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Docket Nos.: 50-329/330

MEMORANDUM FOR: J. P. Knight, Assistant Director for Engineering, Division of Systems Safety

FROM: L. S. Rubenstein, Acting Chief, Light Water Reactors Branch No. 4, Division of Project Management

SUBJECT: REQUEST FOR ENGINEERING PRIORITY FOR MIDLAND SOILS SETTLEMENT POSITIONS

Your assistance is requested to ensure that staff positions from appropriate engineering branches (Geotechnical, Structural, and Mechanical) are documented in a timely manner relative to the soils settlement matter for Midland 1 and 2.

During an internal staff management meeting on August 16, 1979, you noted that your staff had some questions concerning portions of the applicant's corrective measures, citing in particular analytical details, load combination and more thorough monitoring programs. It was my understanding that staff documentation for these concerns would be available about the end of August 1979. I recognize that staff effort in Engineering since the internal meeting has been directed to obtaining outside assistance for completion of the review, and to resolving the outstanding reviews of higher priority plants. However, I believe that you should also consider the following in assigning your work.

1. The applicant's schedule for corrective actions (see section 6 of applicant's letter of August 10, 1979) indicates the start of significant activities are now underway or soon to start. Such activities without staff feedback are entirely at the applicant's own risk. Nevertheless, timely staff feedback needed at this time can be most significant to the ultimate schedule and solution.

2. The Midland LPM, D. Hood, informs me that the information requests by the staff appear to have been formulated already and that the remaining effort is principally a documentation effort. Certainly, those requests known already which could bear on the outcome should be documented now and forwarded to the applicant. A subsequent request could follow later, if necessary.

OFFICE ▶	XA Copy Has Been Sent to PDR				
SURNAME ▶					
DATE ▶					

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3. The time period which has accrued for staff review since the applicant's response on April 24, 1979 to our 10 CFR §50.54(f) requests (and revisions of May 31, 1979; July 9, 1979) and meeting of August 10, 1979.

Please call me if you have any questions regarding this note.

Original signed by:

L. S. Rubenstein, Acting Chief
Light Water Reactors Branch No. 4
Division of Project Management

cc: F. Schroeder
D. Vassallo
S. Varga
F. Schauer
R. Bosnak
R. Jackson
L. Hulman

OFFICE	DPM:LWR-4	DPM:LWR-4	DPM:AD/LWR			
SURNAME	DHood/jl	LRubenstein	SVarga			
DATE	9/17/79	9/17/79	9/ /79			

7 b.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

OCT 16 1979

Docket Nos. 50-329
and 50-330

APPLICANT: Consumers Power Company

FACILITY: Midland Plant, Units 1 & 2

SUBJECT: SUMMARY OF SEPTEMBER 5, 1979 MEETING ON QUALITY ASSURANCE ASPECTS OF STAFF'S 10 CFR 50.54(f) REQUEST ON SOIL SETTLEMENT DEFICIENCY

On September 5, 1979 the NRC staff met in Bethesda, Maryland with Consumers Power Company (the applicant) and Bechtel to discuss quality assurance responses regarding the abnormal soils settlement at the site for Midland Plant, Units 1 & 2. Attendees are listed in Enclosure 1, which reflects a change in the position of Bechtel Project Manager. The meeting agenda was based upon supplemental staff request 23, for which a draft version (Enclosure 2 hereto) was used as a staff handout. The request asks for further detail regarding question 1 of the staff's March 21, 1979 letter, "10 CFR 50.54 Request Regarding Plant Fill."

The applicant summarized (1) its internal review conducted for the original FSAR preparation and early amendment efforts, and (2) the FSAR re-review program described in response to Question 1b of the March 21, 1979 letter. This presentation used the handouts of Enclosure 3. The FSAR re-review program will include all soils-related text and about 55% of Chapters 1 through 12. The applicant's criteria for selecting areas for re-review are listed on page 3 of Enclosure 3. Staff discussions of this presentation included the following suggestions:

1. Clarifying material should be added to the response (e.g., the terms "active" and "inactive" and the degree for which procedures and specifications related to these categories will be re-evaluated).

2. The use of terms such as "as necessary" in describing the re-review program is unacceptable. Specific criteria for such conditions are required for staff review.

3. The staff stressed the special significance of FSAR Chapter 15 in establishing the safety of the plant. The staff suggested that Chapter 15 be re-reviewed by both the re-review team and the Midland Nuclear Safety Task Force described in D. Howell's letter of July 26, 1979. The staff also considers participation by B&W to be significant in this regard.

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4. The response should identify the specific safety related and non-safety related FSAR subsections to be reviewed.

5. The staff questioned the adequacy of the applicant's PSAR commitment list. The applicant should re-review the list against the PSAR, ER, SER, FES, CP, hearing record and other documents issued prior to the FSAR for which commitments or requirements may have been indicated.

6. The applicant should evaluate earlier design review procedures considering factors such as depth of review, qualifications of reviewers and extent of documentation of results.

7. Identify and discuss the procedures to accomplish the re-review.

8. Specify how the group supervisor and review team are conducting the re-review relative to such factors as depth (e.g., what is the extent of verification by discipline?).

9. Clarify presentation charts.

10. The staff cited recent experience with operating plants comparing the installed condition of piping supports to final as-built drawings as an example for which special attention should be directed. The staff suggested the applicant discuss how the re-review relates to percent completion for plant construction and how the corrections resulting from re-review are implemented so as to reflect as-built conditions of the plant (i.e., how and to what extent does the re-review program assure that the FSAR reflects the as-built conditions of the plant?).

11. The staff felt that additional information regarding re-review by B&W is needed in the response.

12. The staff requested more detail regarding the instructions provided the reviewers during FSAR preparation. The staff questioned the depth of the peer review of the FSAR sections during preparation, and suggested that this be considered when determining the root causes of the deficiencies.

The applicant stated that FSAR review audits are scheduled for October 25, 1979 and February 1, 1980.

A Bechtel representative provided further detail of the 13 deficiencies identified in response to question 1a. The presentation used Enclosure 4 as a handout. Specific comments during this presentation follow:

OCT 16 1979

1. The lack of specificity in the SAR text should also be considered when determining the root causes of deficiencies.

2. The applicant should address whether past Resident Engineer Memos, letters, etc. were reviewed for the need to incorporate them as Specification Change Notices.

3. Only minimum clearance requirements were reflected on the civil drawings used to construct the electrical duct banks located under the Diesel Generator Building. The applicant's review of this approach for generic implications shows that other drawings may have failed to recognize the need for both an upper and lower tolerance on dimensions. The applicant will evaluate the effect on the seismic analysis of duct dimensions in excess of nominal dimensions.

4. The applicant will consider whether poor selection of compaction equipment was a root cause of the deficiency.

5. The applicant will review several recent Non-conformance Reports to evaluate whether inadequate technical direction was a contributing factor.

6. The applicant will consider whether lack of criteria for deploying technical engineers may have been a root cause for the deficiencies.

7. One root cause was given as inadequate inspection callouts for soils placement. The applicant will conduct a review to determine if specifications are sufficiently detailed in this regard.

Enclosure 5 tabulates the process corrective actions completed and on-going by the applicant and indicates whether these actions are limited to soils areas or have broader (generic) scope. The staff suggested that Enclosure 5 would be more meaningful if the start date and completion date of each activity were included.

The staff stated that the draft questions of Enclosure 2 would be finalized and issued within one week.

Darl S. Hood, Project Manager
Light Water Reactors Branch No. 4
Division of Project Management

Enclosures:
As stated

cc: See next page

Consumers Power Company

ccs:

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Vice President
Consumers Power Company
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Jackson, Michigan 49201

ENCLOSURE 1

Attendees

September 5, 1979

Consumers Power Company

J. J. Zabritski, Project Licensing Eng.
B. W. Marguglio, Director of QA
D. E. Horn, Group Supervisor (Civil)

Bechtel

J. A. Rutgers, Project Manager
L. A. Dreisbach, Project QAE
J. A. Clements, Licensing Engineer
G. L. Richardson, QA

NRC

D. S. Hood
L. S. Rubenstein
D. J. Skovholt
W. P. Haass
J. G. Spraul
J. W. Gilray
R. J. Cook
R. C. Knop
G. W. Reinmuth
R. E. Shewmaker
W. Belke

DRAFT Enclosure 2

SUPPLEMENTAL REQUEST FOR ADDITIONAL SOILS SETTLEMENT INFORMATION: PART I

23. We have reviewed your response to question 1 of our March 21, 1979 letter, "10 CFR 50.54 Request Regarding Plant Fill", including related amendments or supplements in your letters dated May 31, July 9 and August 10, 1979. We find that the information provided is not sufficient for completion of our review. Accordingly, provide the following additional information:

(1) Your response to question 1a does not provide sufficient information relative to the root causes of the 13 deficiencies. In order to determine the acceptability of the corrective actions for the 13 deficiencies considering the possibility that these deficiencies are of a generic nature that could affect other areas of the facility, a more complete understanding of the root cause of each deficiency is necessary. Accordingly, provide a clearer description of the root causes of each of the 13 deficiencies, including a detailed discussion of the conditions that existed to allow these deficiencies and the changes that have been made to preclude the recurrence of such deficiencies.

(2) Regarding your response to question 1b:

a. The first seven paragraphs do not provide sufficient information to assure that contradictions do not continue to exist in the PSAR, FSAR, design documents, implementing procedures, and as-built conditions since the controls described in these seven paragraphs were in effect prior to the I&E findings reported in J. Keppler's letter of March 15, 1979. Modify your response to clearly describe the control revisions you have instituted to preclude design contradictions.

b. Items 1, 2, and 3 of the eighth paragraph describe the review and update of the PSAR commitment list, the review of the inactive sections of the FSAR, and the review of procedure EDP 4.22, "Preparation and Control of Safety Analysis Reports," without describing the extent of the review process or the qualifications of personnel involved in the review. Accordingly, describe what each of these reviews entails, including the extent to which these reviews are verified, approved, and documented. Identify the organizational unit that is, or will be, involved in these reviews and the qualifications of the involved personnel.

c. Item 2 of the eighth paragraph states that a review of the remaining sections of the FSAR is not necessary,"... because of the ongoing review process described above." Describe your rationale for not reviewing these remaining sections of the FSAR when it appears that the original review of the FSAR was performed prior to issuance of the March 15, 1979 letter providing the I&E findings and prior to any corrective actions resulting therefrom.

d. Describe the extent of the audit to which you have committed in item 4 of the eighth paragraph.

DRAFT

(3) Question 1c requested that other activities be investigated to determine whether programmatic quality assurance deficiencies exist in view of the apparent breakdown of certain quality assurance controls, and that the activities investigated and the results be identified. Your response addressed certain specifications and instructions that received a review of 1977; providing for more in-depth verification; increasing management audits from one to two per year; increasing the staff of Bechtel's QA engineers at the site from five to eight; instituting an overinspection program on certain Q-listed construction activities; assigning resident engineers at the site to aid in the interpretation of drawings and increasing their number from one to twenty-two; and initiating a trend analysis program.

a. According to your response, most of these actions were initiated in 1977. Describe your rationale for assuming that these actions provide confidence that quality assurance deficiencies do not exist in other areas. In order to determine if other areas have deficiencies, work already accomplished in those areas should be investigated. This includes the review of completed documentation, including inspection results, to verify consistency with design and SAR requirements. Also, representative sample inspections of completed work would seem appropriate to determine the acceptability of this work. Accordingly, describe a program in detail to accomplish the above or provide rationale as to why it is not necessary.

b. Your use of generalized statements such as "the reivew of", "increased audits," "overinspection," "identifying trends," and "increase of staff" does not provide sufficient specificity regarding the detail and extent these actions will take place and the effect they will have in assuring other areas are not deficient. Accordingly, in each of these areas provide a clearer description of these actions relative to the full impact they will have in assuring an effective QA program and in sufficient detail to assure that other areas are not deficient. In those cases where credit is taken for actions already accomplished (such as reviews, inspections, and audits), provide a summary of the results of these actions such that the success or failure of the actions can be determined.

(4) Considering the results of your investigation requested in our question 1c, question 1d asked that you describe your position as to the overall effectiveness of the QA program for the Midland Plant. Your overall assessment of the effectiveness of your program should be based on your revised response to our question 1c. (see above question 23(3)). The results of this assessment, including a description of the scope and extent of the assessment effort and the identification and qualifications of the individuals involved in this assessment, should be reported to us.

Enclosure 3

H I S T O R Y

T I M E	A C T I V I T Y	R E S P O N S I B L E O R G A N I Z A T I O N
1969-1977	P S A R APPROX. 150 CHANGE NOTICES	DISCIPLINES
1976-AUGUST, 1977	F S A R DEVELOPED AND SUBMITTED AUGUST, 1977	F S A R ORGANIZATION
AUGUST, 1977 TO PRESENT	F S A R 1600 CHANGE NOTICES ADDITIONS PER NRC QUESTIONS (900) DESIGN CHANGES DESIGN CLARIFICATIONS CLERICAL CORRECTIONS 6% TECH CORRECTIONS	DISCIPLINES
6/79-1/80	RE-REVIEW	DISCIPLINES

FSAR

	SOILS	OTHER AREAS
ORIGINATION	• PREPARED BY GEO/TECH • REVIEWED PRIOR TO SUBMITTAL BY DISCIPLINE	• PREPARED BY FSAR ORGANIZATION • REVIEWED PRIOR TO SUBMITTAL BY DISCIPLINES • (NOT ALL SPECS AVAILABLE)
REVIEW ([illegible])	• INACTIVE • NO NRC QUESTIONS • NO CHANGE NOTICES	• ACTIVE • 1600 CHANGE NOTICES • REVIEWED BY DISCIPLINES
		• METHOD: • EDP 4.23 "SAR Change Control" • ELEMENT REVIEW • DEGREE OF REVIEW BASED ON DEGREE OF ACTIVITY
RE-REVIEW	• SPECIAL PROCEDURE • SYSTEM/SUBSYSTEM RE-REVIEW • RE-REVIEW BY DISCIPLINE & GEO/TECH • TOTAL RE-REVIEW	• SPECIAL PROCEDURE • SYSTEM/SUBSYSTEM RE-REVIEW • RE-REVIEW BY DISCIPLINES • ≅ 55% OF CHAPTERS 1-12 • ADDITIONAL RE-REVIEW AS NECESSARY

#2

RE-REVIEW CRITERIA

- TO BE RE-REVIEWED ARE:
  - SECTIONS WHICH WERE INACTIVE SINCE THEIR ORIGINAL INCORPORATION INTO FSAR
  - SECTIONS FOR WHICH THERE HAVE BEEN MAJOR DESIGN CHANGES
  - SECTIONS FOR WHICH INCONSISTENCIES MAY EXIST BASED ON THE FOLLOWING CONSIDERATIONS:
    - SECTIONS WITH MULTIPLE CROSS REFERENCES
    - SECTIONS WITH MULTIPLE INTERFACES
    - SECTIONS WITH MULTIPLE ORGANIZATION INPUTS
    - SECTIONS WITH PREVIOUSLY IDENTIFIED INCONSISTENCIES
- CHAPTER 15 TO BE ADDRESSED SEPARATE FROM THIS PROGRAM
- NON-SAFETY RELATED SECTIONS EXCLUDED FROM RE-REVIEW
- CHAPTERS 13, 14 AND 17 NOT DESIGN RELATED AND EXCLUDED FROM THIS RE-REVIEW BUT ARE BEING REVIEWED SEPARATELY BY QPCO
- CHAPTER 16 BEING SIGNIFICANTLY REVISED AND WILL BE REVIEWED LATER

RE-REVIEW METHOD

1. IDENTIFY ORIGINAL FSAR COMMITMENT.

2. COMPARE FSAR COMMITMENTS WITH FSAR COMMITMENTS FOR CONSISTENCY.

3. COMPARE FSAR COMMITMENTS WITH SPECS, DRAWINGS AND OTHER DESIGN DOCUMENTS FOR CONSISTENCY.

4. IDENTIFY DISCIPLINE INTERFACES AND REPEAT STEPS ABOVE AS APPROPRIATE.

5. IDENTIFY AND DETERMINE NEED TO DISPOSITION CONSULTANT RECOMMENDATIONS.

6. RESOLVE OMISSIONS AND INCONSISTENCIES AND PROVIDE DISPOSITION.

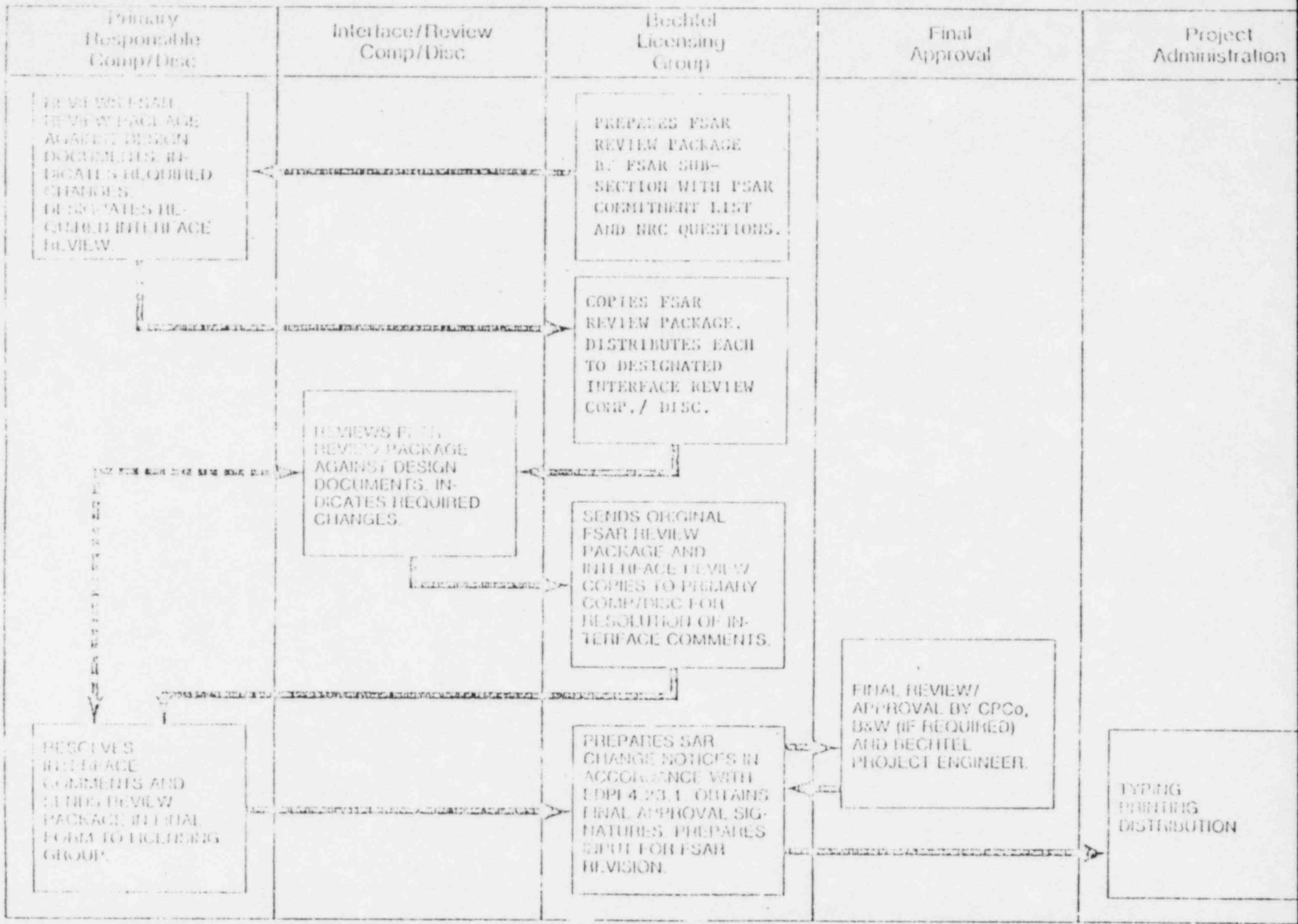
7. a. VERIFICATION BY DISCIPLINE GROUP SUPERVISOR

   b. OVERALL MANAGEMENT AND ACCOUNTABILITY BY LICENSING.

   c. AUDITS BY QUALITY ASSURANCE.

FSAR REVIEW FLOW CHART

Midland Plant Units 1 &
Consumers Power Co
Bechtel Job 7220



JOB 7220 1. REVIEW LOG NO. _____

2. COMPANY: ☐ CPCo ☐ BECHTEL ☐ B&W | 3. PRIMARY REVIEW DISCIPLINE:

4. FSAR SUBSECTION:	5. NRC QUESTIONS:	6. FSAR COMMITMENT LIST ITEMS:

8. PHASE I DESIGN DOCUMENT REVIEW | 7. RETURN TO BECHTEL LICENSING BY:

DESIGN DOCUMENT	CONFLICT	RESOLUTION
_____	YES / NO	_____
_____	YES / NO	_____
_____	YES / NO	_____
_____	YES / NO	_____
_____	YES / NO	_____
_____	YES / NO	_____
_____	YES / NO	_____
_____	YES / NO	_____
_____	YES / NO	_____
_____	YES / NO	_____

9. INITIAL REVIEW APPROVAL (INDICATE REQUIRED INTERFACE REVIEW IN BLOCK 11.)

_____ (PRIMARY REVIEWER) (DATE) _____ (SUPERVISOR) (DATE)

11. PHASE II INTERFACE REVIEW | 10. RETURN TO BECHTEL LICENSING BY:

☐ BECHTEL

BECHTEL DISCIPLINE INTERFACE REVIEW:

☐ ARCH _____ ☐ PLANT DSN _____
☐ CIVIL _____ ☐ PQAE _____
☐ CONTROL SYS _____ ☐ STRESS _____
☐ ELEC _____ ☐ OTHER _____
☐ MECH NUCLEAR _____

INTERFACING STAFF REVIEW:

☐ ARCH _____ ☐ M & CS _____
☐ CIVIL _____ ☐ MECH _____
☐ CONTROL SYSTEM _____ ☐ NUCLEAR _____
☐ ELEC _____ ☐ PLANT DSN _____
☐ GEOTECH _____ ☐ STRESS _____

☐ CPCo

_____ _____
_____ _____
_____ _____
_____ _____

☐ B&W

_____ _____
_____ _____
_____ _____
_____ _____

12. PHASE II RESOLUTION/COMMENTS | 13. RETURN TO BECHTEL LICENSING BY:

FSAR CHANGE REQUIRED YES / NO

Authorized Summary Nuclear Licensing Group is Authorized To Initiate A FSAR Change Without Additional Interface Review.

_____ (PRIMARY REVIEWER) (DATE) _____ (SUPERVISOR) DATE

G-3648

F S A R / S O I L S

R O O T C A U S E

- SPLIT RESPONSIBILITY FOR PREPARATION.
- SMALL AMOUNT OF REVIEW BECAUSE OF INACTIVITY.
- SOME MINOR SPECIFICATION CHANGES WITHOUT F S A R REVIEW.
- MULTIPLE DISPLAY OF TECHNICAL INFORMATION IN F S A R. (Contributor rather than root cause)

C O R R E C T I V E A C T I O N

- SINGLE RESPONSIBILITY FOR PREPARATION AND RE
- ALL SPECIFICATION CHANGE NOTICES SUBJECT TO REVIEW FOR COMPATABILITY WITH F S A R
- RE-REVIEW

F S A R R E V I E W A U D I T

- SCHEDULED FOR OCTOBER 26, 1979, AND FEBRUARY 1, 1980

- BECHTEL AND CONSUMERS POWER COMPANY TO PARTICIPATE

K E Y A U D I T P O I N T S

- PROCEDURAL COMPLIANCE

- EFFECTIVENESS OF DETECTING F S A R OMISSIONS AND INCONSISTENCIES

- EFFECTIVENESS OF IMPLIMENTING CORRECTIVE ACTION

Key to Matrix (pages 2 - 13 hereafter)

A Root Cause

B Permitting Factors

C Process Corrective Action for Soils

D Generic applicability and Generic process corrective action

E QA Program Elements to Identify other similar Deficiencies.

A Did not provide documented disposition to the DQM recommendations which project did not implement.

B Did not recognize necessity to provide documented disposition.

C ·DQM Report reviewed.

·FSAR revised to clearly indicate project commitments.

D Potentially generic to FSAR.

Other consultant recommendations will be reviewed for lack of disposition.

E FSAR re-review.

Specification Requirements

A Did not recognize need to formally change specifications for which clarifications were provided by RDC's, letters, or telecons.

B No procedural prohibitions existed. No general problems identified at the time.

C Improvements made in soils specification to eliminate need for future interpretations.

D •Generically applicable.

•Specification review and specification changes made to minimize need for future interpretation.

•CDPI 4.19.1 Revised to require clarification to be accomplished with formal design documentation.

E •Final Inspection and Turnover will accomplished to final design disclosures.

•QA Audit (1st Quarter 1980)

[illegible] to DG Building Fill Material and Settlement. Inconsistency between Basis for Settlement Calculations for DG Building and Design Basis.

A ·Split responsibility for preparation.

·Small amount of review exposure because of inactivity in these sections.

·Some minor specification changes made without review for compatibility with FSAR.

·Multiple display of technical information to FSAR.

B Same as A above

C ·Corrected inconsistencies.

·Reviewed soil sections of FSAR.

·Established single point responsibility within disciplines.

D ·Generically applicable to FSAR

·Re-review

·All specification changes will be subject to review for compatability with FSAR.

E ·Procedure governing review of changes for compatability with SAR

·Audit of compliance with procedure for change control.

·Audit re-review.

4

A Complete clearance requirements not reflected on the civil drawing used to construct the duct bank.

B Unique circumstance for the particular construction aspect which was not adequately addressed in the design process.

C Reviewed all similar design configurations and found no additional problems.

D •Generically applicable to duct bank interfaces.

•Resolved per C above.

E •Design interface coordination procedure.

•Audit for compliance to procedure.

•Inspection and over inspection programs.

A Did not adequately qualify equipment for allowable lift thickness.

B ·Lack of specificity in specification for this parameter.

·Test data misleading (results and methods).

C ·Requalifying equipment

·Revised specification

·Revised QCI

D ·Potential generic applicability

·All procedures reviewed-No other equipment identified which are not already properly qualified.

E Inspection and test.

Insufficient Technical Direction in the Field

A Soils Engineers not properly deployed.

B No early indicators of quality problem (test results misleading)

C Specification revised to require that soil engineer be stationed at the site. Duties more explicitly defined.

D ·Potential generic applicability.

·All other procedures (areas) reviewed-No other areas identified for which technical direction was judged inadequate.

E ·Specification/Procedural requirements for engineering coverage in field.

·Supervisor control

·Increased QA/QC awareness of the requirements for technical coverage.

·Inspection, test, trending, ect.

A Inadequate inspection callouts (extent and documentation).

B ·Misleading test results.

·Program allowed surveillance inspection methods:

·characteristics

·accountability

·sampling

C Eliminated surveillance mode for final acceptance of characteristics.

D ·Through 1977-Surveillance used for final acceptance extensively only in the soils area. Therefore, no generic implication.

·Thereafter-Eliminated surveillance per C above.

E ·Borings test and repair program.

·Revised inspection, test, over-inspection, audit, trend, ~~ect~~.

A ·Lacked specification clarity to cause test to be run at required time.

·Did not evaluate the effect of the various interpretations applied.

·Did not accomplish formal specification changes.

B Reliance on misleading completion test results for final acceptance.

C Specification and QCI changes.

D ·Potential generic applicability

·Reviewed specifications in all disciplines for specificity.

E Any inquiries or requests for interpretation necessitate review of specification for specificity. Resulting clarifications are made by SCN's.

A ·Did not utilize a systematic approach to detect erroneous results.

·Lacked adequate procedures.

·Misused/overused certain laboratory standards. (Investigation of testing and test results in progress)

B ·Need for procedures to administratively control testing not recognized.

·No industry standards for administratively controlling testing.

C ·A laboratory standard is being required for every field test.

·Tests are being plotted against zero air void curves.

·Soil and QC Engineers are reviewing test data.

D ·Potentially Generic to UST testing activities.

·A technical audit has been conducted which included the review of procedural coverage for all other UST testing activities. (25-2-7)

E ·QC and QA Inspection and overinspection.

·Test program

·Preoperational

A ·TREND program did not cause recognition of need for process correction action.

·The process corrective action required by CPCo, NCR109, was not accomplished in a timely manner.

B ·Program allowed data to be diluted by spreading nonconformances over many categories without combining them generically.

·Lack of universal understanding as to who had the responsibility for the schedule aspects of process corrective action.

C ·TREND program revised

·Emphasized QA responsibility for schedule control of process corrective action. (Procedural change in progress)

D ·Generically applicable and resolved per C above.

E ·Application of revised trend program

·Stop work authority.

A 'Lacked sufficient technical auditing in the program.

B 'Technical aspects not emphasized in the audit process.

C 'Audit and overinspection include the check of quantitative parameters and technical elements.

D 'Generically applicable - resolved per C above.

E Management and CFCo review for adherence to audit schedule.

Assessment of the Effectiveness of the Midland QA Program

Effective because of:

1. QA Program self monitoring elements
   - Overinspection
   - Internal audits
   - External audits
   - Trend programs
   - NRC Inspections

2. Twenty-five corrective actions identified in the 50.54f response, 15 were generic actions.

3. High degree of management involvement.

4. High degree of general compliance with regulatory requirements.

1. Revised FSAR: inconsistency, consultants recommendations, multiple generations of data; project [illegible].	✓	
2. Reviewed FSAR for same factors as in 1, above.		✓
2a. Updated FSAR [illegible].		✓
3. Revised procedure to require single point responsibility for FSAR preparation and review.	✓	
4. Revised specs to add specifics.	✓	
5. Reviewed specs for specificity.		✓
6. Revised procedure to require that all spec changes be reviewed for compatibility with FSAR.		✓
7. Revised procedure to require that "interpretations" be made via Spec Change Notice.		✓
8. Required [illegible] Engineer to be deployed at site.	✓	
9. Reviewed specs for other [illegible] requiring engineers to be deployed at site.		✓
10. Reviewed [illegible] tank drawing interferences.	✓	
11. Qualified equipment.	✓	
12. Reviewed specs and procedures for other equipment needing qualification.		✓
13. Eliminated "surveillance" as a field inspection technique.		✓
14. Reviewed ECNs for specificity.		✓
15. Eliminated use of densometer.	✓	

lifts.		
17. Required supervision with each test.	✓	
18. Required test results to be plotted on air voids curve.	✓	
19. Audited US Testing's procedures	✓	
20. Required Soils Engineer to review test data.	✓	
21. Instituted QC overinspection.	✓	
22. Flow-diagrammed all aspects of soils program and required definition of responsibilities.	✓	
23. Revised procedure to emphasize Quality organization's responsibility for timeliness of effective corrective action.		✓
24. Revised Trend Program		✓
25. Held "brain-storming" meetings with management and technical personnel.		✓
26. Revised Audit Program.		✓

* Although written in past tense, read items as on-going.

Attendees
Sept. 5, 1979

Name		Organization
Paul A. [illegible]		DPM LWR #4
John P. [illegible]	Project Mgr.	Bechtel
J J ZABRITSKI	~~PE~~	CPCO
L A Dreisbach	Project QAE	Bechtel
B.W. MARGUGLIO	DIR. - QA	CPCo
J. A. [illegible]	Licensing Engineer	Bechtel
G.L. RICHARDSON	QUALITY ASSURANCE	BECHTEL
L S RUBENSTEIN	CH. LICENSING BR #4	NRC
D. T. SKOVHOLT	AD QAO	NRC
D.E. HORN	GROUP SUPERVISOR (CIVIL)	CPCo
W.P. HAASS	BR. Chief,	QAB, NRC
J.G. SPRAUL		QAB, NRC
R.J. COOK	RESIDENT INSPECTOR	RIII, NRC
RC Knop	Section chief	RIII, NRC
J.W. Gilray		QA Branch NRC
G.W. Reinmuth	Asst Dir RCI IE, NRC	
R.E. Shewmaker	Senior Structural Engr. RCI, IE	

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON D C 20555

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7.d.

DEC 3 1979

Docket Nos.: 50-329/330

APPLICANT: Consumers Power Company

FACILITY: Midland Plant, Units 1 & 2

SUBJECT: SUMMARY OF NOVEMBER 14, 1979 MEETING WITH U. S. CORPS OF ENGINEERS TO OBSERVE SOIL SETTLEMENT AT MIDLAND 1 & 2 SITE

On November 14, 1979, the NRC staff accompanied representatives of the U. S. Corps of Engineers on a tour of the site for Midland Plant, Units 1 & 2. The Corps is assisting the NRC in the geotechnical review of the Midland site, including abnormal settlement resulting from the type of fill and achievement of insufficient compactive effort. Trip attendees and contacts are listed in the enclosure.

The visit provided the initial site tour by the Corps. The conditions and remedial actions observed are reflected in recent documentation by the applicant submitted as interim reports to the 50.55(e) notification and as revisions to the responses to the staff's 50.54(f) requests on plant backfill settlement. Brief presentations prior to this tour were given by the applicant and Bechtel concerning the history and present status of the settlement matter.

DARL HOOD

Darl Hood, Project Manager
Light Water Reactors Branch No. 4
Division of Project Management

Enclosure:
As stated

cc: See next page.

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Trip Attendees: November 14, 1979

U. S. Corps of Engineers (Detroit)

Ron Erickson
Joe Kubinski

NRC

Ray Gonzales (Hydrology Branch)
Gene Gallagher (IE, Region III)
R. J. Cook (IE Resident Site Inspector)
D. Hood (Division of Project Management)

Contacts

Consumers Power Company

T. C. Cooke (Project Superintendent)
R. G. Wollney (QA Group Superintendent)

Bechtel

A. Boos (Project Field Engineer)
C. McConnell (Engineer)
J. O. Wanzeck (Geotechnical Engineer)