UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

9-20-82

8.b) September

MEMORANDUM FOR: James G. Keppler, Regional Administrator

FROM: R. F. Warnick, Acting Director, Office of Special Cases

SUBJECT: REVIEW OF CONSUMERS POWER COMPANY COMMITMENTS

As directed by you on September 7, 1982, the Midland Section has reviewed the licensee's draft commitments to improve the implementation of their Quality Program in the remedial soils area and in the remaining construction activities at the Midland site. These commitments resulted from discussions you and D. G. Eisenhut had with J. D. Selby and J. W. Cook of CPCo on September 2, 1982.

The licensee's draft commitments are meant to confirm and/or improve the quality of the work performed at Midland and address some of the suggestions made by the Midland Section as described in my memo to you of August 18, 1982. However, the licensee's draft commitments fall short of what we believe is needed to turn this Project around.

We believe the changes described below must be made. Items 1 thru 4 should be implemented prior to allowing CPCo to resume the remedial soils work. Items 5, 6, and 7 pertain to the licensee's commitments for all other plant work.

1. The licensee's draft commitment letter describes how CPCo is undertaking a review of past correspondence to create a computer listing of all commitments not already reflected in the construction documents.

   We feel that Consumers Power Company must provide a master list of all commitments made regarding remedial soils work prior to starting work. To reduce any unnecessary delays that would impact on the project, we would accept a partial list that would identify all commitments made on specific work activities planned for the first 60 days of work with a follow-up master list for all remaining remedial work to be issued within 60 days from the start of the work.

2. The draft letter states that CPCo will integrate the soils QA and QC functions under the direction of MPQAD.

   We believe that Consumers Power Company should remove all responsibility for Quality Control activities from Bechtel. This should include administrative functions such as hiring, firing, promotions, salary, etc. CPCo must also qualify and certify all QC personnel to CPCo standards.

3. CPCo's draft letter commits to "substantially upgraded training programs".

   We believe that the training program should be implemented for all personnel involved in remedial soil activities. The thrust of the program should be directed towards building "quality" into the work and ensuring that everyone is knowledgeable of their responsibilities and authority. This training program should be accomplished before the start of soils work.

4. The draft letter indicates that a third party will be retained to independently appraise the initial phases of the construction of the auxiliary building underpinning.

   We believe the special team that will evaluate Consumers Power Company performance should be in place prior to start of work on pier 12.

   The Midland Section strongly recommends that you do not issue blanket authorization for Consumers Power Company to proceed with the soils project. Rather, we recommend that work projects be authroized piece-meal by the Section as provided in our work authorization agreement with CPCo in order for our staff to evaluate the licensee's quality effort. When the work effort shows that the licensee is adequately implementing their program, additional work projects would be authorized.

5. We do not feel that an INPO type "horizontal" assessment will provide sufficient confidence that the current work in progress is being properly implemented, particularly if the INPO report suffers from the same lack of detail that exists in the operations type INPO reports. It is also our understanding that INPO has minimal assessment experience at construction sites. Even if INPO or a contractor has the necessary expertise, a two-week overview of Consumers Power Company capability will only give us a snap-shot perspective. The licensee's draft commitment

letter does not address an ongoing assessment team beyond the INPO effort. We need a detailed and indepth inspection effort that extends over a much longer period of time.

We originally requested the use of five contract-type personnel, reporting directly to the NRC for a period of six to twelve months, in order for the Midland Section to assess the licensee's current work effort. We believe we must have these additional people to inspect ongoing and completed work. Without them we do not know if we can restore confidence in the Midland Facility. We don't believe the INPO assessment will accomplish what we intended to accomplish by our original recommendation.

6. We do not feel that the proposed CPCo QA/QC organization will be effective as long as Bechtel supervisory personnel are still in place and the administrative functions are still being controlled by Bechtel. We believe it is necessary for Consumers Power Company to take total control of QC. This comment is an extension of comment 2.

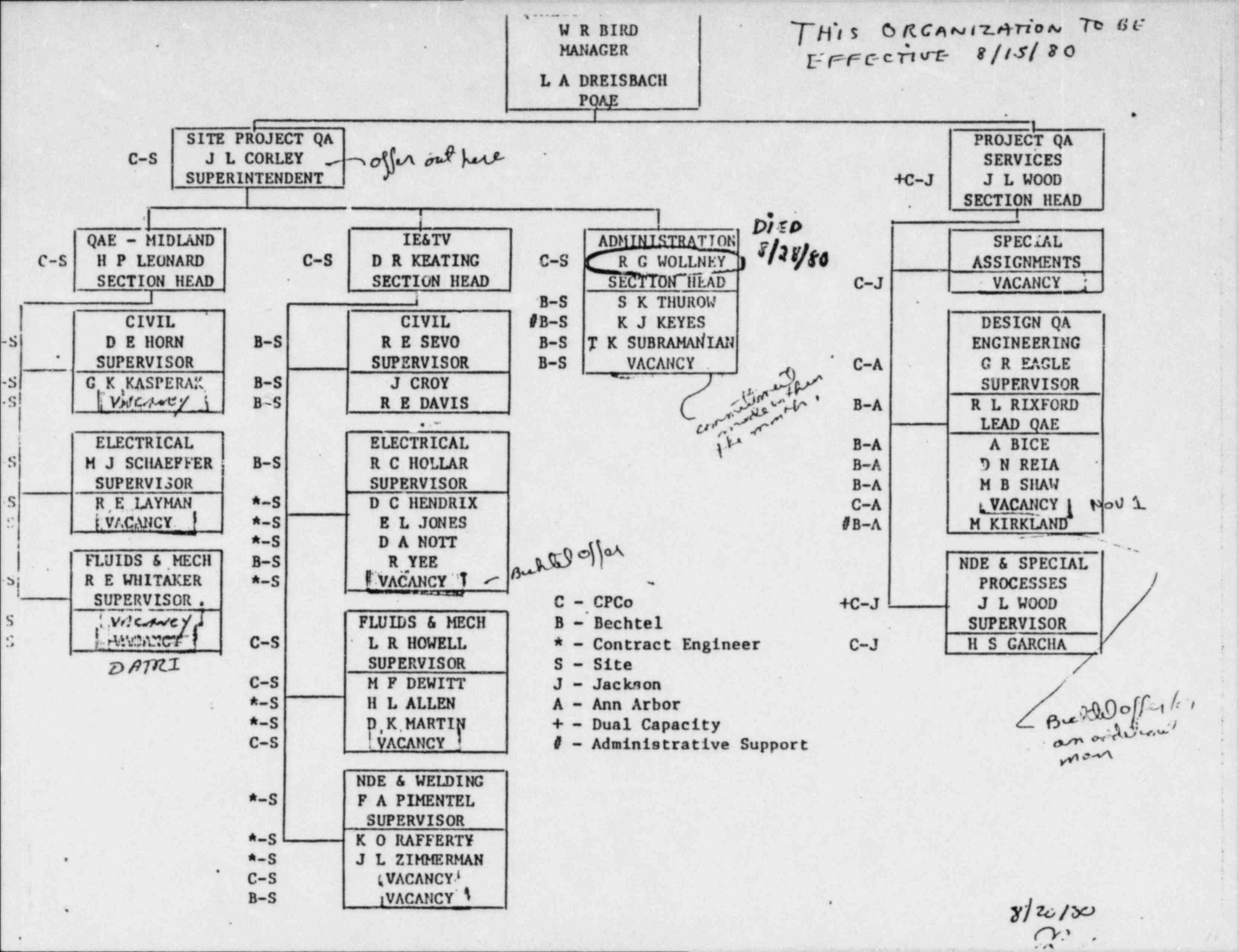
7. There is insufficient information contained in the draft letter to be able to tell much about the "vertical slice" review. We believe it should incorporate a skewed vertical slice through the plant to ensure that interrelationships between various safety systems have been adequately addressed.

We intend to work with CPCo and feel we will be able to accomplish some of our comments and recommendations (1, 3, 4, and 7). We request your help in accomplishing items 2, 5, and 6.

The Midland Section has a difficult task to accomplish. In addition to following the remedial soils and other ongoing work, we must complete enough construction inspections to determine whether or not the plant is built as designed and to determine whether or not any of the types of problems identified at Zimmer exist at Midland. We must resolve the allegations regarding Zack HVAC work and the allegations in the affidavits supplied by GAP. We must also get CPCo to take the actions that will produce the results which in turn will allow the NRC staff to have confidence in CPCo management and Midland. We need more manpower on site to do the job.

Should you have any questions regarding this memorandum, I shall be happy to discuss them with you.

R. F. Warnick, Acting Director
Office of Special Cases


W R BIRD
MANAGER
L A DREISBACH
POAE
THIS ORGANIZATION TO BE EFFECTIVE 8/15/80
C-S
SITE PROJECT QA
J L CORLEY
SUPERINTENDENT
offer out here
+C-J
PROJECT QA SERVICES
J L WOOD
SECTION HEAD
QAE - MIDLAND
C-S
H P LEONARD
SECTION HEAD
C-S
IE&TV
D R KEATING
SECTION HEAD
C-S
ADMINISTRATION
R G WOLLNEY
SECTION HEAD
DIED 5/28/80
B-S
S K THUROW
#B-S
K J KEYES
B-S
T K SUBRAMANIAN
B-S
VACANCY
SPECIAL ASSIGNMENTS
C-J
VACANCY
CIVIL
D E HORN
SUPERVISOR
G K KASPERAK
VACANCY
B-S
J CROY
B-S
R E DAVIS
DESIGN QA ENGINEERING
C-A
G R EAGLE
SUPERVISOR
B-A
R L RIXFORD
LEAD QAE
ELECTRICAL
M J SCHAEFFER
SUPERVISOR
R E LAYMAN
VACANCY
B-S
ELECTRICAL
R C HOLLAR
SUPERVISOR
*-S
D C HENDRIX
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E L JONES
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R E WHITAKER
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FLUIDS & MECH
L R HOWELL
SUPERVISOR
C-S
M F DEWITT
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H L ALLEN
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D K MARTIN
C-S
VACANCY
NDE & SPECIAL PROCESSES
+C-J
J L WOOD
SUPERVISOR
C-J
H S GARCHA
NDE & WELDING
*-S
F A PIMENTEL
SUPERVISOR
*-S
K O RAFFERTY
*-S
J L ZIMMERMAN
C-S
VACANCY
B-S
VACANCY
C - CPCo
B - Bechtel
* - Contract Engineer
S - Site
J - Jackson
A - Ann Arbor
+ - Dual Capacity
# - Administrative Support
8/20/80

QUALITY ASSURANCE - PROJECTS, ENGINEERING & CONSTRUCTION

J B. W. Marguglio, Director
J J. A. Chase, Secretary

QUALITY ASSURANCE ENGINEERING-MIDLAND

J W. R. Bird (H)
J L. J. Bidol, Secy. +

CIVIL

M D. E. Horn (S)
M M. J. Damaso *

ELECTRICAL/ELECTRONICS

M M. J. Schaeffer (S)
J P. W. Jacobsen

FLUIDS & MECHANICAL

J R. L. Southon (S)
M R. E. Whitaker
M W. F. Dickson

NONDESTRUCTIVE EXAMINATION

J J. L. Wood (S)
J H. S. Garcha

RELIABILITY & MAINTAINABILITY

J R. J. Sciamanda (S)

INSPECTION, EXAMINATION & TEST VERIFICATION-MIDLAND

M J. L. Corley (H)
M P. Pomaville, Secy.

CIVIL

M G. T. Black

ELECTRICAL/ELECTRONICS

M P. R. Kyner (S)
M W. H. Benkert
M E. L. Jones *
M D. Nott *

FLUIDS & MECHANICAL

M D. R. Keating (S)
M M. F. DeWitt
M L. R. Howell
M H. L. Allen *
M D. K. Martin *

NONDESTRUCTIVE EXAMINATION

M Vacancy (S)
M R. L. Zimmerman*
M R. Ostrowski *
M K. O. Rafferty *

DOCUMENTATION CONTROL

M R. G. Wollney (S)

QUALITY ASSURANCE ENGINEERING-OTHER

J F. M. Macri (H) +
J L. J. Bidol, Secy. +

J,P J. M. Buechler
J W. C. Carr
J S. Banerjee
J Vacancy ('79)*

INSPECTION, EXAMINATION & TEST VERIFICATION-OTHER

J F. M. Macri (Acting H) +
J L. J. Bidol, Secy. +

C E. G. Adams
C G. L. Roshy
J P. D. Milano *
CT J. L. Stivers *
K,CB,W J. M. Decker

AUDIT & ADMINISTRATION

J D. A. Taggart (H)
J L. L. Bailey, Steno
J B. M. Lounds, Steno

J G. M. Bell
J D. Jones
J P. E. Love
J J. N. Leech/3-16-79
J R. E. Field *

(H) = Section Head
(S) = Group Supervisor
J = Jackson Location
M = Midland Location
C = Campbell Location
P = Palisades Location
B = Big Rock Point Location
K = Karn, Weadock Location
W = Whiting Location
CB = Cobb Location
CT = Chattanooga, Tennessee
* = Contract Personnel
+ = Dual Capacity
Date = Expected Report Date for New Hire

Rev 2/6/79

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V. SUPPORTING DATA AND SUMMARIES

1. Noncompliance Data

Facility Name: Midland Nuclear Power Plant UNIT: 2 DOCKET NO: 50-330

Inspections No. 50-330/80-18 through No. 50-330/80-38

No. 50-330/81-04 through No. 50-330/81-12

Functional Areas	Noncompliances and Deviations[1]									
	Severity Levels						Categories			
	I	II	III	IV	V	VI	Viol.	Infr.	Def.	Dev.
Soils & Foundations				(2)	(1)					(1)
Containment & Other Safety Related Structures										
Piping System & Supports				(1)	(4)			2		
Safety Related Components					2					
HVAC Systems					(1)			(15)	(3)	
Electrical Power Supply/Dist					(4)	1				
Instrumentation & Control Sys.										
Licensing Activities										
Quality Assurance				(1)	(1)					
Fire Protection										
Preservice Inspection										
Design and Design Changes										
Reporting Requirements								(1)		
TOTALS				4	13	1		18	3	1

[1] Numbers in parenthesis indicate noncompliances common to both units.

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V. SUPPORTING DATA AND SUMMARIES

1. Noncompliance Data

Facility Name: Midland Nuclear Power Plant UNIT: 1 DOCKET NO: 50-329

Inspections No. 50-329/80-17 through No. 50-329/80-37

No. 50-329/81-04 through No. 50-329/81-12

Functional Areas	Noncompliances and Deviations[1]									
	Severity Levels						Categories			
	I	II	III	IV	V	VI	Viol.	Infr.	Def.	Dev.
1. Soils & Foundations				(2)	(1)					(1)
2. Containment & Other Safety Related Structures										
3. Piping System & Supports				(1)	(4)			(1)		
4. Safety Related Components										
5. HVAC Systems					(1)			(15)	(3)	
6. Electrical Power Supply/Dist					5					
7. Instrumentation & Control Sys.										
8. Licensing Activities										
9. Quality Assurance				(1)	(1)					
10. Fire Protection										
11. Preservice Inspection										
12. Design and Design Changes										
13. Reporting Requirements								(1)		
14.										
15.										
16.										
17.										
18.										
19.										
20.										
21.										
TOTALS				4	12			17	3	1

1/ Numbers in parenthesis indicate noncompliances common to both units.

HVAC: Level V violation for material storage

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SUMMARY OF ITEMS OF NONCOMPLIANCE

-329 50-330 Report No.	Area of Noncompliance	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	
0-10 80-11	Criterion V	Activities affecting quality were not accomplished in accordance with documented instructions and procedures for fabrication.	10	10	Infraction
	Criterion V	Welders identification was not recorded on travelers.	2	2	Deficiency
	Criterion V	Unapproved marking material, Eberhard Faber Marquette was used to mark sheet steel stock and fabricated items installed in seismic Class 1 duct work without a change approved by the contractor.	2	2	Deficiency
	Criterion XII	Documentary evidence did not exist that material and equipment conform to procurement requirements prior to installation or use.	10	10	Infraction
	Criterion VIII	Failure to assure the identification of safety related HVAC components throughout fabrication, erection and installation.	10	10	Infraction
	Criterion IX	Established welding procedures were not used as specified or in the manner used to qualify the procedure.	10	10	Infraction
	Criterion IX	Procedures to control weld filler metal at the Midland construction site were not followed.	10	10	Infraction

SUMMARY OF ITEMS OF NONCOMPLIANCE

-329 50-330 Report No.	Area of Noncompliance	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	Type
(cont)(cont) 30-10 80-11	Criterion IX	Welding was not performed in accordance with prequalified welding procedures.	10	10	Infraction
	Criterion IX	Individual welds were not identified by welder ID numbers.	10	10	Infraction
	Criterion IX	Two welders were assigned the same welder's ID stamp	10	10	Infraction
	Criterion X	Instructions and procedures for inspections were not prescribed for activities affecting quality.	10	10	Infraction
	Criterion X	The program for inspection was not adequate to assure compliance with applicable specifications.	2	2	Deficiency
	Criterion XV	Measures which would prevent the inadvertent use or installation of nonconforming materials had not been established.	10	10	Infraction
	Criterion XV	Nonconformance tags had been applied to fire dampers without explicitly identifying the item.	10	10	Infraction
	Criterion XVI	None of the seven nonconformance reports generated by CPCo during 5/23 - 10/2/79 had been promptly corrected.	10	10	Infraction

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SUMMARY OF ITEMS OF NONCOMPLIANCE

-329 50-330 Report No.	Area of Noncompliance	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	Type
:ont) (cont))-10 80-11	Criterion XVI	Measures were not adequate to assure that conditions adverse to quality were promptly identified.	10	10	Infraction
	Criterion XVII	Sufficient records to furnish evidence of activities affecting quality were not maintained.	10	10	Infraction

SUMMARY OF ITEMS OF NONCOMPLIANCE

50-329 50-330 SRI Eval IE Report No.	Area of Noncompliance Off Sheets	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	
80-20 80-21	Criterion IV 5 55182 EDA2	Bechtel Purchase Order did not specify applicable codes for purchase of 60,000 lbs of E7018 electrode.	10	10	Infraction
80-21 80-22 Zack (22)	Criterion XVIII 22 92706 EKA2	Failure to perform audit of Photon Testing, Inc. prior to welder training and qualification.	10	10	Infraction
80-28 80-29	Criterion X 5 55175 EKA2	Bypass of an inspection hold point. (Unit 2 only) for pressurizer surge piping		10	Infraction
80-31 80-32 11	Criterion II 22 92706 EBC2	Delay in making 10 CFR 50.55(e) reportability determinations and information was not immediately disseminated to the client. for Part 21 on diesel engine link rods.	10	10	Infraction
80-32 80-33 13 2	Criterion XVI 22 92706	Failure to initiate preventive action to preclude repetition of not identifying design documents. Reviewers were not reviewing the FSAR against references.	10	10	IV

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SUMMARY OF ITEMS OF NONCOMPLIANCE

-329 50-330 RT Eval Report No.	Area of Offsheets Noncompliance	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	Severity Level
0-32 80-33 +3- 2	Criterion III 22 92706	Three examples of failure to translate applicable regulatory requirements and design criteria into design documents. a) Failure to maintain a coordination log of specification change notices. b) Failure to correctly translate SCM-9004 as a requirement into Rev. 20 of specification C-208. c) Failure of EDPI 4.25.1, Rev. 8 to establish adequate measures to waive design interface requirements.	10	10	IV

SUMMARY OF ITEMS OF NONCOMPLIANCE

50-329 50-330 BR Eval Report No.	Area of Noncompliance	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	Severity Level
81-01 81-01 Soils (2)	Criterion V 22 92703 EEA	Failure to establish test procedures for soils work activities.	10	10	V
Soils (2)	Criterion VI 92703 EE4	Failure to control test results forms for soils work activities.	10	10	V
Soils (2)	Criterion XVII 92703 ETA	Failure to initial and date test report sheets or to control the use of signature stamps.	10	10	VI
81-04 81-04	Criterion V 6 50063 EEA5	Failure to have an appropriate procedure for installation of vent valves.		10	V
	Criterion V 6 50063 EEB	Failure to follow access control and severity level V, ie., U/2 core support assembly vent valves without being accounted for on equipment log.		10	V
81-08 81-08 -22 Soils Elec Inst Rev. 1	Criterion XIII 7 51053 EN45	Failure to provide adequate storage conditions for 1) Control Rod Drive Primary AC Breakers 2) New and spent fuel storage racks 3) Emergency battery chargers	10	10	V

SUMMARY OF ITEMS OF NONCOMPLIANCE

DRAFT 1

50-329 50-330 SR1 Eval IE Report No.	Area of Noncompliance (Computer sheets)	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	Severity Categories
81-09 81-09	Criterion V 1 45051 EEBS	Failure to evaluate the technical capabilities of Woodward prior to commencement of drilling operations.	10	10	V
81-11 81-11 Electrical 7	Criterion V 1 51061 EEAS	Failure to establish procedures for temporary support of cable, cable coils --- and for routing cables.	10	~~10~~ 10	V
Question whether really cognizant only Unit 1	Criterion X 7 51063 EKAS	Electrical contractors failed to verify conformance to paragraph 3.1, failure to perform adequate inspection.	10	~~10~~	V
	Criterion XV 7 51063 ERAS	Failure to identify and control nonconforming components.	10	10	V
Electrical QA implication 7	Criterion III 1 52051 ECAS	Failure to translate design criteria into drawings and specifications.	10	10	V

SUMMARY OF ITEMS OF NONCOMPLIANCE

50-329 50-330 SRI Eval IE Report No.	Area of Noncompliance	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	Severity Categories
81-12 81-12 QA-1	Criterion XVI 22 92706 EEB4	Routine analysis of report revealed that appropriate site managers have not routinely established comprehensive corrective actions in response to the identification of adverse quality trends.	10	10	IV
Question whether Unit 2 or Common	Criterion X 7 51063 EKA6	Failure to identify during inspection that a nonconforming condition with regard to minimum installed cable bend radius existed.	[illegible]	? 10	VI
Electrical 7	Criterion XVI 1 51061 ESA5	Failure to take proper corrective action with regard to the lack of approved procedures for the rework items.	10	10	V
	Criterion V 5 50090 EEB5	Failure to install large bore pipe restraints, supports, and anchors in accordance with design drawings and specifications.	10	10	V

SUMMARY OF ITEMS OF NONCOMPLIANCE

DRAFT

50-329 50-330 SRI Eval IE Report No.	Area of Noncompliance	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	Severity Categories
(cont) (cont) 81-12 81-12	Criterion X 5 50090 EKAS	Failure of QC inspector to reject large bore restraints, supports and anchors that were not installed in accordance with design drawings and specifications.	10	10	V
	Criterion III 5 50090 ECF4	Failure to prepare, review and approve small bore pipe and piping suspension system designs performed onsite in accordance with design control procedures.	10	10	IV
	Criterion VI 5 50090 EFBS	Failure to adequately control documents used in site small bore piping design activities.	10	10	V
	Criterion XVIII 5 50090 EWAS	Failure of audits to include a detailed review of system stress analysis and to follow up on previously identified hanger calculation problems.	10	10	V

NUMBER AND NATURE OF ENFORCEMENT ITEMS - Plants under Construction

Facility Name MIDLAND Docket No. 329 Unit 1

Functional Areas	Investigation & Inspection Manhours	Noncompliances and Deviations									
		Severity Levels						Categories			
		I	II	III	IV	V	VI	Viol.	Infr.	Def.	Dev
1. Quality Assurance	73					4					
2. Site Preparation and Foundations	18										
3. Containment Structures	26										
4. Safety-Related Structures	2										
5. Piping and Hangers	33				1	4			1		
6. Safety-Related Components	14										
7. Electrical	107					3					
8. Instrumentation											
9. Fire Protection	25										
10. Preservice Inspection	32										
11. Corrective Action and Reporting	1										
12. Procurement	0										
13. Design and Design Changes	2										
14. Training	0										
15. Plant Operations Preparation	0										
16. Fuel Loading Preparation	0										
17. Maintenance	0										
18. Security & Safeguards	NONE										
19. Surveillance and Pre-Operational Testing	0										
20. Emergency Planning	0										
21. Audits, Reviews, and Committee activities	0										
22. Modules Not included in Any Functional Area	927				1	1			20	3	
TOTALS	1260				2	12			21	3	

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3. NUMBER AND NATURE OF ENFORCEMENT ITEMS - Plants under Construction

Facility Name MIDLAND Docket No. 330 Unit 2

Functional Areas	Investigation & Inspection Manhours	Noncompliances and Deviations									
		Severity Levels						Categories			
		I	II	III	IV	V	VI	Viol.	Infr.	Def.	Dev
1. Quality Assurance	71					4					
2. Site Preparation and Foundations	17										
3. Containment Structures	5										
4. Safety-Related Structures	2										
5. Piping and Hangers	40				1	4			2		
6. Safety-Related Components	17					2					
7. Electrical	104					2	1				
8. Instrumentation	0										
9. Fire Protection	24										
10. Preservice Inspection	34										
11. Corrective Action and Reporting	1										
12. Procurement	0										
13. Design and Design Changes	2										
14. Training	0										
15. Plant Operations Preparation	0										
16. Fuel Loading Preparation	0										
17. Maintenance	0										
18. Security & Safeguards	0										
19. Surveillance and Pre OPERATIONAL TESTING	0										
20. Emergency Planning	0										
21. Audits, Reviews, and Committee activities	0										
22. Modules Not included in Any Functional Area	921				1	1		20	3		
TOTALS	1240				2	~~5~~ 13 1		20	5		

§1-12 Criterion X level VI

Should be against only unit 2 because I saw only cables with unit 2 designator addressed in citation

This then makes §1-11 Criterion X level V citation against only unit 1 compatible with §1-12 as only cables with unit 1 designators were looked at in citation.

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Number and Nature of Noncompliance Items

Noncompliance Category	Unit 1 Points	Unit 2 Points
Violations	-	-
Infractions	16 ~~23~~ 17	~~23~~ 18
Deficiencies	3 ~~3~~ 4	3 ~~3~~ 4
Deviations	0	1
Severity Levels		
I	0	0
II	0	0
III	0	0
IV	~~3~~ 4	~~3~~ 4
V	~~12~~ 13	~~13~~ 15
VI	~~0~~ 1	~~1~~ 2

II. NUMBER AND NATURE OF ENFORCEMENT ITEMS

UKAP 1

Midland Unit 1

Docket No. 50-329

Functional Area	Investigation & Inspection Manhours	Noncompliances and Deviations								
		Severity Level						Classification*		
		I	II	III	IV	V	VI	Vio.	Infr.	Dev.
1. Quality Assurance	73					4				
2. Site Preparation & Foundations	18									
3. Containment Structures	26									
4. Safety-Related Structures	2									
5. Piping & Hangers	33				1	4			1	
6. Safety-related Components	14									
7. Electrical	107					3				
8. Instrumentation										
9. Fire Protection	25									
10. Preservice Inspection	32									
11. Corrective Actions & Reporting	1									
12. Procurement	0									
13. Design and Design Changes	2									
14. Training	0									
15. Modules Not Included In Any Functional Area	927				1	1			20	3
TOTALS	1260				2	12			21	3

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II. NUMBER AND NATURE OF ENFORCEMENT ITEMS

Midland Unit 2

Docket No. 50-330

Functional Area	Investigation & Inspection Manhours	Noncompliances and Deviations								
		Severity Level						Classification*		Dev.
		I	II	III	IV	V	VI	Vio.	Infr.	Def.
1. Quality Assurance	71					4				
2. Site Preparation & Foundations	17									
3. Containment Structures	5									
4. Safety-Related Structures	2									
5. Piping & Hangers	40				1	4			2	
6. Safety-Related Components	17					2				
7. Electrical	104					2	1			
8. Instrumentation	0									
9. Fire Protection	26									
10. Preservice Inspection	34									
11. Corrective Actions & Reporting	1									
12. Procurement	0									
13. Design and Design Changes	2									
14. Training	0									
15. Modules Not Included In Any Functional Area	921				1	1		20	3	
TOTALS	1240				2	13	1	20	5	

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Number and Nature of Noncompliance Items

Noncompliance Category	Unit 1 Points	Unit 2 Points
Violations	-	-
Infractions	21	21
Deficiencies	3	3
Severity Levels		
I	0	0
II	0	0
III	0	0
IV	2	2
V	12	13
VI	0	1

II. NUMBER AND NATURE OF ENFORCEMENT ITEMS

Midland Unit 1

Functional Area	Noncompliances and Deviations									
	Severity Level						Classification			
	I	II	III	IV	V	VI	Vio	Inf	Def	Dev
1. Quality Assurance				1	1					
2. Site Preparation and Foundations				2	2	1				1
3. Containment Structures										
4. Safety-related Structures										
5. Piping & Hangers				1	4			1		
6. Safety-related Components										
7. Electrical					5					
8. Instrumentation										
9. Fire Protection										
10. Preservice Inspection										
11. Corrective Actions and Reporting								1		
12. Procurement										
13. Design and Design Changes										
14. Training										
15. Modules Not Included In Any Functional Area	278				1			15 ~~14~~	3	
TOTALS	517			4	13	1		16	3	1

II. NUMBER AND NATURE OF ENFORCEMENT ITEMS

Midland Unit 2

Functional Area	Noncompliances and Deviations									
	Severity Level						Classification			
	I	II	III	IV	V	VI	Vio	Inf	Def	Dev
1. Quality Assurance				1	1					
2. Site Preparation and Foundations				2	2	1				1
3. Containment Structures										
4. Safety-related Structures										
5. Piping & Hangers				1	4			2		
6. Safety-related Components					2					
7. Electrical					5	1				
8. Instrumentation										
9. Fire Protection										
10. Preservice Inspection										
11. Corrective Actions and Reporting								1		
12. Procurement										
13. Design and Design Changes										
14. Training										
15. Modules Not Included In Any Functional Area	277				1			15	3	
TOTALS	492			4	15	2		18	3	1

SUMMARY OF ITEMS OF NONCOMPLIANCE

-329 50-330 Report No.	Area of Noncompliance	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	
30-10 80-11	1 Criterion V	Activities affecting quality were not accomplished in accordance with documented instructions and procedures for fabrication.	10	10	Infraction
	2 Criterion V	Welders identification was not recorded on travelers.	2	2	Deficiency
	3 Criterion V	Unapproved marking material, Eberhard Faber Marquette was used to mark sheet steel stock and fabricated items installed in seismic Class 1 duct work without a change approved by the contractor.	2	2	Deficiency
	4 Criterion VII	Documentary evidence did not exist that material and equipment conform to procurement requirements prior to installation or use.	10	10	Infraction
	5 Criterion VIII	Failure to assure the identification of safety related HVAC components throughout fabrication, erection and installation.	10	10	Infraction
	6 Criterion IX	Established welding procedures were not used as specified or in the manner used to qualify the procedure.	10	10	Infraction
	7 Criterion IX	Procedures to control weld filler metal at the Midland			

SUMMARY OF ITEMS OF NONCOMPLIANCE

50-329 50-330 Report No.	Area of Noncompliance	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	Type
(cont)(cont) 80-10 80-11	Criterion IX	Welding was not performed in accordance with prequalified welding procedures.	10	10	Infraction
9	Criterion IX	Individual welds were not identified by welder ID numbers.	10	10	Infraction
10	Criterion IX	Two welders were assigned the same welder's ID stamp	10	10	Infraction
11	Criterion X	Instructions and procedures for inspections were not prescribed for activities affecting quality.	10	10	Infraction
12	Criterion X	The program for inspection was not adequate to assure compliance with applicable specifications.	2	2	Deficiency
13	Criterion XV	Measures which would prevent the inadvertent use or installation of nonconforming materials had not been established.	10	10	Infraction
14	Criterion XV	Nonconformance tags had been applied to fire dampers without explicitly identifying the item.	10	10	Infraction
15	Criterion XVI	None of the seven nonconformance reports generated by CPCo during 5/23 - 10/2/79 had been promptly corrected.	10	10	Infraction

SUMMARY OF ITEMS OF NONCOMPLIANCE

50-329 50-330 Report No.	Area of Noncompliance	Subject of Noncompliance	Unit 1 Points	Unit 2 Points	Type
(cont) (cont) 80-10 80-11	16 Criterion XVI	Measures were not adequate to assure that conditions adverse to quality were promptly identified.	10	10	Infraction
	17 Criterion XVII	Sufficient records to furnish evidence of activities affecting quality were not maintained.	10	10	Infraction

I. NUMBER AND NATURE OF ENFORCEMENT ITEMS - Plants under Construction

Facility Name MIDLAND Docket No. 329 Unit 1

Functional Areas	Investigation & Inspection Manhours	Noncompliances and Deviations: Severity Levels I	II	III	IV	V	VI	Categories: Viol.	Infr.	Def.	Dev
1. Quality Assurance	73					4					
2. Site Preparation and Foundations X	18										
3. Containment Structures	26										
4. Safety-Related Structures	2										
5. Piping and Hangers X	33				1	4			1		
6. Safety-Related Components	14										
7. Electrical X	107					3					
8. Instrumentation											
9. Fire Protection	25										
10. Preservice Inspection	32										
11. Corrective Action and Reporting X	1										
12. Procurement	0										
13. Design and Design Changes X	2										
14. Training X	0										
15. Plant Operations Preparation	0										
16. Fuel Loading Preparation	0										
17. Maintenance	0										
18. Security & Safeguards	NONE										
19. Surveillance and Pre-OPERATIONAL TESTING	0										
20. Emergency Planning	0										
21. Audits, Reviews, and Committee activities	0 +										
22. Modules Not included in Any Functional Area X	927				1	1			20	3	
TOTALS	1260				2	12			21	3	

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1. NUMBER AND NATURE OF ENFORCEMENT ITEMS - Plants under Construction

Facility Name MIDLAND Docket No. 330 Unit 2

Functional Areas	Investigation & Inspection Manhours	Noncompliances and Deviations									
		Severity Levels						Categories			
		I	II	III	IV	V	VI	Viol.	Infr.	Def.	Dev
1. Quality Assurance	71					4					
2. Site Preparation and Foundations	17										
3. Containment Structures	5										
4. Safety-Related Structures	2										
5. Piping and Hangers	40				1	4			2		
6. Safety-Related Components	17					2					
7. Electrical	104					2	1				
8. Instrumentation	0										
9. Fire Protection	24										
10. Preservice Inspection	34										
11. Corrective Action and Reporting	1										
12. Procurement	0										
13. Design and Design Changes	2										
14. Training	0										
15. Plant Operations Preparation	0										
16. Fuel Loading Preparation	0										
17. Maintenance	0										
18. Security & Safeguards	0										
19. Surveillance and Pre OPERATIONAL TESTING	0										
20. Emergency Planning	0										
21. Audits, Reviews, and Committee activities	0										
22. Modules Not included in Any Functional Area	921				1	1		20	3		
TOTALS	1240				2	15		20	5		

13 1

I. NUMBER AND NATURE OF ENFORCEMENT ITEMS - Plants under Construction

Facility Name MIDLAND Docket No. 329 Unit 1

Functional Areas	Investigation & Inspection Manhours	Noncompliances and Deviations: Severity Levels I	II	III	IV	V	VI	Categories: Viol.	Infr.	Def.	Dev
1. Quality Assurance	83 ~~73~~				1	~~1~~					
2. Site Preparation and Foundations	~~56~~ 77				2	2	1				1
3. Containment Structures	~~26~~ 0										
4. Safety-Related Structures	~~2~~ 0										
5. Piping and Hangers	~~33~~ 17				1	4			1		
6. Safety-Related Components	~~14~~ 0										
7. Electrical	~~103~~ 42					~~3~~ 5					
8. Instrumentation	0										
9. Fire Protection	~~25~~ 0										
10. Preservice Inspection	~~32~~ 0										
11. Corrective Action and Reporting	+ 20								1		
12. Procurement	0										
13. Design and Design Changes	20										
14. Training	0										
15. Plant Operations Preparation	0										
16. Fuel Loading Preparation	0										
17. Maintenance	0										
18. Security & Safeguards	~~NONE~~ 0										
19. Surveillance and Pre-OPERATIONAL TESTING	0										
20. Emergency Planning	0										
21. Audits, Reviews, and Committee activities	0										
22. Modules Not included in Any Functional Area	~~227~~ 278				0	1			~~30~~ 14	3	
TOTALS	~~260~~ 517				~~34~~	~~12~~ 13	1		~~21~~ 16	3	1

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1. NUMBER AND NATURE OF ENFORCEMENT ITEMS - Plants under Construction

Facility Name MIDLAND Docket No. 330 Unit 2

Functional Areas	Investigation & Inspection Manhours	Noncompliances and Deviations: Severity Levels I	II	III	IV	V	VI	Categories: Viol.	Infr.	Def.	Dev
1. Quality Assurance	~~7~~ 83				1	~~1~~ 7					
2. Site Preparation and Foundations	~~34~~ 34				2	2	1				1
3. Containment Structures	~~5~~ 0										
4. Safety-Related Structures	~~2~~ 0										
5. Piping and Hangers	~~19~~ 19				1	4			~~2~~ 2		
6. Safety-Related Components	~~17~~ 7					~~3~~ 2					
7. Electrical	~~104~~ 52					~~5~~ 2	1				
8. Instrumentation	0										
9. Fire Protection	~~26~~ 0										
10. Preservice Inspection	~~34~~ 0										
11. Corrective Action and Reporting	+ 20								1		
12. Procurement	0										
13. Design and Design Changes	~~2~~ 0										
14. Training	0										
15. Plant Operations Preparation	0										
16. Fuel Loading Preparation	0										
17. Maintenance	0										
18. Security & Safeguards	0										
19. Surveillance and Pre OPERATIONAL TESTING	0										
20. Emergency Planning	0										
21. Audits, Reviews, and Committee activities	0										
22. Modules Not included in Any Functional Area	~~42~~ 277				0	1		~~29~~ 22	~~14~~ 3	3	
TOTALS	~~240~~ 492				~~34~~ 4	~~15~~ 13	2	~~20~~ 0	~~5~~ 17	3	1

~~13~~ ≠ 15

1980 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/80-13 330/80-13	Installation P15 7	Foster/ Erb	2/27 to 5/2	
"	Identification of Problems P15 8	"	"	
"	Consultant Review P15 9	"	"	
"	Management Meeting P15 10	"	"	
329/80-14 330/80-15	50.55(e) Meeting conducted in Glen Ellyn to discuss the Midland RV holddown anchor bolt failures	Keppler & Staff	5/2	
329/80-17-01 330/80-18-01	Licensee Action on IE Bulletin 80-08 P2	Ward	7/22 8/12-13	80-27/28
329/80-17 330/80-18	Review of Revised PSI Procedure P3 2	"	"	
"	Material Certifications P4 3	"	"	
"	(NDE) Personnel Certifications P4 4	"	"	
"	Observation of Work and Work Activities P4 5	"	"	
"	Review of Data Reports and Audits P5 6	"	"	
329/80-17-02 330/80-18-02	Independent Inspection - Graver radiographs P5 7a Ref. 80-07, 80-27/28, 81-02, 81-06	"	"	
329/80-17-03 330/80-18-03	Bechtel Purchased Pipe from Grinnel P6 7c	"	"	80-27/28

1980 REPORTS   *Non - Resident*

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/80-20 330/80-21	Reactor Coolant Pressure Boundary Piping - Observation of Work and Work Activities (Unit 2) P2 1	Lee *5* *5*	7/8-10 *49653* *49654*	
"	Reactor Coolant Pressure Boundary Piping - Welding Material Control (Units 1 and 2) P3 2	"	"	
"	Reactor Coolant Pressure Boundary Piping - Observation of Welding Activities (Units 1 and 2) P3 3	"	"	
"	Reactor Coolant Pressure Boundary Piping - Welder Qualification (Units 1 and 2) P4 4 Ref. 80-01	"	"	
329/80-20-01 330/80-21-01	Safety Related Piping - Welding Material Control (Units 1 and 2) P4 5 *Ref. 80-28/29*	"	"	
329/80-20 330/80-21	Safety Related Piping - Observation of Welding Activities (Unit 1) P5 6	"	"	~~[illegible]~~
"	Safety Related Piping - Observation of NDE Activities (Unit 1) P5 7	"	"	
329/80-20-02 330/80-21-02	Safety Related Water Storage Tanks Fabricated by Graver Company - Tank No. 1T-60 - lack of fusion may exist P6 8b	"	"	~~81-06~~
329/80-23 330/80-24	Construction Schedules P2 1	Sutphin	8/19-22	
"	Part 21 Items P2 2	"	"	

1980 REPORTS Non-Resident

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/80-25 330/80-26	Containment Prestressing System P3 1	Gallagher Landsman	8/27-29	
			3-7805	
"	Meeting on Soils Issue at CPCo Office	"	"	
329/80-27 330/80-28	Licensee Action on IE Bulletin 80-08 P3	Ward	9/23-24	
	Ref. 80-17/18-01	10-7	3052	
		10-7	3053	
		10-7	3055	
"	Procedure and Manual Review P3 2	"	"	
"	Material and Equipment Certification P6 3	"	"	
"	NDE Personnel Certifications P7 4	"	"	
"	Observation of Work and Work Activities P7 5	"	"	
"	Review of Data Reports and Audits P8 6	"	"	
"	Independent Inspection - Allegations - Allegation 1-	"	"	
	Radiographic location markers removed from piping			
	systems for inservice insp. not replaced accurately.			
	P8 7			
"	Conclusion - Allegation substantiated P9 7	"	"	
"	Independent Inspection - Allegations - Allegation 2-	"	"	
	Radiographer used wrong source. P9 7			
	R.F. 81-02			
"	Conclusion - Allegation not substantiated P9 7	"	"	
	R.F. 81-02			

1980 REPORTS Non-Resident

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/80-23 330/80-24	New CPCo QA Organization P3 3	Sutphin	8/19-22	
"	Zack Company Status P3 4	"	"	
"	50.55(e) - Unit 2 containment rebar spacing P3 5	"	"	
"	50.55(e) - Unit 2 containment fire P3 5	"	"	
"	50.55(e) - Missing rebar P3 5	"	"	
329/80-24 330/80-25	Examination of the licensee's pre-operational radiological and nonradiological environmental monitoring programs, construction phase environmental protection program and their implementation. P2 2	Greer	8/26-27	
"	Environmental Program Management P2 3	"	"	
"	Radiological Environmental Monitoring Program P2 4 Ref. 79-07	"	"	
"	Non-radiologican Environmental Monitoring Program P3 5	"	"	
"	Meteorological Monitoring Program P3 6	"	"	
"	Environmental Protection P3 7	"	"	

1980 REPORTS Tom - Trans

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/80-27 330/80-28	Independent Inspection - Allegations - Allegation 3	Ward	9/23-24	
	Field radiographs do not meet the required geometric unsharpness P9 7 Ref. 81-02	"	73-52 73-53 73-55	
"	Conclusion - Allegation substantiated Ref. 81-02	"	"	
"	Independent Inspection - Allegations - Allegation 4 Management instructed radiographer to trim film to eliminate "bad" shop weld. P10 7 Ref. 81-02			
"	Conclusion - Allegation not substantiated P10 7 Ref. 81-02	"	"	
329/80-28 330/80-29	50.55(e) ITT Grinnell Feedwater Pipes - Closed P2 Ref. IE Report No. 99900019/80-01	Lee 5-55075 5-55083 5-49051	9/23-25	80-28/25
"	Reactor Coolant Pressure Boundary Piping - Welding Material Control (Units 1 and 2) P3 1	"	"	
"	Reactor Coolant Pressure Boundary Piping - Observation of Welding Activities (Unit 1) P3 2	"	"	
330/80-29-01	Reactor Coolant Pressure Boundary Piping - Visual Examination of Welds (Unit 2) P4 3	"	"	
329/80-28 330/80-29	Reactor Coolant Pressure Boundary Piping - Welder Qualification (Units 1 and 2) P4 4 Ref. 80-20/21	"	"	
"	Relocation of Pressurizer Level Sensing Nozzles (Unit 2 P5 5	"	"	

1980 REPORTS.

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/80-28 330/80-29	Reactor Coolant Pressure Boundary Piping - Observation of NDE Activities (Unit 1) P5 6	Lee	9/23-25	
"	Reactor Coolant Pressure Boundary Piping - Observation of Work and Work Activities (Unit 2) P5 7	"	"	
"	Safety Related Piping - Observation of Welding Activities (Units 1 and 2) P6 8	"	"	
"	Safety Related Piping - Observation of NDE Activities (Unit 2) P6 9	"	"	
329/80-30 330/80-31	IE Bulletins Closed - 75-03, 75-06, 76-02, 76-03, 76-05, 77-01, 77-02, 77-05 & 05A, 78-05, 79-01, 79-09, 79-11, 79-23 P6	Naidu/ Sutphin	10/7-10 10/15-17 10/20-23	7 - 51054 7 - 51056
"	Review of Licensee Action Taken on IE Bulletins Re-Identified For Action by NRC Division of Licensing, Sept. 4, 1980 - Reopened Bulletin 79-21 Reopened Bulletin 80-06 P7	"	"	
"	Review of Licensee Action Taken on IE Circulars Open - 76-02, 77-06, 79-02, 79-17, 79-20, 77-16, 78-08 Closed 77-09, 78-18, 79-23 P8	"	"	
"	CPCo Quality Assurance Organization P10 1a	"	"	
"	Construction Schedules P10 1b	"	"	

1980 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/80-30 330/80-31	On-Site Design Activity P10 1c	Naidu, Sutphin	9/23-25	
"	50.55(e) Personnel Air Locks P11 2	"	"	
329/80-30-01 330/80-31-01	Observation of Installed Electrical Equipment Units 1 & 2 - Battery Rack Specification Revision P13 1a Ref. 81-12	"	"	
329/80-30-02 330/80-31-02	Observation of Installed Electrical Equipment Units 1 & 2 - Reinspection of welds on Main Control Board Panels P15 1g	"	"	
329/80-30-03 330/80-31-03	Review of QA Records - Battery Charger Test Documentation · P16 2c Ref. 81-12	"	"	
329/80-30 330/80-31	Review of Nonconformance Reports P18 3	"	"	
"	Review of Equipment Verification Activities P18 4	"	"	
329/80-32 330/80-33	Background - Soil Settlement P2 1	Landsman/ Gallagher Gilray	12/11	
"	Purpose of Inspection - To verify implementation of the specific commitments and action items reflected in CPC response to 10 CFR 50.54(f) Questions 1 and 23 P3 2 Ref. 81-01	"	"	
329/80-32-01 330/80-33-01	[redacted] Part (a) and Question 23, Part (1) - Failure to provide adequate design interface control P5 3a	"	"	81-12

1980 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/80-32-02 330/80-33-02	Failure to maintain design interface and coordinator control P5 3b	Landsman/ Gallagher/ Gilray	12/11	
329/80-32-03 330/80-33-03	Failure to provide adequate design interface control P6 3c(1)	"	"	81-12
329/80-32-04 330/80-33-04	Specification C-208 Comments Ref. 81-12 P7 3c (2), (3), (4), (5) & (6)	"	"	
329/80-32-05 330/80-33-05	Specification C-211 Comments P7 3d(1), (2), (3), & (4) Ref. 81-12	"	"	
329/80-32-06 330/80-33-06	Review of Question 1, Part (b) and Question 23, Part (2) - Failure to Provide Adequate Corrective Action with Regard to Identified Audit Results P7 4	"	"	
329/80-32 330/80-33	Review of Question 1, Part (c) and Question 23, Part (3) P9 5	"	"	
329/80-33 330/80-34	Steam Generator and Pressurizer Modifications, Units 1 and 2 P2 1	Erb	12/1-4	
"	Observation of Guide Blocks on Lower Internals Unit 2 P3 2	1 - 50061 6 - 50063 6 - 50065 1 - 50071 6 - 50073 6 - 50075 6 - 50074		
"	QA Documentation on Safety Related Components, Units 1 and 2 P3 3	"	"	

1980 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/80-33-01 330/80-34-01	Embedded Bolts for Attachment of Primary Coolant Snubbers to Concrete Wall - Some bolts below the minimum specified hardness of 31 - 39 RC P4 4	Erb	12/1-4	
329/80-35 330/80-36	Management Meeting Held on 11/24/80 at the Holiday Inn, Jackson - Evaluation of Activities Authorized by NRC Construction Permits No. CPPR-81 and No. CPPR-82	Keppler & Staff	11/24	
"	Major Observations P2 3 Ref. 80-36/37	"	"	

1981 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/81-01 330/81-01	CPCo Quality Assurance Organization P5 1a	Gallagher/ Landsman/ Sutphin	1/7-9	~~81-12~~
"	Construction Schedule P5 1b	"	"	
"	Onsite Design Activity P5 1c	"	"	
"	50.55(e) Personnel Air Locks P5 2a	"	"	
329/81-01-01 330/81-01-01 V	Review of Onsite Soils Works Activities - Inadequate laboratory and field test procedures for the control of soil testing activities. P6 1a	"	"	81-12
329/81-01-02 330/81-01-02 V	Document Control For Soils Work - Measures have not been established to control the issuance of documents which affect quality activities P8 1b Ref. 81-06 Ref. 81-03	"	"	81-12
329/81-01-03 330/81-01-03 V	Soils Test Recc 's - Soil test reports are not initialed or datec nd there were no established controls on the use of a rubber signature stamp. P8 1c(1) Ref. 81-03	"	"	81-12
329/81-01-04 330/81-01-04 V	Test results (when densities exceed certain values) reviews do not meet the requirements. P9 1c(2)	"	"	81-12
"	Review of Nonconformance Reports P9 1d	"	"	
329/81-01-05 330/81-01-05 V	Qualifications of Onsite Geotechnical Engineer P10 1e	"	"	81-12

1981 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/81-01 330/81-01	50.55(e) Borated Water Storage Tank Reanalysis P10 2	Gallagher/ Landsman/ Sutphin	1/7-9	
329/81-02 330/81-02	Licensee Action on IE Bulletin P2	Ward	1/9,20-21	
		" -	730 52	
"	Procedure Review P3 1b	" -	730 53 730 55	
"	Material and Equipment Certification P3 1c	"	"	
"	NDE Personnel Certifications P3 1d	"	"	
"	Observation of Work Activities P4 1e	"	"	
"	Review of Data Reports P4 1f	"	"	
"	Independent Inspection P4 2 Ref. 80-27/28	"	"	
329/81-03 330/81-03	Comments on Woolley Submittal P4	Sutphin	1/27-29 4/14-16	
"	50.55(e) Personnel Airlocks P4 Ref. 80-01-02/03	"	"	
"	Licensee Action on IE Bulletins Closed 79-05A, 79-08, 79-13, 79-13 Rev. 2, 79-21, 79-26, 80-05 - Open 79-14	"	"	
"	Reactor Internals Vent Valves - Status of Installation, Unit 2 P7 1 Ref. 81-04	"	"	
329/81-03-01 330/81-03-01	Midland Plant Procedures For the Processing of NRC Bulletins, Circulars and Information Notices	"	"	

1981 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/81-05 330/81-05	Meeting in Glen Ellyn to discuss the Midland Project Reorganization and Quality Assurance Program update and modifications.	Keppler & Staff	3/13	
329/81-06 330/81-06	General - Third of four allegations resolved P3 1 Ref. 80-27/28, 79-20/21, 80-03, 80-17/18, 81-02	Ward 1C - 73052 1C - 73053	3/18 & 5/12	
"	Preservice Inspection P3 2	1C - 73055 "	"	
"	Independent Inspection P5 2	"	"	
329/81-09 330/81-09	Purpose of Inspection - to verify the quality assurance program for the soil borings P3 2	Landsman 1 - 45051 2 - - -	3/25-27 4/7-9	
"	Review of Drilling Procedures P3 3	"	"	
329/81-09-01 330/81-09-01	Review of Contract Documents - Approval of Woodward-Clyde as a principal supplier of services was not complete prior to commencing soil boring activities. P5 4	"	"	
329/81-11-01 330/81-11-01	Sealing of cable ends. 7 - 51063 Observation of Electrical Work Activities P2 1a	Gardner/ Love 1 - 52051 1 - 51061	4/28-30	
329/81-11-02 330/81-11-02	Failure to prescribe activities affecting quality by documented procedures P4 1b	1 - 52051 ? 7 - 51063 "	"	
329/81-11-03 ~~XXXXXXXXXX~~	Failure to perform an adequate inspection P4 1c	"	"	
329/81-11-04 330/81-11-03	Failure to identify and control nonconforming conditions P7 1d	"	"	

1981 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/81-11-05 330/81-11-04	Vendor wiring in Class 1E Battery Charger 1D17 is terminated with spaded lugs. P7 1e	Gardner/ Love	4/28-30	
329/81-11-06 330/81-11-05	Review of QA Implementing Procedures - Terminations - Failure to prescribe activities affecting quality by documented procedures P8 2	"	"	
329/81-11-07 330/81-11-06	Review of Instrumentation Installation - Specifications and Procedures - Failure to assure requirements were correctly translated into specifications, drawings, procedures and instructions. P9 3a	"	"	
329/81-12 330/81-12	50.55(e) Undersized Wire Installed in the Control Room Makepup Filter Drain Heater Units - Closed P7 2a Ref. 78-13	Team Inspec.	5/18-22	8/-/2
"	50.55(e) Inadequate Crimping in Vendor Supplied Electrical Penetrations.- Open P7 2b Ref. 78-12	"	"	
329/81-12-01 330/81-12-01	Problem Areas Identified - Need to be more specific in the administration and organizational relationships of the Bechtel site construction management and quality control organizations, in regard to the coordination, interface and working relationships between the two organizations. P 9 2b	"	"	
"	Positive Comments P10 3	"	"	

1981 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/81-12 330/81-12	Objectives of the Inspection - to verify that current Quality Assurance Program description and implementation met requirements of 10 CFR Part 50, Appendix B and other licensee commitments. P11 1	Team Insp.	5/18-22	
"	General Areas Inspected P11 2	"	"	
329/81-12-02 330/81-12-02	Review of NSSS Nonconformance Reports (NCRs) - Verification of the as-built conditions after "Proof Testing" was not accomplished. P13 3a	"	"	
329/81-12-03 330/81-12-03	Core Support Assembly Guide Block Positioning and Welding - Engineering data associated with motion of the guide blocks. P13 3b	"	"	
"	Review of Consumers Power Company Nonconformance Reports (NCR's) P13 4 7-51065	"	"	
"	Review of Bechtel Corporation Nonconformance Reports (NCR's) P13 5 7-51065	"	"	
"	Selection of Sampling Periods P14 6	"	"	
"	Conclusions P15 7			
"	QA Staffing (Civil Area) P16 1	"	"	
329/81-12-04 330/81-12-04	Trend Analysis and Evaluation - Consumers has not implemented the trend analysis program as required by Procedure M-2 in that appropriate corrective action commitments were not established by the appropriate individuals P19 2b	"	"	

1981 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/81-12-04 330/81-12-04	Nonconformance Report Reviews - Failure to take adequate corrective action regarding an identified adverse trend P20 3	Team Insp.	5/18-22	
329/81-12 330/81-12	Design Control of Block Walls P20 4	"	"	
"	Overinspection Plans and Implementation P20 5	"	"	
329/81-12-05 330/81-12-05	Permanent Dewatering System P21 6	"	"	
329/81-12-06 330/81-12-06	Procurement of Materials P22 7	"	"	
329/81-12 330/81-12	Quality Assurance Audits P22 8	"	"	
"	Project Quality Control Instructions P22 9	"	"	
330/81-12-07	Failure to perform an adequate inspection Observation of Electrical Work Activities - Terminations P24 1a	"	"	
329/81-12-07 330/81-12-08	Observation of Electrical Work Activities - Terminations - No inspection plan for the retermination of all electrical power and control cables P24 1b	"	"	
329/81-12-08 330/81-12-09	Qualification of QC Inspectors - Electrical - Qualification and Certification of Electrical QC Inspectors Questionable P25 2	"	"	
329/81-12-09 330/81-12-10	Review of Raceway Rework Controls - Licensee's method of controlling the rework of items previously inspected and accepted by QC. P28 3	"	"	

1981 REPORTS

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/81-12 330/81-12	Review of Quality Assurance Records - Quality Action Requests	Team Insp/	5/18-22	
"	Storage of Electric Cable - Cable Storage Yard P30 5	"	"	
329/81-12 330/81-12	Review of Procedures and Specifications P31 1	"	"	
"	5 - 50090 Inspection of Large Bore Pipe Suspension System Component Installations P32 2	"	"	
329/81-12-10 330/81-12-11	5 - 50090 Rigid Frame Restraint 18-1HCB-2-H1e P3 2e	"	"	
329/81-12-11 330/81-12-12	5 - 50090 Deficiency in the pipe hanger program. P34 2c-i	"	"	
329/81-12-12 330/81-12-13	Failure of the QC inspectors to identify the installation deficiencies Per 2	"	"	
329/81-12-13 330/81-12-14	5 - 50090 Review of Site Small Bore Piping Design Activities - Failure to document stress calculations prior to issuance of drawings for construction P35 3a	"	"	
329/81-12-14 330/81-12-15	Document Control - Specifications and calculations not up to date. P36 3b	"	"	
329/81-12-15 330/81-12-16	5 - 50090 Control of Installation Changes - Procedural provisions to control the effects of design revisions on small bore piping and piping suspension systems were questionable. P36 3c	"	"	

#	TOPIC	INSPECTOR	OPENED	CLOSED
329/81-12-15 330/81-12-16	Audits of Site Small Bore Piping Design Activities - Inadequate audits and surveillances of the site small bore pipe and hanger design activities. P37 4a&b	Team Insp.	5/18-22	
	IMMEDIATE ACTION LETTER issued 5/22/81 Ref. 81-14			
329/81-14 330/81-14	Followup on Immediate Action Letter (IAL) Items P2 1	Yin	7/16-17 7/23-24	
329/81-14-01 330/81-14-01	Followup on Allegation - Field change procedures used at the site for small bore piping and piping supports. P5 2 - Inadequate design control involving the RE review of the FE redline drawings P7 Ref. 81-12	"	"	
329/81-14 330/81-14	Management Exit Meeting - Small Piping and Pipe Hanger Review Status Presented by CP Management P7 1	"	"	
"	Positions and General Comments Noted by the Region III Management P8 2	"	"	

50-10
50-11 ZACK REPORT 1980 REPORTS Resident

#	TOPIC	RPT #	OPENED	CLOS
32	22 Investigation - Unlicensed Radiographics P3(3)	80-19 80-20	6/1-30	
33	22 Investigation - Construction Activities Pertaining to Installation of HVAC Systems P3(4) Ref. 80-10/11; 80-12/13; 80-16/17; 80-18/19; 80-22/23	"	"	
34	50.55(e) 3 - 48053 Personnel Airlock Door P3(5) Ref. 80-15/16; 78-04	"	"	
35	7 - 5,0603 UNRESOLVED ITEM - Class 1E Electrical Conduit Clamp Installation P4(6) Ref. 80-18/19	80-19-01 80-20-01	"	8/-/(
36	Zack Quality Assurance Manual Review P4(1)	80-21 80-22	7/16-18	
37	Consumers Power Company Overview Activity P4(2) Ref. 80-29/80	"	"	
38	Zack Organization Review P5(3)	"	"	
39	Material Reassessment Review - Drop-in Anchor Bolts P5(4a)	"	"	
40	Material Reassessment Review - Welding to 3/4" and above base metal P6(4b)	"	"	
41	Material Reassessment Review - Hanger Reinspection P7(4c)	"	"	
42	Reinspection Overview - Bechtel Corporation QC P8(5a)	"	"	
43	Licensee Corrective Action P8(6)	"	"	

22 Mech. Pipe Hangers Included

Resident

#	TOPIC	RPT #	OPENED	CLOS
44	Classification of Fire Dampers and Other Components as Equipment P9(7) 42051 - #9	80-21 80-22 42051 30703 92706	7/16-18	
45	ITEM OF NONCOMPLIANCE - Qualification of Zack Co. Welders P10(8) Region letter requested response - Report Details section indicated no response needed. 92706	80-21/22	8-01	8/-6
46	Material Certification P10(9)	"	"	
47	Welding Parameter Verification P11(10)	"	"	
48	Exit Interview - Pertained to Zack Co. Items Requiring Resolution before Stop Work Order could be lifted. Also referred to telecom between CPCo, RIII, Resident Inspector & Bechtel lifting Stop Work Order on Zack P12	"	"	
49	Detensioning of Reactor Vessel Holddown Bolts P2(2) Ref. 80-26/27 80-12/13; 80-16/17; 80-18/19	80-22 80-23	7/1-31	
50	Follow-up Review of Corrective Measures for Installation of HVAC Systems P3(3) Ref. 80-21/22; 80-26/27	"	"	
51	Investigation - Construction Activities Pertaining to Installation of HVAC Systems P3(4) Ref. 80-10/11, 12/13, 16/17, 18/19, 19/20	80-22 80-23	"	
52	Caseload Forecast Panel P3(5)	"	"	

#	TOPIC	RPT #	OPENED	CL
53	Detensioning of Reactor Vessel Holddown Bolts P2(2) Ref. 80-22/23	80-26 80-27	8/1-31	
	80-12/13; 80-16/17; 80-18/19			
54	Follow-up Review of Corrective Measures for Installation of	"	"	
	HVAC Systems P3(3) Ref. 80-21/22; 80-22/23			
55	Meeting With Soils Hearing Petitioners P3(2)	80-29 80-30	9/1-30	
56	Damage to Diesel Generator Electrical Rotor P3(3) Ref. 80-31/32	80-29-01 80-30-01	"	
	47-51053			
57	Welding Procedure Changes for Installation of HVAC Systems	"	"	
	Ref. 80-21/22			
58	Timeliness of QC Inspections for Installation of HVAC Systems	"	"	
	P4(5) Ref. 80-21/22			
59	Quality Control Classification of Diesel Fuel Oil P3(2)	80-31 80-32	10/1-31	
60	Alignment of Unit 1 Reactor Coolant Pumps P3(3) 50073	"	"	
61	HVAC System Fire Dampers P3(4) Ref. 80-34/35	"	"	
62	Hydrostatic Test of Borated Water Storage Tanks P4(5)	"	"	
	48063			
63	Installation of Level Sensing Nozzles for Unit 2"B" Steam	"	"	
	Generator P4(6) 55073			

#	TOPIC	RPT #	OPENED
64	Installation of Level Sensing Nozzles in the Unit 2 Pressurizer P4(7) 55073	80-31 80-32	10/1-31
65	Changes in Site Management P5(8)	"	"
66	ITEM OF NONCOMPLIANCE - Transamerica Delaval, Inc., 10 CFR 50 Part 21 Notification P5(9)	80-31-01 80-32-01	"
67	(Open) UNRESOLVED ITEM 80-29/30-01	"	"
68	Transamerica Delaval, Inc., 10 CFR Part 21 Notification - Link Rod Defect P2(1)	80-34 80-35	11/1-30
69	HVAC System Fire Dampers P2(2) Ref. 80-31/32	80-34-01 80-35-01	"
70	Systematic Assessment of Licensee Performance (SALP) Meetings P3(3)	"	"
71	Mounting of Safety Related Power Station Transformers P3(4)	"	"
72	Changes in Site Management P4(5)	"	"
73	Closed Noncompliance (50-330/79-13-01) Hydrostatic Test of Unit 2 Incore Instrument Tank 2T-87 P2	80-37 80-38	12/1-31
74	Consumers Power Audits of the Zack Co. P3(1) (CPCo Stop Work) Ref. 81-04	"	"

1981 REPORTS Resident

#	TOPIC	RPT #	OPENED	CLOSED
1	CPCO Audits of the Zack Co. P3(2) Ref. 80-37/38	81-04	1/1-31 2/1-14	
2	Presence of Fluid in 350 MCM-3/C B-11 Power Cable P3(3) Ref. 79-13, 79-15, 79-27, 80-08.	"	"	
3	50.55(e) Item - Underrated Terminal Strips on Limitorque Valve Operators P4(4)	"	"	
4	Installation of Core Support Assembly Vent Valves P4(5) (Failure to comply with provisions of B&W Quality Control Procedure No. 9-CP-101) Ref 81-03	330/ 81-04-01	"	
5	ITEM OF NONCOMPLIANCE Failure to have an appropriate procedure describing the installation of the vent valves. P6 Ref 81-03	330/ 81-04-02	"	
6	Closed Noncompliance 80-31-01, 80-32-01 P2(2)	81-07	2/15-28 3/1-31	
7	Site tours - It was noted that some of the dunnage and pipe storage in a laydown area to the east of Unit 1 containment was deteriorating. P3(3a)	"	"	
8	Transamerica Delaval, Inc., 10 CFR Part 21 Notification - Turbocharger Thrust Bearing Lubrication P3(3c)	"	"	
9	Transamerica Delaval, Inc., 10 CFR Part 21 Notification - Link Rod Defect P3(3b)	"	"	
10	Bomb Threat P4(3d)	"	"	

Resident

#	TOPIC	RPT #	OPENED	CLOS
11	Soil Borings P4(3e) Ref. 81-10; 81-13	81-07	2/15-28 3/1-31	
11½	Report # 81-08 OUT OF SEQUENCE - LOCATED AFTER #81-13	81-08	6/1-30	
12	(Closed) Unresolved Item 50-329/80-19-01; 50-330/80-20-01 P2(2) ELECTRICAL CONDUIT CLAMPS	81-10	4/1-30	
13	Site Tours - Mr. D. Hood, NRR Project Manager & Ms. E. Brown, Office of the Executive Legal Director accompanied the inspector on one of his tours while those areas being discussed as part of the soil settlement issues were examined. P3(3a)	"	"	
14	Examination of Laydown Area P3(3b)	"	"	
15	Quality Control Classification of Diesel Fuel Oil P3(3c)	"	"	
16	Soil Borings P4(3d) Ref. 81-13; 81-07	"	"	
17	50.55(e) Item - Potential Failure of Service Water Sluice Gates to Open P4(3e) No longer considered reportable	"	"	
18	50.55(e) Item - Adequacy of Structural Reinforcement at Major Containment Penetrations P4(3f)	"	"	
19	Investigation - Construction Activities Pertaining to Installa- of HVAC Systems P5(3g) Ref. Rpt. No. 80-10/11; CPCo letter dated 1/30/81	"	"	
20	Construction Assessment Team Inspection P2(2b)Ref. 81-12	81-13	5/1-31	

Resident

#	TOPIC	RPT #	OPENED	CLO
21	Brine Well Samples - Velsicol Chemical Company P3(2c)	81-13	5/1-31	
22	Soil Borings P3(2d) Ref. 81-10	"	"	
23	Site Tours - Storage Conditions were not Adequate for some Equip. P2(a)	81-08	6/1-30	
24	Change of QA/QC Responsibilities for Installation of HVAC Systems P3(b)	"	"	
25	Investigation - Construction Activities Pertaining to Installation of HVAC Systems P3(c)	"	"	
26	Allegations - Small Bore Pipe Installation P3(d)	"	"	
27	VIOLATION On Site Storage of Material and Equipment P3(e) (1) Storage of Control Rod Drive (CRD) Primary AC Breakers P4 (2) New and Spent Fuel Storage Racks P4 (3) Battery Chargers P4	"	"	
28	Allegations - Small Bore Pipe Installations P2 2b Ref. 81-14	81-17	7/1-31	
29	Management Meeting P3 2c	"	"	
30	Meeting With Soils Settlement Hearing Intervenor P3 2d	"	"	
31	Hearings - Soil Settlement Issues P3 2e	"	"	
32				

22 - Modules Not Included

80/10-11 Zack Non compliance
Big Report.

80/19-20 Zack

80/21-22 Zack; one Noncompliance - Tail along

80/22-23 Zack

80/26-27 Zack

80/29-30 Zack
QC Qual of Diesel Fuel

80/31-32 Zack; Fire Dampers

81-10 Zack

81-08 Material Storage

Not able to stand safety when NRC
~~[illegible]~~ attempts to close 50-55e when
they say they are ready
Rpt 81-12 penetrations - looked at 2 of
the 23 & found not good.

CPCo - had change in site management
Insp Rpt 80-31/32 dtd 10/1-31/80

Citation - Part 21 on diesels
Insp Rpt 80-31/32 - CPCo/Bechtel Twice
has had a poor system for telling Part 21
info in to 50-55e evaluation system.

QA Coverage/above coverage ≡ Program OK
Staff OK Qual/No-
% wasn't for adequacy of staff in trenches - would
have a high probability of failure - biggest cap
is in management corrective action
Soils lack-of
QA

check K. Ward - above average

check Yin for average

80-23/24 80-30/31, 11/24 81-01

Organization

Changes in Management
80-31/32 #5, 80-34/35 #4

Mgmt mtg March 13, 81
81-05

Team 5/15-22/81
81-12

October 1980 – J. Cooley left

Nov 20 1980 Turnbull arrived as
Site Project QA Superintendent

June!

Landsman

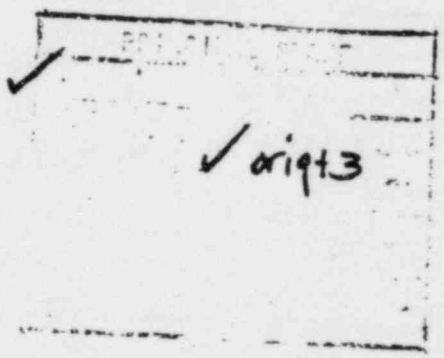
(55)

Consumers Power Company

James W Cook
Vice President - Projects, Engineering and Construction

General Offices: 1945 West Parnall Road, Jackson, MI 49201 • (517) 788-0453

January 10, 1983



Mr J G Keppler, Administrator, Region III
Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND NUCLEAR COGENERATION PLANT
MIDLAND DOCKET NOS 50-329, 50-330
CONSTRUCTION COMPLETION PROGRAM
FILE 0655 SERIAL 20428

REFERENCE LETTER TO J W COOK, DATED DECEMBER 30, 1982, FROM NRC REGION III REGARDING CONSTRUCTION COMPLETION PROGRAM

On December 2, 1982, Consumers Power Company met with Mr Warnick and other members of your staff to discuss the general concept of our proposed Construction Completion Program. The enclosure to this letter documents in detail the Construction Completion Program, as requested at the meeting and in your follow up letter (Reference).

Since our meeting, the program has undergone considerable development and evolution. Details have been supplied and more specific objectives and implementing methods have been established. Further details are still being developed. While the Company expects the Program, as presently constituted, to be a workable and sufficient framework for future action, revisions may be necessary as future needs and experience dictate.

The Construction Completion Program is a positive step in the overall advancement of Project goals. It represents the best efforts of Project management, support and quality assurance personnel. We believe it will produce an improvement in Project installation and inspection status, systems construction and QA implementation. The quality verification effort should provide increased confidence of the NRC that the plant has been properly built. Other aspects of the Program, including the measure to improve ongoing inspections and scheduling interfaces, should contribute to that result. This Program, together with recent Consumers Power Company commitments regarding quality assurance and remedial soils work, can establish a basis for improved relations between the Company and the NRC Region group assigned to inspect Midland. The Construction Completion Program demonstrates the Company's responsiveness to both NRC concerns and the particular needs of this Project. It is our expectation that the Program, created out of a desire to enhance the

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orderliness and quality of construction, will achieve its intended purpose and lead to the successful "completion of construction" of the Midland Plant in accordance with regulatory requirements.

We hope that this submittal fulfills your request for written information regarding the Construction Completion Program. Consumers Power Company is prepared to support the public meeting proposed for January 26, 1983 in Midland, Michigan.

James W. Cook

JWC/DMB/cl

CC Atomic Safety and Licensing Appeal Board
CBechhoefer
FPCowan, ASLB
JHarbour, ASLB
DSHood, NRC
MMCherry
RWHernan, NRC
RJCook, Midland Resident Inspector
FSKelley
HRDenton, NRC
WHMarshall
WDPaton, NRC
WDShafer, NRC
RFWarnick, NRC
BStamiris
MSinclair
LLBishop

CONSUMERS POWER CC IPANY
Midland Units 1 and 2
Docket No 50-329, 50-330

Letter Serial 20428 Dated January 10, 1983

At the request of the Commission and pursuant to the Atomic Energy Act of 1954, and the Energy Reorganization Act of 1974, as amended and the Commission's Rules and Regulations thereunder, Consumers Power Company submits its Construction Completion Program.

CONSUMERS POWER COMPANY

By J W Cook
J W Cook, Vice President
Projects, Engineering and Construction

Sworn and subscribed before me this 10th day of January, 1983

Patricia A Puffer
Notary Public
Bay County, Michigan

My Commission Expires 3-4-86

oc0183-0308a100

Construction Completion Program
Executive Summary

The Construction Completion Program has been formulated to provide guidance in the planning and management of the design and quality activities necessary for completion of the construction of the Midland Nuclear Cogeneration Plant. Construction completion is defined in this Plan as carrying all systems to the point they are turned over to Consumers Power Company for component checkout and preoperational testing. The Construction Completion Program does not include the Remedial Soils Program which is treated in separate interactions between Consumers Power Company and the Nuclear Regulatory Commission.

Background

The Construction Completion Program was developed in response to a number of management concerns that have been identified during the period preceding the initiation of the Program. The Midland Project had been proceeding at a high level of activity as it approached completion. The final transition from area construction to system completion, using punch lists, has been difficult for most nuclear projects. The Midland Project has not escaped these difficulties which have been compounded due to the congested space and the continuing numerous design changes, both generally attributable to the age of the Project. These factors lead to the need for improved definition of work status, increased emphasis on overall Project objectives as well as continued focus of construction and inspection resources on completion of systems for short-term milestones and increased effort to complete engineering ahead of field installation.

The Midland Project has been criticized by the NRC regional office as not having met their expectations for implementation of the Project's Quality Assurance Program. The result has been that the Project management has too often, during the past few months, been in a reactive rather than proactive posture with regard to quality assurance matters.

In recognition of these conditions, management has concluded that a change in approach was needed to effectively complete the Project while maintaining high quality standards.

Objectives

The development of the Program has considered the Project's current status and recent history and attempts to address the underlying or root causes of the problems currently being experienced. In order to develop the Program the following overall objectives were established under three general headings. The Program must:

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 function.

- Improving the primary inspection process.

- Providing a uniform understanding of the quality requirements among all parties.

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.

Description

The Construction Completion Program entails a number of major changes in the conduct of the final stages of the construction process and can be described in summary as a two-phase process.

First, after certain necessary preparations, the safety-related systems and areas of the plant will be systematically reviewed. This first phase will be carried out on an area-by-area basis, but will be accomplished mainly by teams organized with systems responsibility and a separate effort to verify the completed work. The product from this phase of the program will be a clear status of remaining installation work and a current inspection status which provides quality verification of the existing work. The teams organized to carry out this first phase will continue to function in the second phase as the responsible organizational units to the complete the work.

In order to achieve its complete set of objectives, the Program contains a number of activities and elements that support and are linked to the two major phases described above. The major components of the Plan, which are discussed in more detail in the balance of this report, can be described as follows:

- A significant reduction in the construction activity in the safety-related portion of the plant, material removal and a general cleanup will be carried out in preparation for installation and inspection status assessment and quality verification activities.

- A review will be made of equipment status to assure that the proper lay-up precautions have been implemented to protect the equipment until the installation work is completed.

- The integration of the Bechtel QC function into the Midland Project Quality Assurance Department (MPQAD) under Consumers Power Company management will be completed.

- The Consumers Power Company is carrying out recertification program of Bechtel QC inspectors, and a review of the inspection procedures to be utilized.

- The system completion teams will be organized, staffed and trained according to procedures developed to define the team's work process.

- The systems completion teams will 1) accomplish installation and inspection status assessment, 2) perform systems construction completion and construction quality performance and 3) determine that all requirements have been met prior to functional turnover for test and operation.

- Quality verification of completed work will be carried out in parallel with installation and inspection status activities of the system completion teams.

- A series of management reviews will be carried out to carefully monitor the conduct of the Program and to revise the plan as appropriate.

- Review and resolution will proceed on outstanding issues related either to QA program or QA program implementation as raised by the NRC or third party overviews of the Project.

- Third party reviews will be undertaken to monitor Project performance and to carry out the NRC's requirements for independent design verification.

Schedule Status

The Program was initiated on December 2, 1982 by limiting certain ongoing safety-related work and starting preparations for the phase-one work of status assessment and quality verification activities. Since the Program also has incorporated a number of commitments made to the NRC during the past few months, activities in support of these commitments such as QC integration into MPQAD and the recertification of QC inspectors, had been initiated prior to December.

Status and schedules for each element of the Plan are enumerated in the text. In general, preparation for the Phase 1 activities are underway and will continue through January. A pilot team to develop the procedures and training requirements will be initiated during January. It is expected that the first

areas to undergo Phase 1 status assessment will be defined and teams mobilized during March.

Quality verification of completed work will start in late January or early February.

The Program provides for the Phase 1 results on a system or partial system to be reviewed and evaluated prior to initiating Phase 2 system completion work on that system or partial system. Management will monitor both process readiness and Phase 1 evaluation results.

The major areas of continuing safety-related work are NSSS construction as performed by B&W Construction Co, HVAC work under the Zack subcontract, the Remedial Soils Program and post-turnover punch list work released to Bechtel construction by Consumers Power Company. The Zack work is currently limited until a recently identified question on welder certification is resolved.

During the implementation of the Program in 1983, the NRC Resident Inspectors can use the Plan to monitor safety-related construction activities at the site. Since a substantial portion of the Plan directly relates to commitments made to NRC management, Consumers Power Company intends to schedule periodic reviews of Program status and progress with the NRC.

TABLE OF CONTENTS

1.0 INTRODUCTION

The Construction Completion Program has been formulated to provide guidance in the planning and quality activities necessary for completion of the construction of the Midland Nuclear Cogeneration Plant. Construction completion is defined in this Plan as carrying all systems to the point they are turned over to Consumers Power Company for component checkout and preoperational testing. The Construction Completion Program does not include the Remedial Soils Program which is treated in separate interactions between Consumers Power Company and the Nuclear Regulatory Commission. The Construction Completion Program will be referred to as the Program in this document which contains the Plan for Program development and implementation.

Background

The Construction Completion Program is being developed in response to a number of management concerns that have been identified during the period preceding the initiation of the Program. The Midland Project had been proceeding at a high level of activity as it approached completion. The final transition from area construction to system completion, using punch lists, has been difficult for most nuclear projects. The Midland Project has not escaped these difficulties which have been compounded due to the congested space and the continuing numerous design changes, both generally attributable to the age of the Project. These factors lead to the need for improved definition of work status, increased emphasis on overall Project objectives as well as continued focus of construction and inspection resources on completion of systems for short-term milestones and increased effort to complete engineering ahead of field installation.

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In recognition of these conditions, Consumers Power Company has concluded that a change in approach is needed to effectively complete the Project while maintaining high quality standards.

Objectives

The development of the Program has considered the Project's current status and recent history and attempts to address the underlying or root causes of the problems currently being experienced. In order to develop the Program, the following overall objectives were established under three general headings. The Program must:

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Improve Implementation of the QA Program By:

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- Improving the primary inspection process.

- Providing a uniform understanding of the quality requirements among all parties.

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.

PLAN CONTENTS

The Program was initiated on December 2, 1982 by limiting on-going work on Q-systems to pre-defined tasks and preparing the major structures housing Q-systems for an installation and inspection status assessment and verification of completed work. The relationship of the major elements of the Plan is shown in Figure 1-1. The sections of the Plan address the following major activity areas:

PREPARATION OF THE PLANT (Section 2.0)

The buildings are being prepared for a status assessment and verification of completed work.

QA/QC ORGANIZATION CHANGES (Section 3.0)

A new QA organization that integrates the QA and QC functions under a Consumers Power Company direct reporting relationship is being established. As a part of this transition, the Bechtel QC inspectors are being recertified to increase confidence in the quality inspection performance.

PROGRAM PLANNING (Section 4.0)

The overall Plan for the Program is being developed in two major phases.

The first phase includes:

- A team organization assigned on the basis of systems is being developed to determine present installation and inspection status. The inspection status assessment includes performing inspections on completed work to bring them up to date. A closely coordinated effort involving the construction contractor and Consumers Power Company (QA/QC, testing and construction) will improve quality performance.

- The quality verification of completed work will be based, in part, on a sampling technique using re-certified inspectors as described in Section 3.0.

The second phase includes:

- Following installation and inspection status assessment the team organization will retain responsibility for systems completion work.

- The QC inspection process of new work will be integrated with the systems completion work to ensure adequate quality performance.

PROGRAM IMPLEMENTATION (Section 5.0)

The first phase implementation of the Program will be initiated with a review of the process, procedures and team assignments that will be used. The plan for verification of completed work will be reviewed separately. The teams will conduct the installation and inspection status assessment; verification of completed and inspected work will proceed, as planned, in coordination with the team effort. Following phase 1 completion of the first work segment, a management review of the plan effectiveness will be made.

In second phase Program implementation, the assigned team will plan and schedule the remaining work needed for completion including QC inspections.

QUALITY PROGRAM REVIEW (Section 6.0)

The adequacy and completeness of the quality program will be reviewed on an ongoing basis, taking into consideration questions raised by NRC inspections and findings by third party reviewers. The results of these reviews will be considered as part of the management review that are a part of the Program implementation (Section 5).

THIRD PARTY REVIEWS (Section 7.0)

Independent assessments of the Midland Project will provide management and NRC with evaluations of Project performance.

SYSTEM LAY-UP (Section 8.0)

The on-going work to protect plant equipment and systems will be augmented as necessary to provide adequate protection during implementation of this Plan.

CONTINUING WORK ACTIVITIES (Section 9.0) Section 9.3

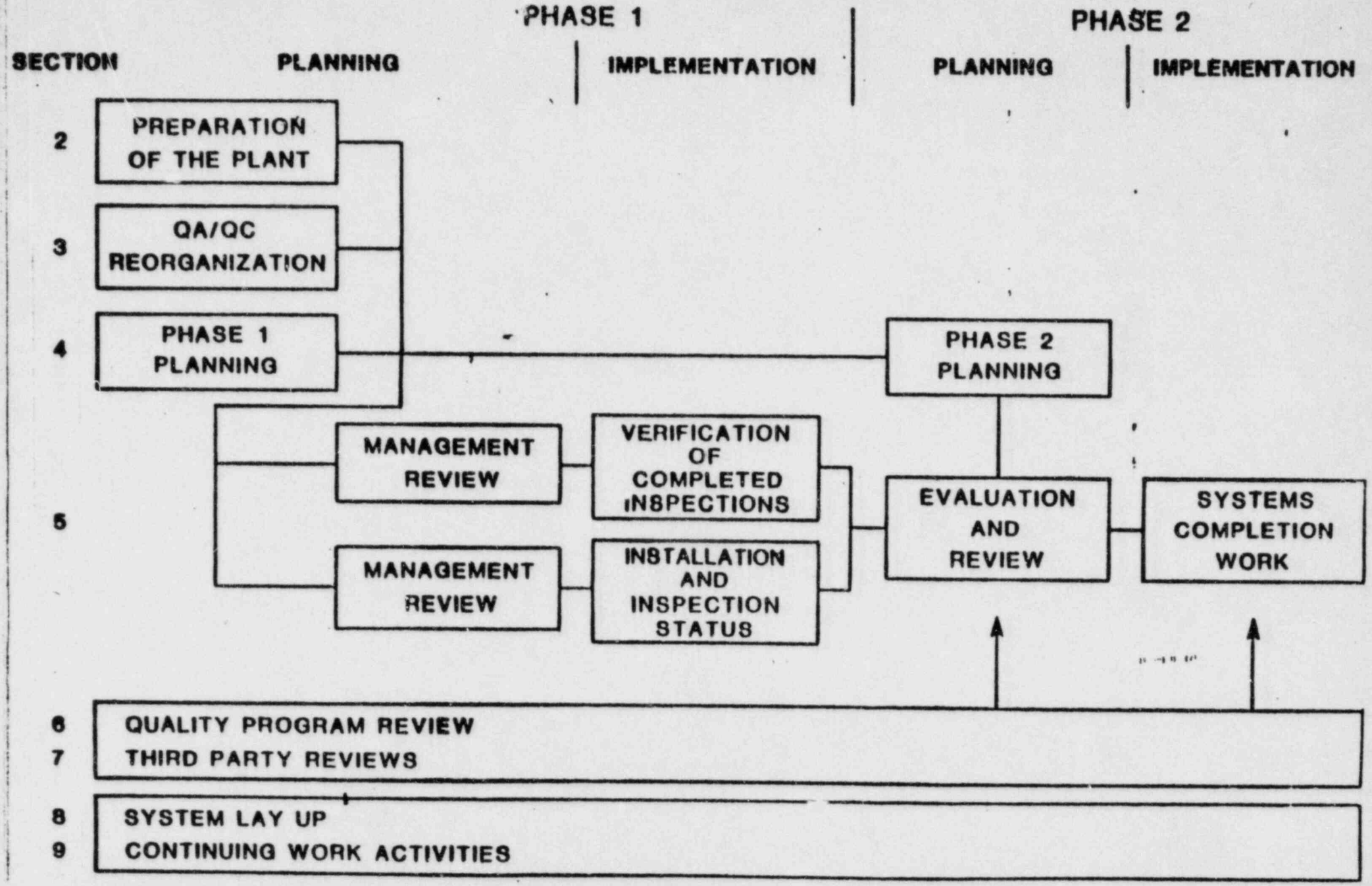
Work on Q-Systems has been limited to specific activities. This limitation permits important work to proceed while allowing building preparation for status assessment and verification activities.

SUMMARY

Each section of this Plan presents detailed objectives, a description of the activity involved, and a schedule for achieving major milestones. The Program, however, is still in an evolutionary state and revisions to the Plan may be necessary as Consumers Power Company gains experience in the implementation of Program elements.

FIGURE 1-1

CONSTRUCTION COMPLETION PROGRAM SCHEMATIC



2.0 PREPARATION OF THE PLANT

2.1 Introduction

The preparation of the Plant will clear the auxiliary, diesel generator and containment buildings and the service water pump structure of materials, construction tools and equipment and temporary construction facilities.

2.2 Objective

To allow improved access to systems and areas for the Program activities.

2.3 Description

The preparation activities minimize obstacles and interferences for the Program activities. This is being accomplished through the following steps.

1. Limitation of Q-work to activities and areas defined in Section 9 resulting in substantial work force reduction.

2. Removal and storage of construction tools and equipment, and temporary construction facilities (scaffolding, etc) from the buildings identified in Section 2.1.

3. Removal, control and storage of uninstalled materials from the buildings identified in Section 2.1.

4. Appropriate housekeeping of all areas following material and equipment removal.

The preparation for each area will be complete before initiating further Program activity. The on-going work described in Section 9 will continue as scheduled during the preparation.

2.4 Schedule Status

The preparation of the Plant began on December 2, 1982. It will be complete by January 31, 1983.

- Keppler & Downes 6 - Testimony in Aug before Congress

3.0 QA/QC ORGANIZATION CHANGES

3.1 Introduction

The Consumer Power Company's Midland Project Quality Assurance Department (MPQAD) is being expanded to assume direct control of Bechtel QC activities. The new organization and the plan for the transition are described below. The transferred QC Inspectors will be recertified as part of this transition.

3.2 Objectives

Establish New QA/QC Organization

Establish an integrated organization which includes the transition of Bechtel QC to MPQAD while accomplishing the following objectives:

1. Establish direct Consumers Power Company control over the QC inspection process.

2. Establish the responsibilities and roles of the QA and QC Departments in the integrated organization.

3. Use qualified personnel from existing QA and QC departments and contractors to staff key positions throughout the integrated organization.

Recertify QC Inspectors

Ensure that those Quality Control inspection personnel transferring to MPQAD from Bechtel will be trained and recertified in accordance with MPQAD Procedure B-3M-1.

3.3 Description

Drawing revisions traceability

Establish New QA/QC Organization

A new organization will be implemented under Consumers Power Company and will be described in appropriate Topical Reports (CPC-1A and BQ-TOP-1) and quality program manuals (Volume II, BQAM and NQAM). Changes to these documents will be submitted to NRC.

Features of the new organization include:

1. Lead QC Supervisors report directly to a QC Superintendent who reports to the MPQAD Executive Manager. Any required support from Bechtel Corporate QC and QA functions (except ASME N-Stamp activities) is provided at the level of the MPQAD Executive Manager.

2. The MPQAD Executive Manager will review the performance of lead personnel in his department.

3. QA will develop and issue Quality Control inspection plans and be responsible for the technical content and requirements of such plans. QC will be responsible to implement these plans.

4. QA will continue to monitor the Quality Control inspection process to insure that program requirements are satisfactorily implemented.

5. MPQAD will continue to use Bechtel's Quality Control Notices Manual (QCNM) and Quality Assurance Manual (BQAM) as approved for use on the Midland Project.

6. ASME requirements imposed upon a contractor as N-Stamp holder will remain with that contractor. MPQAD QA will monitor the implementation of ASME requirements.

An organization chart (Fig 3-1) showing reporting relationships in the new organization is attached.

Recertify QC Inspectors

The training and recertification process for QC inspectors has been revised to include commitments made during the September 29, 1982 public meeting with the NRC. Those inspectors transferred from Bechtel to MPQAD will be trained and examined in accordance with MPQAD Procedure B-3M-1. Upon satisfactory completion of the training and examination requirements, inspection personnel will be certified for the Project Quality Control Instruction(s) (PQCI(s)) they are to implement. Inspection personnel will be certified on a schedule which supports ongoing work and system completion team activities.

3.4 Schedule Status

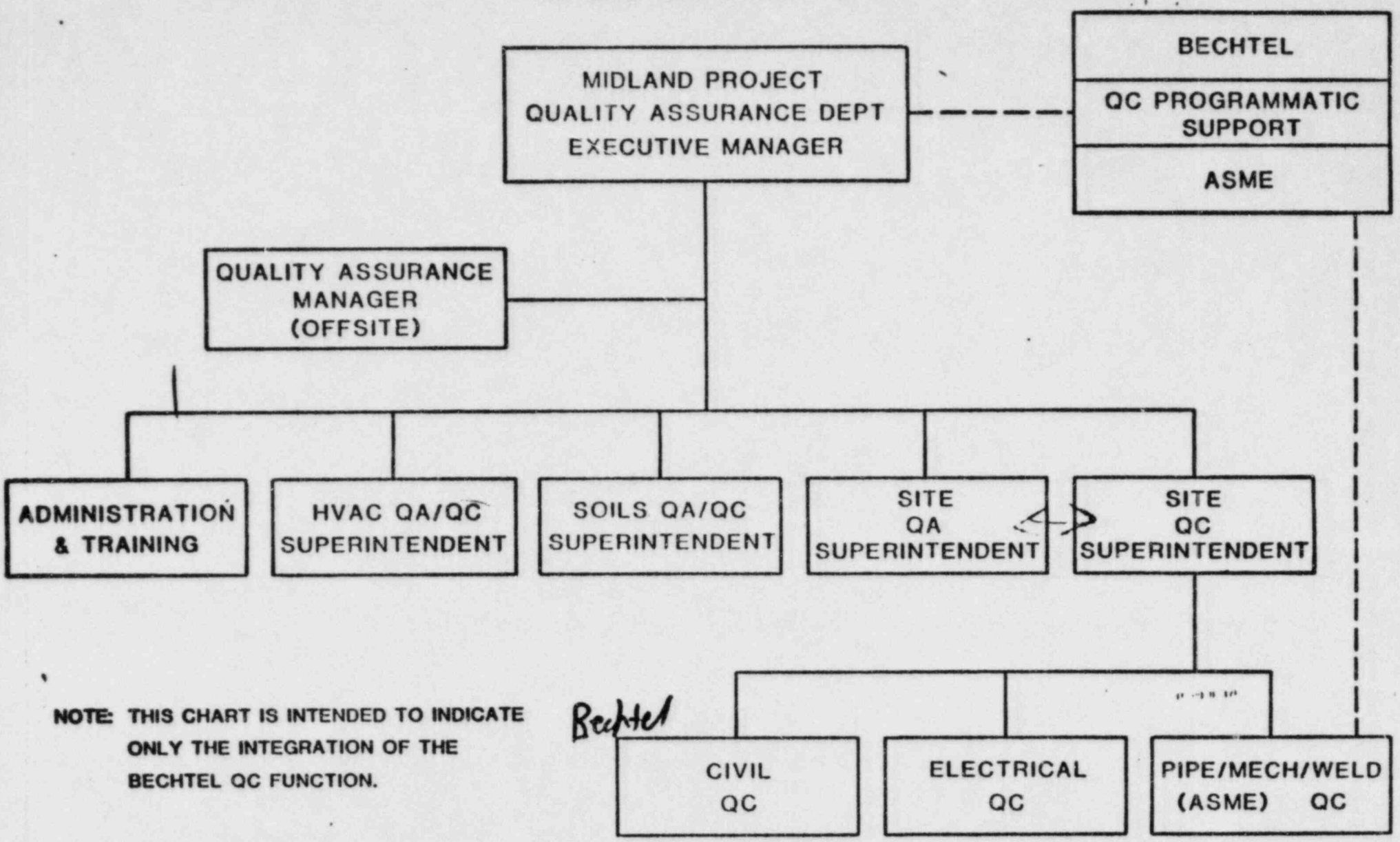
Establish New Organization

Advise NRC of the structure of the integrated organization.	12/15/82
Transfer the Bechtel QC Organization to MPQAD.	1/17/83
Submit changes to Topical Reports and quality program manuals to NRC.	2/17/83

Recertify QC Inspectors

Specify the revised training and examination requirements for certification (B-3M-1).	10/25/82
Complete recertification	4/01/83

FIGURE 3-1
MPQAD ORGANIZATION



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

4.0 PROGRAM PLANNING

4.1 Introduction

The detailed planning for the major portion of the Construction Completion Program is described in this section.

Planning in support of Phase 1 consists of the activities to set up a team organization to assess the installation and inspection status of Q-systems within major structures (Section 4.2) and to verify the adequacy of completed inspection effort (Section 4.3).

The Phase 2 planning effort covers the process and procedures that will be used by the team organization for systems completion work (Section 4.4). The procedures to integrate the quality program requirements with continuing systems completion work will be developed (Section 4.5).

4.2 Team Organization (Phase 1)

4.2.1 Introduction

Organize and train teams and prepare procedures for an installation and inspection status assessment.

4.2.2 Objective

1. Establish and implement a team organization ready to inspect and assess systems for installation and inspection status.

2. Develop the organizational processes and procedures necessary to implement the team approach for status assessment.

3. Provide training to ensure required inspection and installation status assessment activities are satisfactorily performed.

4.2.3 Description

1. The team organization structure will vary depending upon the assigned scope of work. The organization will consist of a team supervisor and personnel as appropriate from field engineering, planning, craft supervision, project engineering, MPQAD and Consumers Power Company Site Management Office. The team may be augmented by procurement personnel, subcontract coordinators and turnover coordinators.

   Teams will be assigned a specific scope of work and held accountable for status assessment and overall completion within this scope. The scope includes the requirements

to develop a viable working schedule and insure early identification and resolution of problem areas. Project processes and procedures will be reviewed and modified to incorporate the team organization. The team MPQAD representative is responsible for providing the QA/QC support for the team. He receives scheduling direction from the Team Supervisor and technical direction from MPQAD. For his team's work, he analyzes the quality requirements and plans the QC activities to integrate them with the team effort. He assures the necessary PQCI's and certified inspection personnel are available for performing the inspections. He maintains cognizance of the quality status of the verification activities.

The Washington Nuclear Plant #2 (WNP-2) team organization will be used as a starting point for a Midland specific approach.

A pilot team or teams will be utilized to develop and test processes and procedures during the development stage to assure that Program objectives can be met. This will also provide practical field input to assure that efficient and workable methods are used.

Team members will be physically located together to the extent practicable to improve communication, status assessment, problem identification and problem resolution.

2. Training for inspection and installation status assessment will be provided to team members. It will include responsibilities, reporting functions, indoctrination of project processes and procedures and familiarization with the project quality program to ensure effective implementation.

3. A separate organization of design engineers (presently existing) will coordinate spatial interaction, review and examination with the activities of these teams.

B.G.

4.2.4 Schedule Status

. Designate pilot team.	1/21/83
. Complete grouping of systems for assignment to teams.	2/28/83
. Complete assignment of team supervisors and members to designated systems.	3/31/83

4.3 Quality Verification (Phase 1)

4.3.1 Introduction

The verification program is the activity undertaken to determine, using a variety of methods, that the inspections performed on completed work were done correctly.

4.3.2 Objectives

The objectives of the verification program are to:

- Review existing PQCI's and revise as necessary to assure that:
  - a. Attributes important to the safety and reliability of specific components, systems, and structures are identified for verification.
  - b. Accept/reject criteria are clearly identified.
  - c. Appropriate controls, methods, inspection and/or testing equipment are specified.
  - d. Requisite skill levels are required per ANSI N45.2.6 or SNT-TC-1A.
- Develop and implement verification inspection plan for completed work which considers:
  - a. Re-inspection of accessible items.
  - b. Review of documentation for attributes determined to be inaccessible for re-inspection.
  - c. Sampling techniques using national standards.

4.3.3 Description

PQCI's will be revised as necessary to meet the objectives in Section 4.3.2. Verification of the quality of accessible completed contruction, which has been previously inspected will be performed by use of sampling plans based on MIL-S-105D (1963) or other acceptable methods. Attributes determined to be inaccessible for direct re-inspection due to embedment or the status of completed construction or installation (eg, weld preparation of completed welds, reinforcement in placed concrete, installed anchor bolts, etc) will be verified as appropriate, by examination of records.

4.3.4 Schedule Status

- Complete review and revision of PQCI's. (Date to be determined.)
- Establish verification inspection plan for completed work. (Date to be determined.)

4.4 System Completion Planning (Phase 2)

4.4.1 Introduction

Establish the processes for system completion, prepare procedures and expand training to cover systems completion work.

4.4.2 Objective

The objectives of the systems completion planning are as follows:

- Establish processes and interfaces for system completion.
- Prepare procedures defining tasks of each system completion team.
- Train team members by expanding upon training received previously for inspection and status assessment.
- Establish scheduling methods to be used during system completion activities.

4.4.3 Description

The team organization (developed in Section 4.2) and the processes and procedures will be extended to accomplish the systems completion work.

Hold pt.

- Training will be conducted to assure that supervisors understand the team objectives and their role. Emphasis will be placed on completion of all work in accordance with the design requirements, the change control process used when the design must be modified, and changes to the established team processes and procedures.

4.4.4 Schedule Status

- Complete team preparation for systems completion work. (Date to be determined.)

4.5 QA/QC Systems Completion Planning (Phase 2)

4.5.1 Introduction

The QA/QC systems completion activity covers the planning to support of system completion work.

4.5.2 Objectives

Establish in-process inspection program and complete review and modification of PQCIs.

4.5.3 Description

The QC in-process inspection program will be directly coordinated with future installation schedules to insure that inspection points, identified by MPQAD QA in the PQCI's, are integrated with the installation schedule. The identification of applicable PQCI's and required inspection points will be used by system completion teams to insure that QC inspections are adequately scheduled into the process. The system completion team quality representative will be responsible for providing the link between the system completion team and MPQAD to insure that quality requirements are satisfied.

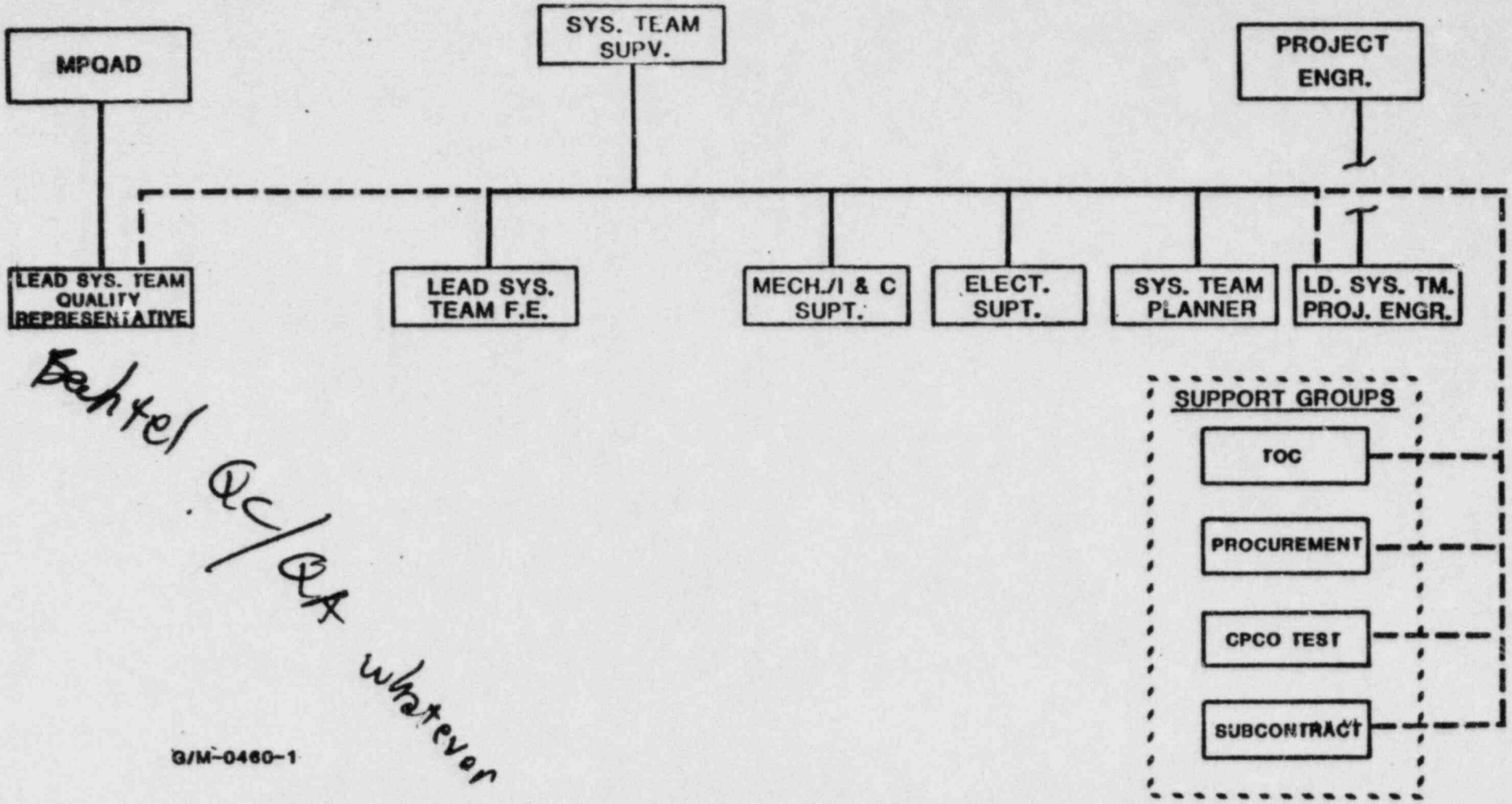
PQCI's will be reviewed, and modified as necessary, to insure that proper attributes are being inspected, that inspection plans are clear and concise, that inspection points are specifically scheduled with installation activities and that inspection results are properly documented. MPQAD QA will be responsible for the PQCI review activity and will obtain assistance, as required, from other project functions, such as Project Engineering and Quality Control. Revised PQCI's will be used to conduct inspection of future installation activities.

4.5.4 Schedule Status

Issue procedure for integrating inspection points into the construction schedule. 2/22/83

FIGURE 4-1

CONCEPTUAL TEAM ORGANIZATION



Bechtel QC/QA whatever

G/M-0460-1

5.0 PROGRAM IMPLEMENTATION

5.1 Introduction

The implementation of the Phase 1 Construction Completion Program activities will be initiated after a management review of the overall process insures that Project performance and quality objectives have been addressed. The Phase 1 work will then be carried out by the various teams in accordance with the procedures described in the preceding sections. The installation and inspection status assessment of a system or partial system will be followed by a review of results by MPQAD and a second management review before initiating the Phase 2 systems completion work. The Phase 2 work will then be initiated on that system or partial system.

5.2 Objectives

The objectives to be met are:

- Establish the present installation completion and quality status.
- Integrate the construction and quality activities for all remaining work.
- Improve performance in demonstrated conformance to quality goals in all system completion work.

5.3 Description

Management Reviews

Project management will conduct formal review of the plans for implementation activities prior to initiation of team activities for the Phase 1 work. These reviews will ensure that identified project management and quality issues have been adequately addressed by specific actions and that Program objectives are met. The reviews will cover the process for both 1) the verification of completed inspection activity and 2) the installation and inspection status activity.

The installation and inspection status assessment will be performed on a system and/or area basis. Phase 2 is initiated after a formal Project management review of the first status assessment results to evaluate implementation effectiveness. After completion of this review, a work segment will be released for systems completion. Subsequent status assessment results will be reviewed by site management prior to initiation of additional systems completion segments. Reports will be made to Project management at regularly scheduled meetings.

Phase 1 Implementation

The existing installation and inspection status will be established in accordance with the plan presented in Section 4.

Evaluate Phase 1 Results

MPQAD will review the status assessment results to determine if any programmatic or implementation changes must be made. Verification scope will be adjusted, as necessary, based on evaluation results. Also, the evaluation will check for reportability to the NRC (as required by 10 CFR 50.55(e)) and Part 21.

Phase 2 Implementation

This activity starts systems completion for turnover. Work will be scheduled as installation and inspection status assessments are completed and reviewed. Correction of identified problems will be given priority over initiation of new work, as appropriate, and the system completion teams will schedule their work based on these priorities.

NRC Decides

5.4 Schedule Status

- Complete Management review and initiate implementation of plan for verification of completed inspections. (Date to be determined.)

- Complete Management review and initiate implementation of plan for status assessment. (Date to be determined.)

- Complete Management review of initial installation and inspection status results and initiate systems completion work. (Date to be determined.)

6.0 QUALITY PROGRAM REVIEW

6.1 Introduction

The adequacy and completeness of the quality program is reviewed as part of the ongoing Project management attention to quality. These reviews consider any questions raised by NRC inspections or findings raised by third party evaluations.

6.2 Objective

Address issues raised by internal audits, NRC inspections and third party assessments. Program changes, if needed, will be evaluated and, as findings are processed, will be factored into the Project work.

6.3 Description

Consumers Power Company believes Midland QA program is sound. From time to time, questions arise on detailed aspects of the program or program implementation. The normal process of addressing these issues ensures that all necessary information is provided to NRC and that internal confidence in the program is maintained.

The recent inspection of the diesel generator building has raised several issues of programmatic concern. These are in the areas of material traceability, design control process, Q-system related requirements, document control and receipt inspection. Project management has directed that MPQAD provide an expeditious evaluation of these issues to be considered as part of the management review prior to initiation of Phase 2. Once the NRC inspection report is received and specified items are identified, these items will be addressed and resolved through the normal process of closing the inspection findings. Any corrective action or program changes will be implemented as appropriate in Project work on a schedule provided in the inspection report response.

The Project will also receive, from time to time, findings from third party assessments (Section 7). These findings or recommendations may also result in program modification or adjustments. Corrective action taken by the Project will be implemented on a schedule stated in the response to these findings.

7.0 THIRD PARTY REVIEWS

7.1 Introduction

This section describes third party evaluations and reviews that have been performed and are planned to assess the effectiveness of design and construction activity implementation. Third party reviews being conducted as part of the Remedial Soils Program are not included in this activity.

7.2 Objectives

To assist in improving Project implementation and assessment of Midland design and construction adequacy, consultants will be utilized in order to:

- Achieve a broad snapshot of current Project practices and performance in relation to a national program.
- Provide continuous monitoring and feedback to Management of Project performance.
- Identify any activities or organizational elements needing improvement.
- Improve confidence (including the NRC's and the public's) in overall Project adequacy.

7.3 Description

The use of consultants to overview Project design and construction activities with particular emphasis on construction is part of the effort to improve the Project's implementation of the quality program. Specifically, the plan overview employs the use of consultants for three separate functions: (1) To carry out a self-initiated evaluation (SIE) of the entire Project under the INPO Phase I program, (2) to utilize a third party overview of ongoing site construction activities to provide monitoring of the degree of implementation success achieved under the new program and (3) to conduct a third party Independent Design Verification (IDV) Program.

1. The INPO self-initiated evaluation was planned as part of an industry commitment to the NRC in response to concerns over nuclear plant construction quality assurance. For the Midland SIE, the evaluation was contracted to be carried out entirely by third party, experienced personnel from the Management Analysis Company.

   The evaluation was performed by a team of 17 consultants familiar with the INPO criteria and evaluation methodology. Over a period of a month they interviewed Project personnel at various locations and observed work in progress. The initial results of their evaluation have been presented to the Company

and a Project response to each finding will be prepared and included as part of the evaluation report to be submitted first to INPO and then to the NRC Region III Administrator, together with the INPO overview.

2. A third-party installation implementation overview is being undertaken using, as a model, the program developed specifically for the underpinning portion of the soils remedial work. The overview will be initiated by retaining an independent firm, having considerable experience and depth of personnel in the nuclear construction field. The consultant's overview team will be located at the Midland Plant site and will observe the work activities being conducted in accordance with this Plan on safety-related systems. The overview will continue for a period of six months, after which the Project's cumulative performance will be evaluated. Based on the overview team's findings, a determination will be made by the Company's top management on what modification, if any, should be made to the consultant's scope of work. Findings identified by the installation overview team will be made available to the NRC in accordance with the procedures established for the conduct of independent verification programs.

3. An Independent Design Verification (IDV) is being conducted by Tera Corporation.

   The IDV is directed at verifying the quality of design and construction for the Midland Plant. The approach selected is a review and evaluation of a detailed "vertical slice" of the Project design and construction. The design and as-built configuration of two selected safety systems will be reviewed to assure their adequacy to function in accordance with their safety design bases and to assure applicable licensing commitments have been properly implemented. The field work done in support of this activity will not take place until after Phase I implementation (Section 5) has been completed on the systems being reviewed.

   The Unit 2 Auxiliary Feedwater System (AFW) plus another system to be selected with NRC concurrence, will be reviewed to fulfill the requirements of the IDV.

7.4 Status/Schedule

1. INPO Construction Project Evaluation	
Select consultant and conduct evaluation	Complete
Submit report to INPO	Jan 20, 1983
2. Independent Construction Overview	
Define scope	Dec 30, 1982
Select consultant	Jan 31, 1983
Mobilize assessment team	(Date to be determined)
Receive assessment team report	(Date to be determined)
3. IDV	
Select 2 Systems	
.AFW System	Complete
.Obtain NRC concurrence for second system.	(Date to de determined)
Complete Evaluation	(Date to be determined)

8.0 SYSTEM LAYUP

8.1 Introduction

Perform system lay-up activities to protect plant equipment.

8.2 Objectives

Expand the protection of completed and partially completed plant systems and components until plant start-up, to take into account any special considerations during the status assessment.

8.3 Description

Procedures and instructions are provided in the Testing Program Manual to protect equipment during the on-going installation and test work. These will be extended to cover special considerations associated with the Program implementation. Both the pre- and post-turnover periods are covered. System and component integrity is ensured through existing programs and implementation of control and verification procedures.

In summary, these procedures and instructions require: Test Engineers to complete walkdowns of Q-Systems (in the auxiliary, diesel generator and containment buildings and the service water pump structure), paying particular attention to systems/components that are open to the atmosphere (eg open ended pipes, open tanks, missing spools, disconnected instrument lines, etc). Systems that have been hydrotested but are not currently in controlled layup require action to place the system in layup. Layup will vary from system to system but in general will consist of air blowing to remove moisture and closing the system from the atmosphere.

8.4 Schedule/Status

. Start extended layup activities	1/15/83
. Issue walk down schedules	1/15/83
. Complete the layup preparation walkdown	2/28/83

esign engineering which will continue for the Midland Plant as
ill engineering support of other project activites.

itional activities related to the systems completion effort, may
initiated, as appropriate, to support orderly completion of the
erall Project. Any activities in this category that are initiated
ior to release of an area for systems completion work will be
eviewed with the NRC Resident Inspector before initiation.

Status Schedule

These activities are proceeding with schedules that are independent
of this Plan.

MIDLAND - CHRONOLOGY OF EVENTS SINCE JULY 1981 HEARINGS

07/07/81	Soil Hearing commenced
10/05/81	CPCo met with NRC to discuss organizational improvements
10/14/81	Hearing reconvened to deal with Geo-Technical Issues
01/12/82	CPCo met with NRC to discuss changes to the Midland QA organization
02/02/82	Testified at Midland soils hearing re: recent QA reorganization
03/30/82	CPCo/NRC Meeting (Norelius; Adensam)
04/13/82	NRC Public Meeting in Midland on Underpinning activities
04/26/82	Midland SALP-2 Meeting
04/28/82	Stop Work Order issued by CPCo against Mergentine (dug into 4160 volt power supply)
05/14/82	CPCo/NRC Meeting to discuss overview of electrical inspections
05/20/82	ACRS Subcommittee briefed re: Midland QA for construction
05/26/82	Construction Permit Amendment 3 issued
06/03/82	Full ACRS briefed re: Midland QA for construction
06/08/82	ACRS Report requested a Broader Assessment of design adequacy and construction quality
06/21/82	Spessard/Norelius recommendations provided
06/21/82	SALP-2 Meeting to discuss CPCo Response in Jackson, MI, Public Meeting
06/22/82	Meeting to Review Response to SALP Report
06/28/82	GAP News Conference requesting NRC halt construction
07/82	Office of Special Cases formed in Region III, includes Midland Section
07/07/82	ASLB issues memo/Order on reopening record on QA matters
07/09/82	NRC Requested IDV by CPCo
07/23/82	Cook memo issued containing Midland problems
07/26/82	RIII meeting with NRR to discuss Midland QA problems (meeting minutes written 8/18/82, Warnick memo)
08/05/82	Public Meeting to discuss SALP-2 differences with CPCo
08/05/82	Salp-2 Meeting to further discuss CPCo response, in Jackson, MI, Public Meeting

08/09/82	Soils Stop Work Order issued by CPCo, potential violation of Board Order
08/10/82	Enforcement Conference re: unapproved excavations (alleged violation of Board Order)
08/10/82	CPCo stopped soils work at our request pending resolution of authority to dig holes
08/12/82	Issued Work Authorization Procedure for Soils (NRC/CPCo)
08/26/82	NRC management meeting with CPCo management re: QA problems
09/02/82	NRC followup meeting with CPCo management re: Quality Improvement Plan (JGK/Selby)
09/03/82	Briefing of Jack Roe and J. Austin of Commissioner's Staff at Midland
09/09/82	MPQAD Reorganization - Bechtel QC into CPCo QA Organization
09/09/82	Meeting with NRR to review Midland soils issue
09/10/82	Region III initial approval of MPQP 1 and 2
09/15/82	NRC Meeting with CPCo attorneys re: GAP allegations
09/17/82	CPCo notified NRC of integrated QA/QC
09/17/82	CPCo proposed Stone and Webster for soils third party overview
09/17/82	CPCo proposes IDV and other corrective actions
09/20/82	S&W began overview work on soils at the Midland site
09/22/82	Meeting with Mooney, Schaub, and Ronk on Midland QA commitments. They will give us a list. Also talked about taking QC from Bechtel and putting it under MPQAD - Problem with N stamp.
09/24/82	Soils Stop Work Order issued by CPCo following NRC inspection (CAL issued). QC training, requalification soils area
09/28/82	RIII initial meeting on site with S&W, proposed third party for soils activities
09/29/82	Public management meeting with CPCo re: QA/QC organization, CAL third party review
10/82	Safety Evaluation Report Supplement 2, issued approving soils design
10/01/82	JGK and ABD gave approval for Midland team inspection

10/05/82 CPCo proposes TERA for IDV at meeting with NRR, RIII, GAP and proposed auxiliary feedwater system be included

10/07/82 Meeting in RIII with ELD to discuss testimony for next round of hearings

10/12/82 Diesel generator building inspection commenced

10/13/82 Detroit Free Press had series on Midland. Kent and anonymous electrician were quoted.

10/15/82, 10/22/82, 10/26/82, 10/28/82 DGB Inspection mini-exits with CPCo

10/25/82 Revised Testimony issued by NRC

10/25/82 Meeting with NRR to discuss Midland third party, IDVP proposal

10/26 - 11/05/82 ASLB Hearings in Session

10/29/82 Meeting with Bechtel to discuss performance/problems

11/05/82 Meeting with NRR to discuss Stone and Webster (S&W) Qualification for soils third party overview; NRR, RIII, CPCo, S&W, Persons, IE, GAP

11/07/82 TERA began auxiliary feedwater system review for IDVP at CPCo risk

11/10/82 DGB inspection team exit with CPCo site personnel (10-12 concerns with multiple examples and problems)

11/22/82 DGB inspection findings discussed with JGK by RFW

11/23/82 DGB inspection exit with CPCo management

11/30/82 CPCo notified Region III verbally of proposed Stop-Work

11/30/82 CPCo stopped all HVAC welding; problems with Photon testing, qualification of welding procedures

12/01/82 CPCo announces Zack problem may lead to a large lay-off

12/02/82 Meeting RFW and Shafer and team with CPCo and Bechtel to discuss CUP. RIII informed. Also HQ and Commission's assistants

12/03/82 CPCo stopped majority of safety related work at site. Issued PN and news release. Briefed JGK, ABD, SL

12/03/82 CPCo proposes to increase TERA scope to include three additional systems; Emergency Power (DG System), Safeguards Chill Water, and Containment Insulation Systems

12/07/82 NRC meeting to brief NRR/IE management on DGB inspection problems and QA/QC history and problems, CCP and the licensee "Get Well Program"

12/09/82 NRC approved CPCo to begin work on Piers 12E and 12W under turbine building

12/13/82 RIII meeting with ELD to discuss plans for supplemental testimony

12/30/82 NRC letter issued confirming Stop Work on Safety Related areas with certain exceptions

01/10/83 CPCo submitted proposed CCP with third party overview included in the proposal

01/18/83 Enforcement Conference with CPCo management re: diesel generator building inspection

01/21/83 Final exit on diesel generator building inspection, concluding continued misuse of IPIN's and improper use of Attachment 10 firms

02/02/83 NRC/CPCo meeting to discuss CCP (collect info)

02/08/83 Proposed Civil Penalty issued; $120,000

02/08/83 Public Meeting re: CCP and IDCVP

02/08/83 Meeting with CPCo and Bechtel management to discuss desire to turn things around

02/09/83 TERA's Engineering Program Plan submitted; auxiliary feedwater only

02/14 - 18/83 } ASLB Hearings in session

02/14/83 Stone and Webster supplies assessment of piers 12 East/West

02/15/83 CPCo sumits S&W independent qualification statements for soils

02/24/83 CPCo expands S&W contract to include QA overview/review work packages, QC inspector requalification, all soils training, and on an assessment of all underpinning work

02/24/83 NRC approves Stone & Webster for soil third party overview

03/07/83 NRC Meeting with NRR/GAP to discuss the CCP

03/08/83 Meeting in RIII with ELD to discuss supplemental hearing testimony

03/10/83 CPCo responded to Notice of Violation and proposed Civil Penalties

03/15/83 Meeting with CPCo to obtain INPO Self Imposed Evaluation results

03/22/83 NRC selects additional systems systems for the IDCVP; Emergency Electric Power System, and Control Room HVAC

03/28/83 RIII letter issued requesting additional details re: CCP; included in this request was a proposed third party candidate and the protocol to be utilized for the IDCVP

04/04/83 Harrison replaced Shafer

04/06/83 CPCo proposes Stone and Webster to perform third party overview for the CCP ; S&W's program is titled Construction Implementation Overview (CIO)

04/13/83 Meeting in Headquarters to discuss TERA proposal on IDCVP; IE, RIII, NRR, and GAP participated

04/15/83 Stone and Webster issued a 90 Day Report on Assessment of Remedial Soils Underpinning Activities

04/19 - 21/83 Caseload Forecast Panel at Midland; Public Meeting 4/19 and 4/21/83

04/21/83 Stone and Webster CIO personnel onsite

04/22/83 CPCo response to NRC letter of 3/28/83, re: CCP Additional Information

04/27 - 05/06/83 ASLB Hearing in session - NRC testifies

05/03/83 NRC approval of TERA for IDCVP for Auxiliary Feedwater only

05/17/83 Meeting with CPCo to discuss CCP/CIO; response 4/22/83 to NRC 3/28/83 letter re: Additional Information

05/18/83 TERA submitted modification to the Engineering Program Plan (EPP) to include the two additional system;s Emergency Power and Control Room HVAC

Bechtel Power Corporation

Post Office Box 2167
Midland, Michigan 48640

December 16, 1980

Consumers Power Company
P. O. Box 1963
Midland, MI 48640

Attention: D. B. Miller
Site Manager

Job 7220 Midland Project
Agency Response
BCCC-5243

Dear Mr. Miller:

For your information and to expedite integral responses, the attached matrix identifies individuals who are to respond to questions posed by CPCo, the NRC, or other outside agencies during their routine visits, inspections, and audits at the jobsite.

The purpose of this authorization is to minimize the opportunity for inadequate or incorrect responses to specific questions. The identification of individuals will also allow for more rapid, factual responses.

The Bechtel individuals not identified on the attached matrix should contact their supervisor when questioned by CPCo, the NRC, or other outside/non-project agencies.

Very truly yours,

L. E. Davis
Site Manager

LED/ch

Attachment - Agency Response Matrix

RESPONSIBLES

ACTIVITY	FIELD ENGINEER	QC	TURNOVER	SERVICES	QA	ENGINEERING	ENGINEERING	Labor Relations
All	J. Gilmartin J. Betts Schwaltsch	E. Smith Russell Newman Kirker	Choy-Hee Rynning	E.J. Reinsch*	M. Dietrich A. McClure	Corcoran T. Supplee	Rothwell	
Civil	Goguen Wehner		N/A	N/A	Sevo	J. Hoekwater J. Darby	Dhar	
Post-Tensioning	Betts Goguen	S. Gelnett P. Vanderveer	N/A	N/A	Sevo	J. Hoekwater A. Dausman	S. Lo	
Mech/Lge. Pipe	Dunbar Hendricks	Creel Fugate	N/A	N/A	M. Dietrich A. McClure	F. Krauss	D. Anderson Tulloch	
Sm. Pipe & Hangers	G. Smith B. McKenzie	Creel Fugate	N/A	N/A	M. Dietrich A. McClure	M. Rothwell F. Young	Tulloch	
Electrical	Matthews Collin	Lobravich	N/A	N/A	Hollar Yee	G. Warner C. Szabelski	Kononetz J. Kavach G. Little	
Instrumentation	W. Smith B. McKenzie	Creel Fugate	N/A	N/A	McClure	J. Mayer J. Clinton	J. Anderson	
Welding	M. Boone G. Savala	Daly Harrison	N/A	N/A	M. Dietrich A. McClure	N/A	D. Anderson	
Turnover	TBD	Russell	Choy-Hee Rynning	N/A	M. Dietrich	N/A	Hughes	
Documentation/ Document Control	N/A	Foote Reigelsperger	Choy-Hee	Mellstrup J. Davis	McClure	N/A	M. Bakarich	
Subcontracts	N/A	Siple Russell	Choy-Hee	Littlewhite C. Cross	M. Dietrich	N/A	Hughes	
Field Procurement/ Receiving Inspection	N/A	Delaney	Choy-Hee	Stubbs Reigelsperger	A. McClure	N/A	Hughes	
EEO Audits by SFHD Bechtel personnel, State or Federal offices	N/A	N/A	N/A					Weatherred Dart
NLRB Investigations	N/A	N/A	N/A					Weatherred
Legal matters con- cerning manual personnel	N/A	N/A	N/A					Weatherred
Dept. of Labor Inquiries	N/A	N/A	N/A					Weatherred

*Also responsible for Safety, Finance & Accounting.

NAC 1982 Biennial QA Audit

Page		
9	6.3.2	Management corrective action
	6.3.2	Timeliness of response

NRC AMS-83-9	1F	Uncontrolled-outdated documents
AMS-83-9	3F	1/ using sample technique when 100% required - non compliance. If no inspection - noncompliance
	4F	Timely Corrective action.
	5F	Non compliance - Items not Source inspected
	6F	Not 1
	7F	Non Compliance - weakness identified by NRC
Observation 4		Segregation of material - non compliance
Observation 6		IPIM's

RAW

MAR 2 8 1983

To Distribution

From DJones, JSC-206B

Date March 23, 1983

Subject 1982 BIENNIAL QUALITY ASSURANCE AUDIT
MIDLAND PROJECT

Consumers Power Company

INTERNAL CORRESPONDENCE

DJ-58-83

cc GMouradian/File: AMS-83-9

Attached for your information is the report of the 1982 Biennial Quality Assurance Audit of the Midland Project recently completed by Management Analysis Company.

As discussed at the exit meeting, each Audit Finding Report, Unresolved Item and Observation will be issued to the organization responsible for action.

Should you have any questions, please do not hesitate to contact me.

DJ/11b