



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

SEP 9 1983

Docket Nos. 50-329/330

*File*

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MEMORANDUM FOR: G.E. Lear, Chief, Structural & Geotechnical Engineering Branch,

FROM: Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

SUBJECT: CLARIFICATION OF NRR ASSISTANCE IN RESOLVING MIDLAND SOILS ISSUES

Recent discussions with Region III have occurred to clarify R. F. Warnick's memorandum of March 16, 1983 (Enclosure 1) addressing NRR assistance in resolving Midland soils issues. The clarification focused on the statement that "Region III has assumed all responsibility for reviewing the remedial soils work at the Midland site" Region III agrees that this statement does not apply to changes representing a significant departure from the Midland SER and its supplements or associated hearing testimony. Such changes are to be handled through the normal licensing process (i.e., by formal request from CPCo to NRR and SER supplements).

Accordingly, in the execution of the Task Interface Agreement 83-40 (TAC #51341; accomplishment No. 141433) included in Enclosure 1, NRR should be alert to recognize early where changes requested by CPCo represent a significant departure from our earlier evaluation, and to assure that such requests and reviews are accomplished in accordance with NRC regulations for licensing reviews and documentation requirements. Please assure that any such changes are identified promptly to the Licensing Project Manager, Darl Hood, in order that proper coordination and documentation be achieved.

*Elinor G. Adensam*  
Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosure:  
As stated

SEP 16 1983

8309300010

TASK INTERFACE AGREEMENT

PROBLEM: Midland 1/2 - Soils Issue

LEAD OFFICE:  I&E  NRR  REGION III  JOINT

NOTIFICATION:

REFERENCES: Memo to TNovak fm RWarnick dated 03/16/83, subject: NRR Assistance in Resolving Midland Soils Issue

ACTION PLAN:

- NRR: 1. Assist Region III in reviewing the remedial soils work at Midland. Assistance is expected to include evaluation of possible deviations from licensee commitments in the SER, advice to the Region III reviewer, and occasional site visits. (SGTEB)

The exact schedule cannot be defined but the PM forecasts that NRR assistance after ~~12/83~~ **6/84** is unlikely.

Region III will contact NRR (PM) on case basis.

NRR: Designate Lead Project Manager to assign TACS and coordinate correspondence, meetings, and reports (ORB# /LB#4 - D. Hood).

OFFICE COORDINATORS:

*J. Ippolito*  
 T. Ippolito (X27415)

*R. Vollmer 5/31/83*  
 R. Vollmer (X27207)

APPROVED:

*T. Novak 4/15*  
 T. Novak (X27425)

*C. Noelius*  
 C. Noelius  
 Region- III

*F. J. Minaglia 4/15*  
 F. J. Minaglia (X27492)

NRR

- |                     |                   |                  |                      |
|---------------------|-------------------|------------------|----------------------|
| cc: V. Stello, ROGR | J. Sniezek, I&E   | T. Speis, NRR    | G. Holahan, NRR      |
| Regional Admin.     | R. DeYoung, I&E   | D. Eisenhut, NRR | Lead Project Manager |
| J. Taylor, I&E      | J. Heltanes, AEOD | R. Vollmer, NRR  | R. Purple, NRR       |
|                     | H. Denton, NRR    | G. Lafias, NRR   | R. Wegeran, NRR      |
| E. Jordan, I&E      | E. Case, NRR      | T. Novak, NRR    |                      |
| R. Doer, I&E        | R. Madison, NRR   | F. Minaglia, NRR |                      |
| K. Mills, I&E       | K. Thompson, NRR  | F. Minaglia, NRR |                      |

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

10 1 6

MEMORANDUM FOR: T. Novak, Assistant Director for Licensing, Division  
of Licen g

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

SUBJECT: NRR ASSISTANCE IN RESOLVING MIDLAND SOILS ISSUE

Region III has assumed all responsibility for reviewing the remedial soils work at the Midland site. However, we expect the licensee to periodically request relief from commitments made in the SSER. NRR's assistance will be requested when this occurs.

The expertise of NRR will also be required from time to time for consultation with Mr. Ross Landsman during his review of the remedial soils activities. A schedule cannot be defined at this time. NRR's assistance will be requested on a case by case basis as the need arises.

We also recommend that periodic site visits be made in order for your personnel to maintain their awareness of the underpinning effort. These visits could be limited to observations of critical work activities such as the pier 11 load tests and the drift work to the control tower. The schedule for these activities can be obtained from Ross Landsman.

Should you have any questions please contact Wayne Shafer (FTS 384-2656).

*R F Warnick*

R. F. Warnick, Director  
Office of Special Cases

cc: A. B. Davis  
J. H. Sniezek, IE  
J. C. Stone, IE  
✓ D. Hood, NRR 4/5-116

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file



**Consumers  
Power  
Company**

General Offices: 212 West Michigan Avenue, Jackson, MI 49201 • (517) 788-0550

September 7, 1983

Mr J J Harrison  
Midland Nuclear Project Section  
US Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

MIDLAND ENERGY CENTER  
REMEDIAL SOILS WORK AUTHORIZATION  
FILE: 0485.16 UFI: 42\*05\*22\*04, 12\*32 SERIAL: CSC-6881

Attached for your review is Revision 7 to MPQP-1. The significant changes in MPQP-1 are as follows:

1. The Plan has been revised to provide coverage for how Mueser, Rutledge, Johnston & DeSimone (MRJD) will provide design services to support remedial soils work as a design contractor to Bechtel.
2. Where audit was covered in the various text locations, the wording has been clarified to reflect that the MPQAD Site Audit Organization has the prime responsibility for audits.
3. As appropriate, the new PEP's have replaced the old EDP's, and the Administrative Services Department Procedures have been added to the List of Applicable Procedures.

In accordance with the NRC/CPCo Work Authorization Procedure, we request your approval of this activity.

102351125 - Approval of MPQP-1, Rev 7

Upon receipt of your authorization, an effectivity date will be assigned and the plan will be released.

*J. Amoney*  
DBM/WRB/ljr

Attachment

CC: DSHood, US NRC  
RJCook, Midland Resident Inspector

OC0983-0004A-MP01

SEP 12 1983

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QUALITY PLAN FOR  
UNDERPINNING ACTIVITIES

Effectivity Date \_\_\_\_\_

Approved \_\_\_\_\_  
Manager MPQAD

Approved \_\_\_\_\_  
Bechtel Assistant Project Manager

Approved \_\_\_\_\_  
Midland Project Office

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

1. GENERAL

All activities for the remedial soils work are covered by the existing Consumers Power Company and Bechtel Power Corporation Topical Reports CPC-1-A and BQ-TOP-1, Revision 1A, respectively. This Quality Plan provides a more detailed written description of the accomplishment of activities specific to certain soils remedial work. This Quality Plan was developed to describe how quality programmatic coverage is extended to encompass the underpinning subcontractors as required by the Quality Plan for Remedial Soils Work (MPQP-2).

The senior management, consisting of the Vice President of Projects, Engineering and Construction, Consumers Power Company, and the Midland Project Manager, Bechtel Power Corporation (CP Co's contractor for the Midland Nuclear Plant), reviews and approves major decisions and design concepts regarding underpinning work. For CP Co, a Midland Project Office Executive Manager and an Assistant Project Manager, and for Bechtel, a Bechtel Assistant Project Manager, will manage the underpinning work. The Bechtel Field Soils Manager manages overall soils activities including the underpinning work.

The Executive Manager of MPQAD and the Site QA Superintendent Soils will manage the MPQAD support of underpinning work with the overview of the Director of Environmental and Quality Assurance.

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

2. SCOPE

This Quality Plan is applicable to the auxiliary building and service water structure underpinning tasks. The "Q" list for this work is all inclusive and, as such, covers activities, items and structures beyond the requirements provided by the FSAR. This extension to provide Quality Assurance Program coverage over and above the coverage for safety related items provides an additional assurance that the non-safety related activities will not have an adverse affect on safety related structures.

The following major categories of the underpinning work are specifically covered by this Quality Plan.

1. Underpinning of the Service Water Pump Structure as delineated by Specification 7220-C-194(Q).
2. Underpinning of Auxiliary Building (removal, replacement of fill, and underpinning beneath the feedwater isolation valve pit areas, auxiliary building electrical penetration areas, control tower, and beneath the turbine building) as delineated by Specification 7220-C-195(Q). (Reference MPQP-1)

Any activity or structure which will be excluded from Quality Assurance Program coverage shall be specifically documented on an exception basis. Authorization by NRC Region III is required prior to conducting any work activity in the excluded areas.



QUALITY PLAN FOR UNDERPINNING ACTIVITIES

Specifications, procurement documents, drawings and procedures are specific as to the design attributes and activities which require quality verification. The need for verification shall be dictated by the following principal:

The Quality Assurance Program shall provide control over activities affecting the quality of the identified structures, systems and components to an extent consistent with (a) their importance to safety; (b) their possible detrimental interaction or effect on safety related structures and items; or (c) assuring obtainment of the overall Project objectives.

3. UNDERPINNING WORK ORGANIZATIONS

Organizations involved with the underpinning are defined in the Functional Matrix, Attachment 1 and as follows:

CP Co Project Management

Sets policy, coordinates licensing review, and submittals to the NRC.

CP Co Safety and Licensing

Performs licensing reviews and coordinates FSAR revisions.

Project Engineering - Mechanical/Civil

Provides client design input and performs reviews of and comments on Bechtel Design Documents.

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

CP Co Site Management

Provides overview and direction as necessary for underpinning activities for compliance with NRC commitments. Monitors underpinning activities with respect to commercial type items, construction activities (such as equipment care, labor and production), and implements site work authorization procedure. Provides overview and control of work releases for remedial soils activities for compliance with NRC commitments.

Bechtel Project Management

Coordinates with client and sets project policy for Bechtel organizations.

Bechtel Project Engineering

Establishes design criteria and reviews input from non-Bechtel sources. Originates and issues design documents for construction. Provides design verification and approval for subcontractor-originated non-permanent underpinning component design. Reviews design by design contractors and releases same for construction.

Bechtel Project Geotechnical Engineer

Functions as Project Engineering's Geotechnical representative on project. Performs geotechnical reviews related to design criteria and procedures. Interfaces with Geotech Services and Resident Geotechnical Engineer.

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

Bechtel Site Management

Performs the overall on-site management of all construction activities including coordination between Bechtel, CP Co and Subcontractors.

Bechtel Site Management includes Construction Site Organization, Field Soils Organization, Field Document Control Center and Field Procurement Department. The Field Soils Organization (FSO) is responsible for all ASLB Board Order Work including coordinating the activities of the underpinning subcontractors.

Geotech Services

Provides design and field geotechnical services as requested by Project Engineering.

Resident Assistant Project Engineer

Represents Project Engineering and interfaces with the Field Soils Organization.

Resident Geotechnical Engineer

Performs foundation inspection and on-site geotechnical monitoring of underpinning activities. Interfaces with the Project Geotechnical Engineer.

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

Resident Structural Engineer

Provides structural expertise for the underpinning activities. Receives and evaluates data from the underpinning instrumentation systems.

Midland Project Quality Assurance Department (MPQAD)

Provides quality assurance including quality assurance engineering (QAE) and quality control (QC) for all underpinning work including work done by Bechtel and Bechtel Subcontractors. Quality Assurance Engineering develops quality plans, reviews construction procedures, drawings and specifications for inclusion and establishment of inspection criteria, performs overinspections and may conduct pre-planned audits. Quality Control performs first-line inspection and verification, of items under the Quality Assurance Program.

Subcontractor

Perform construction activities as contracted for, within the framework of the Midland Project Quality Program. Provide design of non-permanent underpinning components as directed by Bechtel Project Engineering.

Consultant

Provides advice to Bechtel Project Engineering or Bechtel Field Soils Organization on construction methods, design, instrumentation or geotechnical items.

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

Design Contractor

Provides design (including calculations, design drawings, and detail drawings) of permanent and non-permanent underpinning components as specified in Technical Service Agreements issued by Bechtel Project Engineering.

4. DESIGN CONTROL

Design Control for the underpinning of the Auxiliary Building (Electrical Penetrations and Control Tower Structure), Feedwater Isolation Valve Pit fill material replacement will be provided by Bechtel Project Engineering and Design Contractors with approved Quality Assurance Programs. Design control for the underpinning of the Service Water Pump Structure will be provided by Bechtel Project Engineering. Engineering Department Procedures (EDPs), and Project Engineering Procedures (PEPs) provide the controls for Bechtel Engineering activities which are responsive to the Quality Program requirements of MPQP-2. Design contractors are required to have design control procedures as part of their approved Quality Assurance Program.

Design criteria will be developed from input from consultants, the Midland Plant Safety Analysis Report, 50.54(f) responses submitted to the NRC staff, meetings with and submittals to the NRC staff, and testimony during the ASLB Soils hearing.

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

Design documents, including specifications, drawings and material requisitions, shall be specific as to what is required to ascertain that processes, activities and final products meet their design requirements.

Design documents, including specifications and drawings (as well as changes and revisions to these documents), will be reviewed and checked for compliance to design requirements by Bechtel Project Engineering. Design documents will be reviewed by MPQAD QAE. The Quality Assurance Engineering review applies to all design documents. (MPQAD Procedure M-11)

Quality Assurance Engineering will act as the focal point for the assurance of the resolution of quality related comments.

Technical specifications and revisions thereof will be generated, reviewed, approved, and controlled by Bechtel Project Engineering in accordance with EDP 4.49. Initial specifications will also be reviewed by CP Co Design Production and comments submitted to Bechtel Project Engineering. Specification Change Notices (SCNs), used as interim change documents between revisions of the specification, will receive the same level of review and approval by Bechtel Project Engineering as the basic specifications. Specification Change Notices shall be administered and controlled in accordance with PEP 4.49.1.

Project Engineering prepares, reviews, approves, issues and controls design drawings in accordance with PEP 4.46.1. Changes to engineering

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

drawings receive the same level of review and approval as the basic drawing and are administered in accordance with EDP 4.47 and PEP 4.47.2.

(Underpinning) Subcontractors prepare design and detail drawings for non-permanent underpinning systems/components. These documents are checked, reviewed and approved by Bechtel Project Engineering in accordance with PEP 4.25.2 and EDP 5.16.

Design contractors prepare, review, approve, issue and control design drawings in accordance with their Quality Assurance Program approved by MPQAD and Bechtel Project Engineering.

Bechtel design calculations are originated, checked, approved, controlled and documented by Project Engineering in accordance with EDP 4.37. All design calculations submitted by the consultant are checked, reviewed and approved by Bechtel Project Engineering in accordance with PEP 4.25.2.

Design calculations by the design contractor are originated, checked, and controlled in accordance with their Quality Assurance Program approved by MPQAD and Bechtel Project Engineering.

Bechtel Project Engineering will review all design calculations, design drawings, and detail drawings by design contractors in accordance with PEP 4.25.2 and EDP 5.16.

All design documents by subcontractors, design contractors and consultants are documented and retained in accordance with Administrative Services Department Procedure (ADP) ADP-2.2 and ADP-2.13.

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

Bechtel Field Soils Organization shall request from or notify Project Engineering of changes to design documents by Field Change Requests (FCRs) and Field Change Notices (FCNs), respectively. The FCRs will be reviewed, evaluated, dispositioned, controlled and administered in accordance with PEP 4.62.1. FCNs will allow the Bechtel Field Soils Organization to initiate field changes in design documents originated by Bechtel Project Engineering within the allowable guidelines of Field Procedure FPD-2.000 and Specification G-34 (Q) as provided by Project Engineering. FCNs will be reviewed, evaluated, dispositioned, controlled and administered according to PEP 4.62.1. Changes to design contractor originated documents will be accomplished by the Design Contractors change program or by a field engineering request using the FCR.

The design interface for the underpinning activities between Project Engineering, project groups, technical support groups, subcontractors, design contractors and consultants shall be administered as illustrated in Attachment 2, Design Document Interface Flowchart, and Attachment 3, Design Interface Flowchart for Design Contractors. Geotech Services will receive design for review in accordance with PEP 4.25.2. The Subcontractor receives design documents from Bechtel Field Soils Organization in accordance with FID 1.100. The Resident Structural Engineers duties on site are defined in PEP 2.14.9.

Inspections are performed by Quality Control to verify that construction is being performed to the latest revisions of the design documents. Audits and/or overinspections are conducted by MPQAD Site audit



QUALITY PLAN FOR UNDERPINNING ACTIVITIES

organization and Quality Assurance Engineering respectively. Field geotechnical activities, including subgrade acceptance, are accomplished in accordance with PEP 2.14.8.

5. PROCUREMENT AND RECEIVING

Procurement of items and services for the remedial underpinning work is performed by Bechtel employing the technical and quality requirements established in the specifications and drawings. Q-material requisitions are originated by Bechtel Field Soils Organization in accordance with FPG-8.000. The Bechtel Field Soils Organization is responsible for assuring that applicable Quality Program requirements, design bases, specifications, procedures and drawings are included and referenced in the material requisitions. Bechtel Field Procurement Department initiates formal purchase orders and will be responsible for ensuring that the procurement package conforms to the material requisition. Quality Assurance Engineering reviews and approves procurement documents in accordance with MPQAD Procedure M-5 to assure that necessary Quality Assurance Program requirements are included.

Upon receipt of Q-material, inspections are performed by Quality Control in accordance with PSP G-5.1 to verify items comply with the procurement package requirements and quality verification packages are complete. Quality verification packages are reviewed for availability, traceability and legibility by Quality Control and audited by Quality Assurance (MPQAD Procedure F-1M). In addition, a technical review will be performed by

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

Quality Control in quality verification packages for non-shop inspected items.

6. PREPARATION AND IMPLEMENTATION OF PROCEDURES/INSTRUCTIONS

Written instructions to the Subcontractor are in the form of engineering specifications, drawings, and approved changes thereto.

The G-321D form (controlled by EDP 4.58) attached to the specifications identify the procedures and other vendor submittals, which are the minimum required to be submitted by the Subcontractor prior to the start of fabrication and construction. These procedures are logged, controlled, and distributed by the Field Document Control Center and reviewed by Project Engineering and MPQAD. Project Engineering defines the specific quality attributes of each procedure. The procedures will be specifically reviewed by Quality Assurance Engineering for appropriate inclusion of quality requirements. (MPQAD Procedure M-10)

These procedures, when approved by MPQAD, and Bechtel Project Engineering, provides authorization for fabrication/construction to proceed.

7. INSPECTION, EXAMINATION, TEST AND CALIBRATION

Quality verification, inspection and testing of Subcontractor activities is performed by Quality Control, independent of the Subcontractor and Bechtel Field Soils Organization. Inspection planning is performed by MPQAD in accordance with PSP G-6.1 and MPQAD Procedure E-3M, utilizing

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

inputs from technical specifications, design drawings, Subcontractor procedures and shop drawings. Project Quality Control Instructions (PQCI) are prepared to cover all Subcontractor quality related activities. Existing PQCI are adapted for standard construction activities such as concrete batching, placement and testing, and reinforcing steel installation. Additional PQCI are developed as necessary to verify new underpinning activities such as temporary support installation, load transfer and threaded reinforcing connectors. In addition, inspection and test activities are monitored by Quality Assurance Engineering through the use of overinspection plans based on an independent evaluation of design and procurement documents per MPQAD Procedure E-1M. The Subcontractors are indoctrinated to quality control inspection practices to assure that hold points, included as an integral part of the Subcontractor's procedures, are adhered to. For site construction activities, the detailed implementing procedures shall utilize integrated construction planning, as follows:

- a) Hold points shall be clearly identified in the procedures.
- b) The procedures shall provide for MPQAD signoff to record the completion of the inspection holdpoints prior to proceeding with the further execution of subsequent procedural steps.

Tests are performed to qualify, demonstrate or assure that the quality of procured items or completed construction is as defined in applicable engineering drawings and procurement documents.

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

Calibration, maintenance and control of measuring and test equipment is provided by approved agencies which will be pre-qualified by Quality Assurance Engineering. These agencies provide for traceability to national standards, the unique identification of each instrument or equipment requiring calibration, the maintenance of calibration frequencies, and identification of calibration status. Calibration records are maintained by the agencies and are transmitted to Bechtel Field Soils Organization for review. At the completion of the subcontract, these records will be turned over to MPQAD. Performance and effectiveness of the agencies is verified by Quality Assurance audits and/or overinspections in accordance with MPQAD Procedures F-1M and E-1M, respectively.

8. HANDLING AND STORAGE

All Q-list material is stored and handled in accordance with general Field Procedures FPG 4.000 and 5.000 and supplemented by the Subcontractor's procedure. Storage and handling of material and equipment is subject to Quality Control inspection and verification according to PSP G-5.1 and Quality Assurance overinspections and/or audits per MPQAD Procedures E-1M and F-1M, respectively.

9. DOCUMENT CONTROL AND QUALITY RECORDS

Subcontractor documents which are to be submitted for review and comment by Bechtel Project Engineering and MPQAD are controlled by the Field Document Control Center (FDCC) in accordance with Bechtel field Procedure

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

FPD 1.000. Prior to the start of work, the Subcontractor submits construction procedures, drawings, purchase orders, as required by the specifications, to Bechtel Field Soils Organization. Bechtel Field Soils Organization and the FDCC distributes the procedures for review and approval as defined in the Quality Plans included with specifications 7220-C-194 and C-195. Bechtel Project Engineering and/or Resident Engineering, as designated, is responsible for resolving review comments.

All quality records are controlled by EDPs 5.16 and 5.24, Quality Control Procedure PSP G-7.1 and MPQAD Procedures F-11M and F-12M. These procedures prescribe the requirement for preparation, control, distribution and transmittal of all Q-related procedures, specifications, drawings and inspection records.

10. NONCONFORMING ITEMS AND CORRECTIVE ACTION

Nonconformances discovered during construction inspection activities are documented and controlled by MPQAD in accordance with PSP G-3.2 and/or MPQAD Procedure F-2M and M4. These procedures provide for the identification and documentation of the nonconforming item, identify the authority for and disposition of the nonconforming condition, and provide for documenting the reinspection and closeout of the nonconformance.

Dispositions to non-conformance reports will be reviewed by Quality Assurance Engineering to assure that the disposition is acceptable, that engineering rationale is adequately documented and that quality planning is available for the verification of the disposition. MPQAD will inspect

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

and provide verification of disposition implementation prior to closing of the non-conformance report.

Within the Midland Project Quality Program, the identification of reportable items is accomplished by MPQAD through the review of nonconformance reports, supplier surveillances and quality assurance audits. Corrective action for quality problems will be controlled by MPQAD Procedure F-2M, M-4 or F-3M.

In the design phase, investigation of cause and action taken to preclude recurrence of design deficiencies will be accomplished through EDP 4.65. Design deficiencies include those items which are not identified in the course of design development and which ultimately require changes.

11. AUDITS

Audits are performed by Quality Assurance to verify conformance to quality requirements. MPQAD Procedure F-1M includes provisions for the identification of deficiencies, the determination of corrective action, and the necessary follow up to verify that timely and effective action is taken. The primary responsibility for site audits rests with the MPQAD Site audit organization. Soils Quality Assurance supports this audit function. Audits of Bechtel Ann Arbor ~~2000~~ <sup>activities</sup> and Design Contractors are accomplished by MPQAD Quality Engineering. Audits of Suppliers are accomplished by Bechtel Supplier Quality with participation by Quality Assurance Engineering.

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

12. TRAINING AND CERTIFICATION

All inspectors and quality auditors are trained and certified in accordance with MPQAD Procedures B-2M and/or B-3M. Subcontractor field supervisory, engineering personnel and crafts receive training (QA Indoctrination) to the Midland Project Quality Program. This training includes an introduction to the quality system, inspection activities, nonconformance control, NRC activities, field and engineering design changes and site organizations and interfaces. The training is initially completed prior to any Q-listed work proceeding. Additional training sessions will be scheduled by MPQAD to indoctrinate personnel which are assigned after the initial indoctrination. The Subcontractor is required to implement training for the procedures covering the Subcontractors Q-listed activities.

QUALITY PLAN FOR UNDERPINNING ACTIVITIES

LIST OF  
APPLICABLE  
PROCEDURES



MIDLAND PROJECT QUALITY ASSURANCE DEPARTMENT PROCEDURES

B-2M	Personnel Training
B-3M	Qualification and Certification of Inspection and Test Personnel
E-1M	Site Inspection Planning and Site Inspection
E-2M	Review of Site Inspection Planning Prepared by others than MPQA
F-1M	Audit
F-2M	Nonconformance Reporting, Corrective Action and Statusing
F-3M	Resolution of Significant Quality Problems
F-11M	Documentation Control
F-12M	Quality Records
M-4	Quality Action Request
M-5	QA Review of Bechtel Field-Originated Procurement Documents
M-10	MPQAD Review of Subcontractor Procedures/Instructions for work covered by the April 30, 1982 ASLB order.

M-11                      MPQAD Review and Approval of Bechtel Design Documents, Field Sketches, and Shop Drawings for work covered by the April 30, 1982 ASLB Order.

ENGINEERING DEPARTMENT PROCEDURES

EDP - 4.37              Design Calculations

EDP - 4.49              Project Specifications

EDP - 4.58              Specifying and Reviewing Supplier Engineering and Quality Verification Documentation

EDP - 4.65              Design Deficiency

EDP - 5.16              Supplier Document Control

EDP - 5.24              Document Distribution Control Center

ADMINISTRATIVE SERVICES DEPARTMENT PROCEDURES

ADP - 2.2                Project Records Control, Retention, and Turnover

ADP - 2.13              Project Supplier Design Document Control

FIELD PROCEDURES

FPG-8.000	FMRs
FPD-2.000	Field Change Request/Field Change Notice
FPG-4.000	Storage Maintenance/Inspection of Equipment and Materials
FPG-5.000	Maintenance/Inspection of Material and Equipment Released for Construction
FID-1.100	Vendor Document Review
FPD-1.000	Field Documentation of Correspondence Control

PROJECT SPECIAL PROVISIONS

PSP G-3.2	Control of Nonconforming Items
PSP G-5.1	Material Receiving and Storage Control
PSP G-6.1	Inspection Planning
PSP G-7.1	Document, Records and Correspondence Control
PSP G-8.1	Qualification, Evaluation, Examination Training and Certification of Construction Quality Control Personnel

PROJECT ENGINEERING PROCEDURES

- PEP - 4.1.1                      Preparation of Design Requirements Verification  
Checklist.
- PEP - 4.25.2                     Interface Control Design Documents for Remedial Soils  
Underpinning Operation.
- PEP - 4.25.3                     Interface Control of Design Documents for Remedial  
Soils and Related Other Work with Consumers Power  
Company for Midland Job 7220.
- PEP - 4.46.1                     Project Drawings
- PEP - 4.47.2                     Drawing Change Notices
- PEP - 4.49.1                     Specification Change Notice
- PEP - 4.62.1                     FCR/FCN
- PEP-2.14.8                       Resident Geotechnical Engineer for Remedial Soils  
Activities
- PEP-2.14.9                       Resident Structural Engineer for Remedial Soils  
Activities

# PROJECT FUNCTIONAL MATRIX FOR UNDERPINNING ACTIVITIES

MPQAD-1  
REVISION 7  
ATTACHMENT 1

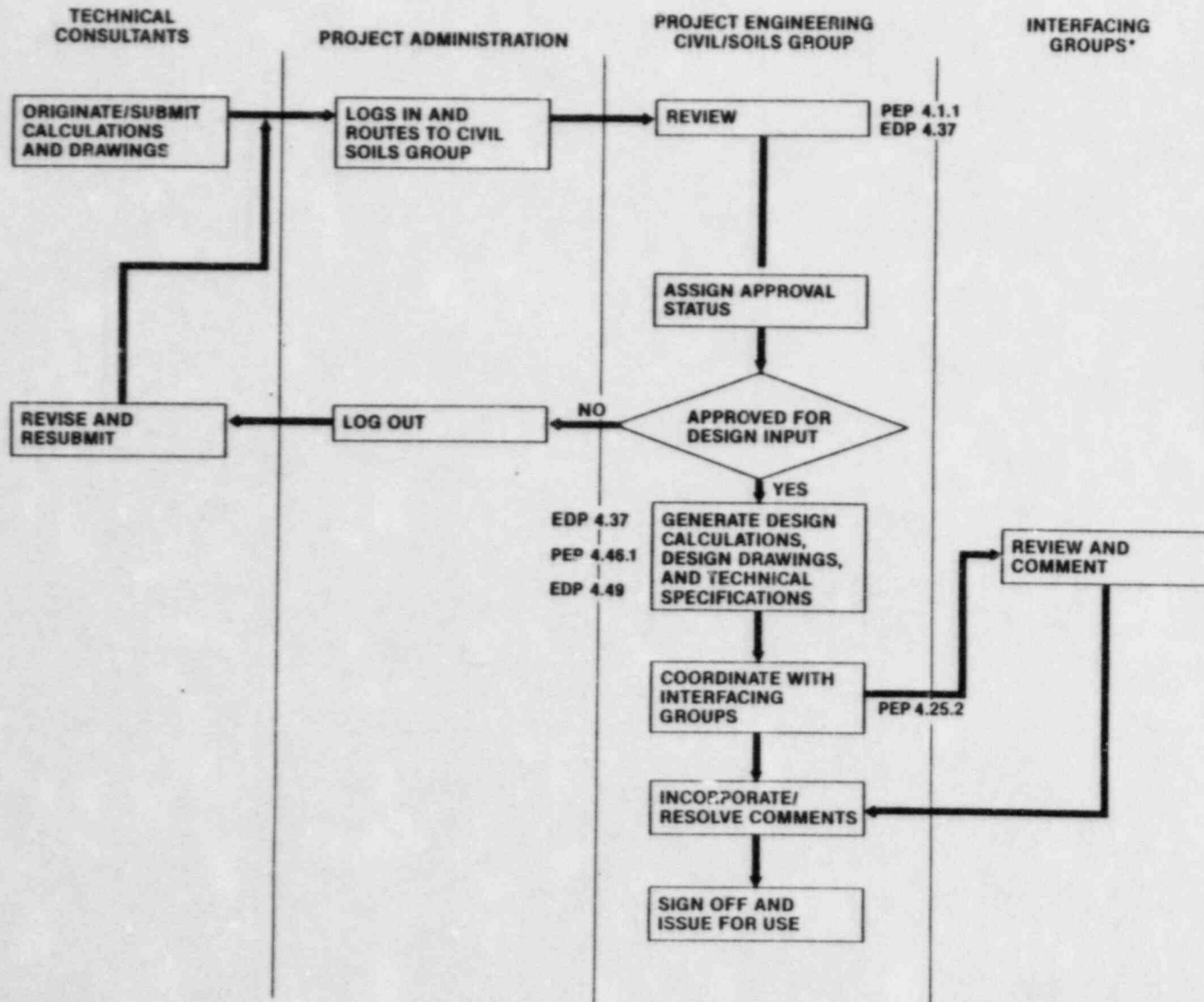
	POLICY				DESIGN				PROCUREMENT				INSTALLATION				AUDITS	
	ENG'G POLICY ESTABLISHMENT	ESTABLISHMENT AND IMPLEMENTATION OF DESIGN CRITERIA (PERMANENT STRUCTURE)	ESTABL AND IMPLEMENTATION OF DESIGN CRITERIA (TEMPORARY STRUCTURE)	DESIGN CONTROL INTERFACE ESTABLISHMENT	PREPARATION OF ENGINEERING DOCUMENTS	DESIGN REVIEW AND VERIFICATION	PREPARATION AND CONTROL OF DESIGN CHANGES INCLUDING FIELD SUPPLIER EVALUATION AND SELECTION	PROCUREMENT (PURCHASE ORDERS)	INSPECTION AND AUDIT OF OFFSITE ORGANIZATIONS	RECEIVING INSPECTION	PREPARATION AND IMPLEMENTATION OF INSTRUCTIONS, PROCEDURES DRAWINGS, TEST CONTROL	QUALITY VERIFICATION, INSPECTION AND TESTING STATUS INDICATORS	NONCONFORMANCE CONTROL	CORRECTIVE ACTION	QUALITY RECORDS	AUDITS		
CPCo PROJ MGMT	●																	
BECHTEL PROJ MGMT																		
CPCo PRODUCTION ENGRG																		
BECHTEL MGMT ENGRG																		
BECHTEL PROJ ENGRG																		
BECHTEL QUALITY ENGRG																		
MRJD/MERGENTINE (TSA)																		
WISS JANNEY (TSA)																		
SPENCER, WHITE, AND PRENTISS																		
GEOTECH SERVICES																		
U/P SUBCONTRACTORS																		
FIELD SOILS ORGANIZATION																		
MRJD (Design Contractor)																		
MPQAD																		

● DIRECT INVOLVEMENT  
○ INPUT ONLY

NOTE: This functional matrix represents the activities of both organizations described in the quality plan and those included in the quality plans of the technical specifications for underpinning

### DESIGN DOCUMENT INTERFACE FLOWCHART

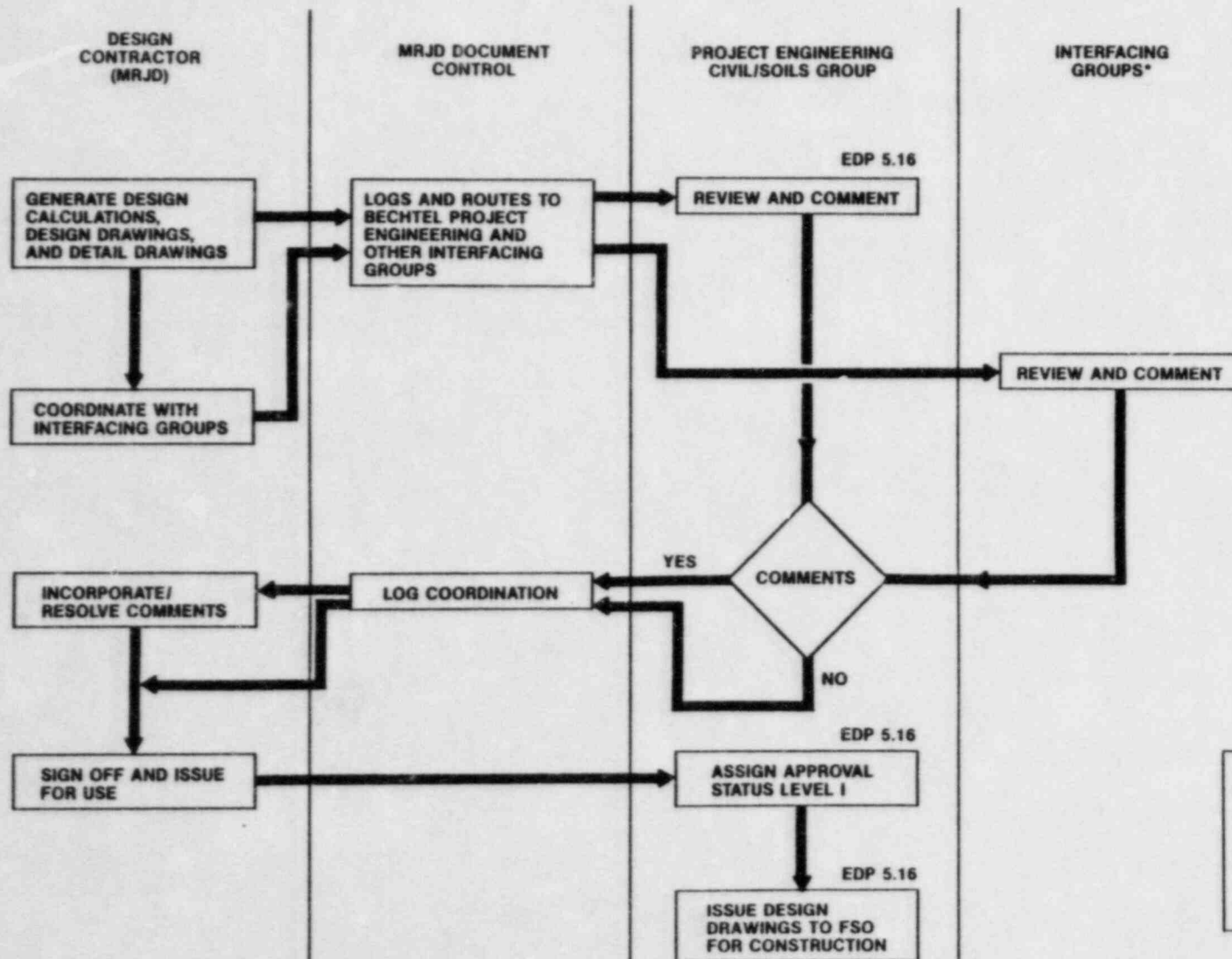
MPQP-1  
REVISION 7  
ATTACHMENT 2



\*INTERFACING GROUPS (as defined by PEP 4.25.2 or approved alternate)

- DISCIPLINE ENGINEERING GROUPS
- CHIEF ENGINEER (per EDP 4.34)
- GEOTECHNICAL SERVICES
- CONSULTANTS
- QUALITY ENGINEERING (drawings and specifications)
- MPQA (drawings and specifications)
- FSO

DESIGN DOCUMENT INTERFACE FLOWCHART  
 FOR DESIGN CONTRACTORS



\*INTERFACING GROUPS (as defined by PEP 4.25.2 or approved alternate)

- GEOTECHNICAL SERVICES
- CONSULTANTS
- QUALITY ENGINEERING
- MPQA
- DPD (CPCo)
- SUBCONTRACTOR (mergentine)
- FSO

sent to DMB 7/12/83



**Consumers  
Power  
Company**

General Offices: 1945 West Parnall Road, Jackson, MI 49201 • (517) 788-0774

J A Mooney  
Executive Manager  
Midland Project Office

September 7, 1983

Mr J J Harrison  
Midland Project Section  
U S Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

PRINCIPAL STAFF	
RA	ENF
D/RA	BCS
A/RA	PAO
DPRP	SLO
DRMA	RC
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UE	
ML	
OL	FILE

orig r3

MIDLAND ENERGY CENTER GWO 7020  
REMEDIAL SOILS WORK AUTHORIZATION  
File: 0485.16 UFI: 42\*05\*22\*04 Serial: CSC-6878  
12\*32

We have completed our review of the documents for the activities listed below. Based on our review, we concluded that we are ready to start the work:

- 402550525 - Temporary backfill new pipe (Train A)
- 203150165 - Fill SWPS chambers with water to el. 622 (±5')
- 402550446 - Excavate existing pipe (Train B)
- 402550562 - Temporary backfill new pipe (Train B)
- 155052320 - Drift from KC3 to 13 feet east of KC4
- 165052320 - Drift from KC10 to 9 feet west of KC9
- 155052032 - Finger drift to KC4
- 155053315 - Excavate Pier KC4
- 155054310 - Install and load Pier KC4
- 165052032 - Finger drift to KC9
- 165053315 - Excavate Pier KC9
- 165054310 - Install and load Pier KC9
- 207050601 - SWPS-Install four (4) additional piezometers

Also, a number of activity authorizations have passed the 90 day expiration limit. In accordance with the Work Authorization Procedure, we request re-authorization of the following activities:

TRAIN B OF SERVICE WATER PIPE REPLACEMENT

- 402550550 - Remove existing pipe
- 402550560 - Install new pipe and expansion coupling
- 402550561 - Hydro test new pipe
- 402550508 - Perform profiling and ovality check on new piping

*JAMooney*

JAM/AEB/klm

8309130378

SEP 12 1983



sent to DM3 9/10/83



**Consumers  
Power  
Company**

General Offices: 1945 West Parnall Road, Jackson, MI 49201 • (517) 788-0774

**J A Mooney**  
Executive Manager  
Midland Project Office

PRINCIPAL STAFF		
✓ RA	INF	
D/RA	SCS	3
A/RA	PAO	
DFRP	SLO	
DRMA	RC	
DMSP		
DE		
ML		
OL	FILE	

September 7, 1983

Mr J J Harrison  
Midland Project Section  
U S Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

MIDLAND ENERGY CENTER GWO 7020  
REMEDIAL SOILS DISCUSSIONS BETWEEN CPCo AND NRC  
File: 0485.16 UFI: 42\*05\*22\*04 Serial: CSC-6871  
70\*01

This letter is to confirm discussions with Region III's Dr. Landsman and Mr. Gardner and with Mr. Wheeler and Mr. Wieland of CPCo on September 1, 1983. The following agreements were reached:

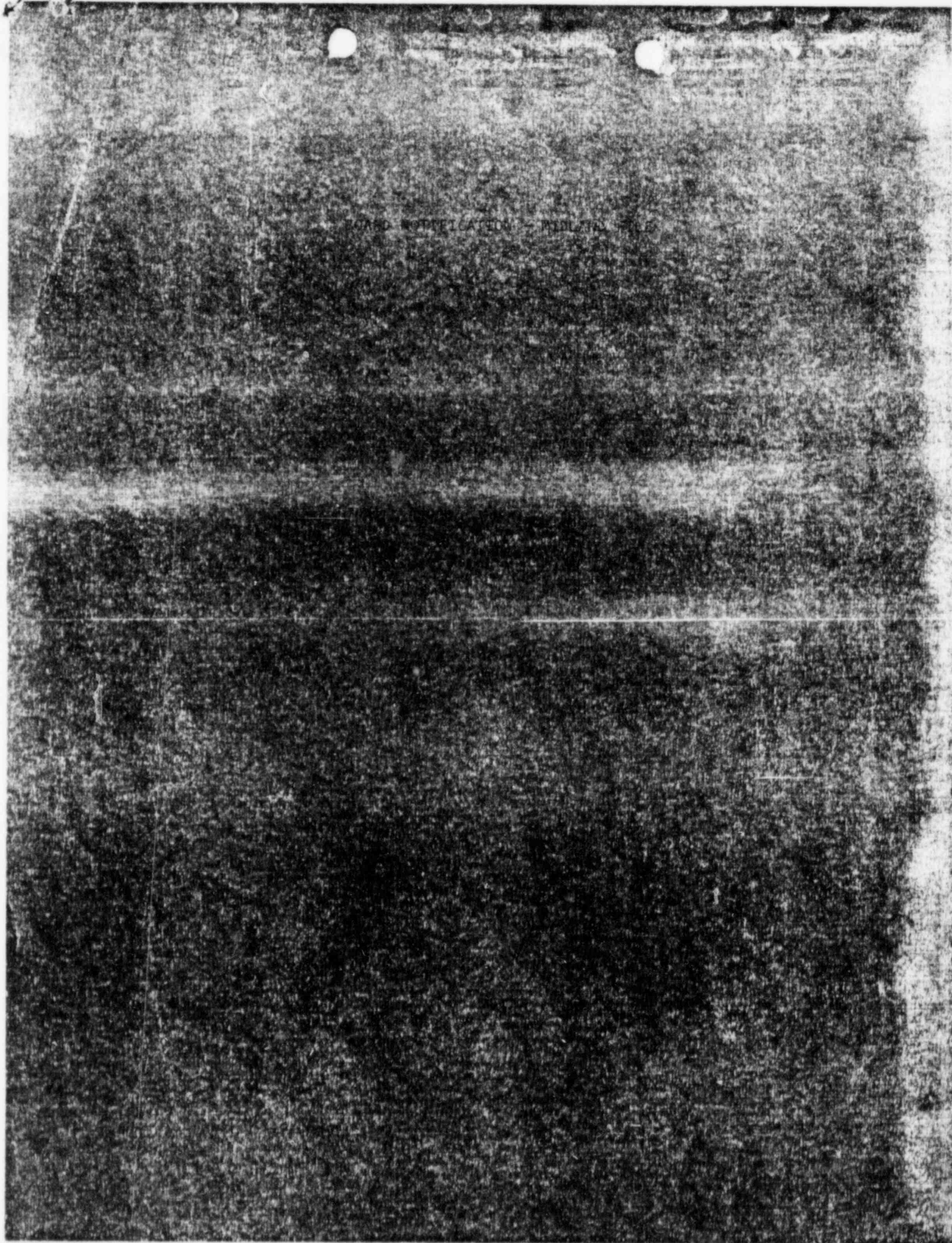
1. Dr. Landsman indicated the NRC concurs with the Engineering logic change which allows the drifts from Kc-2 to Kc-3 and Kc-10 to Kc-11 to be constructed before Piers Kc-3 or Kc-10 are jacked.
2. Dr. Landsman concurred with eliminating the activity entitled "Construct Concrete Invert and Layback Soil Kc-2 to Kc-3" and "Construct Concrete Invert and Layback Soil Kc-11 to Kc-10" from the work activity list.
3. It was pointed out to Dr. Landsman that a Consumers Power letter, serial CSC-6863, dated 8/25/83, has the incorrect activity number to "Install Pier W13", due to a typing error. The number for this activity should be 165054035 instead of 165053035. This incorrect number was also in an NRC approval letter, dated 8/29/83. For the purposes of documentation, it was agreed that the NRC approval letter dated 8/29/83 authorized the activity "Install Pier W13" and an additional authorization letter from NRC is not required.
4. On September 1, 1983, a discussion was held between Dr. Landsman and our Mr. Puhalla in which Dr. Landsman concurred with relocating LS-10 from an interior piezometer to an exterior piezometer, and also concurred with FCR C-6556 to Drawing J-1320 which deletes wells 555, 561, 576 from the dewatering schedule and adds them to the piezometer schedule.

If you have any questions please contact this office.

*JAMooney*

JAM/RMW/kjm  
8309150002

SEP 10 1983





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

*Ref*  
*Zimmer + Mitt. Br*

April 4, 1983

Docket Nos. 50-289, 50-275/323, 50-361  
50-362, 50-483, 50-528/529/530,  
50-416, 50-389, 50-370, 50-437

MEMORANDUM FOR: Chairman Palladino  
Commissioner Gilinsky  
Commissioner Ahearne  
Commissioner Roberts  
Commissioner Asselstine

FROM: Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

SUBJECT: STAFF POSITION REGARDING UNRESOLVED SAFETY ISSUE A-17  
(Board Notification 83-44 )

The enclosed information is being provided in accordance with present NRC procedures for board notifications. This issue is applicable to all nuclear power plants.

On February 13, 1983, the staff issued Board Notification No. 83-17 concerning allegations regarding Unresolved Safety Issue A-17, "Systems Interaction in Nuclear Power Plants." The staff has considered the concerns raised in that affidavit and has determined that there is no basis for any change in the staff's position regarding USI A-17. The enclosed testimony reaffirms the staff position on USI A-17. We now consider this issue to be resolved.

*Darrell G. Eisenhut*  
Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated

cc: SECY  
OGC  
OPE  
EDO

Contact:  
S. Black, NRR  
xt. 29788

APR 15 1983

*2711*

*8304130187*

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James B. Dougherty, Esq.  
 Mr. Thomas M. Dougherty  
 Mr. David B. Duboff  
 Mr. Jay Dunkleberger  
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Charles M. Pratt, Esq.  
 David J. Preister, Esq.  
 Dr. Lawrence R. Quarles  
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Daniel D. Wilt, Esq.  
John F. Wolf, Esq.  
Sheldon J. Wolfe, Esq.  
John D. Woliver, Esq.  
Mr. Robert G. Wright  
Dr. Bruce von Zellen

Atomic Safety and Licensing  
Board Panel  
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Dr. Milton S. Plesset  
Mr. Jeremiah J. Ray  
Dr. Paul C. Shewmon  
Dr. Chester P. Siess  
Mr. David A. Ward

BYRON

Mr. Dennis L. Farrar  
Director of Nuclear Licensing  
Commonwealth Edison Company  
Post Office Box 767  
Chicago, Illinois 60690

cc: Mr. William Kortier  
Atomic Power Distribution  
Westinghouse Electric Corporation  
Post Office Box 355  
Pittsburgh, Pennsylvania 15230

Paul M. Murphy, Esq.  
Isham, Lincoln & Beale  
One First National Plaza  
42nd Floor  
Chicago, Illinois 60603

Mrs. Phillip B. Johnson  
1907 Stratford Lane  
Rockford, Illinois 61107

Ms. Bridget Little Rorem  
Appleseed Coordinator  
117 North Linden Street  
Essex, Illinois 60935

Dr. Bruce von Zellen  
Department of Biological Sciences  
Northern Illinois University  
DeKalb, Illinois 61107

Mr. Edward R. Crass  
Nuclear Safeguards & Licensing Division  
Sargent & Lundy Engineers  
55 East Monroe Street  
Chicago, Illinois 60603

Myron Cherry, Esq.  
Cherry & Flynn  
Suite 3700  
Three First National Plaza  
Chicago, Illinois 60602

Mr. William Forney  
U. S. Nuclear Regulatory Commission  
Byron/Resident Inspectors Office  
4448 German Church Road  
Byron, Illinois 61010

Ms. Diane Chavez  
326 N. Avon Street  
Rockford, Illinois 61103

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

Joseph Gallo, Esq.  
Isham, Lincoln & Beale  
Suite 840  
1120 Connecticut Avenue, N. W.  
Washington, D. C. 20036

CALLAWAY  
50-483

Mr. D. F. Schnell  
Vice President - Nuclear  
Union Electric Company  
Post Office Box 149  
St. Louis, Missouri 63166

cc: Mr. Nicholas A. Petrick  
Executive Director - SNUPPS  
5 Choke Cherry Road  
Rockville, Maryland 20850

Gerald Charnoff, Esq.  
Thomas A. Baxter, Esq.  
Shaw, Pittman, Potts & Trowbridge  
1800 M Street, N. W.  
Washington, D. C. 20036

Mr. J. E. Birk  
Assistant to the General Counsel  
Union Electric Company  
Post Office Box 149  
St. Louis, Missouri 63166

Mr. John Neisler  
U.S. Nuclear Regulatory Commission  
Resident Inspectors Office  
RR#1  
Steedman, Missouri 65077

Mr. Donald W. Capone, Manager  
Nuclear Engineering  
Union Electric Company  
Post Office Box 149  
St. Louis, Missouri 63166

A. Scott Cauger, Esq.  
Assistant General Counsel for the  
Missouri Public Service Comm.  
Post Office Box 360  
Jefferson City, Missouri 65101

Ms. Barbara Shull  
Ms. Lenore Loeb  
League of Women Voters of Missouri  
2138 Woodson Road  
St. Louis, Missouri 63114

Ms. Marjorie Reilly  
Energy Chairman of the League of  
Women Voters of University City, MO  
7065 Pershing Avenue  
University City, Missouri 63130

Mayor Howard Steffen  
Chamois, Missouri 65024

Mr. Fred Luekey  
Presiding Judge, Montgomery County  
Rural Route  
Rhineland, Missouri 65069

Professor William H. Miller  
Missouri Kansas Section, American  
Nuclear Society  
Department of Nuclear Engineering  
1026 Engineering Building  
University of Missouri  
Columbia, Missouri 65211

Mr. Robert G. Wright  
Assoc. Judge, Eastern District  
County Court, Callaway County, Missouri  
Route #1  
Fulton, Missouri 65251

Kenneth M. Chackes  
Chackes and Hoare  
Attorney for Joint Intervenors  
314 N. Broadway  
St. Louis, Missouri 63102

Mr. Earl Brown  
School District Superintendent  
Post Office Box 9  
Kingdom City, Missouri 65262

Mr. Samuel J. Birk  
R. R. #1, Box 243  
Morrison, Missouri 65061

Mr. Harold Lottman  
Presiding Judge, Dasconade County  
Route 1  
Owensville, Missouri 65066

Eric A. Eisen, Esq.  
Birch, Horton, Bittner and Moore  
Suite 1100  
1140 Connecticut Avenue, N. W.  
Washington, D. C. 20036

Mr. John G. Reed  
Route #1  
Kingdom City, Missouri 65262



Mr. D. F. Schnell

- 2 -

CALLAWAY  
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cc (cont'd):

Mr. Dan I. Bolef, President  
Kay Drey, Representative  
Board of Directors Coalition for  
the Environment  
St. Louis Region  
6267 Delmar Boulevard  
University City, Missouri 63130

Mr. Donald Bollinger, Member  
Missourians for Safe Energy  
6267 Delmar Boulevard  
University City, Missouri 63130

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

COMANCHE PEAK  
50-445/446

Mr. R. J. Gary  
Executive Vice President and  
General Manager  
Texas Utilities Generating Company  
2001 Bryan Tower  
Dallas, Texas. 75201

cc: Nicholas S. Reynolds, Esq.  
Debevoise & Liberman  
1200 Seventeenth Street, N. W.  
Washington, D. C. 20036

Spencer C. Relyea, Esq.  
Worsham, Forsythe & Sampels  
2001 Bryan Tower  
Dallas, Texas 75201

Mr. Homer C. Schmidt  
Manager - Nuclear Services  
Texas Utilities Services, Inc.  
2001 Bryan Tower  
Dallas, Texas 75201

Mr. H. R. Rock  
Gibbs and Hill, Inc.  
393 Seventh Avenue  
New York, New York 10001

Mr. A. T. Parker  
Westinghouse Electric Corporation  
P. O. Box 355  
Pittsburgh, Pennsylvania 15230

David J. Preister  
Assistant Attorney General  
Environmental Protection Division  
P. O. Box 12548, Capitol Station  
Austin, Texas 78711

Mrs. Juanita Ellis, President  
Citizens Association for Sound  
Energy  
1426 South Polk  
Dallas, Texas 75224

Mr. Robert G. Taylor  
Resident Inspector/Comanche Peak  
Nuclear Power Station  
c/o U. S. Nuclear Regulatory  
Commission  
P. O. Box 38  
Glen Rose, Texas 76043

Mr. John T. Collins  
U. S. NRC, Region IV  
611 Ryan Plaza Drive  
Suite 1000  
Arlington, Texas 76011

Diablo Canyon

Mr. Malcolm H. Furbush  
Vice President - General Counsel  
Pacific Gas & Electric Company  
P. O. Box 7442  
San Francisco, California 94120

cc: Philip A. Crane, Jr., Esq.  
Pacific Gas & Electric Company  
P. O. Box 7442  
San Francisco, California 94120

Janice E. Kerr, Esq.  
California Public Utilities Commission  
350 McAllister Street  
San Francisco, California 94102

Mr. Frederick Eissler, President  
Scenic Shoreline Preservation  
Conference, Inc.  
4623 More Mesa Drive  
Santa Barbara, California 93105

Ms. Elizabeth Apfelberg  
1415 Cozadero  
San Luis Obispo, CA 93401

Mr. Gordon A. Silver  
Ms. Sandra A. Silver  
1760 Alisal Street  
San Luis Obispo, CA 93401

Harry M. Willis, Esq.  
Seymour & Willis  
601 California Street, Suite 2100  
San Francisco, CA 94108

Mr. Richard Hubbard  
MHB Technical Associates  
Suite K  
1725 Hamilton Avenue  
San Jose, CA 96125

Mr. John Marrs, Managing Editor  
San Luis Obispo County Telegram Tribune  
1321 Johnson Avenue  
P. O. Box 112  
San Luis Obispo, CA 93406

Resident Inspector/Diablo Canyon NPS  
c/o U. S. Nuclear Regulatory Commission  
P. O. Box 369  
Avila Beach, California 93424

Ms. Raye Fleming  
1920 Mattie Road  
Shell Beach, California 93440

Joel Reynolds, Esq.  
John R. Phillips, Esq.  
Center for Law in the Public Interest  
10951 West Pico Boulevard  
Third Floor  
Los Angeles, California 90064

Paul C. Valentine, Esq.  
321 Lytton Avenue  
Palo Alto, California 94302

Mr. Byron S. Georgiou  
Legal Affairs Secretary  
Governor's Office  
State Capitol  
Sacramento, California 95814

Herbert H. Brown, Esq.  
Hill, Christopher & Phillips, P.C.  
1900 M Street, N.W.  
Washington, D. C. 20036

Mr. Dick Blankenburg  
Editor & Co-Publisher  
South County Publishing Company  
P. O. Box 460  
Arroyo Grande, California 93420

Mr. James O. Schuyler  
Vice President - Nuclear Generation  
Department  
Pacific Gas & Electric Company  
P. O. Box 7442  
San Francisco, California 94120

Mr. Malcolm H. Furbush

- 2 -

Bruce Norton, Esq.  
Suite 202  
3216 North 3rd Street  
Phoenix, Arizona 85012

Mr. W. C. Gangloff  
Westinghouse-Electric Corporation  
P. O. Box 355  
Pittsburg, Pennsylvania 15230

David F. Fleischaker, Esq.  
P. O. Box 1178  
Oklahoma City, Oklahoma 73101

Arthur C. Gehr, Esq.  
Snell & Wilmer  
3100 Valley Center  
Phoenix, Arizona 85073

Mr. Owen H. Davis, Director  
Federal Agency Relations  
Pacific Gas and Electric Company  
1050 17th Street, N.W.  
Suite 1180  
Washington, D. C. 20036

Regional Administrator - Region V  
U.S. Nuclear Regulatory Commission  
1450 Maria Lane  
Suite 210  
Walnut Creek, California 94596

Dr. Jose Rosset  
3505 Duvall Road  
Austin, Texas 78759

FERMI  
50-341

Mr. Harry Tauber  
Vice President  
Engineering & Construction  
Detroit Edison Company  
2000 Second Avenue  
Detroit, Michigan 48226

cc: Mr. Harry H. Voigt, Esq.  
LeBoeuf, Lamb, Leiby & MacRae  
1333 New Hampshire Avenue, N. W.  
Washington, D. C. 20036

Peter A. Marquardt, Esq.  
Co-Counsel  
The Detroit Edison Company  
2000 Second Avenue  
Detroit, Michigan 48226

Mr. William J. Fahrner  
Project Manager - Fermi 2  
The Detroit Edison Company  
2000 Second Avenue  
Detroit, Michigan 48226

Mr. Larry E. Schuerman  
Detroit Edison Company  
3331 West Big Beaver Road  
Troy, Michigan 48084

John Minock, Esq.  
305 Mapleridge  
Ann Arbor, Michigan 48103

Mr. Bruce Little  
U. S. Nuclear Regulatory Commission  
Resident Inspector's Office  
6450 W. Dixie Highway  
Newport, Michigan 48166

Dr. Wayne Jens  
Detroit Edison Company  
2000 Second Avenue  
Detroit, Michigan 48226

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

FNP

Mr. R. A. Thomas, Manager  
Offshore Power Systems  
P.O. Box 8000  
8000 Arlington Expressway  
Jacksonville, Florida 32211

cc: Vincent W. Campbell, Esq.  
Vice President & General Counsel  
Offshore Power Systems  
P.O. Box 8000  
8000 Arlington Expressway  
Jacksonville, Florida 32211

Thomas M. Daugherty, Esq.  
Offshore Power Systems  
P.O. Box 8000  
8000 Arlington Expressway  
Jacksonville, Florida 32211

Barton Z. Cowan, Esq.  
Eckert, Seamans, Cherin & Mellott  
600 Grant Street, 42nd Floor  
Pittsburgh, Pennsylvania 15219

David S. Fleischaker  
1735 Eye Street  
Suite 709  
Washington, D. C. 20006

Dr. Alden McLellan  
Assistant Commissioner  
State of New Jersey  
Dept. of Environmental Protection  
Labor and Industry Building  
John Fitch Plaza  
Trenton, New Jersey 08625

Keith A. Onsdorff, Esq.  
Miriam N. Span, Esq.  
Assistant Deputy Public Advocates  
520 East State Street  
P.O. Box 141  
Trenton, New Jersey 08625

Carl Valore, Jr., Esq.  
Valore, McAllister, DeBrier,  
Aron & Westmoreland  
Mainland Professional Plaza  
535 Tilton Road  
P.O. Box 152  
Northfield, New Jersey 08225

Dr. Willard W. Rosenberg  
8 North Rumson Avenue  
Margate, New Jersey 08402

Mr. John Williamson  
211 Forest Drive  
Linwood, New Jersey 08221

Harold P. Green, Esq.  
Fried, Frank, Harris, Shriver  
and Kampelman  
Suite 1000, The Watergate 600  
600 New Hampshire Avenue, N.W.  
Washington, D. C. 20037

Nuclear Coordinator  
Office of Merchant Marine Safety  
Commandant (GMMT-4)  
U.S. Coast Guard  
Washington, D. C. 20590

Mr. Mitchell Attalla  
4028 Ponce DeLeon Avenue  
Jacksonville, Florida 32217

Mr. Reg Crowder  
Jacksonville Journal  
P.O. Box 1949  
Jacksonville, Florida 32201

Mr. A. R. Collier

- 2 -

cc: Richard F. Engel  
Deputy Attorney General  
Department of Law and Public  
Safety, CN 112  
36 West State Street  
Trenton, New Jersey 08625

James P. O'Reilly, Regional Administrator  
U.S. Nuclear Regulatory Commission,  
Region II  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Mr. Thomas Jackson  
Vice President  
The Oceanic Society  
Magee Avenue  
Stamford, Connecticut 06902

Indian Point 2/3  
Mr. Leroy W. Sinclair  
Power Authority of the State of New York

cc: Joan Holt, Project Director  
New York Public Interest  
Research Group, Inc.  
5 Beekman Street  
New York, New York 10038

Mr. Charles M. Pratt  
Assistant General Counsel  
Power Authority of the  
State of New York  
10 Columbus Circle  
New York, New York 10019

Ms. Ellyn Weiss  
Sheldon, Harmon and Weiss  
1725 I Street, N.W., Suite 506  
Washington, D. C. 20006

Dr. Lawrence D. Quarles  
Apartment 51  
Kendal at Longwood  
Kennett Square, Pennsylvania 19348

Mr. George M. Wilverding  
Safety Review Committee  
Power Authority of the  
State of New York  
10 Columbus Circle  
New York, New York 10019

Resident Inspector  
Indian Point Nuclear Generating  
U. S. Nuclear Regulatory Commission  
Post Office Box 66  
Buchanan, New York 10511

Mr. J. P. Bayne, Senior Vice President  
Nuclear Generation  
Power Authority of the State  
of New York  
10 Columbus Circle  
New York, New York 10019

Mr. John C. Brons, Resident Manager  
Indian Point 3 Nuclear Power Plant  
P. O. Box 215  
Buchanan, New York 10511

Ezra I. Bialik  
Assistant Attorney General  
Environmental Protection Bureau  
New York State Department of Law  
2 World Trade Center  
New York, New York 10047

Mr. A. Klausmann, Vice President  
Quality Assurance  
Power Authority of the State  
of New York  
10 Columbus Circle  
New York, New York 10019

Mr. D. Halama  
Quality Assurance Superintendent  
Indian Point 3 Nuclear Power Plant  
Post Office Box 215  
Buchanan, New York 10511

Ronald C. Haynes  
Regional Administrator - Region I  
U. S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, Pennsylvania 19406



Indian Point 2/3  
Mr. D. L. Farrar  
Commonwealth Edison Company

cc: Robert J. Vollen, Esquire  
109 North Dearborn Street  
Chicago, Illinois 60602

Dr. Cecil Lue-Hing  
Director of Research and Development  
Metropolitan Sanitary District  
of Greater Chicago  
100 East Erie Street  
Chicago, Illinois 60611

Mr. Phillip P. Steptoe  
Isham, Lincoln and Beale  
Counselors at Law  
Three First National Plaza  
51st Floor  
Chicago, Illinois 60602

Susan N. Sekuler, Esquire  
Assistant Attorney General  
Environmental Control Division  
188 West Randolph Street, Suite 2315  
Chicago, Illinois 60601

U. S. Nuclear Regulatory Commission  
Resident Inspectors Office  
105 Shiloh Blvd.  
Zion, Illinois 60099

James P. Keppler  
Regional Administrator - Region III  
U. S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

MIDLAND (For BNs)

Mr. J. W. Cook  
Vice President  
Consumers Power Company  
1945 West Parnall Road  
Jackson, Michigan 49201

cc: Stewart H. Freeman  
Assistant Attorney General  
State of Michigan Environmental  
Protection Division  
720 Law Building  
Lansing, Michigan 48913

Mr. Roger W. Huston  
Suite 220  
7910 Woodmont Avenue  
Bethesda, Maryland 20814

Mr. R. B. Borsum  
Nuclear Power Generation Division  
Babcock & Wilcox  
7910 Woodmont Avenue, Suite 220  
Bethesda, Maryland 20814

Mr. Don van Farrowe, Chief  
Division of Radiological Health  
Department of Public Health  
P.O. Box 33035  
Lansing, Michigan 48909

U.S. Nuclear Regulatory Commission  
Resident Inspectors Office  
Route 7  
Midland, Michigan 48640

Mr. Paul A. Perry, Secretary  
Consumers Power Company  
212 W. Michigan Avenue  
Jackson, Michigan 49201

Mr. Walt Apley  
c/o Mr. Max Clausen  
Battelle Pacific North West Labs (PNWL)  
Battelle Blvd.  
SIGMA IV Building  
Richland, Washington 99352

Mr. I. Charak, Manager  
NRC Assistance Project  
Argonne National Laboratory  
9700 South Cass Avenue  
Argonne, Illinois 60439

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

Mr. Ron Callen  
Michigan Public Serviced Commission  
6545 Mercantile Way  
P.O. Box 30221  
Lansing, Michigan 48909

Mr. Paul Rau  
Midland Daily News  
124 McDonald Street  
Midland, Michigan 48640

Billie Pirner Garde  
Director, Citizens Clinic  
for Accountable Government  
Government Accountability Project  
Institute for Policy Studies  
1901 Que Street, N.W.  
Washington, D. C. 20009

Commander, Naval Surface Weapons Center  
ATTN: P. C. Huang  
White Oak  
Silver Spring, Maryland 20910

Mr. L. J. Auge, Manager  
Facility Design Engineering  
Energy Technology Engineering Center  
P.O. Box 1449  
Canoga Park, California 91304

Mr. Neil Gehring  
U.S. Corps of Engineers  
NCEED - T  
7th Floor  
477 Michigan Avenue  
Detroit, Michigan 48226

Geotechnical Engineers, Inc.  
ATTN: Dr. Steve J. Poulos  
1017 Main Street  
Winchester, Massachusetts 01890

Palo Verde

Mr. E. E. Van Brunt, Jr.  
Vice President - Nuclear Projects  
Arizona Public Service Company  
P. O. Box 21666  
Phoenix, Arizona 85036

cc: Arthur C. Gehr, Esq.  
Snell & Wilmer  
3100 Valley Center  
Phoenix, Arizona 85073

Regional Administrator-Region V  
U. S. Nuclear Regulatory Commission  
1450 Maria Lane  
Suite 210  
Walnut Creek, California 94596

Charles S. Pierson  
Assistant Attorney General  
200 State Capitol  
1700 West Washington  
Phoenix, Arizona 85007

Charles R. Kocher, Esq., Assistant Counsel  
James A. Boeletto, Esq.  
Southern California Edison Company  
P. O. Box 800  
Rosemead, California 91770

Ms. Margaret Walker  
Deputy Director of Energy Programs  
Economic Planning and Development Office  
1700 West Washington  
Phoenix, Arizona 85007

Mr. Rand L. Greenfield  
Assistant Attorney General  
Bataan Memorial Building  
Santa Fe, New Mexico 87503

Resident Inspector Palo Verde/NPS  
U. S. Nuclear Regulatory Commission  
P. O. Box 21324  
Phoenix, Arizona 85001

Ms. Patricia Lee Hourihan  
6413 S. 26th Street  
Phoenix, Arizona 85040

Lynne A. Bernabei, Esq.  
Harmon & Weiss  
1725 I Street, N. W.  
Suite 506  
Washington, D. C. 20006

PERRY  
50-440/441

Mr. Murray R. Edelman  
Vice President, Nuclear Group  
The Cleveland Electric Illuminating Company  
P. O. Box 5000  
Cleveland, Ohio 44101

cc: Jay Silberg, Esq.  
Shaw, Pittman, Potts & Trowbridge  
1800 M Street, N. W.  
Washington, D. C. 20006

Donald H. Hauser, Esq.  
The Cleveland Electric Illuminating Company  
P. O. Box 5000  
Cleveland, Ohio 44101

Resident Inspector's Office  
U. S. Nuclear Regulatory Commission  
Parmly at Center Road  
Perry, Ohio 44081

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

Donald T. Ezzone, Esq.  
Assistant Prosecuting Attorney  
105 Main Street  
Lake County Administration Center  
Painesville, Ohio 44077

Daniel D. Wilt, Esq.  
P. O. Box 08159  
Cleveland, Ohio 44108

Ms. Sue Hiatt  
OCRE Interim Representative  
8275 Munson  
Mentor, Ohio 44060

Terry Lodge, Esq.  
915 Spitzer Building  
Toledo, Ohio 43604

John G. Cardinal, Esq.  
Prosecuting Attorney  
Ashtabula County Courthouse  
Jefferson, Ohio 44047

San Onofre

Mr. Robert Dietch  
Vice President  
Southern California Edison Company  
2244 Walnut Grove Avenue  
P. O. Box 800 --  
Rosemead, California 91770

Mr. Gary D. Cotton  
Mr. Louis Bernath  
San Diego Gas & Electric Company  
101 Ash Street  
San Diego, California 92112

cc: Charles R. Kocher, Esq.  
James A. Beoletto, Esq.  
Southern California Edison Company  
2244 Walnut Grove Avenue  
P. O. Box 800  
Rosemead, California 91770

Orrick, Herrington & Sutcliffe  
ATTN: David R. Pigott, Esq.  
600 Montgomery Street  
San Francisco, California 94111

Mr. George Carvalho  
City Manager  
City of San Clemente  
100 Avenida Presidio  
San Clemente, California 92672

Alan R. Watts, Esq.  
Rourke & Woodruff  
Suite 1020  
1055 North Main Street  
Santa Ana, California 92701

Lawrence Q. Garcia, Esq.  
California Public Utilities Commission  
5066 State Building  
San Francisco, California 94102

Mr. V. C. Hall  
Combustion Engineering, Inc.  
1000 Prospect Hill Road  
Windsor, Connecticut 06095

Mr. S. McClusky  
Bechtel Power Corporation  
P. O. Box 60860, Terminal Annex  
Los Angeles, California 90060

Mr. Dennis F. Kirsch  
U.S. Nuclear Regulatory Comm. - Reg. V  
1450 Maria Lane, Suite 210  
Walnut Creek, California 94596

Mr. Mark Medford  
Southern California Edison Company  
2244 Walnut Grove Avenue  
P. O. Box 800  
Rosemead, California 91770

Mr. Henry Peters  
San Diego Gas & Electric Company  
P. O. Box 1831  
San Diego, California 92112

Ms. Lyn Harris Hicks  
Advocate for GUARD  
3908 Calle Ariana  
San Clemente, California 92672

Richard J. Wharton, Esq.  
University of San Diego School of Law  
Environmental Law Clinic  
San Diego, California 92110

Phyllis M. Gallagher, Esq.  
Suite 222  
1695 West Crescent Avenue  
Anaheim, California 92701

Mr. A. S. Carstens  
2071 Caminito Circulo Norte  
Mt. La Jolla, California 92037

Charles E. McClung, Jr., Esq.  
Attorney at Law  
24012 Calle de la Plata/Suite 330  
Laguna Hills, California 92653

Resident Inspector, San Onofre/NPS  
c/o U.S. Nuclear Regulatory Commission  
P. O. Box 4329  
San Clemente, California 92672

Regional Administrator-Region V/NRC  
1450 Maria Lane/Suite 210  
Walnut Creek, California 94596

Mr. C. B. Brinkman  
Combustion Engineering, Inc.  
7910 Woodmont Avenue  
Bethesda, Maryland 20814

Mr. M. S. Pollock  
Vice President - Nuclear  
Long Island Lighting Company  
175 East Old Country Road  
Hicksville, New York 11801

cc: Howard L. Blau, Esquire  
Blau and Cohn, PC.  
217 Newbridge Road  
Hicksville, New York 11801

Mr. Jay Dunkleberger  
New York State Energy Office  
Agency Building 2  
Empire State Plaza  
Albany, New York 12223

Energy Research Group, Inc.  
400-1 Totten Pond Road  
Waltham, Massachusetts 02154

Mr. Jeff Smith  
Shoreham Nuclear Power Station  
Post Office Box 618  
Wading River, New York 11792

W. Taylor Reveley, III, Esquire  
Hunton & Williams  
Post Office Box 1535  
Richmond, Virginia 23212

Ralph Shapiro, Esquire  
Cammer & Shapiro  
9 East 40th Street  
New York, New York 10016

Mr. Brian McCaffrey  
Long Island Lighting Company  
175 E. Old Country Road  
Hicksville, New York 11801

Honorable Peter Cohalan  
Suffolk County Executive  
County Executive/Legislative Bldg.  
Veteran's Memorial Highway  
Hauppauge, New York 11788

David Gilmartin, Esquire  
Suffolk County Attorney  
County Executive/Legislative Bldg.  
Veteran's Memorial Highway  
Hauppauge, New York 11788

MHB Technical Associates  
1723 Hamilton Avenue, Suite K  
San Jose, California 95125

Stephen Latham, Esquire  
Twomey, Latham & Shea  
Post Office Box 398  
33 West Second Street  
Riverhead, New York 11901

Matthew J. Kelly, Esquire  
Staff Counsel  
New York State Public Service Commission  
Three Rockefeller Plaza  
Albany, New York 12223

Ezra I. Bialik, Esquire  
Assistant Attorney General  
Environmental Protection Bureau  
New York State Department of Law  
2 World Trade Center  
New York, New York 10047

Resident Inspector  
Shoreham NPS, U.S. NRC  
Post Office Box B  
Rocky Point, New York 11778

Herbert H. Brown, Esquire  
Kirkpatrick, Lockhart, Hill,  
Christopher & Phillips  
1900 M Street, N.W.  
Washington, D.C. 20036

Lawrence Coe Lanpher, Esquire  
Kirkpatrick, Lockhart, Hill,  
Christopher & Phillips  
1900 M Street, N.W.  
Washington, D.C. 20036

Karla J. Letsche, Esquire  
Kirkpatrick, Lockhart, Hill,  
Christopher & Phillips  
1900 M Street, N.W.  
Washington, D.C. 20036

Mr. R. J. Toole  
 Manager, TMI-1  
 GPU Nuclear Corporation  
 P. O. Box 480  
 Middletown, Pennsylvania 17057

Board of Directors  
 P. A. N. E.  
 P. O. Box 268  
 Middletown, Pennsylvania 17057

\*Docketing and Service Section  
 U. S. Nuclear Regulatory Commission  
 Washington, D. C. 20555

Chauncey Kepford  
 Judith H. Johnsrud  
 Environmental Coalition on Nuclear Power  
 433 Orlando Avenue  
 State College, Pennsylvania 16801

\*Judge Reginald L. Gotchy  
 Atomic Safety & Licensing Appeal Board  
 U.S. Nuclear Regulatory Commission  
 Washington, DC 20555

J. B. Lieberman, Esq.  
 Berlock, Israel & Lieberman  
 26 Broadway  
 New York, New York 10004

Mr. Ronald C. Haynes, Regional Administrator  
 U. S. N. R. C., Region I  
 631 Park Avenue  
 King of Prussia, Pennsylvania 19406

ANGRY/TMI-PIRC  
 1037 Maclay Street  
 Harrisburg, Pennsylvania 17103

John Levin, Esq.  
 Pennsylvania Public Utilities  
 Commission  
 Box 3265  
 Harrisburg, Pennsylvania 17120

Jordan D. Cunningham, Esq.  
 Fox, Farr and Cunningham  
 2320 North 2nd Street  
 Harrisburg, Pennsylvania 17110

Ms. Louise Bradford  
 TMIA  
 1011 Green Street  
 Harrisburg, Pennsylvania 17102

Ms. Marjorie M. Aamodt  
 R. D. #5  
 Coatesville, Pennsylvania 19320

Earl B. Hoffman  
 Dauphin County Commissioner  
 Dauphin County Courthouse  
 Front and Market Streets  
 Harrisburg, Pennsylvania 17101

Union of Concerned Scientists  
 c/o - Harmon & Weiss  
 1725 I Street, N. W.  
 Suite 506  
 Washington, D. C. 20006

Mr. Steven C. Sholly  
 Union of Concerned Scientists  
 1346 Connecticut Avenue, N. W.  
 Dupont Circle Building, Suite 1101  
 Washington, D. C. 20036

\* Gary J. Edles, Chairman  
 Atomic Safety & Licensing Appeal  
 Board  
 U.S. Nuclear Regulatory Commission  
 Washington, DC 20555

\* Dr. John H. Buck  
 Atomic Safety & Licensing Appeal  
 Board  
 U.S. Nuclear Regulatory Commission  
 Washington, DC 20555



GPU Nuclear Corporation

- 2 -

Mr. Thomas Gerusky  
Bureau of Radiation Protection  
Department of Environmental Resources  
P. O. Box 2063  
Harrisburg, Pennsylvania 17120

General Counsel  
Federal Emergency Management Agency  
ATTN: Docket Clerk  
1725 I Street, NW  
Washington, DC 20472

Karin W. Carter, Esq.  
505 Executive House  
P. O. Box 2357  
Harrisburg, Pennsylvania 17120

G. F. Trowbridge, Esq.  
Shaw, Pittman, Potts & Trowbridge  
1800 M Street, N.W.  
Washington, D. C. 20036

Dauphin County Office Emergency  
Preparedness  
Court House, Room 7  
Front & Market Streets  
Harrisburg, Pennsylvania 17101

Mr. E. G. Wallace  
Licensing Manager  
GPU Nuclear Corporation  
100 Interpace Parkway  
Parsippany, New Jersey 07054

William S. Jordan, III, Esq.  
Harmon & Weiss  
1725 I Street, NW, Suite 506  
Washington, DC 20006

Ms. Lennie Prough  
U. S. H. R. C. - TMI Site  
P. O. Box 311  
Middletown, Pennsylvania 17057

Ms. Virginia Southard, Chairman  
Citizens for a Safe Environment  
264 Walton Street  
Lemoyne, Pennsylvania 17043

Mr. Robert B. Borsum  
Babcock & Wilcox  
Nuclear Power Generation Division  
Suite 220, 7910 Woodmont Avenue  
Bethesda, Maryland 20814

Mr. David D. Maxwell, Chairman  
Board of Supervisors  
Londonderry Township  
RFD#1 - Geyers Church Road  
Middletown, Pennsylvania 17057

Mr. C. W. Smyth  
Supervisor of Licensing TMI-1  
GPU Nuclear Corporation  
P. O. Box 480  
Middletown, Pennsylvania 17057

Regional Radiation Representative  
EPA Region III  
Curtis Building (Sixth Floor)  
6th and Walnut Streets  
Philadelphia, Pennsylvania 19106

Mr. Richard Conte  
Senior Resident Inspector (TMI-1)  
U.S.N.R.C.  
P. O. Box 311  
Middletown, Pennsylvania 17057

Governor's Office of State Planning  
and Development  
ATTN: Coordinator, Pennsylvania  
State Clearinghouse  
P. O. Box 1323  
Harrisburg, Pennsylvania 17120

WATERFORD

Mr. L. V. Maurin  
Vice President - Nuclear Operations  
Louisiana Power & Light Company  
142 Delaronde Street  
New Orleans, Louisiana 70174

cc: W. Malcolm Stevenson, Esq.  
Monroe & Lemann  
1423 Whitney Building  
New Orleans, Louisiana 70130

Regional Administrator-Region IV  
U. S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive  
Suite 1000  
Arlington, Texas 76012

Mr. E. Blake  
Shaw, Pittman, Potts and Trowbridge  
1800 M Street, NW  
Washington, DC 20036

Mr. Gary L. Groesch  
2257 Bayou Road  
New Orleans, Louisiana 70119

Mr. F. J. Drummond  
Project Manager - Nuclear  
Louisiana Power & Light Company  
142 Delaronde Street  
New Orleans, Louisiana 70174

Mr. D. B. Lester  
Production Engineer  
Louisiana Power & Light Company  
142 Delaronde Street  
New Orleans, Louisiana 70174

Luke Fontana, Esq.  
824 Esplanade Avenue  
New Orleans, Louisiana 70116

Stephen M. Irving, Esq.  
535 North 6th Street  
Baton Rouge, Louisiana 70802

Resident Inspector/Waterford NPS  
P. O. Box 822  
Killona, Louisiana 70066

Dr. D. C. Gibbs  
Middle South Service, Inc.  
P. O. Box 61000  
New Orleans, Louisiana 70161

ZIMMER  
50-358

Mr. Earl A. Borgmann  
Senior Vice President  
Cincinnati Gas and Electric Company  
Post Office Box 960  
Cincinnati, Ohio 45201

cc: Troy B. Conner, Jr., Esq.  
Connor, Moore & Corber  
1747 Pennsylvania Avenue, N. W.  
Washington, D. C. 20006

Mr. William J. Moran  
General Counsel  
Cincinnati Gas and Electric Company  
Post Office Box 960  
Cincinnati, Ohio 45201

Mr. Samuel H. Porter  
Porter, Wright, Morris & Arthur  
37 West Broad Street  
Columbus, Ohio 43215

Mr. James D. Flynn, Manager  
Licensing Environmental Affairs  
Cincinnati Gas & Electric Company  
Post Office Box 960  
Cincinnati, Ohio 45201

David Martin, Esq.  
Office of the Attorney General  
209 St. Clair Street  
First Floor  
Frankfort, Kentucky 40601

Lynn Bernabei, Esq.  
Government Accountability Project/IPS  
1901 Q Street, N. W.  
Washington, D. C. 20009

W. Peter Heile, Esq.  
Assistant City Solicitor  
Room 214, City Hall  
Cincinnati, Ohio 45220

John D. Woliver, Esq.  
Legal Aid Security  
Post Office Box #47  
55 Kilgore Street  
Batavia, Ohio 45103

Mr. John E. Dolan  
Vice Chairman - Engineering and  
Construction  
American Electric Power Company, Inc.  
180 Broad Street  
Columbus, Ohio 43215

Deborah Faber Webb  
7967 Alexandria Pike  
Alexandria, Kentucky 41001

Andrew B. Dennison, Esq.  
200 Main Street  
Batavia, Ohio 45103

George E. Pattison, Esq.  
Clermont County Prosecuting Attorney  
462 Main Street  
Batavia, Ohio 45103

Mr. Waldman Christianson  
Resident Inspector/Zimmer  
RFD 1, Post Office Box 2021  
U. S. Route 52  
Moscow, Ohio 45153

Mr. John Youkilis  
Office of the Honorable William  
Gradison  
United States House of Representatives  
Washington, D. C. 20515

Timothy S. Hogan, Jr., Chairman  
Board of Commissioners  
50 Market Street, Clermont County  
Batavia, Ohio 45103

Lawrence R. Fisse, Esq.  
Assistant Prosecuting Attorney  
462 Main Street  
Batavia, Ohio 45103

Mr. James G. Keppler  
U. S. NRC, Region III  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

ZIMMER  
50-358

- 2 -

Edward F. Schweibinz  
U. S. NRC, Region III  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Mr. Steven G. Smith  
The Dayton Power and Light Company  
P. O. Box 1247  
Dayton, Ohio 45401

Mr. James P. Fenstermaker  
Columbus and Southern Ohio Electric  
Company  
215 North Front Street  
Columbus, Ohio 43215