO BE DETERMINED AFTER COORDINATION WITH HJK AND CG&E DOCUMENTATION REVIEW GROUP.

QUALITY CONFIRMATION PROGRAM

TASK IV: SOCKET WELD DISENGAGEMENT

ACTIONS BEING TAKEN

A. IDENTIFY SMALL BORE PIPING SOCKET WELDS FOR WHICH VERIFICATION FOR DISENGAGEMENT DOES NOT EXIST.

B. RADIOGRAPH 100% OF THE ACCESSIBLE WELD NOT HAVING VERIFICATION OF DISENGAGEMENT.

SUMMARY OF TASK

AREA	TOTAL # OF ITEMS	ITEMS COMPELTED THIS MONTH	ITEMS COMPLETED TO DATE	PERCENT COMPLETED THIS MONTH	PERCENT COMPLETED TO DATE	MANHOURS EXPENDED THIS MONTH	MANHOUR REMAINI
IV SOCKET WELD DISENGAGE-MENT	32,000	0	29,821	0	98	*90	240

CURRENT STATUS AND RESULTS

A. 348 RADIOGRAPHS TO DATE HAVE BEEN TRANSMITTED TO QADVG.

B. 111 SOCKET WELDS HAVE BEEN REJECTED FOR LACK OF DISENGAGEMENT.

C. 695 WELDS HAVE BEEN IDENTIFIED TO DATE AS LACKING EVIDENCE OF A QUALITY INSPECTION.

D. REJECT WELD HAVE BEEN IDENTIFIED ON NONCONFORMANCE REPORTS.

COMMENTS

1. MANHOURS EXPENDED THIS TASK DUE TO CER 82-240 WRITTEN ON 19-QA-02 FOR NONCOMPLIANCE OF PROCEDURE. RESULTS: A REWRITE OF 19-QA-02 FOR CLARITY, DIRECTION AND TO INITIATE A SECOND REVIEW OF DOCUMENTS GENERATED BY TASK IV. IMPACT OF SECOND REVIEW HAS NOT BEEN DETERMINED TO DATE, PROCEDURE WAS REVIEWED BY THE REVIEW BOARD AND COMMENTS ADDED 10-26-82.

MANPOWER SUMMARY	ACTUAL
TASK COORDINATOR	1/2
CLERKS	1/2
TOTAL	1

TASK IV: (CONT'D)

STATUS

THIS TASK IS 98% COMPLETE. INITIAL REVIEW/CER 82-240.

ESTIMATED COMPLETION DATE

DECEMBER 1, 1982 PENDING APPROVAL OF THE H. THIELSCH REPORT. AN ESTIMATED COMPLETION DATE FOR THE SECOND REVIEW WILL BE ADDRESSED AFTER IMPLIMENTATION OF 19-QA-02.

TASK V: RADIOGRAPHS

ACTION TO BE TAKEN

A. CONFIRM THAT THE EXISTING RADIOGRAPHS OF LARGE BORE PIPING SUPPLIED BY M. W. KELLOGG ARE ADEQUATE TO IDENTIFY WELD DEFICIENCIES.

SUMMARY OF TASK

AREA	TOTAL # OF ITEMS	ITEMS COMPLETED THIS MONTH	ITEMS COMPLETED TO DATE	PERCENT COMPLETED THIS MONTH	PERCENT COMPLETED TO DATE	MANHOURS EXPENDED THIS MONTH	MANHOURS REMAININ
RADIOGRAPHY REVIEW	4250	0	4250	0	100	0	0
RADIOGRAPHS PHASE II	46	4	46	27.3	100	40	40
TOTALS	4296	4	4296	1	99	40	40

CURRENT STATUS AND RESULTS

A. REVIEW OF 4250 WELD RADIOGRAPHS FOR SENSITIVITY IS COMPLETE.

B. 46 WELDS HAVE BEEN IDENTIFIED TO BE RE-RADIOGRAPHED, COVERING ALL VARIATION IN PIPE AND WALL THICKNESS.

C. PROGRAM TO CONFIRM RADIOGRAPHS HAS BEEN APPROVED BY THE NATIONAL BOARD OF BOILER PRESSURE VESSEL INSPECTORS AND THE STATE OF OHIO.

D. 46 OF THE 46 RADIOGRAPHS HAVE BEEN RE-RADIOGRAPHED, AND ACCEPTED.

E. MOCK-UPS OF THE 4 INACCESSABLE WELDS WERE FABRICATED AND RADIOGRAPHED.

TO BE RESOLVED

COMMENTS

A FINAL REPORT FOR TASK V IS BEING WRITTEN AND WILL BE PRESENTED TO ALL APPLICABLE PARTIES.

MANPOWER SUMMARY

PERSONNEL ASSIGNED TO TASK III WILL SUPPORT THIS ACTIVITY.

STATUS

OVERALL TASK IS APPROXIMATELY 99% COMPLETE.

ESTIMATED COMPLETION DATE

NOVEMBER 15, 1982

TASK VI: CABLE SEPARATION

ACTION BEING TAKEN

A. 100% INSPECTION OF SLEEVES AND CLASS IE FLOOR PENETRATIONS FOR SEPARATION IDENTIFICATION AND ROUTING.

B. INSPECT A MINIMUM OF 10% OF THE ASSOCIATED CABLES TO ARRIVE AT A 95% CONFIDENCE LEVEL THAT 95% OF THE ASSOCIATED CABLES ARE PROPERLY SEPARATED IN TRAYS AND CONDUITS. CONFIDENCE LEVEL WAS NOT MET. THIS INSPECTION IS SUPERSEDED BY THE INSPECTION OF CABLE TRAYS.

C. 100% INSPECTION OF CABLE TRAYS IN CATEGORY 1 STRUCTURES.

D. 100% INSPECTION OF CABLES REQUIRING SEPARATION INSIDE PANELS AND TO THE FIRST ASSIGNED RACEWAY TO VERIFY PROPER SEPARATION AND IDENTIFICATION. THIS INCLUDES ALL CABLES INSTALLED BETWEEN THE CABLE SPREADING ROOM AND THE MAIN CONTROL ROOM.

E. TRACK RESOLUTION OF SIX SAMPLES OF FAILURE TO MEET CABLE SEPARATION CRITERIA IDENTIFIED BY THE NRC.

SUMMARY OF TASK

AREA	TOTAL # OF ITEMS	ITEMS COMPLETED THIS MONTH	ITEMS COMPLETED TO DATE	PERCENT COMPLETED THIS MONTH	PERCENT COMPLETED TO DATE	MANHOURS EXPENDED THIS MONTH	MANHOURS REMAINI
WALL PENETRATION SLEEVES (SEE NOTE B)	182	0	182	0	100	0	32
ASSOC. CABLES	392	0	392	0	100	0	0
TRAY SYS. WLKDWN (SEE NOTE C)	1778(TR) (12446 UN)	1903(UN)	5589(UN)	15.3	44.9	538.5	8172
CABLES REQUIRING SEP. INSIDE PANELS (SEE NOTE D)	8951 CABLES (35,804 UN)	0	0	0	0	217	6357
REVIEW OF EER RESPONSES		0	37	0	100	0	0
ADMINISTRATIVE	-	-	-	-	-	589.5	1592
TOTAL	48,824	1903	6200	6	50	1345	16,153

(TR = TRAYS)
(UN = UNITS)

TASK VI: (CONT'D)

CURRENT STATUS AND RESULTS

A. A TOTAL OF 776 NONCONFORMANCE REPORTS HAVE BEEN WRITTEN FOR SEPARATION, IDENTIFICATION AND ROUTING DEFICIENCIES. 345 NR'S DISPOSITIONED (131 REWORK, 25 REPAIR, 189 ACCEPT-AS-IS). 217 OF THE 345 DISPOSITIONED NR'S HAVE BEEN CLOSED. 12 NR'S WERE CANCELLED BECAUSE OF DUPLICATION. 419 NR'S HAVE NOT BEEN DISPOSITIONED.

B. WALL PENETRATION AND SLEEVE INSPECTIONS COMPLETE. LEVEL II REVIEW OF INSPECTION RECORDS REMAINING.

C. THE DECISION HAS BEEN MADE TO INSPECT CABLE TRAYS IN PLACE OF CLOSING OUT ASSOCIATED CABLE INSPECTION RECORDS SINCE CONFIDENCE LEVEL HAS NOT BEEN MET. THE PROCEDURE FOR TRAY INSPECTION 19-QA-38 WAS APPROVED ON AUGUST 24, 1982. THE CABLE TRAY INSPECTIONS FOR THE CONTROL ROOM AND THE SERVICE WATER PUMP STRUCTURE ARE COMPLETE AND INSPECTIONS ARE BEING PERFORMED IN THE REACTOR BUILDING.

D. THERE ARE 4210 CABLES THAT REQUIRE INSPECTION IN THE CONTROL ROOM AND FROM THE CABLE SPREADING ROOM TO THE CONTROL ROOM. INSPECTIONS CANNOT START UNITL THE SEPARATION REQUIREMENTS ARE FINALIZED.

E. STATUS OF THE SIX EXAMPLES OF LACK OF SEPARATION: (2) CORRECTED, (1) IN-PROCESS OF BEING REWORKED, (2) ACCEPTED BY ENGINEERING, AND (1) IDENTIFIED ON NR.

COMMENT

MEETINGS WERE HELD WITH S&L TO CLARIFY AND RESOLVE SEPARATION REQUIREMENTS.

MANPOWER SUMMARY	ACTUAL
TASK COORDINATOR	1
QUALITY ENGINEER	1
LEAD INSPECTOR	1
INSPECTORS	4 1/2
DOCUMENTATION (NR'S & SCOPING PKGS)	1 1/2
TOTAL	9

TASK VI: (CONT'D)

STATUS

50% COMPLETE (EXPANDED SCOPE MANHOURS).

ESTIMATED COMPLETION DATE

JUNE 1, 1983

TASK VII: NONCONFORMANCE REPORTS

ACTION BEING TAKEN

A. 100% REVIEW OF ALL VOIDED NONCONFORMANCE REPORTS (NR'S), SURVEILLANCE REPORTS (SR'S), PUNCHLIST AND EXCEPTION LIST ITEMS.

B. 100% SOLICITATION TO PAST AND PRESENT QC INSPECTORS, BY CERTIFIED MAIL, REQUESTING THEIR KNOWLEDGE OF ANY NONCONFORMANCE REPORTS NOT ENTERED INTO THE SYSTEM.

C. REVIEW 300 RANDOMLY SELECTED, CLOSED NR'S.

SUMMARY OF TASK

AREA	TOTAL # OF ITEMS	ITEMS COMPLETED THIS MONTH	ITEMS COMPLETED TO DATE	PERCENT COMPLETED THIS MONTH	PERCENT COMPLETED TO DATE	MANHOURS EXPENDED THIS MONTH	MANHOURS REMAINING
VOIDED NR REVIEW INITIAL	1318	100	1050	7.58	79.66	125	539
VOIDED REVIEW SECONDARY	1318	64	656	4.85	49.77	80	565
SURVEILL-ANCE RPT REVIEW	3500	0	3285	0	94	0	5430
PUNCHLIST REVIEW	(APPX) 25,000	0	0	0	0	10	1190
CLOSED NR REVIEW	300	0	50	0	16.66	0	145
NR'S FROM INSPECTORS	UNKNOWN	0	0	(NO NR'S RECEIVED THIS MONTH)			
TOTAL	31,436	0	5,041	0	61	215	7869

CURRENT STATUS AND RESULTS

A. OF THE 100 NR'S REVIEWED, 50 HAVE BEEN SENT TO HJK FOR ADDITIONAL INFORMATION/ BACK-UP DOCUMENTATION AND 50 ARE READY FOR TRANSMITTAL UPON RECEIPT OF ORIGINAL 50 (EXPECTED 10/26; LETTER FOR ADDITIONAL 50 FOR SIGNATURE).

B. NO NO COMMITTEE HELD THIS MONTH.

TASK VII: CONT'D.

C. TWENTY MAN HOURS WERE EXPENDED THIS PERIOD FOR DISCUSSION AND PREPARATION OF PROCEDURES TO CLOSE OUT PUNCHLIST ITEMS.

D. PREPARATION OF PROCEDURE (19-QA-20 REVIEW OF PUNCHLIST) IN PROGRESS AS OF THIS DATE. PROCEDURE AND FINAL REVIEW CYCLE TO BE COMPLETED BY NOVEMBER 15, 1982.

E. 58 NR'S HAVE BEEN GENERATED FROM THE REVIEW OF VOIDED HJK NR'S AND SURVEILLANCE REPORTS.

MANPOWER SUMMARY	ACTUAL
TASK COORDINATOR	1
DOCUMENT REVIEWERS	2
TOTAL	3

STATUS

THIS TASK IS APPROXIMATELY 61% COMPLETE.

ESTIMATED COMPLETION DATE

JANUARY 30, 1983

TASK VIII: DESIGN CONTROL AND VERIFICATION

ACTION BEING TAKEN

VERIFY ADEQUACY OF S&L DESIGN CONTROL AND VERIFICATION PROGRAM. PROCEDURES WERE IN PLACE AND WERE CLARIFIED.

CURRENT STATUS AND RESULTS

THE FINAL REPORT FOR TASK VIII IS BEING WRITTEN.

STATUS

THIS TASK IS 99% COMPLETE TO DATE.

ESTIMATED COMPLETION DATE

DECEMBER 15, 1982

TASK IX: DESIGN DOCUMENT CHANGES

ACTION BEING TAKEN

1. COMPILE A COMPUTER LISTING OF ALL DDC'S.
2. REVIEW CG&E, HJK, S&L AND OTHER SITE CONTRACTORS' DDC'S TO DETERMINE PROPER CLASSIFICATION.
3. REVIEW CG&E, HJK, S&L AND OTHER SITE CONTRACTOR'S ESSENTIAL DDC'S TO DETERMINE IF DDC'S WERE INCORPORATED IN INSPECTION DOCUMENTATION.
4. PERFORM ELECTRICAL INSPECTIONS IN THE CONTROL ROOM FOR CABLE TRAY HANGERS, CONDUIT, AND CONDUIT SUPPORTS. (ADDITION TO ORIGINAL QCP WORK SCOPE)

SUMMARY OF TASK

AREA	TOTAL # OF ITEMS	ITEMS COMPLETED THIS MONTH	ITEMS COMPLETED TO DATE	PERCENT COMPLETED THIS MONTH	PERCENT COMPLETED TO DATE	MANHOURS EXPENDED THIS MONTH	MANHOURS REMAINING
PHASE I	19,711	0	18,725	0	95	0	80
PHASE II	9,111	227	3,303	2.5	36.3	551.5	13,858.5
PHASE IA	2,600	190	754	7.3	29	2[illegible]	146
PHASE IIA	2,200	68	167	3.1	7.6	226	5,030.5
PHASE III DOCUMENTATION	714	24	124*	3.3	17.3	45.0	-
INSPECTION	714	79	98*	11	13.7	491.5	-
OTHER	-	-	-	-	-	1017.0	-
TOTAL	35,050	-	23,171	2	35	2353	19,115

* EQUIVALENT ITEMS

** OTHER TIME SPENT FOR TRAINING AND CERTIFICATION OF PERSONNEL, PROBLEM RESEARCH AND RESOLUTION, PROCEDURE PREPARATION, CLERICAL, PHASE II ADMINISTRATION, AND SETTING UP A DDC REVIEW AND HANDLING SYSTEM. (386.5 HRS. FOR DDC SYSTEM)

PHASE I - CLASSIFICATION OF CG&E, S&L AND HJK, DDC'S AS ESSENTIAL OR NON-ESSENTIAL.

PHASE II - REVIEW INSPECTION DOCUMENTATION TO DETERMINE IF CG&E, S&L AND HJK DDC'S HAVE BEEN INCORPORATED AND INSPECTED.

PHASE IA - CLASSIFICATION OF WY&B AND OTHER SITE CONTRACTOR DDC'S AS ESSENTIAL OR NON-ESSENTIAL.

PHASE IIA- REVIEW INSPECTION DOCUMENTATION TO DETERMINE IF WY&B AND OTHER SITE CONTRACTOR DDC'S HAVE BEEN INCORPORATED AND INSPECTED.

PHASE III- ELECTRICAL INSPECTIONS IN THE CONTROL ROOM.

TASK IX: (CONT'D)

RESULTS

1. IN PHASES II & IIA, 760 DEFICIENCIES IDENTIFIED TO DATE FOR REPORTING VIA DOCUMENT DEFICIENCY NOTICES OR NONCONFORMANCE REPORTS AS APPLICABLE.
2. IN PHASE III, 95 DEFICIENCIES HAVE BEEN IDENTIFIED TO DATE FOR REPORTING VIA NONCONFORMANCE REPORTS. A MAJORITY OF THESE DEFICIENCIES ARE DUE TO WELD DEFICIENCIES.
3. TASK IX GENERATED THE FOLLOWING CER'S DURING THE PAST MONTH:
   i) DOCUMENTATION FOR MISCELLANEOUS HVAC INSTALLATION
   ii) RESPONSE TIME FOR CER'S
   iii) DOCUMENTATION FOR INSPECTION OF GE MECHANICAL FDDR'S AND FDI'S
   iv) CABLE TRAY HANGER WELDS (VENDORS SHOP VS. FIELD)
   v) CONDUIT HANGER DEADWEIGHT CALCULATIONS
   vi) CONDUIT HANGER DIMENSION TOLERANCES
   vii) NR'S WITH CONDITIONAL DISPOSITIONS

PROMBLEM/DEFICIENCY	ELECT.	MECH.	STRUCT.	TOTAL
1. MISSING DOCUMENTATION	32		203	235
2. DDC MIS-CLASSIFICATION	13		3	16
3. INSPECTION PROGRAM DEFICIENCIES & MISC.	26		32	58
4. DDC NOT INCORPORATED IN DOCUMENTATION	101	10	307	418
5. INSPECTION PRIOR TO DDC BEING WRITTEN (AS-BUILT)	3			3
6. INCOMPLETE INSPECTION	8		22	30
TOTAL	183	10	567	760

TO BE RESOLVED

A. TASK IX IS STILL WAITING FOR HJK TO RESPOND TO CAR'S IN ORDER TO COMPLETE SOME DDC REVIEWS.
B. THE METHOD USED TO CALCULATE CONDUIT DEAD LOADS, AS CONTAINED IN THE E-189 SERIES GENERAL NOTES, MAY BE INADEQUATE. THIS IS BEING ADDRESSED BY CG&E QUALITY ENGINEERING.

TASK IX: (CONT'D)

C. THE WELD INSPECTORS HAVE STATED THAT THEY CANNOT DETERMINE WHICH WELDS ON TRAY SUPPORTS WERE MADE BY THE SMAW PROCESS AND WHICH WERE MADE BY THE MIG PROCESS AFTER THE WELDS HAVE BEEN HOT-DIPPED GALVANIZED. THERE IS PRESENTLY NO WAY TO DETERMINE WHICH SUPPORTS WERE FABRICATED BY THE VENDOR AND WHICH WERE FABRICATED HERE ON SITE. THE LATTER REQUIRE INSPECTION OF THE "SHOP" WELDS. THIS PROBLEM IS BEING ADDRESSED BY CG&E QUALITY ENGINEERING, PER CER WRITTEN BY TASK IX.

D. THERE ARE SEVERAL HUNDRED DDC'S OPEN AGAINST THE E-189 DRAWINGS, OF WHICH MORE THAN 150 APPLY TO THE CONTROL ROOM AREA. A SYSTEM IS CURRENTLY BEING DEVELOPED TO ASSURE THAT ALL APPLICABLE DDC'S ARE INCLUDED IN THE INSPECTION PACKAGES AND PROVIDE FOR VERIFICATION OF THAT FACT.

E. A LARGE NUMBER OF CONDUIT SUPPORTS IN THE MAIN CONTROL ROOM STILL HAVE OPEN WORK TICKETS FOR LINE REVISIONS. THE PRESENT HJK PROGRAM ONLY REQUIRES INSPECTION OF THE ACTUAL REVISION, AND NOT THE ENTIRE SUPPORT. THEREFORE, SINCE THESE SUPPORTS HAVE BEEN PREVIOUSLY ACCEPTED, THEY STILL FALL UNDER 19-QA-35. THIS PROBLEM HAS NOT YET BEEN ADDRESSED, BUT WILL REQUIRE RESOLUTION BEFORE ALL OF THE SUPPORTS CAN BE COMPLETED.

F. TASK IX IS GOING TO PARTICIPATE ON A STRUCTURAL DDC NR REVIEW BOARD WHICH IS GOING TO BE FORMED TO FACILITATE THE DISPOSITIONING OF DOCUMENTATION DEFICIENCIES. THIS REVIEW BOARD NEEDS TO BE FORMED.

G. WAITING FOR RESOLUTION OF PROBLEMS WITH X & Y DIMENSION TOLERANCES ON CONDUIT HANGERS.

H. WAITING FOR RESOLUTION/CLARIFICATION OF HANGER SEPARATION CRITERIA.

COMMENTS

1. PHASE III OF TASK IX REQUIRES MANPOWER ELECTRICAL INSPECTORS IN ORDER TO ACHIEVE COMPLETION BY THE DATE INDICATED BELOW. A TOTAL OF 14 PEOPLE WILL BE REQUIRED BY NOVEMBER 1, 1982 IN ORDER TO MEET THE COMPLETION DATE.

MANPOWER SUMMARY	PHASES I, II, IA, IIA
ENGINEERS (INCLUDING TASK COORDINATOR)	4
DOCUMENT REVIEWERS	2
CLERKS	1
TOTAL	7
	PHASE III
DOCUMENT REVIEWERS	4 **
INSPECTORS	3
TOTAL	7 (DOES NOT INCLUDE WELD INS

** NUMBER INCLUDES PHASE COORDINATOR & LEAD INSPECTOR. TWO DOCUMENT REVIEWERS ARE A CERTIFIED AS ELECTRICAL INSPECTORS.

TASK IX: (CONT'D)

STATUS

PHASE I 95% COMPLETE
PHASE II 36.3% COMPLETE
PHASE IA 29.0% COMPLETE
PHASE IIA 7.6% COMPLETE
PHASE III 10% COMPLETE (ITEMS COMPLETED)
THE ORIGINAL TASK (PHASES I & II) IS APPROXIMATELY 40.8% COMPLETE.
PHASES IA AND IIA ARE APPROXIMATELY 9.2% COMPLETE.
THE OVERALL TASK IS 35% COMPLETE (DOES NOT INCLUDE PHASE III)

ESTIMATED COMPLETION DATE

PHASES I, II, IA, IIA - JUNE 1983
PHASE III ' - JANUARY 1983 *

* BASED ON RESOLUTION OF ITEMS "B", "C", "D", "E", "G" & "H" BY NOVEMBER 15, 1982.

TASK X: SUBCONTRACTOR/QA PROGRAM

ACTION BEING TAKEN:

A. ALL CG&E QA AUDITS OF SUBCONTRACTORS/VENDORS HAVE BEEN IDENTIFIED.

B. MATRICES HAVE BEEN DEVELOPED SHOWING WHICH 10CFR50 APPENDIX B CRITERIAS WERE VERIFIED DURING THESE AUDITS.

C. AUDIT REPORTS ARE BEING REVIEWED AND SUMMARIZED ON INDIVIDUAL FORMS.

D. EVALUATIONS ARE MADE OF THE SCOPE AND DEPTH OF THE AUDITS TO DETERMINE WHETHER THESE AUDITS COVERED ALL APPLICABLE 10CFR50, APPENDIX B CRITERIAS IN SUFFICIENT DETAIL.

1. IF EVALUATIONS PROVE SUBCONTRACTORS PROGRAMS ACCEPTABLE THESE CAN BE CLOSED.
2. IF EVALUATIONS CANNOT PROVIDE EVIDENCE THAT SUBCONTRACTOR PROGRAMS WERE SATISFACTORY, ALTERNATE MEASURE TO VERIFY HARDWARE INTEGRITY, SUCH AS REVIEW OF INTERNAL AUDITS PERFORMED BY SUBCONTRACTORS, REVIEW OF QUALITY DOCUMENTATION (INSPECTION RESULTS) TO PROVE ADEQUATE PROGRAM COVERAGE, COVERAGE IN OTHER QCP TASKS, RE-AUDIT OR HARDWARE INSPECTION AND/OR TESTING, WILL BE PURSUED..

SUMMARY OF TASK

AREA	TOTAL # OF ITEMS	ITEMS COMPLETED THIS MONTH	ITEMS COMPLETED TO DATE	PERCENT COMPLETED THIS MONTH	PERCENT COMPLETED TO DATE	MANHOURS EXPENDED THIS MONTH	MANHOURS REMAINING
SUBCONTRACTOR QA PROGRAMS	80	0	80	3	78*	20	130

* REMAINING 22% TO COMPLETE EVALUATION

CURRENT STATUS AND RESULTS

A. PROCEDURE FOR INTERFACE WITH OTHER QCP TASKS TO VERIFY ADEQUACY OF WORK HAS BEEN DEVELOPED. THIS PROCEDURE IS BEING REWRITTEN AND WILL BE SUMITTED FOR REVIEW.

B. EIGHTY (80) AUDITS OF SUBCONTRACTORS WERE IDENTIFIED AS BEING PERFORMED PRIOR TO APRIL 8, 1981. THESE AUDITS ENCOMPASSED THIRTEEN(13) DIFFERENT SUBCONTRACTORS. OF THE THIRTEEN SUBCONTRACTORS, SIX (6) MAY REQUIRE AUDITS OF SUBSEQUENT ACTIVITIES FOR CONFIRMATION OF THE WORK WHICH CANNOT BE ACCOMPLISHED BY DOCUMENT REVIEW OR INSPECTION. ALL AUDITS HAVE BEEN REVIEWED. THE SCOPE OF MANY AUDITS DO NOT ADDRESS APPLICABLE CRITERIA.

TASK X: CONT'D.

C. EVALUATIONS OF THE AUDITS WILL BEGIN WHEN THE PROCEDURE FOR THIS TASK IS APPROVED.

TO BE RESOLVED

COMMENTS

A. THE ESTIMATED TIME REQUIRED FOR COMPLETION IS 15 MAN DAYS WHICH INCLUDES EVALUATION OF PAST AUDITS OF SIX SUBCONTRACTORS.

B. IF THE SCOPE AT THIS TASK IS EXPANDED TO INCLUDE VENDORS WHICH SUPPLIED MATERIAL BUT HAVE NOT BEEN AUDITED, IT IS ESTIMATED THAT A MINIMUM OF 10 MAN DAYS PER VENDOR WILL BE REQUIRED TO COMPLETE AN AUDIT.

STATUS

THIS TASK IS 78% COMPLETE.

ESTIMATED COMPLETION DATE

DECEMBER 1982 FINAL REPORT AND EVALUATION.

TASK XI: AUDITS

ACTION BEING TAKEN

A. REVIEW ALL PAST CG&E QA AUDITS OF HJK, S&L, GE, NPD, NED, EOTD, AND GCD.

B. DEVELOP MATRICES SHOWING WHICH 10CFR50 APPENDIX B CRITERIA WERE IDENTIFIED DURING AUDITS.

SUMMARY

AREA	TOTAL # OF ITEMS	ITEMS COMPLETED THIS MONTH	ITEMS COMPLETED TO DATE	PERCENT COMPLETED THIS MONTH	PERCENT COMPLETED TO DATE	MANHOURS EXPENDED THIS MONTH	MANHOURS REMAINING
AUDITS REVIEWED	296	0	296	2	82	40	210

CURRENT STATUS AND RESULTS

A. PRELIMINARY EVALUATION INDICATES THAT MOST AUDITS WERE OF LIMITED SCOPE, HOWEVER, COLLECTIVELY DUE TO THE LARGE NUMBER OF AUDITS PERFORMED, THE APPLICABLE 18 CRITERIA WERE COVERED FOR HJK, EOTD, NED, GCD, AND NPD. THERE WERE AREAS NOT COVERED IN AUDITS OF S&L AND GE SUBSEQUENT TO APRIL 8, 1981. HOWEVER, CURRENT AUDITS OF S&L AND GE HAVE COVERED THE MAJORITY OF APPLICABLE CRITERIA.

B. PROCEDURE FOR INTERFACE WITH THE QCP TASKS TO VERIFY ADEQUACY OF WORK HAS BEEN DEVELOPED. THIS PROCEDURE IS BEING REWRITTEN AND WILL BE SUBMITTED FOR REVIEW.

COMMENTS

A. IT IS ESTIMATED THAT 30 MAN DAYS WILL BE REQUIRED FOR THE EVALUATION OF THESE AUDITS.

STATUS

THIS TASK IS 82% COMPLETE

ESTIMATED COMPLETION DATE

OCTOBER 15, 1982 - REVIEWS COMPLETE

NOVEMBER 15, 1982 FINAL REPORT AND EVALUATIONS.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nunzio J. Palladino, Chairman
Victor Gilinsky
John F. Ahearne
Thomas M. Roberts
James K. Asselstine

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In the Matter of	
CINCINNATI GAS & ELECTRIC COMPANY	Docket No. 50-358
(William H. Zimmer Nuclear Power Station)	Construction Permit No. CPPR-88 EA 82-129

ORDER TO SHOW CAUSE AND
ORDER IMMEDIATELY SUSPENDING CONSTRUCTION
(CLI-82-33)

I.

The Cincinnati Gas and Electric Company (CG&E) holds Construction Permit No. CPPR-88 which was issued by the Commission in 1972. The permit authorizes the construction of the William H. Zimmer Nuclear Power Station Unit 1, a boiling water reactor to be used for the commercial generation of electric power. The Zimmer plant is located on the licensee's site in Moscow, Ohio.

II.

A. Initial Identification of QA Problems

In early 1981 the NRC conducted an investigation into allegations made by present and former Zimmer site employees and by the Government Accountability Project. The NRC investigation revealed a widespread breakdown in CG&E's management of the Zimmer project as evidenced by numerous examples of non-compliance with twelve of the eighteen quality assurance Criteria of

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Appendix B to 10 CFR Part 50. Consequently, CG&E paid a civil penalty of $200,000 for the failure to implement an acceptable quality assurance program, false quality assurance documents, and intimidation and harassment of quality control inspectors. (See Notice of Violation and Proposed Imposition of Civil Penalties, dated November 24, 1981 and Investigation Report No. 50-358/81-13.) In addition CG&E agreed to take actions to correct identified QA failures and prevent their recurrence and to determine quality of completed construction work.

1. Actions to Correct Identified QA Failures and Prevent Recurrence

A meeting was conducted by Region III on March 31, 1981, and the utility agreed to implement ten actions to correct quality assurance failures identified during the January - March 1981 investigation and to preclude their recurrence. These actions included: (1) increasing the size and technical expertise of the CG&E QA organization; (2) taking action to assure independence and separation of the QA/QC function performed by Kaiser from the construction function; (3) conducting 100% reinspections of the quality control (QC) inspections performed after that date by Kaiser and other contractors; (4) reviewing for adequacy, and revising as appropriate, all QC inspection procedures; (5) training QA/QC personnel on new and revised procedures; (6) reviewing for adequacy, and revising as appropriate, the procedures governing the identification, reporting, and resolution of deviations from codes and Final Safety Analysis Report (FSAR) statements; (7) reviewing for adequacy the procedures governing nonconformance reporting and justifying the disposition of each voided nonconformance

report; (8) establishing an adequate program for control of QA and QC records; (9) performing a 100% review of all future surveillance and nonconformance reports written by contractor personnel; and (10) reviewing and revising the CG&E audit program so that it included technical audits of construction work and more comprehensive and effective programmatic audits. These commitments were confirmed in an Immediate Action Letter to the licensee on April 8, 1981.

2. Actions to Determine Quality of Completed Construction Work

Following the identification in 1981 of significant quality assurance problems and related management breakdowns, CG&E agreed to establish a comprehensive program to determine the quality of the completed construction work. The Quality Confirmation Program (QCP) was submitted to the NRC by the licensee on August 21, 1981. The QCP addressed problems identified by the investigation in the following areas: (1) structural steel; (2) weld quality; (3) traceability of heat numbers on piping; (4) socket weld fitup; (5) radiographs; (6) electrical cable separation; (7) nonconformance reports; (8) design control and verification; (9) design document changes; (10) subcontractor QA programs; and (11) audits.

3. Results of Actions Taken by the Licensee to Determine the Quality of Completed Construction Work

Many construction deficiencies have been identified by the licensee during the conduct of the QCP and other quality reviews and reported to

the NRC pursuant to 10 CFR 50.55(e) which could have been prevented or identified in a timely manner by the licensee and its contractors had there been a properly managed QA program. Major construction deficiencies identified to date by the quality reviews are listed in order of identification and include the following:

. Welds performed using an unqualified welding procedure for welds greater than 0.864 inches.

. Unauthorized stamping of fittings and use of "high-stress" stamps.

. ASME structural weld and welder qualification deficiencies.

. Welds performed and welders not qualified for weld thickness range per ASME requirements.

. Approximately 2400 feet of small bore piping identified with questionable heat treatment.

. Welder qualifications with a substantial number of documentation discrepancies.

. Carbon steel weld rod may have been used for a portion of several stainless steel recirculation line welds.

- Electrical cable tray installation and inspection deficiencies.

- Hangers installed for the control rod drive system are of indeterminate quality.

- Both weld and radiograph quality deficiencies for sacrificial shield welds and radiograph deficiencies identified for the containment monorail and the ventilation stack.

- Deficiencies in the H. J. Kaiser procurement program for structural steel and other materials.

- Inadequate design control by Sargent & Lundy (architect engineer) for electrical separation.

- Inadequate weld preparation prior to radiography (ripples not removed) which caused masking of discontinuities in some welds.

- Reactor control, reactor protection, and neutron monitoring panels, including field installed wiring do not, in some cases, conform to design drawings with regard to cable separation.

- Inadequate engagement of "gamma plugs" in large-bore piping and lack of heat number traceability of the "gamma plugs." (During radiography of a pipe weld, a gamma source is sometimes inserted through a small

hole in the side of the pipe. After radiography the hole is plugged to provide a pressure boundary.)

- Inadequate inspection program and installation procedures for "Nelson stud" installation for cable tray hangers.

- Concrete and steel coating program not in accordance with the QA Program and the Sargent & Lundy specification requirements.

- Design changes made to the Fire Protection System piping in the cable spreading room in 1979 were inadequately controlled.

- The Sargent & Lundy (architect engineer) dynamic stress analysis of small bore piping is questionable.

- Cable separation problem with regard to division separation between non-essential cables being bundled with essential cables of different divisions.

- Pipe support installation procedures did not contain seismic clearance criteria between pipe supports and cable trays or conduit and associated supports as required by the specification.

These deficiencies represent those which the staff considers most significant. There were additional 10 CFR 50.55(e) reports made by the licensee and the licensee has identified a large number of

nonconformances (which could reflect construction or other types of deficiencies). As of September 30, 1982 the licensee's continuing quality confirmation program reviews had identified approximately 4,200 nonconformances of which about 800 have been "dispositioned", i.e., the licensee had made a determination as to resolution. (Inspection Report No. 50-358/82-12, report pending.) The large number of noncomformance reports and the significance of the matters being identified corroborate the staff's 1981 finding of significant breakdown in the licensee's quality assurance program.

B. Findings Subsequent to Licensee Actions Taken to Correct QA Failures and Prevent Recurrence

Since the Immediate Action Letter was issued on April 8, 1981 and quality assurance and management deficiencies were brought to the attention of the licensee, hardware and programmatic QA/QC problems have been identified by the NRC and the National Board of Boiler and Pressure Vessel Inspectors. These problems are discussed in the following paragraphs and indicate the licensee and the constructor are still having difficulty implementing satisfactory QA/QC programs:

During an inspection conducted the latter part of 1981 and the early part of 1982 (Inspection Report No. 50-358/82-01, issued on June 24, 1982) three items of noncompliance were identified. The findings concerned (1) the failure to clearly establish and document the authorities and duties of all QA Department personnel, (2) the failure to provide

adequate certification of qualifications of all QA Department personnel, and (3) the failure to provide adequate procedures. The licensee failed to adequately address the provisions of Regulatory Guide 1.58 (ANSI N45.2.6-1978) concerning personnel in the QA Department. Additionally, inadequately qualified personnel were reviewing and approving quality procedures controlling electrical activities, which contained deficiencies.

Furthermore, as a result of the licensee reviews it was revealed that some weld inspectors involved in the QCP Task I, Structural Steel, were not adequately certified and the task was stopped. The task was restarted following upgrade of the inspectors through training provided by additional certified weld inspectors.

During an inspection conducted in March and April 1982 (Inspection Report No. 50-358/82-05, issued on July 1, 1982) two items of noncompliance were identified. The findings concerned the lack of implementation and timeliness of corrective actions and the failure to adequately review and document potentially reportable matters.

During an inspection conducted in April, May, and June of 1982 (Inspection Report No. 50-358/82-06, issued on November 2, 1982) two items of noncompliance were identified. The findings concerned (1) the performance of quality activities required of the welding engineers by inadequately qualified clerks and (2) the failure to perform required calibrations

during a critical quality activity, Induction Heating Stress Improvement (IHSI) program.

A recent inspection conducted during June and July of 1982 (Inspection Report No. 50-358/82-10, report pending) identified a number of significant concerns. These concerns were discussed with the licensee on July 9, July 15, August 15, and October 19, 1982. Four significant items of concern (potential items of noncompliance) were identified: (1) the inadequate control and documentation of welder qualifications; (2) the failure to take corrective actions following the identification of inadequate records to support welder qualifications; (3) the unauthorized correction, supplementation, and alteration of quality records; and (4) the failure to follow procedures controlling weld filler metal control, logging and control of requests for information/evaluation, and imposition of reporting requirements on contractors. The NRC findings concerning welder qualifications resulted in the requalification of approximately 100 active onsite welders and the need for the licensee to develop a program to evaluate the previous work of the welders whose qualifications were not adequately documented.

An inspection was conducted following notification of the Region III Office that a CG&E Stop Work Order (SWO) had been initiated on August 5, 1982, pertaining to Catalytic, Inc. (CI) activities in the area of the control rod drive system hangers and supports. CI is a contractor of the licensee performing construction work

including rework activities identified by the QCP program. During this inspection conducted during August and September of 1982 (Inspection Report No. 50-358/82-13, report pending), significant concerns were identified regarding the implementation of CG&E's quality assurance program and its management program established to control and monitor the activities of Catalytic, Inc. (CI). The concerns involved the areas of (1) the description of organization and functional interfaces, (2) training of CI personnel, (3) design control measures, (4) procedure content and implementation, (5) document control, (6) inspection and surveillance activities, (7) nonconforming conditions, (8) corrective actions, (9) records, and (10) audits. The findings were discussed with the licensee on August 12, September 10 and 1[illegible] October 19, 1982.

As a result of the inspection findings and subsequent discussions with the licensee, Stop Work Orders were issued by the licensee, stopping all essential work by CI on October 11, 1982, pending resolution of the programmatic problems identified by the NRC and licensee reviews.

The licensee has initiated Stop Work Orders in addition to those affecting CI due to inadequate quality assurance in the areas of application of coatings (October 12, 1982), electrical cable installation (October 12, 1982), and special process procedures (November 1, 1982). The Stop Work Orders involve ongoing activities. The November 1, 1982 Stop Work Order involved procedures not meeting requirements notwithstanding that the procedures had been specifically

reviewed by CG&E for adequacy subsequent to the issuance of the April 8, 1981 Immediate Action Letter.

Additionally, during the week of October 10, 1982, the Authorized Nuclear Inspector (ANI) for the N-stamp holder (H. J. Kaiser) recalled ASME work packages then being used in the field because of the performance of ASME code work (hanger attachment removal and piping cutouts) was outside the approved QA Program procedures. The ASME code work was being controlled and performed utilizing an H. J. Kaiser administrative memo which bypassed the ANI's required involvement in the code activities. The NRC was apprised of the required corrective actions during a meeting involving CG&E and H. J. Kaiser on October 15, 1982. The corrective actions taken and planned were considered acceptable by the Authorized Nuclear Inspector.

The National Board of Boiler and Pressure Vessel Inspectors, at the request of the State of Ohio, have been onsite since March 1, 1982. The National Board has issued three interim reports documenting findings regarding ASME code activities. The National Board findings include deficiencies in the following areas regarding on-going ASME code activities: design control, procurement, procedures, special processes, nonconforming conditions, and corrective actions. The findings are generally consistent with past and present NRC findings.

C. Rework Activities

As a result of the information obtained from the licensee's reviews of plant quality, the licensee is proceeding, prior to completion of the relevant QCP tasks, to initiate rework activities. A major example of rework activities is the area of structural steel welding. The reinspection and rework of structural steel welds located in a number of areas of the plant have been in process for a number of months. Approximately 70 percent of the structural welds are being reworked to make the welds acceptable. In the case of these welds, rework is being undertaken prior to the completion of the quality reviews to determine the acceptability of all structural steel welds and beam/hanger materials. The rework of these welds prematurely may result in the addition of new weld material over unacceptable weld material or beam/hanger materials. Following completion of the quality reviews unacceptable areas may require additional rework activities. This approach to rework activities indicates a lack of a comprehensive management program to address rework activities and the safety impact of those activities on the facility.

III.

The foregoing information indicates that: 1) the Zimmer facility has been constructed without an adequate quality assurance (QA) program to govern construction and to monitor its quality, resulting in the construction of a facility which currently is of indeterminate quality; 2) substantial efforts are underway to determine the quality of past construction activities and numerous construction deficiencies have been

identified and are continuing to be identified such that both reanalysis and rework will be required to bring the facility into conformance with the application and regulatory standards on the basis of which the construction permit was originally issued; and 3) rework of deficiencies identified by the Quality Confirmation Program (QCP) has been undertaken prior to completion of other relevant QCP tasks and other reviews, resulting in the potential for additional reworking of the same item if further deficiencies are found, as has been the case, by the quality reviews. Consequently, the NRC presently lacks reasonable assurance that the Zimmer plant is being constructed in conformance with the terms of its construction permit and 10 CFR Part 50, Appendix B, and that there is adequate management control over the Zimmer project to ensure that NRC requirements are being met.

The verification of the facility's quality and appropriate actions to correct deficiencies in construction are of utmost importance to the public health and safety should the licensee receive a license to operate the facility. Moreover, the licensee must be in a position to assure that its construction activities have been properly carried out in accordance with Commission requirements, as the Commission inspectors are not able to personally verify every individual aspect of construction that may impact on safety. In view of the importance to safety of construction verification and corrective actions and the past pattern of quality assurance deficiencies, the Commission has concluded that safety-related construction, including rework activities, should be suspended until there is reasonable assurance that future construction activities will be appropriately managed to assure that rework activities and all other construction activities will be conducted in

accordance with 10 CFR Part 50, Appendix B, and other Commission requirements. The Commission has further determined that in light of the foregoing considerations the public health, safety and interest require suspension of construction, effective immediately pending further authorization.

IV.

Accordingly, pursuant to sections 103, 161i, 182 and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR Parts 2 and 50, IT IS HEREBY ORDERED THAT:

A. Effective immediately, safety-related construction activities, including rework of identified deficient construction, shall be suspended.

B. The licensee shall show cause why safety-related construction activities, including reworking activities, should not remain suspended until the licensee:

(1) Has obtained an independent review of its management of the Zimmer project, including its quality assurance program and its quality verification program, to determine measures needed to ensure that construction of the Zimmer plant can be completed in conformance with the Commission's regulations and construction permit.

(a) The independent organization conducting this review shall be knowledgeable in QA/QC matters and nuclear plant construction and shall be acceptable to the Regional Administrator. The independent organization shall make

recommendations to the licensee regarding necessary steps to ensure that the construction of the facility can be completed in conformance with the Commission's regulations and the construction permit. A copy of the independent organization's recommendations and all exchanges of correspondence, including drafts, between the independent organization and CG&E shall be submitted to the Regional Administrator at the same time as they are submitted to the licensee. In making recommendations, the independent organization shall consider at a minimum the following alternatives for management of the Zimmer project and shall weigh the advantages and disadvantages of each alternative:

1. Strengthening the present CG&E organization.
2. Creation of an organizational structure where the construction management of the project is conducted by an experienced outside organization reporting to the chief executive officer of CG&E.
3. Creation of an organizational structure where the quality assurance program is conducted by an experienced outside organization reporting to the chief executive officer of CG&E.
4. Creation of an organizational structure with both quality assurance and construction project management conducted by an experienced outside

organization reporting to the chief executive officer of CG&E.

(b) The licensee shall submit to the Regional Administrator the licensee's recommended course of action on the basis of this independent review. In evaluating the recommendations of the independent organization, the licensee shall address why it selected particular alternatives and rejected others. The licensee's recommendations and its schedule for implementation of those recommendations shall be subject to approval by the Regional Administrator.

(2) Following the Regional Administrator's approval in accordance with section IV B(1)(b),

(a) Has submitted to the Regional Administrator an updated comprehensive plan to verify the quality of construction of the Zimmer facility and the Regional Administrator of NRC Region III has approved such plan. In preparing this updated comprehensive plan, the licensee shall review the ongoing Quality Confirmation Program to determine whether its scope and depth should be expanded in light of the hardware and programmatic problems identified to date. The updated plan shall include an audit by a qualified outside organization, which did not perform the activities being audited, to verify the adequacy of the quality of construction; and

(b) Has submitted to the Regional Administrator a comprehensive plan, based on the results of the verification program, for the continuation of construction, including reworking activities, and the Regional Administrator has confirmed in writing that there is reasonable assurance that construction will proceed in an orderly manner and will be conducted in accordance with the requirements of the Commission's regulations and the Construction Permit No. CPPR-88.

(3) The Regional Administrator may relax all or part of the conditions of section IV.B for resumption of specified construction activities, provided such activities can be conducted in accordance with the Commission's regulations and the provisions of the construction permit.

V.

Within 25 days of the date of this order, the licensee may show cause why the actions described in section IV should not be ordered by filing a written answer under oath or affirmation that sets forth the matters of fact and law on which the licensee relies. As provided in 10 CFR 2.202(d), the licensee may answer by consenting to the order proposed in section IV of this order to show cause. Upon the licensee's consent, the terms of

section IV.B of this order will become effective. Alternatively, the licensee may request a hearing on this order within 25 days after the issuance of this order. Any request for a hearing or answer to this order shall be submitted to the Secretary, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. A copy of the request or answer shall also be sent to the Director, Office of Inspection and Enforcement, and to the Executive Legal Director at the same address, and to the Regional Administrator, NRC Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137. A request for a hearing shall not stay the immediate effectiveness of section IV.A of this Order.

If the licensee requests a hearing on this order, the Commission will issue an order designating the time and place of hearing. If a hearing is held, the issues to be considered at such a hearing shall be whether the facts set forth in sections II and III of this order are true and whether this order should be sustained.

Commissioners Ahearne and Roberts dissent from this decision. Their dissenting views are attached.

It is so ORDERED.

For the Commission

John C. Hoyle
Acting Secretary of the Commission

Dated at Washington, D.C.
this 12th day of November, 1982.

DISSENTING VIEWS OF COMMISSIONER AHEARNE

I agree with both the substance and the direction for change described in this order. However, I would have simply issued a Show Cause Order and would not have made it immediately effective.

DISSENTING VIEW OF COMMISSIONER ROBERTS

I disagree with the action taken by the Commission majority on several grounds First, I believe the Commission's action in immediately suspending construction at the Zimmer facility is precipitous. Earlier this year, Cincinnati Gas and Electric Company (CG&E) made substantial changes in its management structure in order to manage more effectively construction activities and to monitor more carefully quality assurance programs. Despite the fact that this new organizational structure is relatively untested, the Commission is now suspending effective immediately all construction and corrective actions at the site. Additionally, the NRC Staff admits that CG&E's enhanced Quality Confirmation Program (QCP) and large quality control staff is effectively identifying existing construction problems. Moreover, to the extent that actual construction deficiencies have been found, CG&E's management has demonstrated its willingness to take strong remedial actions by issuing stop work orders in those areas where construction deficiencies have been found. In a plant that is approximately 98 percent complete, the Commission is requiring the relatively few remaining construction activities and the ongoing corrective actions necessitated by the QCP to stop immediately while additional organizational changes are implemented.

Second, I believe the Commission's action does not comport with its own practice. In Licensees Authorized to Possess . . . Special Nuclear Materials, CLI-77-3, 5 NRC 16, 20 (1977), the Commission said that "[a]vailable information must demonstrate the need for [such] emergency

actions and the insufficiency of less drastic measures" (emphasis added). See also Consumers Power Co. (Midland Plant, Units 1 & 2), CLI-73-38, 6 AEC 1082, 1083 (1973). I believe that, in this case, some of the less drastic alternatives proposed by the Staff would be adequate to resolve the problems at this facility. For example, the Commission could send CG&E a letter indicating that at this time the Commission does not have sufficient information to conclude that Zimmer has been constructed in substantial conformance with the construction permit. The Commission could request the provision of information on the part of CG&E which, if available, would provide the Commission with the necessary assurance. See 10 CFR 50.54(f).

Third, in the absence of willfulness, the Commission may suspend construction effective immediately in accordance with Section 9b of the Administrative Procedures Act and the Commission's regulations only if the Commission finds that the public health, safety, or interest requires such action. I do not believe that the concerns listed in the Commission's Order show that the public health and safety requires immediate suspension of all construction and corrective actions at the Zimmer site. Indeed, Mr. James Keppler, the Region III Administrator, has stated that CG&E's QCP has been successful in identifying existing construction problems. Transcript of Public Meeting on the Status of Zimmer, October 28, 1982 at 5. Additionally, most of the NRC inspection findings arising out of the QCP point to administrative or procedural deficiencies, rather than to actual material or construction errors. While the NRC's level of confidence in the adequacy of the plant

construction has been reduced, it has not been shown by the NRC that problems exist which require immediate resolution to protect the public health and safety. Moreover, I do not believe this action is in the public interest.

I am also concerned that the Order has been approved without consideration for the Applicant's proposal to correct management and construction problems. That proposal, outlined in a letter to the Commissioners dated November 10, 1982, contained all of the essential elements approved by this Order. Specifically, the proposal calls for obtaining new project management, stopping all rework on quality confirmation matters, and an independent third party review to confirm the acceptability of selected safety systems. In view of the voluntary agreement by CG&E to such drastic measures, I feel that this Order is primarily punitive in nature and does little to correct problems in the interest of public health and safety.

Finally, I disagree with the Commission's Order because of the potential for delay inherent in this procedure. CG&E has an absolute right to a hearing on the Commission's Order. If CG&E avails itself of this right, then other "interested persons" will be entitled to demand a hearing. Once started, the hearing would be difficult to bring to an expeditious close. Even if the Staff and CG&E were to reach agreement on the corrective actions to be taken, litigation of the requirements imposed by the Commission Order would continue. Consumers Power Co. (Midland Plant, Units 1 & 2), ALAB-315, 3 NRC 101 (1976); Dairyland Power Cooperative (LaCrosse Boiling Water Reactor), LBP-81-7, 13 NRC 257, 264-65 (1981).

THE CINCINNATI GAS & ELECTRIC COMPANY

CINCINNATI, OHIO 45201

B. R. SYLVIA
VICE PRESIDENT
NUCLEAR OPERATIONS

November 15, 1982

U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Attention: Mr. J.G. Keppler
Regional Administrator

RE: WM. H. ZIMMER NUCLEAR POWER STATION - UNIT 1 - NRC ALLEGATIONS - WELDER QUALIFICATION - DOCKET NO. 50-358, CONSTRUCTION PERMIT NO. CPPR-88, W.O. #57300, JOB E-5590 - FILE NO. NRC-19 & I.E. INSPECTION REPORT NO.

Gentlemen:

By letter dated October 27, 1982, CG&E was notified by the NRC that "NRC Region III has been advised of allegations that relevant documentation on the welders at the Zimmer Site was prepared for, or reviewed at, a meeting between Cincinnati Gas & Electric Company (CG&E) and H.J. Kaiser (HJK) held on July 8, 1982, but that such documentation was not discussed with, or made available to, Region III at the meeting on this subject held on July 9, 1982 among CG&E, HJK and Region III. Substantial documentation was made available to Region III in connection with the July 9 meeting, but additional relevant documentation was allegedly not made available."

The July 8, 1982 meeting between CG&E and HJK was a routine Zimmer Site management meeting. One of the topics scheduled for discussion near the end of the meeting was the resolution of current welder performance qualification. These concerns over welder performance qualification records were identified earlier in 10CFR50.55(e) Report M-45 and in numerous HJK and CG&E nonconformance and Corrective Action Reports which were available to the NRC. Generic categories of document deficiencies identified in these CARs and NRs were discussed at the meeting for the purpose of

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determining resolutions acceptable to CG&E and HJK management. The results of this discussion were presented to the NRC in a meeting on July 9, 1982. Additional supporting documentation was subsequently made available to the NRC.

CG&E's approach to formulating a response to the aforementioned allegation was to seek information from each individual who attended the July 8, 1982 meeting. Everyone attending the meeting was asked to identify documentation or reports made available or discussed at the meeting, or used in preparing for the meeting.

On the basis of the information given to me by the meeting participants, and my personal knowledge, I have determined that no reports or documentation other than that already made available to Region III were prepared for use at either the July 8, or July 9, 1982 meeting. A list of documents or reports either used at the July 8 and/or July 9, 1982 meetings or used in preparation for these meetings is provided as Attachment 1. This list is a compilation of the information provided by each of the July 8, 1982 meeting attendees. This list, of course, does not include all information generated as part of the general review of welder performance qualification records not prepared specifically for or discussed at the July 8, or July 9, 1982 meetings. These records have been and are available for NRC review.

Very truly yours,

By B R Sylvia
B.R. Sylvia
Vice President - Nuclear Operations

BRS/bcf
Attachments
cc: D. Hunter
W.F. Christianson

State of Ohio)
County of Clermont) ss

Sworn to and subscribed before me this
15th day of November, 1982

Linda F. Peterson
Notary Public
My commission expires 2-2-23

ATTACHMENT 1

HJK QA Documentation Group

A) Current Welder Qualification Status Report (July 9, 1982)
B) Current Welders with Gladstone Laboratories Test
C) Welder Status Index
D) Current Welders Status
E) QA Records Review Welder Status Checklist

HJK Welding Department

A) Welder Qualification List

CG&E Quality Confirmation Program

A) QCP Welder Qualification Log generated by 19-QA-21
B) Welder Qualification Record: #50-238
C) Welder Qualification Record: #9-3174
D) Welder Qualification Record: Number not recalled

Other documents referenced during the July 8, 1982 meeting

A) HJK Procedure: WCP-2
B) HJK Procedure: SPPM 3.2, R.4
C) HJK Procedure: SPPM 3.2, R.7
D) Various CARs and NRs referenced in the above documents.