

GOVERNMENT ACCOUNTABILITY PROJECT

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November 11, 1982

Mr. Harold P. Denton
Office of Nuclear Reactor Regulation
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. James G. Keppler
Administrator, Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Re: Midland Nuclear Power Plant, Units I & II
- Consumers Power Company, Quality Assurance Program
Implementation for Soils Remedial Work
- Consumers Power Company Midland Independent
Review Program

Dear Sirs:

This letter provides a comprehensive review of the written materials and presentations from the October 24 and November 5, 1982 meetings between Consumers Power Company (CPCo) and the NRC at the Bethesda offices. We are submitting these comments on behalf of those former employees, local citizens and the Lone Tree Council of the tri-city area surrounding the plant.

We are pleased with a number of results to date; specifically the inclusion of the Tera Corporation's vertical slice review, the expertise of Parsons and Brinkerhoff, and the impressive qualifications of certain personnel selected to perform the independent assessment. Further, we are pleased with the consensus for the independent auditors to submit their reports simultaneously to CPCo and the Nuclear Regulatory Commission.

In general, however, we remain skeptical of the plan being provided by CPCo to allay legitimate NRC and public concerns over the safety of the Midland project. Although we are operating at a handicap due to the generalized nature of CPCo's presentations, the following specific concerns and observations may be helpful as you review the final CPCo proposal.

I. Summary of October 22, 1982 Recommendations

On October 22, 1982 GAP provided an extensive review of the three Consumers Power Company letters outlining the utility's proposed relief. The review

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included a number of specific concerns which remain unresolved, as well as pertinent recommendations. Based on our review of the licensee proposals (and subsequent presentations) we are asking the NRC:

1. To withhold approval of the independent audit proposal in its present form.
2. To require two further public meetings, in Michigan, that finalize the details of the independent contracts.
 - a. At least one of these meetings should be in Midland, so that local residents can be informed; and one of these meetings should fully explain the proposed single-point accountability (SPA) proposal, including having the individuals who are to perform this function explain their personal understanding of their respective responsibilities.
 - b. Further, GAP recommends that:
 1. Final approval of the SPA individuals rest with the NRC;
 2. SPA officials should commit to at least one meeting and site tour with public nuclear employee witnesses to resolve their allegations;
 3. SPA officials should be accessible to the public on a regularly scheduled basis to discuss the status of the work.
 - c. The second meeting should provide an opportunity for all the contracted independent auditors to meet directly with the NRC staff, in public, and review the terms and requirements of their contracts.
3. To require the expansion of the proposed training sessions, including NRC review of the training materials relating to NRC regulations and requirements.
4. To increase direct contact between NRC regional management officials and QA/QC personnel performing work on the soil remedial project, including written materials for each employee, a site visit by Mr. Keppler, and an "open door" policy with resident inspectors.
5. To reject the INPO evaluation by Management Analysis Company as the independent assessment. (Although GAP believes the INPO evaluation may be beneficial to CPCo management, it does not meet the minimum requirements for either independence or a comprehensive evaluation.)
6. To reject the selection of Stone & Webster for the independent assessment of QA implementation.
7. To request that the entire record, including all relevant, material raw data, be provided to the NRC with the weekly and monthly reports.

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8. To require a mandated percentage of field verification of the systems being reviewed.

Finally, GAP provided a series of specific recommendations for the charters of the independent contractors and subcontractors. These are noted below:

1. The independent contractor should be responsible directly to the NRC, submitting all interim and final product simultaneously with CPCo and the NRC.
2. The independent contractor should do a historical assessment of CPCo's prior work, including a frank report of the causes of the soils settlement problem.
3. The charter should ensure that, once hired, CPCo cannot dismiss the independent contractor from the project without prior notice to the NRC and an NRC-sponsored public meeting to justify the decision.
4. The charter should require that each auditor, at least five already identified, subcontract any services for which its direct personnel are not qualified.
5. The charter should require that the proposed methodology be disclosed: specifically selection criteria and size of the samples for inspections and testing.
6. The charter should require the auditors to provide calculations demonstrating that it is possible to adequately complete its work during the proposed timeframe.
7. The charter should require the auditor to support its proposed methodology through references to established professional codes (ASIM, ASME, ANSI, AWS, etc.).
8. The charter's should require all auditors to report all safety-related information directly to the NRC.
9. The employees and auditors should demonstrate that the personnel assigned to the project are free from conflicts of interest.
10. The auditors must recommend corrective action, and then control its implementation.

Our further comments can be categorized into priority items and methodology.

A.. Priority Items

1. No soils work should be allowed to go forward until all questions on implementation review process are resolved.

- a. Lack of independence. At the November 5, 1982 meeting it was obvious that the most basic questions about Stone & Webster's (S&W) work had not been resolved. The disclosure that S&W in fact had done previous work for CPCo was particularly disturbing. This places S&W in the same position as MAC. According to the "Independency Criteria" outlined in the February 1, 1982 letter from Chairman Palladino to Congressman John Dengell, as well as the previous independence criteria used in Region III, S&W must be rejected.
 - b. Conflict of interest. Further, the conflict-of-interest clause pertaining to "significant amounts" of stock has not been adequately explained, nor has the specific stockholding been adequately disclosed for the members of S&W's management review team and the S&W corporation itself. Insignificant conflicts should be fully disclosed and explained, subject to NRC approval.
 - c. Lines of authority. Additionally, S&W and Consumers representatives could not provide adequate answers to explain who has final decisionmaking authority within and between S&W, Bechtel and Consumers. It was quite clear that Consumers "does not anticipate" any problems between the numerous involved parties. This optimistic attitude belies a sense of security that is inconsistent with both the potential and the historic problems between Bechtel and Stone & Webster. (Specifically, GAP recommends the use of the NRC dissenting professional opinion procedure throughout this process.
2. The CPCo option to provide QA implementation for only a 90-day period must be dropped.

As proposed, the 90-day initial assessment period will cover only the trial period of construction. This limited scope cannot realistically present any assurance that CPCo and Bechtel have reversed a decade-long history of failures and bungling. Anything less than 100% review will fall short of accomplishing the goal of the proposed remedy.

3. Until the specific methodology of how S&W is going to evaluate the adequacy of technical, construction and quality procedures is disclosed, no approval should be issued.

Although the valuation will be cumulative, it is critical that NRC staff and the public are aware of the methodology for S&W's review. Otherwise, faulty fact-finding techniques will be faits accompli when the public has an opportunity to review them.

4. Release and Review of the Project Quality Plan for soils QA review is essential.

This document evidently holds the key to S&W review. It is through this Plan that the actual implementation will be reviewed and

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monitored. It is critical that this document be released for public review and analysis before any NRC approval is given.

5. It is critical that CPCo commission an independent assessment team as quickly as possible.
 1. As indicated previously, GAP cannot accept MAC and the INPO evaluation as a substitute for an independent review. (See October 22, 1982 letter, pp. 17-18.) As a result we have refrained from providing specific comment on the MAC proposals. However, some of the major programmatic weaknesses are listed below--
 - lack of historical analysis of problems to get to the "root cause," leaving unanswered questions with regards to the causes (contradicting the ACRS's June 9, 1982 request to the NRC staff);
 - lack of trending of systems or nonconformances to identify specifically weak areas of construction or QA/QC functions;
 - time guidelines dictated by the utility, hampering the independence of any company to define the scope of necessary evaluations;
 - lack of specified criteria to identify the qualifications of the key factfinders and inspectors;
 - reporting procedures that exclude independent contact with the NRC;
 - evaluation/contact report that provides a weak substitute for Nonconformance Reports without verification of corrective action;
 - lack of recommendations for resolution of identified weaknesses; and
 - lack of recognition for the gravity of Midland's problems, evidenced by attempting to substitute INPO for aggressive independent assessment.
6. Expansion of the role performed by Tera Corporation is appropriate.
 - a. The Tera Corporation proposed to look at the Auxiliary Feedwater System for its independent safety system. This system has been reviewed several times in previous audits. GAP recommends that this system be rejected in favor of a combination of two systems: one system under controversy -- the HVAC system specifically -- and another system yet unidentified for major review or auditing.

²/ In an October 12, 1982 letter from Mr. J. G. Keppler to Ms. Billie Garde, it was suggested that the independent assessment would resolve the questions of the

- b. Tera's work, although admirable, failed to provide an acceptable or even identifiable level of field verification of the as-built condition and failed to explain the disclosed inconsistencies in the scope of its proposed field verification effort.

It is our recommendation that Tera provide additional qualified personnel to conduct comprehensive field review of the system(s) under scrutiny.

- c. Tera should be removed from any reporting line through MAC, answering directly (and simultaneously) to the NRC and the licensee with reports and findings. (This was already reflected in Tera written presentation, but was not clear in the MAC/CPCo comments at the October 24 meeting.)

B. Methodology

Generally, the specific methodology for assessments/audits was non-existent. Without the information on such issues as the size of samples, specific system criteria for examination, evaluation criteria, forms used for evaluations and reporting procedures, it is impossible to accept any review as adequate.

The Tera's presentation was a refreshing deviation from the otherwise public relations-style presentations. It is our request that any further meetings be delayed until after CPCo provides adequate comprehensive methodologies for analysis. (Perhaps the NRC could provide examples of particularly noteworthy independent reviews to CPCo in an effort to demonstrate a truly broad scope assessment.)

It is our earnest hope that this methodology, once provided, will provide a basis to begin restoration of public confidence in the plant. Anything short of an "open book" at this point will fall short of the goals of this expensive effort.

We have attempted to provide a thorough review of the massive independent assessment efforts at the Midland site. But a comprehensive effort is impossible based on the minimal public disclosure to date. As a result, we request the following specific plans or documents from the NRC in order to finish our evaluation.

1. The details of the Quality Improvement Plan (QIP) (September 17 letter to Denton).
2. The Project Quality Plan (S&W presentation, November 5, 1982)
3. The Single Point Accountability System. (September 17, 1982 CPCo letter to Denton)

(footnote continued)

HVAC systems adequacy. It does not appear to be the case in any of the presentations thus far.

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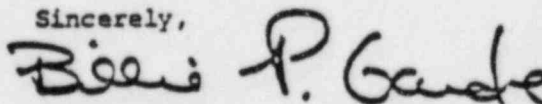
4. The criteria for selection of the independent auditors
5. The criteria for choosing the specific safety system
6. A reporting (communication line) chart, from the worker up and the NRC down
7. The conflict-of-interest disclosures for all independent assessment corporations, individuals and management
8. The training materials to be used as part of the QIP
9. The criteria for selection of field verification inspections by Tera personnel
10. The breakdown of S&W personnel with nuclear experience by plant site.

II. Conclusion

Finally, we wish to thank you for your inclusion of public comment into this procedure. It is a positive step forward on behalf of public safety issues.

We look forward to notification of the next meetings on the independent assessment of the Midland plant, as well as notification of any other pertinent meetings on the Midland project. As the role of the Government Accountability Project in the Midland investigation grows, it seems appropriate to repeat an oft-used phrase of Mr. James G. Keppler about the William H. Zimmer Nuclear Power Station. The "real sin" at Zimmer is that the plant is in the ground at 97% complete. Since Midland is far from complete, there remains an opportunity to avoid the sins of Zimmer -- but it will take concerted effort by all parties at this critical juncture.

Sincerely,



BILLIE P. GARDE
Director -
Citizens Clinic for Accountable Government

BG/my

RFW
2/7/3

A G E N D A

Opening Remarks

JWCook

Construction Completion Program

Introduction

DBMiller

Detailed Description

RAWells

Third Party Review

GSKeeley/TERA

Bechtel Comments

JARutgers

Closure

JWCook

CONSTRUCTION COMPLETION PROGRAM

SOURCES OF INPUT

1. EVALUATION OF SYSTEMS COMPLETION
2. TRANSFER OF QC TO CPCO QA (MPQAD)
3. INPO SELF-INITIATED EVALUATION
4. 1981 SALP REPORT AND SUBSEQUENT DISCUSSIONS
5. THE OCTOBER/NOVEMBER DIESEL-GENERATOR BUILDING INSPECTION
6. NOVEMBER NRC LETTER TO THE ACRS
7. NEED TO PLACE MORE EMPHASIS ON SOILS START

CONSTRUCTION COMPLETION PROGRAM

OBJECTIVES

IMPROVE PROJECT INFORMATION STATUS BY:

- PREPARING AN ACCURATE LIST OF TO-GO WORK AGAINST A DEFINED BASELINE.
- BRINGING INSPECTIONS UP-TO-DATE AND VERIFYING THAT PAST QUALITY ISSUES HAVE BEEN OR ARE BEING BROUGHT TO RESOLUTION.
- MAINTAINING A CURRENT STATUS OF WORK AND QUALITY INSPECTIONS AS THE PROJECT PROCEEDS.

IMPROVE IMPLEMENTATION OF THE QA PROGRAM BY:

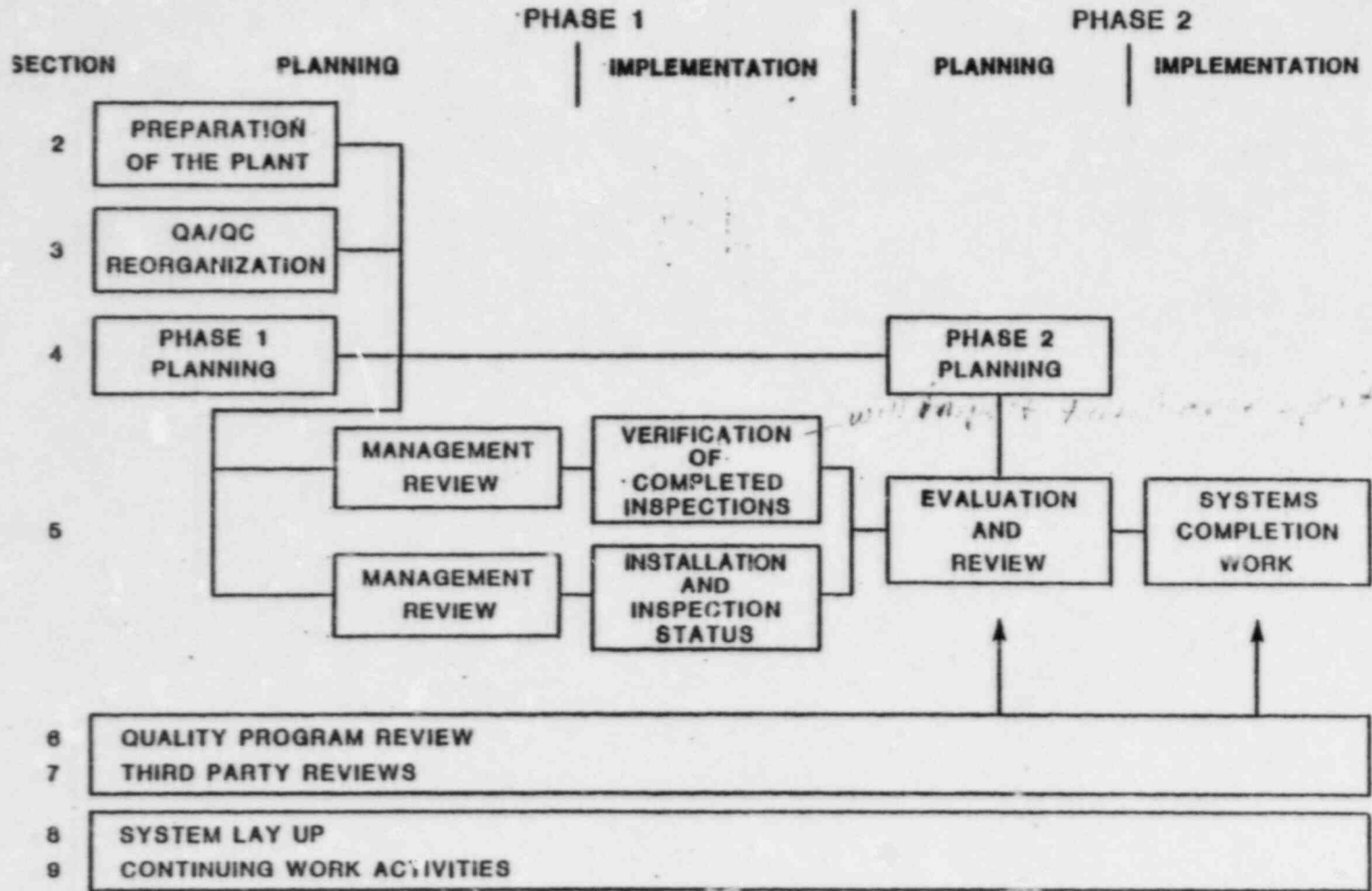
- EXPANDING AND CONSOLIDATING CONSUMERS POWER COMPANY CONTROL OF THE QUALITY FUNCTIONS.
- IMPROVING THE PRIMARY INSPECTION PROCESS.
- PROVIDING A UNIFORM UNDERSTANDING OF THE QUALITY REQUIREMENTS AMONG ALL PARTIES.

CONSTRUCTION COMPLETION PROGRAM (CONTD)

ASSURE EFFICIENT AND ORDERLY CONDUCT OF THE PROJECT BY:

- ESTABLISHING AN ORGANIZATIONAL STRUCTURE CONSISTENT WITH THE REMAINING WORK.
- PROVIDING SUFFICIENT NUMBERS OF QUALIFIED PERSONNEL TO CARRY OUT THE PROGRAM.
- MAINTAINING FLEXIBILITY TO MODIFY THE PLAN AS EXPERIENCE DICTATES.

FIGURE 1-1
CONSTRUCTION COMPLETION PROGRAM SCHEMATIC



SECTION 2.0
PREPARATION OF THE PLANT

OBJECTIVES: TO ALLOW IMPROVED ACCESS TO SYSTEMS FOR PROGRAM ACTIVITIES

DESCRIPTION: REDUCE THE WORKFORCE AND LIMIT Q ACTIVITIES
REMOVE THE CONSTRUCTION EQUIPMENT AND CLEAR AREAS
INSPECT, STORE AND SALVAGE EQUIPMENT

RESULTS: PLANT IS IN A CONDITION TO FACILITATE INSTALLATION AND INSPECTION
STATUS AND VERIFICATION OF COMPLETED WORK

STATUS: REDUCTION IN FORCE STARTED 12/1/82 WITH CLEANUP COMPLETED ON
1/31/83.

SECTION 3.0

QA/QC ORGANIZATIONAL CHANGES

OBJECTIVE:

- . ESTABLISH INTEGRATED QA/QC ORGANIZATION UNDER CPCO CONTROL
Report state that this was done early in evening in 10/10/83
- . TRAIN AND RE-CERTIFY QC INSPECTION PERSONNEL

DESCRIPTION:

- . QC ORGANIZATION REPORTS DIRECTLY AND SOLELY TO CPCO MPQAD
- . QA AND QC RESPONSIBILITIES REDEFINED AS AN INTEGRATED TEAM
- . QA DEVELOPS INSPECTION PLANS - QC IMPLEMENTS PLANS - QA MONITORS
~80 PRCI's being reviewed Level III in QA unit decide if insp and to be so
- . BECHTEL'S QC AND QA MANUALS USED AS APPROVED FOR MIDLAND
Trying to combine both into one procedure. Will have to resolve conflict
- . ASME REQUIREMENTS REMAIN IMPOSED ON CONTRACTOR AS N-STAMP HOLDER - QA MONITORS
- . QC INSPECTORS RECERTIFIED

RESULT EXPECTED:

- . FULLY INTEGRATED QUALITY ORGANIZATION UNDER CPCO CONTROL
- . UNIFORM UNDERSTANDING OF QUALITY REQUIREMENTS AMONG ALL PARTIES
- . IMPROVED PRIMARY INSPECTION PROCESS WITH RECERTIFIED PERSONNEL
- . IMPROVED AND AGGRESSIVE IMPLEMENTATION OF QA PROGRAM

STATUS:

TRANSFER QC
ORG TO CPCO

1/17/83

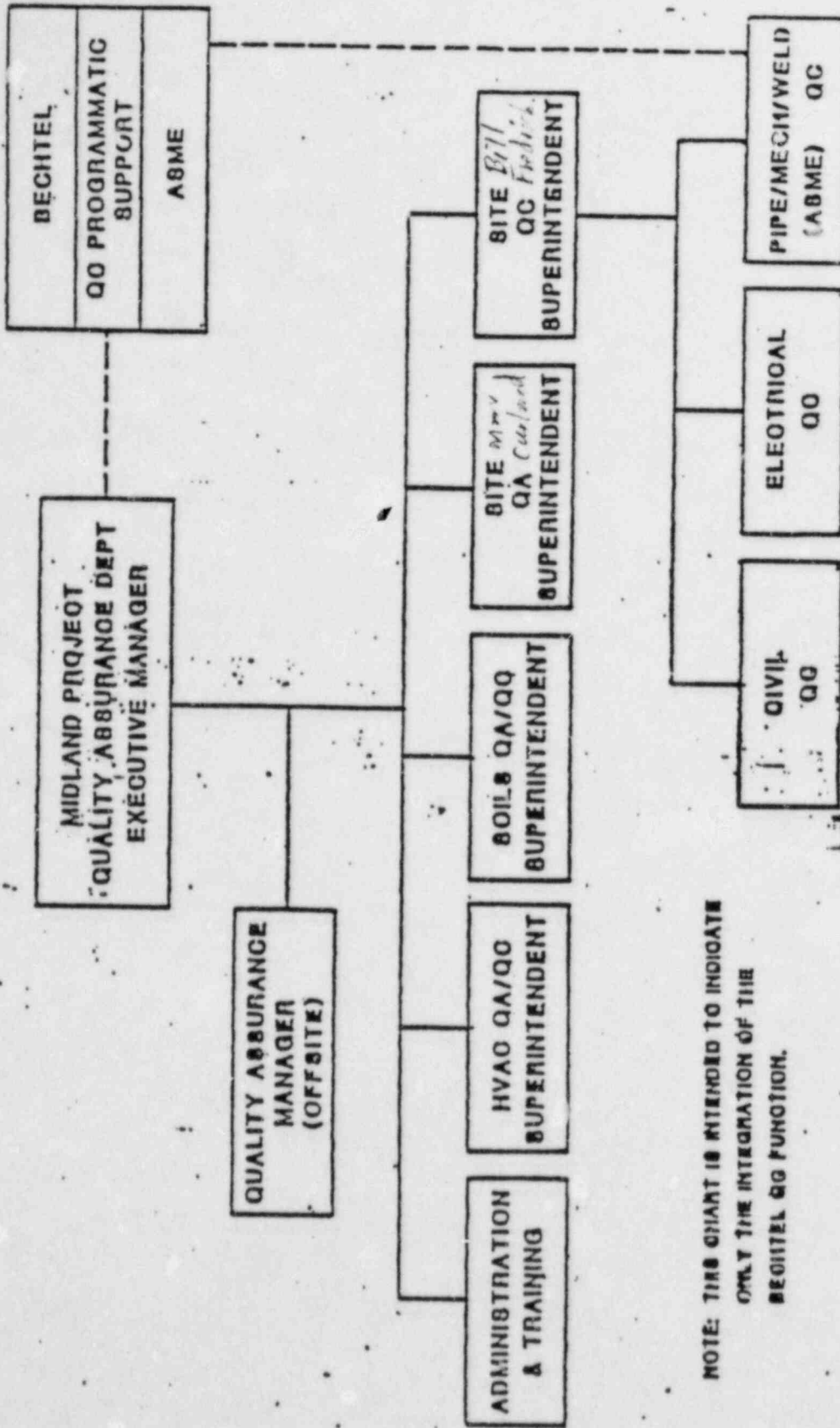
SUBMIT PROGRAMMATIC
CHANGES TO NRC

2/17/83

COMPLETE INSPECTOR
RECERTIFICATION

4/1/83

FIGURE 3-1
MPCAD ORGANIZATION



NOTE: THIS CHART IS INTENDED TO INDICATE ONLY THE INTEGRATION OF THE BECHTEL QA FUNCTION.

QC RECERTIFICATION

PROGRAM:

- . COVERS ALL QC INSPECTORS INTEGRATED WITH MPQAD
- . CLASS ROOM TRAINING ON PROGRAMMATIC AND INSPECTION PLANS
- . WRITTEN CLOSED BOOK EXAMINATIONS WITH 80% ACHIEVEMENT REQUIREMENT ON PROGRAMMATIC AND INSPECTION PLANS
- . ON THE JOB TRAINING AND PERFORMANCE DEMONSTRATION EXAMINATIONS WITH 100% ACHIEVEMENT REQUIREMENT ON INSPECTION PLANS
- . FINAL CERTIFICATION GIVEN BY MPQAD PERSONNEL QUALIFIED AS ANSI LEVEL III

TRAINING STAFF:

- . UNDER MPQAD DIRECTION
- . DEDICATED STAFF WITH SUPPORT BY EXPERIENCED MPQAD STAFF
- . EXPERIENCED TRAINING SUPERVISION AND SELECTED INSTRUCTORS
- . PRESENT COMPLEMENT
 - . SUPERVISORS
 - . INSTRUCTORS
 - . PROGRAM SUPPORT (LESSON PLANS - EXAMS)

STATUS: (AS OF 2/4/83)

- . ALL PERSONNEL RECERTIFIED TO QC PROGRAM
- . NEARLY 500 INSPECTOR - PQCI TESTS
- . OVER 100 PERFORMANCE DEMONSTRATIONS
- . APPROXIMATELY 75 INSPECTOR - PQCI CERTIFICATIONS

SECTION 4.2 AND 4.4

PROGRAM PLANNING

TEAM ORGANIZATION

OBJECTIVE: ORGANIZE AND TRAIN TEAM AND PREPARE PROCEDURES FOR INSTALLATION AND INSPECTION STATUS ASSESSMENT AND FOR SYSTEMS COMPLETION.

DESCRIPTION: .DEVELOP TEAM CONCEPT
.SELECT PILOT TEAM TO TEST PROCESSES AND PROCEDURES
.PREPARE JOB RESPONSIBILITIES AND PROCEDURES
.PROVIDE TEAM TRAINING FOR STATUS ASSESSMENT AND SYSTEMS COMPLETION

RESULTS .IMPROVED INSPECTION AND INSTALLATION PLANNING AND EXECUTION

EXPECTED: .IMPROVED DIRECTIONS TO CRAFTS
.IMPROVED COMMUNICATION BETWEEN CONSTRUCTION, QC, ENGINEERING AND TESTING

STATUS ESTABLISH TEAM CONCEPT AND DESIGNATE PILOT TEAM 1/21/83

BENEFITS OF "COMPLETION TEAM" APPROACH

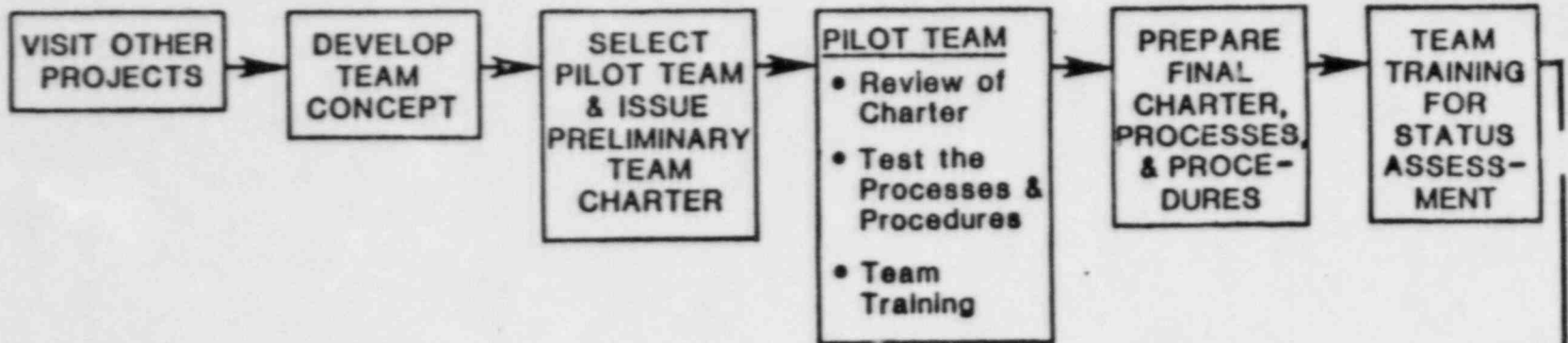
- SINGLE GROUP RESPONSIBLE FOR ALL ASPECTS OF SYSTEM COMPLETION TO FUNCTIONAL TURNOVER
 - IMPROVED COMMUNICATION BY BEING PHYSICALLY LOCATED TOGETHER
 - IMPROVED MAINTENANCE OF STATUS OF WORK
 - SINGLE POINT CONTACT FOR QUALITY INSPECTION REQUIREMENTS
 - IMPROVED INTEGRATION OF QUALITY INSPECTION PLANS WITH THE INSTALLATION PLANS
 - SINGLE POINT CONTACT FOR ENGINEERING/DESIGN REQUIREMENTS
 - SINGLE POINT CONTACT FOR TESTING REQUIREMENTS
- 25059*

subject
no.

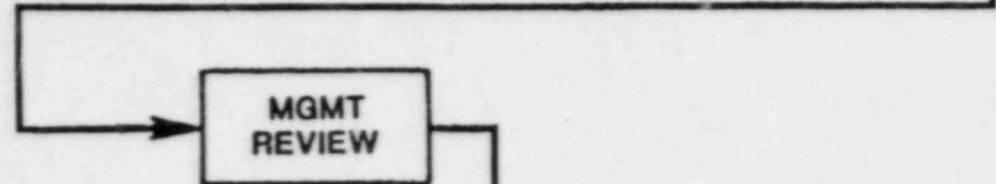
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SYSTEM TEAM DEVELOPMENT

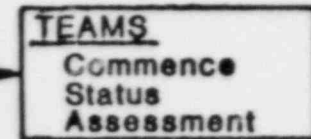
ORGANIZATIONAL PROCESS & PROCEDURE DEVELOPMENT



REVIEWS AND APPROVALS

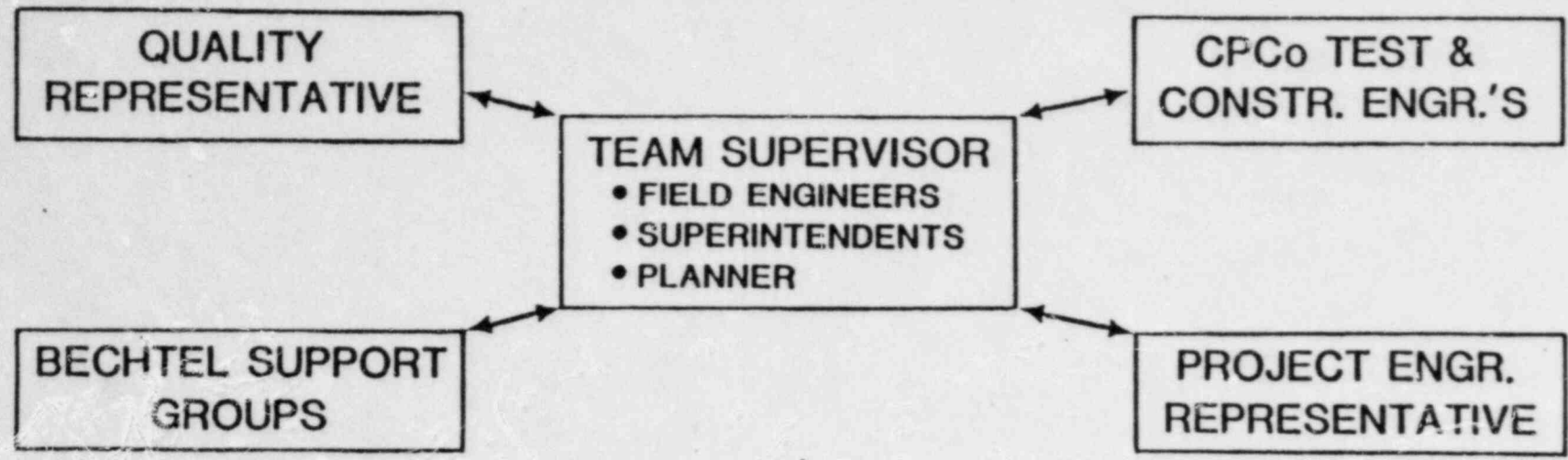


COMMENCE WORK



subject
no.

SYSTEM TEAM OPERATIONS



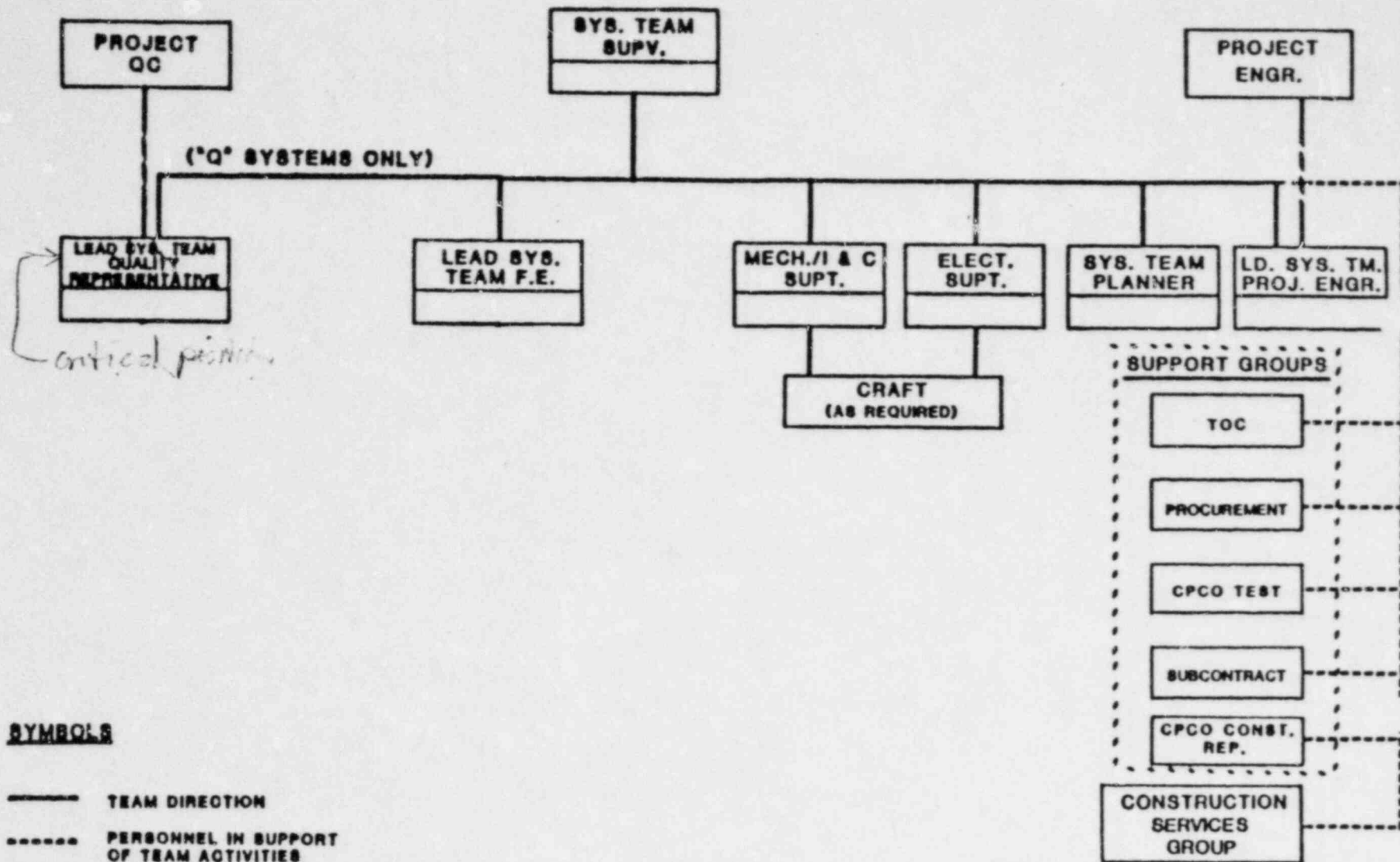
PHASE I

- REVIEW DOCUMENTS TO DESCRIBE THE SYSTEM SCOPE
- COMPARE PHYSICAL STATUS TO THE DOCUMENTS
- PERFORM QUALITY VERIFICATION ACTIVITIES AS ASSIGNED
- IDENTIFY REMAINING WORK

PHASE II

- DEVELOP DETAIL SYSTEM COMPLETION SCHEDULES
- DIRECT & ACCOMPLISH THE WORK
- MONITOR & REPORT STATUS/PROGRESS
- IDENTIFY PROBLEMS FOR RESOLUTION & MGMT. REVIEW
- COMPLETE THE SYSTEMS FOR FUNCTIONAL TURNOVER

SYSTEM TEAM ORGANIZATION



SYMBOLS

- TEAM DIRECTION
- PERSONNEL IN SUPPORT OF TEAM ACTIVITIES
- - - - -** TECHNICAL, PROGRAMMATIC & ADMINISTRATIVE DIRECTION

Q/M-0460

cotch

14 Transparency Mounting Frame
Part No. 0-21200-19919

Commercial Tape Division/3M
St. Paul, MN 55144
Made in U.S.A.

SECTION 4.3
PROGRAM PLANNING - PHASE 1
QUALITY VERIFICATION

OBJECTIVES: . DEVELOP AND IMPLEMENT A QUALITY VERIFICATION PROGRAM FOR COMPLETED INSPECTIONS

DESCRIPTION: . REVIEW EXISTING INSPECTION PLANS (PQCI) AND REVISE AS NECESSARY
. WRITE NEW INSPECTION PLANS (PQCI) IF REQUIRED
. VALIDATE PAST COMPLETED INSPECTION

RESULT EXPECTED: . ESTABLISH THE VALIDITY OF COMPLETED INSPECTIONS AND INSTALLATION QUALITY STATUS

STATUS: . DOCUMENT AND CORRECT ANY NONCONFORMING CONDITIONS

PQCI REVISION TO
SUPPORT START OF
REINSPECTION

2/22/83

DEVELOP VERIFI-
CATION PROGRAM
CONCEPT

2/15/83

DEVELOP DETAILED
PLANS FOR VERIFI-
CATION EFFORT

2/28/83

INSPECTION PLAN (PQCI) REVIEW AND REVISION

EXISTING PQCI'S REVIEWED AND REVISED, AS NECESSARY, BY MPQAD-QA

NEW PQCI'S WILL BE WRITTEN IF REQUIRED

PQCI'S MUST MEET RELEVANT CRITERIA INCLUDING:

- CONFIRM THAT ATTRIBUTES IMPORTANT TO SAFETY ARE INCLUDED
- ACCEPT/REJECT CRITERIA CLEARLY STATED
- INFORMATION NECESSARY FOR INSPECTION CONTAINED IN PQCI
- INSPECTION POINTS CLEARLY NOTED
- PROCEDURE FOR DOCUMENTATION ^{of those for review is} UNDER REVIEW AND REVISION
- INSPECTION PLANS REVIEWED BY PROJECT ENGINEERING AS AN OVERVIEW - *Tech. Pkg.* TO INSURE ALL TECHNICAL REQUIREMENTS INCLUDED
- REVISED/NEW PQCI PILOT TESTED BEFORE IMPLEMENTATION
- QC INSPECTORS RETAINED TO REVISED PQCI

Eisenhart - Bring up how license is going to address system change components important to safety (as opposed to safety critical)

VERIFICATION PROGRAM CONCEPTS

- . ESTABLISH THE VALIDITY OF PAST/CLOSED INSPECTION REPORTS 135-735, 600
- . CONFIRM THE ACCEPTABLE CONDITION OF INSTALLED COMPONENTS, SYSTEM AND STRUCTURES
- . DOCUMENT AND CORRECT NONCONFORMING CONDITIONS
- . SCOPE OF PROGRAM INCLUDES ALL COMPLETED INSPECTION REPORTS
- . INSPECTION REPORTS CATEGORIZED BY PQCI
- . VERIFY THE QUALITY OF COMPLETED WORK USING AN ACCEPTABLE SAMPLING PLAN WHERE APPROPRIATE
- . VERIFICATION PLAN BASED UPON SPECIFIC INSPECTION REPORT POPULATIONS:
 - . ITEM ACCESSIBLE FOR REINSPECTION
 - . DOCUMENTATION ONLY IS AVAILABLE
 - . UNIQUE AREAS OF CONCERN
 - . LOT SIZES NOT APPROPRIATE FOR STATISTICAL SAMPLE
- . CONTINUATION OF REINSPECTIONS ALREADY COMMITTED
 - . CABLE ROUTING AND IDENTIFICATION
 - . HANGERS
- . DETAILS OF PLAN STILL UNDER DEVELOPMENT

SECTION 4.5

QA/QC SYSTEMS COMPLETION PLANNING (PHASE 2)

OBJECTIVE:

- FORMALLY INTEGRATE INSPECTION PLANNING WITH CONSTRUCTION SEQUENCE
- VERIFY THAT PQCI'S ARE FULLY ACCEPTABLE FOR NEW INSPECTIONS

DESCRIPTION:

- ESTABLISH AN IN PROCESS INSPECTION PROGRAM
- CLEARLY DEFINE INSPECTION POINTS IN PQCI
- UTILIZE QUALITY REPRESENTATIVE ON SYSTEM COMPLETION TEAM
- MPQAD-QA CONDUCT FINAL REVIEW OF PQCI

RESULT
EXPECTED:

- TIMELY COMPLETION OF QC INSPECTIONS ON SYSTEM COMPLETION WORK
- CLEAR AND DETAILED INSPECTION REQUIREMENTS
- TIMELY DOCUMENTATION AND CORRECTION OF NONCONFORMANCES

STATUS:

DEVELOP CONCEPTUAL
PROCEDURES FOR IN-
TEGRAED INSPEC-
TION

DEVELOP PROCEDURES
FOR INTEGRATED IN-
SPECTION WITH PILOT
TEAM

FINAL REVIEW OF
PQCI

2/22/83

CONCEPTS OF IN PROCESS INSPECTION PROGRAM

- . MPQAD-QA ISSUES FINAL PQCI WITH IDENTIFIED INSPECTION POINTS
- . INSPECTION POINTS INTEGRATED INTO CONSTRUCTION SCHEDULE
- . QUALITY REPRESENTATIVE ON SYSTEM COMPLETION TEAM RESPONSIBLE FOR OVERALL QUALITY:
 - . INSURE THE TEAM PROPERLY PLANS FOR INSPECTION
 - . INSURE PROPER PQCI'S IDENTIFIED FOR TEAM
 - . INSURE AVAILABILITY OF QUALIFIED INSPECTORS
 - . INSURE NONCONFORMANCES REPORTED TO MPQAD-QA FOR TIMELY DISPOSITION AND ANALYSIS
 - . INSURE QC INSPECTIONS PERFORMED ON TIMELY BASIS
 - . INSURE THAT NEW WORK DOES NOT OBSCURE NONCONFORMANCES
- . PROCEDURES TO BE DEVELOPED BY PILOT TEAM

SIGNIFICANT INSPECTION PROCESS IMPROVEMENTS

IMPROVED QUALITY CONTROL INSPECTIONS AND INSPECTION REPORTS

REVIEWED AND MODIFIED TO:

- . MINIMIZE INSPECTOR INTERPRETATIONS BY IDENTIFYING SPECIFIC ACCEPT/REJECT CRITERIA IN SELF CONTAINED PQCI
- . INSURE CLARITY AND EFFECTIVENESS OF PQCI BY PILOT TESTS
- . INSURE ALL INSPECTION ATTRIBUTES AND ACCEPTANCE CRITERIA ARE INCLUDED BY MPQAD-QA PREPARATION AND PROJECT ENGINEERING OVERVIEW

ABSOLUTE AND TIMELY REPORTING OF NONCONFORMANCES

PROCEDURES REVISED TO:

- . REQUIRE ALL NONCONFORMANCES ARE IDENTIFIED AND RECORDED FOR ANALYSIS AND DISPOSITION
- . IMPROVE TRENDING AND IDENTIFICATION OF PROCESS DEFICIENCIES FOR TIMELY MANAGEMENT ACTION
- . ELIMINATE DUPLICATIVE NONCONFORMANCE REPORTING SYSTEMS

QUALITY REPRESENTATIVE ON SYSTEM COMPLETION TEAM REPRESENTS MPQAD-QA/QC

INTEGRATED CONSTRUCTION/INSPECTION PROCESS

IMPROVED INTEGRITY AND TIMELINESS OF INSPECTIONS BY:

- . USE OF DEFINED HOLD POINTS FOR INSPECTION IN CONSTRUCTION SEQUENCES
- . FORMAL DOCUMENTATION OF ALL OBSERVED NONCONFORMANCES AT ALL INSPECTION POINTS

SIGNIFICANT INSPECTION PROCESS IMPROVEMENTS

(CONT'D)

- . DEDICATED QUALITY REPRESENTATIVE FOR SYSTEMS AS MEMBER OF TEAM
- . INTEGRATED PLANNING FOR INSPECTIONS BY TEAM

INTEGRATED QUALITY PROCEDURES DUE TO QA/QC INTEGRATION

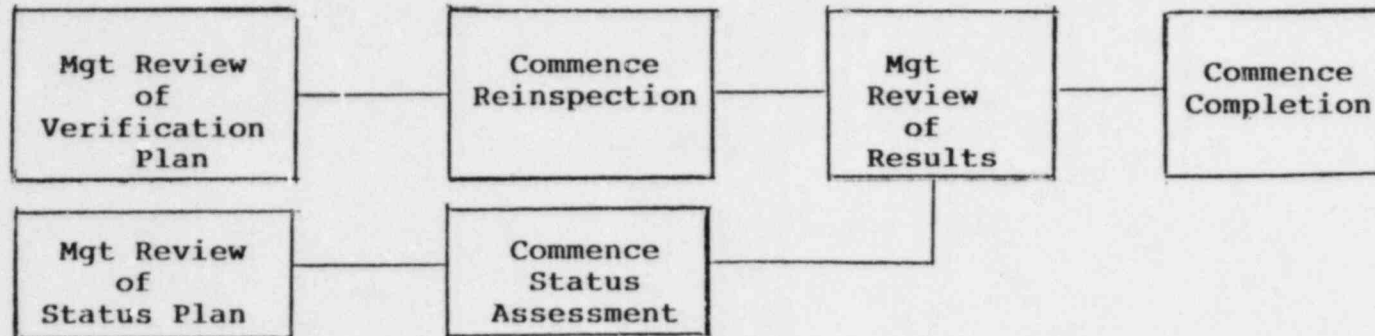
- . ELIMINATION OF REDUNDANT OR DUPLICATIVE PROCEDURES
- . FOCUS ON SINGLE MISSION FOR QUALITY ORGANIZATIONS
- . ELIMINATION OF POTENTIAL INSPECTOR MISINTERPRETATION

SECTION 5.0
PROGRAM IMPLEMENTATION

OBJECTIVE: .PROVIDE A PROCESS FOR CONTROL, REVIEW AND APPROVAL OF EACH MAJOR TASK AS THE PROGRAM PROCEEDS.

DESCRIPTION: .ESTABLISH COMPLETION AND QUALITY STATUS
.INTEGRATE CONSTRUCTION AND QUALITY ACTIVITIES
.IMPROVE ON-GOING QUALITY PERFORMANCE

RESULT EXPECTED .COMPLETE SYSTEMS FOR TURNOVER TO C.P.C.O TESTING
.PROVIDE CONTINUING DEMONSTRATION OF QUALITY AS WORK PROCEEDS
.PROVIDE VERIFICATION OF QUALITY IN COMPLETED WORK



SECTION 6.0
QUALITY PROGRAM REVIEW

OBJECTIVE:

REVIEW THE ADEQUACY AND COMPLETENESS OF THE QUALITY PROGRAM AND MAKE REVISIONS AS NECESSARY:

- . ON AN ONGOING BASIS FOR GENERAL IMPROVEMENTS
- . IN RESPONSE TO SPECIFIC CONCERNS (D/G INSPECTION)
- . IN RESPONSE TO THIRD PARTY REVIEWS

DESCRIPTIONS:

- . REVIEW SPECIFIC PROCEDURES FOR COMPLIANCE TO PROGRAM REVIEW
- REVIEW ACTUAL IMPLEMENTATION OF PROCEDURES
- . COORDINATE REVIEWS WITH OTHER PROJECT AREAS
- . PROVIDE INPUT AND RECOMMENDATION TO MANAGEMENT

RESULT EXPECTED:

- . CONTINUED OVERALL IMPROVEMENT IN THE QUALITY PROGRAM CONTENT AND IMPLEMENTATION

STATUS:

ONGOING
REVIEWS

COMPLETE PRE-
SENT SPECIFIC
EFFORTS

CURRENT SPECIFIC PROGRAMMATIC REVIEWS

EFFORTS PRESENTLY UNDERWAY TO REVIEW PROGRAMMATIC REQUIREMENTS AND IMPLEMENTATION FOR:

MATERIAL TRACEABILITY:

- . REVIEW OF ALL PROJECT COMMITMENTS
- . REVIEW OF IMPLEMENTING PROCEDURES
- . REVIEW OF PRIOR AUDITS
- . REVISION OF RECEIPT INSPECTION PQCI

Q-SYSTEM RELATED REQUIREMENTS

- . VERIFICATION OF PROJECT COMMITMENTS BY ENGINEERING AND LICENSING

DESIGN DOCUMENT CONTROL

- . FLOW CHART OF EXISTING PROCEDURES
- . CHECK OF ACTUAL IMPLEMENTATION
- . COMPARISON WITH PROGRAMMATIC REQUIREMENTS

RECEIPT INSPECTION

- . REVIEW OF SOURCE INSPECTION/RECEIPT INSPECTION SYSTEMS
- . PQCI REVISED
- . RECERTIFICATION OF INSPECTORS
- . CONSIDERATION OF SELECTED OVERINSPECTION

SECTION 8.0
SYSTEM LAYUP

OBJECTIVE: PROVIDE ADEQUATE PROTECTION FOR PLANT SYSTEMS AND COMPONENTS UNTIL
PLANT STARTUP

DESCRIPTION: .IDENTIFY AND PROTECT SYSTEMS WETTED DUE TO HYDRO TESTING OR FLUSHING
.PROVIDE SCHEDULES FOR WALKDOWN TO ENSURE CLEANLINESS AND ADEQUATE
PREVENTIVE MAINTENANCE
.CARRY OUT WALKDOWNS TO ENSURE COMPLETENESS OF SYSTEM LAYUP ACTIVITIES

RESULTS IMMEDIATE PROTECTION OF WETTED SYSTEMS

EXPECTED: PROVIDE CONTINUED CARE FOR ALL COMPONENTS UNTIL SYSTEM TURNOVER

STATUS: COMPLETE LAYUP OF ALL WETTED SYSTEMS 1/15/83

ISSUED SCHEDULES FOR WALKDOWNS 1/15/83

SECTION 9.0
CONTINUING WORK ACTIVITIES

OBJECTIVES:

- . MEET PREVIOUS NRC REQUIREMENTS AND CONTINUE WITH ACTIVITIES WHICH DO NOT IMPEDE THE EXECUTION OF THE PROGRAM

- . PROVIDE DESIGN SUPPORT FOR ORDERLY SYSTEM COMPLETION WORK AND RESOLUTION OF IDENTIFIED ISSUES

- . ESTABLISH A MANAGEMENT CONTROL TO INITIATE ADDITIONAL SPECIFIED WORK THAT CAN PROCEED OUTSIDE OF THE SYSTEMS COMPLETION ACTIVITIES

SECTION 9.0
CONTINUING WORK ACTIVITIES

DESCRIPTION: THOSE ACTIVITIES THAT HAVE DEMONSTRATED EFFECTIVENESS IN THE QUALITY PROGRAM IMPLEMENTATION WILL CONTINUE DURING IMPLEMENTATION OF THE CONSTRUCTION COMPLETION PROGRAM.

THESE ARE:

1. NSSS INSTALLATION OF SYSTEMS AND COMPONENTS BEING CARRIED OUT BY B&W CONSTRUCTION COMPANY
2. HVAC INSTALLATION WORK BEING PERFORMED BY ZACK COMPANY. WELDING ACTIVITIES CURRENTLY ON HOLD WILL BE RESUMED AS THE IDENTIFIED PROBLEMS ARE RESOLVED
3. POST SYSTEM TURNOVER WORK, WHICH IS UNDER THE DIRECT CONTROL OF CONSUMERS POWER COMPANY, WILL BE RELEASED AS APPROPRIATE USING ESTABLISHED WORK AUTHORIZATION PROCEDURES
4. HANGER AND CABLE RE-INSPECTIONS, WHICH WILL PROCEED ACCORDING TO SEPARATELY ESTABLISHED COMMITMENTS TO NRC
5. REMEDIAL SOILS WORK WHICH IS PROCEEDING AS AUTHORIZED BY THE NRC
6. DESIGN ENGINEERING WILL CONTINUE AS WILL ENGINEERING SUPPORT OF OTHER PROJECT ACTIVITIES

SECTION 9.0
CONTINUING WORK ACTIVITIES

STATUS: .THESE ACTIVITIES ARE PROCEEDING
WITH SCHEDULES THAT ARE
INDEPENDENT OF THIS PLAN.