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MEMORANDUM FOR: J. P. Knight, Assistant Director for Components and Structures Engineering

EAdensam

FROM: T. M. Novak, Assistant Director for Division of Licensing

SUBJECT: CSE INPUT TO MIDLAND SSER #2

Your memorandum of August 16, 1982 forwarded the CSE input for Midland SSER #2 documenting conclusion of the staff's lengthy review of soils settlement problems. As you know, the staff's review in this area has been without precedence, not only in terms of manpower and consulting resources, but also in terms of review detail due to the uniqueness, extent and complexity of the soils problem and its solution. The issue has been one of high exposure throughout the industry since Mid-1970 and the SSER will undoubtedly be of interest to a wide and varied audience. Documentation of this staff review, therefore, will have special significance as a record and reference source, both now and in the future, in addition to its significance as a principal hearing document.

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As a first step in this direction, DL and technical editors have made some improvements to the August input by the enclosed SSER. However, much more is needed to produce the final report that this special review deserves. The Enclosure identifies some of the deficiencies about which we have concerns. We are continuing to review the enclosed SSER to identify more specific areas where improvement is needed, and will provide these to your staff when we are completed with this effort. However, we ask that you provide DL with modifications of the attached SSER draft that respond to these concerns on an expeditious basis consistent with fulfilling our needs.

Thomas M. Novak, Assistant Director for Licensing
Division of Licensing

Enclosure:
As stated

cc: See next page

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DATE	08/27/82	08/25/82	08/27/82			

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 G. Lear
 F. Schauer
 R. Bosnak
 L. Heller
 P. Kuo
 M. Fliegel
 W. Paton
 E. Adensan
 D. Hood
 R. Hernan
 R. Gonzales
 H. Singh, COE
 S. Poulos, GEI
 J. Kane
 G. Harstead
 J. Matra
 F. Rinaldi
 H. Brammer
 P. Chen

cc w/o encl:
 R. Jackson
 E. Sullivan
 N. Romney

OFFICE ▶	.....	.....	.....	.....	.....	.....	.....
SURNAME ▶	.....	.....	.....	.....	.....	.....	.....
DATE ▶	.....	.....	.....	.....	.....	.....	.....

COMMENTS ON MIDLAND SSER #2

1. Each of the licensing conditions previously identified for staff approval of the Auxiliary Building should be covered by the SER (see Table A-20 in staff's testimony at December 3, 1981 Hearing, Transcript 5839, as corrected at pp. 5820-5821).
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3. Writeup needed describing seismic margin study, status and staff position on applicant's ongoing effort.
4. Several sections in 3.8, and some elsewhere, refer to applicant's calculations (sometimes at an audit) as the basis for staff acceptance, but gives no discussion of that calculation sufficient to establish it's basis of acceptance. This deficiency is particularly acute because the referenced calculations are not part of the published record.
5. No clear account of the construction activities authorized by the SSER is given as directed by the Board (May 7, 1982 Order).
6. Several areas need conclusions and bases.
7. The sliding analysis for the SWPS is not addressed.
8. Several items (see SSER Section 1.7 for summary) remain open for which little additional effort appears to be needed (a phone call) to close them out. Also, some of the "soils settlement" open items from 1.7 of the SER are not addressed.
9. Some items identified at the front of the writeups as having been reviewed are not subsequently discussed.
10. Section 3.9 on underground piping needs to be reorganized and restructured for easier reading. An example of this problem is given on SSER page 3-32:

"(9) The monitoring programs of (6) - (8) above will provide the same assumption as (5) above."



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

AUG 27 1982

MEMORANDUM FOR: J. P. Knight, Assistant Director for
Components and Structures Engineering

FROM: T. M. Novak, Assistant Director for
Division of Licensing

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A handwritten signature in cursive script, appearing to read "Tom Novak".

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: See next page

~~8209230536~~

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cc w/encl:
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W. Paton
E. Adensam
D. Hood
R. Hernan
R. Gonzales
H. Singh, COE
S. Poulos, GEI
J. Kane
G. Harstead
J. Matra
F. Rinaldi
H. Brammer
P. Chen

cc w/o encl:
R. Jackson
E. Sullivan
N. Romney



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

AUG 27 1982

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FROM: T. M. Novak, Assistant Director for
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A handwritten signature in cursive script, appearing to read "T M Novak".

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: See next page

8249234536

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cc w/o encl:

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MEMORANDUM FOR: J. P. Knight, Assistant Director for
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FROM: T. M. Novak, Assistant Director for
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Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

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8/25/82

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EAdensam
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RHernan
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TNovak

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FROM: T. M. Novak, Assistant Director for
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Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

DL:LB#4 DL:LB#4 AD:1/DL
DHood:eb EAdensam TMNovak

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cc w/encl:
R. Vollmer
D. Eisenhut
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L. Heller
P. Kuo
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J. Matra
F. Rinaldi
H. Brammer
P. Chen

cc w/o encl:
R. Jackson
E. Sullivan
N. Romney

*Superseded by J.P. Knight
memo Dated 7/27*

*8/23/82
hmc*

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Docket Nos. 50-329/330
LB #4 r/f
MDuncan
T. Novak

Docket Nos: 50-329
and 50-330

MEMORANDUM FOR: L. Rubenstein, Assistant Director for Core and Plant Systems
T. Speis, Assistant Director for Reactor Safety
R. Warnick, Region III
J. P. Knight, Assistant Director for Components and Structures Engineering
W. Paton, OELD

FROM: Thomas M. Novak, Assistant Director
for Licensing, DL

SUBJECT: MIDLAND 1 AND 2 SSER #2

Attached for your concurrence prior to issuance is the second supplement to the Safety Evaluation Report for the Midland Plant. This SSER closes some of the open and confirmatory issues from the SSER. The open items closed relate to soil settlement issues. Contributors to this SSER are listed in Appendix E.

The date given the Licensing Board for publication of this SSER is August 27, 1982, and the subsequent soils hearing (Oct. 5-8 and 29-22, 1982) has been scheduled based upon this date. Please mark any changes associated with your concurrence on the attached SSER copy, and return to the project manager, Darl Hood (492-8474, Room 118 of the Phillips Annex) by COB August 25, 1982, along with indication of your approval. Changes received by this time will be incorporated into the final copy.

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

- | | |
|----------------|------------|
| cc: R. Vollmer | F. Schauer |
| D. Eisenhut | R. Bosnak |
| J. Keppler | G. Lear |
| R. Mattson | B. Sheron |
| E. Adensam | O. Parr |
| R. Hernan | E. Goodwin |
| D. Hood | R. Warnick |
| J. Scinto | |

DL:LB #4	DL:LB #4	AD:L:DL
DHood/hmc	EAdensam	Novak
8/ /82	8/ /82	8/ /82

MEETING SUMMARY DISTRIBUTION

September 22, 1982

midland
Sept 2, 1982

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Docket No(s): 50-329/330 OM, OL
NRC/PDR
Local PDR
TIC/NSIC/TERA JKeppler
LB #1 r/f WPaton
Attorney, OELD RWarnick
OIE RVollmer
E. Adensam
Project Manager DHood
Licensing Assistant MDuncan

NRC Participants:

T. Novak
D. Hood
W. Shafer (RIII)

bcc: Applicant & Service List

September 22, 1982

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

APPLICANT: Consumers Power Company
FACILITY: Midland Plant, Units 1 and 2
SUBJECT: SUMMARY OF SEPTEMBER 8, 1982, MEETING ON
SOILS-RELATED QUALITY ASSURANCE IMPROVEMENTS

On September 8, 1982, the NRC staff met in Bethesda, Maryland with Mr. J. Mooney of Consumers Power Company (the Applicant) to discuss measures being considered to assure successful implementation of the quality plan for the Midland soils remedial work. Meeting attendees are listed in Enclosure 1.

During a September 2, 1982, meeting between NRC management and CPCo management and during an earlier SALP meeting, the NRC indicated that implementation of the quality assurance program needs to be improved, especially in the soils remedial areas. Mr. Mooney noted that in response to these NRC concerns, he is preparing a letter to address measures which will be taken to gauge and assure the successful implementation of the quality program, with particular emphasis in the soils areas. The purpose of the meeting was to discuss a preliminary draft of the letter (Enclosure 2) in the soils areas. Another letter covering the total Midland Quality Program implementation is also being drafted by Mr. Mooney.

Mr. Mooney expects to issue his letters in about a week.

1-1
Darl S. Hood, Project Manager
Licensing Branch No. 4
Division of Licensing

Enclosures:
As stated

cc: See next page

~~8209270054~~ *12 pp.*

OFFICE	DL:LB #4	LA:DL:LB #4	DL:LB #4	ADW:DL			
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DATE	9/16/82	9/ /82	9/17/82	9/19/82			

MIDLAND

Mr. J. W. Cook
Vice President
Consumers Power Company
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Ronald G. Zamarin, Esq.
Alan S. Farnell, Esq.
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Ms. Mary Sinclair
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Stewart H. Freeman
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Lee L. Bishop
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Mr. Don van Farrowe, Chief
Division of Radiological Health
Department of Public Health
P.O. Box 33035
Lansing, Michigan 48909

Mr. Steve Gadler
2120 Carter Avenue
St. Paul, Minnesota 55108

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

Ms. Barbara Stamiris
5795 N. River
Freeland, Michigan 48623

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.
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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 Service Commission
6545 Mercantile Way
P.O. Box 30221
Lansing, Michigan 48909

Mr. J. W. Cook

- 2 -

cc: Commander, Naval Surface Weapons Center
ATTN: P. C. Huang
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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
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Detroit, Michigan 48226

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Atomic Safety & Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Frederick P. Cowan
Apt. B-125
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Boca Raton, Florida 33433

Jerry Harbour, Esq.
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

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

ENCLOSURE 1

ATTENDEES

September 8, 1982

NRC

T. Novak
D. Hood
W. Shafer (RIII)

CPCo

J. Mooney
J. Cook (part time via telephone)

OFFICE ▶	.....	.....	.....	.....	.....	.....	.....
SURNAME ▶	.....	.....	.....	.....	.....	.....	.....
DATE ▶	.....	.....	.....	.....	.....	.....	.....



Consumers
Power
Company

James W Cook
Vice President - Projects, Engineering
and Construction

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

September 7, 1982

*Received during Meeting
of September 8, 1982*

Harold R Denton, Director
Office of Nuclear Reactor Regulation
Division of Licensing
US Nuclear Regulatory Commission
Washington, DC 20555

MIDLAND NUCLEAR COGENERATION PLANT
MIDLAND DOCKET NOS 50-329, 50-330
RESPONSE TO OPEN ITEMS OF DRAFT SER
FILE 0485.16 SERIAL 19158

DRAFT

This letter summarizes Consumers Power Company's discussions with the NRC management regarding our mutual desire to implement a successful quality program for the Midland soils remedial work.

The 1980/1981 SALP Report, presented to Consumers in late April of this year, indicated that activities in the soils area should receive more inspection effort on the part of both the NRC and CP Co. Follow-up discussions with the NRR staff and Region III Inspectors led to the conclusion that the Quality Program and its definition was adequate; however, there was concern that certain aspects were not being or might not be satisfactorily implemented. This was corroborated by the fact that the majority of the NRCs recent inspection findings at the Midland Site were in the soils area.

oc0982-2607a102

DRAFT

Consumers Power has performed an in-depth review of all aspects of the implementation plans for the Midland Soils work activities. This review included the areas of design and construction requirements and plans, organization and personnel, project controls and management involvement. The results of this review and the proposed steps for the successful implementation of the Quality Program were discussed with the NRC management in a meeting held in Chicago on September 2, 1982. In addition, because of the expanded underpinning activities scheduled to begin shortly, Consumers proposes to retain a qualified third party for an assessment of the initial phase of the implementation of these work activities. The highlights of the September 2 discussions are presented in the following paragraphs.

The design for the required remedial activities is in an advanced state; design details and adequacy have been reviewed by numerous organizations. A special ACRS Subcommittee reviewed the soils activities and concluded that there were no open items, while commenting favorably on the thoroughness and conservatism of the review and remedial approaches. Numerous submittals to the NRC have been presented to clarify the design intent. The NRC Staff has subsequently completed its detailed review of all design aspects, has reached the conclusion that no open issues remain, and is in the process of issuing an SSER. Following-up on design activities, Bechtel has assigned to the site a design team comprised of experienced structural and geotechnical engineers under the Resident Engineer. This team will monitor and review the field implementation, resolve on a timely basis routine construction questions requiring engineering response and immediately administer contingency plans immediately if any problem should arise during the underpinning work.

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DRAFT

Following, coupled with an effective design process, the next step in quality performance of the soils remedial work involves a system to assure that all design requirements and commitments are properly reflected in the final product. To this end, all soils activities covered by the ASLB Order of April 30, 1982 are "Q-listed" and are covered under soils-specific QA plans. These require that appropriate procedures are in place to accomplish the work in a quality manner successfully and that detailed inspection plans and over-inspection plans have been developed and are utilized. Additionally, the Work Authorization Procedure and Work Permit System insure the NRC and CP Co have specifically approved and released the work.

To assure that all commitments made to the NRC are properly accounted for in design documents, Consumers reviews written records of commitments and incorporates them in design detail. The Project is also undertaking a review of past correspondence to create a computer listing of all commitments not already placed in construction documents. This computer list will be periodically reviewed to insure that commitments are incorporated in design or construction documents in a timely fashion.

Another aspect of the Company's quality implementation program calls for an efficient, integrated quality organization staffed by qualified, experienced personnel. The present project organization provides single-point accountability, dedicated personnel, minimum interfaces - particularly at the working level, and a quality organization integrating quality assurance and quality control. This organization is staffed by personnel with the experience

DRAFT

necessary to successfully accomplish the work. (The qualifications of key personnel were discussed in more detail in our recent meeting.)

To enhance the performance of key project organizations, the Company will maintain day-to-day control over scheduling, both through the construction approval process and by frequent meetings with the involved contractors and subcontractors. Each week, underpinning subcontractors will present proposed construction work to the Company. In addition, to reduce schedule pressures on involved subcontractors, all subcontracts were entered into on a time-material basis. This should improve subcontractor attention to detail in performance of specific construction activities.

Another important element of the proposed soils implementation plan involves employee training. The training program, which includes all organization and personnel, covers both general training in quality and specific training relative to the construction procedures. More specifically, all personnel associated with Remedial Soils work have attended a special Quality Assurance Indoctrination Session. This includes Bechtel Remedial Soils Group, Bechtel QC, MPQAD, Mergentime and Spencer, White and Prentis (SW&P) personnel down to the craft foreman level. This training consists of one three-hour session covering Federal Nuclear Regulations, the NRC, Quality Programs in general, and the Remedial Soils Quality Plan in detail. In addition to the forementioned training, both Mergentime and SW&P Procedures for Quality Related Training require specific training prior to initiating any quality related construction activity. The extent of this training, and identification of individuals to receive it, are spelled out in

the each separate procedures governing quality related activities. Training requirements are listed in the prerequisites section of each procedure, and are QC and QA Hold Points, which must be signed by a QC and QA representative prior to the beginning of relevant activities.

Beyond training, an additional measure to improve performance involves the creation of a new Quality Improvement Program (QIP) for the soils project. To launch their effort, an indoctrination program will be presented to all individuals, stressing the absolutes of Quality and the concept of "Doing it right the first time." Measures specific to soils will be developed for those critical areas which are indicative of a "quality product". Tracking these activities will provide an indication of the effectiveness of the program. The QIP will provide mechanisms for individual "feedback" and will enhance existing QIP programs.

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oc0982-2607a102

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Complementing the enhanced CP Co management role, NRC Region Management overview of the construction process will be assured by monthly meeting, agreed upon by the Region, to overview the results of the quality program and the progress of the soils project. These meetings will cover any or all aspects of the project of general or special interest to the NRC management.

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Based on the discussion outlined above, CP Co believes that the soils program has been thoroughly and critically evaluated, and that all prerequisites for successful implementation have been or are being accomplished. The Company's program, with the initial overview from the independent implementation assessment, and the continuing overview by the NRC staff and management should provide proper assurance that the remedial soils activities will be successfully completed.

JWC/JAM/cl

CC Atomic Safety and Licensing Appeal Board

CBechhoefer, ASLB, w/o
MMCherry, Esq, w/o
FPCowan, ASLB, w/o
RJCook, Midland Resident Inspector, w/o
SGadler, w/o
JHarbour, ASLB, w/o
GHarstead, Harstead Engineering, w/a
DSHood, NRC, w/a (2)
DFJudd, B&W, w/o
JDKane, NRC, w/a
FJKelley, Eq, w/o
RBLandsman, NRC Region III, w/a
WHMarshall, w/o
JPMatra, Naval Surface Weapons Center, w/a
WOtto, Army Corps of Engineers, w/o
WDPaton, Esq, w/o
SJPoulos, Geotechnical Engineers, w/a
FRinaldi, NRC, w/a
HSingh, Army Corps of Engineers, w/a
BStamiris, w/o

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oc0982-2607a102

CONSUMERS POWER COMPANY

Midland Units 1 and 2
Docket No 50-329, 50-330

Letter Serial Dated

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

CONSUMERS POWER COMPANY

By -

J W Cook, Vice President
Projects, Engineering and Construction

Sworn and subscribed before me this ____ day of _____.

Notary Public
Jackson County, Michigan

My Commission Expires _____

oc0982-2607a102

DRAFT

CONSUMERS POWER COMPANY

Midland Units 1 and 2
Docket No 50-329, 50-330

Letter Serial Dated

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CONSUMERS POWER COMPANY

By /s/ J W Cook

J W Cook, Vice President
Projects, Engineering and Construction

Sworn and subscribed before me this ____ day of _____.

/s/ Barbara P Townsend

Notary Public
Jackson County, Michigan

My Commission Expires _____

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oc0982-2607a102



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

September 22, 1982

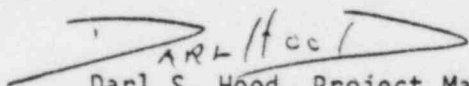
Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

APPLICANT: Consumers Power Company
FACILITY: Midland Plant, Units 1 and 2
SUBJECT: SUMMARY OF SEPTEMBER 8, 1982, MEETING ON
SOILS-RELATED QUALITY ASSURANCE IMPROVEMENTS

On September 8, 1982, the NRC staff met in Bethesda, Maryland with Mr. J. Mooney of Consumers Power Company (the Applicant) to discuss measures being considered to assure successful implementation of the quality plan for the Midland soils remedial work. Meeting attendees are listed in Enclosure 1.

During a September 2, 1982, meeting between NRC management and CPCo management and during an earlier SALP meeting, the NRC indicated that implementation of the quality assurance program needs to be improved, especially in the soils remedial areas. Mr. Mooney noted that in response to these NRC concerns, he is preparing a letter to address measures which will be taken to gauge and assure the successful implementation of the quality program, with particular emphasis in the soils areas. The purpose of the meeting was to discuss a preliminary draft of the letter (Enclosure 2) in the soils areas. Another letter covering the total Midland Quality Program implementation is also being drafted by Mr. Mooney.

Mr. Mooney expects to issue his letters in about a week.


Darl S. Hood, Project Manager
Licensing Branch No. 4
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Enclosures:
As stated

cc: See next page

~~8209270019~~ 12pp.

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Mr. J. W. Cook

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Geotechnical Engineers, Inc.
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ENCLOSURE 1

ATTENDEES

September 8, 1982

NRC

T. Novak
D. Hood
W. Shafer (RIII)

CPCo

J. Mooney
J. Cook (part time via telephone)

Enclosure 2



**Consumers
Power
Company**

James W Cook
Vice President - Projects, Engineering
and Construction

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

September 7, 1982

*Received during Meeting
of September 8, 1982*

Harold R Denton, Director
Office of Nuclear Reactor Regulation
Division of Licensing
US Nuclear Regulatory Commission
Washington, DC 20555

MIDLAND NUCLEAR COGENERATION PLANT
MIDLAND DOCKET NOS 50-329, 50-330
RESPONSE TO OPEN ITEMS OF DRAFT SER
FILE 0485.16 SERIAL 19158

DRAFT

This letter summarizes Consumers Power Company's discussions with the NRC management regarding our mutual desire to implement a successful quality program for the Midland soils remedial work.

The 1980/1981 SALP Report, presented to Consumers in late April of this year, indicated that activities in the soils area should receive more inspection effort on the part of both the NRC and CP Co. Follow-up discussions with the NRR staff and Region III Inspectors led to the conclusion that the Quality Program and its definition was adequate; however, there was concern that certain aspects were not being or might not be satisfactorily implemented. This was corroborated by the fact that the majority of the NRCs recent inspection findings at the Midland Site were in the soils area.

oc0982-2607a102

DRAFT

Consumers Power has performed an in-depth review of all aspects of the implementation plans for the Midland Soils work activities. This review included the areas of design and construction requirements and plans, organization and personnel, project controls and management involvement. The results of this review and the proposed steps for the successful implementation of the Quality Program were discussed with the NRC management in a meeting held in Chicago on September 2, 1982. In addition, because of the expanded underpinning activities scheduled to begin shortly, Consumers proposes to retain a qualified third party for an assessment of the initial phase of the implementation of these work activities. The highlights of the September 2 discussions are presented in the following paragraphs.

The design for the required remedial activities is in an advanced state; design details and adequacy have been reviewed by numerous organizations. A special ACRS Subcommittee reviewed the soils activities and concluded that there were no open items, while commenting favorably on the thoroughness and conservatism of the review and remedial approaches. Numerous submittals to the NRC have been presented to clarify the design intent. The NRC Staff has subsequently completed its detailed review of all design aspects, has reached the conclusion that no open issues remain, and is in the process of issuing an SSER. Following-up on design activities, Bechtel has assigned to the site a design team comprised of experienced structural and geotechnical engineers under the Resident Engineer. This team will monitor and review the field implementation, resolve on a timely basis routine construction questions requiring engineering response and immediately administer contingency plans immediately if any problem should arise during the underpinning work.

oc0982-2607a102

DRAFT

Following, coupled with an effective design process, the next step in quality performance of the soils remedial work involves a system to assure that all design requirements and commitments are properly reflected in the final product. To this end, all soils activities covered by the ASLB Order of April 30, 1982 are "Q-listed" and are covered under soils-specific QA plans. These require that appropriate procedures are in place to accomplish the work in a quality manner successfully and that detailed inspection plans and over-inspection plans have been developed and are utilized. Additionally, the Work Authorization Procedure and Work Permit System insure the NRC and CP Co have specifically approved and released the work.

To assure that all commitments made to the NRC are properly accounted for in design documents, Consumers reviews written records of commitments and incorporates them in design detail. The Project is also undertaking a review of past correspondence to create a computer listing of all commitments not already placed in construction documents. This computer list will be periodically reviewed to insure that commitments are incorporated in design or construction documents in a timely fashion.

Another aspect of the Company's quality implementation program calls for an efficient, integrated quality organization staffed by qualified, experienced personnel. The present project organization provides single-point accountability, dedicated personnel, minimum interfaces - particularly at the working level, and a quality organization integrating quality assurance and quality control. This organization is staffed by personnel with the experience

DRAFT

necessary to successfully accomplish the work. (The qualifications of key personnel were discussed in more detail in our recent meeting.)

To enhance the performance of key project organizations, the Company will maintain day-to-day control over scheduling, both through the construction approval process and by frequent meetings with the involved contractors and subcontractors. Each week, underpinning subcontractors will present proposed construction work to the Company. In addition, to reduce schedule pressures on involved subcontractors, all subcontracts were entered into on a time-material basis. This should improve subcontractor attention to detail in performance of specific construction activities.

Another important element of the proposed soils implementation plan involves employee training. The training program, which includes all organization and personnel, covers both general training in quality and specific training relative to the construction procedures. More specifically, all personnel associated with Remedial Soils work have attended a special Quality Assurance Indoctrination Session. This includes Bechtel Remedial Soils Group, Bechtel QC, MPQAD, Mergentime and Spencer, White and Prentis (SW&P) personnel down to the craft foreman level. This training consists of one three-hour session covering Federal Nuclear Regulations, the NRC, Quality Programs in general, and the Remedial Soils Quality Plan in detail. In addition to the forementioned training, both Mergentime and SW&P Procedures for Quality Related Training require specific training prior to initiating any quality related construction activity. The extent of this training, and identification of individuals to receive it, are spelled out in

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JWC/JAM/cl

CC Atomic Safety and Licensing Appeal Board

CBechnoefer, ASLB, w/o
 MMCherry, Esq, w/o
 FPCowan, ASLB, w/o
 RJCook, Midland Resident Inspector, w/o
 SGadler, w/o
 JHarbour, ASLB, w/o
 GHarstead, Harstead Engineering, w/a
 DSHood, NRC, w/a (2)
 DFJudd, B&W, w/o
 JDKane, NRC, w/a
 FJKelley, Ewq, w/o
 RBLandsman, NRC Region III, w/a
 WHMarshall, w/o
 JPMatra, Naval Surface Weapons Center, w/a
 WOtto, Army Corps of Engineers, w/o
 WDPaton, Esq, w/o
 SJPoulos, Geotechnical Engineers, w/a
 FRinaldi, NRC, w/a
 HSingh, Army Corps of Engineers, w/a
 BStamiris, w/o

DRAFT

oc0982-2607a102

CONSUMERS POWER COMPANY

Midland Units 1 and 2
Docket No 50-329, 50-330

Letter Serial Dated

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

CONSUMERS POWER COMPANY

By

J W Cook, Vice President
Projects, Engineering and Construction

Sworn and subscribed before me this ____ day of _____.

Notary Public
Jackson County, Michigan

My Commission Expires _____

oc0982-2607a102

DRAFT

CONSUMERS POWER COMPANY

Midland Units 1 and 2
Docket No 50-329, 50-330

Letter Serial Dated

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CONSUMERS POWER COMPANY

By /s/ J W Cook

J W Cook, Vice President
Projects, Engineering and Construction

Sworn and subscribed before me this ____ day of _____.

/s/ Barbara P Townsend

Notary Public
Jackson County, Michigan

My Commission Expires _____

DRAFT

oc0982-2607a102



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

September 22, 1982

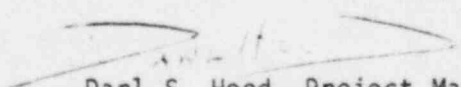
Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

APPLICANT: Consumers Power Company
FACILITY: Midland Plant, Units 1 and 2
SUBJECT: SUMMARY OF SEPTEMBER 8, 1982, MEETING ON
SOILS-RELATED QUALITY ASSURANCE IMPROVEMENTS

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Darl S. Hood, Project Manager
Licensing Branch No. 4
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Enclosures:
As stated

cc: See next page

~~8209270014~~

12 pp.

MIDLAND

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ENCLOSURE 1

ATTENDEES

September 8, 1982

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T. Novak
D. Hood
W. Shafer (RIII)

CPCo

J. Mooney
J. Cook (part time via telephone)

Enclosure 2



James W Cook
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September 7, 1982

*Received during Meeting
of September 8, 1982*

Harold R Denton, Director
Office of Nuclear Reactor Regulation
Division of Licensing
US Nuclear Regulatory Commission
Washington, DC 20555

MIDLAND NUCLEAR COGENERATION PLANT
MIDLAND DOCKET NOS 50-329, 50-330
RESPONSE TO OPEN ITEMS OF DRAFT SER
FILE 0485.16 SERIAL 19158

DRAFT

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oc0982-2607a102

DRAFT

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oc0982-2607a102

DRAFT

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Another aspect of the Company's quality implementation program calls for an efficient, integrated quality organization staffed by qualified, experienced personnel. The present project organization provides single-point accountability, dedicated personnel, minimum interfaces - particularly at the working level, and a quality organization integrating quality assurance and quality control. This organization is staffed by personnel with the experience

DRAFT

necessary to successfully accomplish the work. (The qualifications of key personnel were discussed in more detail in our recent meeting.)

To enhance the performance of key project organizations, the Company will maintain day-to-day control over scheduling, both through the construction approval process and by frequent meetings with the involved contractors and subcontractors. Each week, underpinning subcontractors will present proposed construction work to the Company. In addition, to reduce schedule pressures on involved subcontractors, all subcontracts were entered into on a time-material basis. This should improve subcontractor attention to detail in performance of specific construction activities.

Another important element of the proposed soils implementation plan involves employee training. The training program, which includes all organization and personnel, covers both general training in quality and specific training relative to the construction procedures. More specifically, all personnel associated with Remedial Soils work have attended a special Quality Assurance Indoctrination Session. This includes Bechtel Remedial Soils Group, Bechtel QC, MPQAD, Mergentime and Spencer, White and Prentis (SW&P) personnel down to the craft foreman level. This training consists of one three-hour session covering Federal Nuclear Regulations, the NRC, Quality Programs in general, and the Remedial Soils Quality Plan in detail. In addition to the forementioned training, both Mergentime and SW&P Procedures for Quality Related Training require specific training prior to initiating any quality related construction activity. The extent of this training, and identification of individuals to receive it, are spelled out in

the each separate procedures governing quality related activities. Training requirements are listed in the prerequisites section of each procedure, and are QC and QA Hold Points, which must be signed by a QC and QA representative prior to the beginning of relevant activities.

Beyond training, an additional measure to improve performance involves the creation of a new Quality Improvement Program (QIP) for the soils project. To launch their effort, an indoctrination program will be presented to all individuals, stressing the absolutes of Quality and the concept of "Doing it right the first time." Measures specific to soils will be developed for those critical areas which are indicative of a "quality product". Tracking these activities will provide an indication of the effectiveness of the program. The QIP will provide mechanisms for individual "feedback" and will enhance existing QIP programs.

In addition to embracing well-defined design and implementation requirements, a qualified organization and strict performance standards, the soils remedial work will include a high level of senior management involvement. Towards this end, project senior management will conduct weekly in-depth reviews on site of all aspects of the work including quality and implementation of commitments. The Company's CEO is briefed on a regular basis and schedules bi-monthly briefings on all aspects of the project including soils. During the bi-monthly briefings the CEO tours the Midland site.

Complementing the enhanced CP Co management role, NRC Region Management overview of the construction process will be assured by monthly meeting, agreed upon by the Region, to overview the results of the quality program and the progress of the soils project. These meetings will cover any or all aspects of the project of general or special interest to the NRC management.

A final element of the Company's of quality implementation effort is the establishing of an independent appraisal program. This program is independent of the design and construction effort and will assess implementation during the initial three months of the underpinning of the auxiliary building or longer if circumstance warrant. This independent appraisal program implementation will be in place prior to starting Phase 3, which is defined as starting with the removal of soil for the grillage beams at Piers East and West #8 (Piers E/W8 are installed as Phase 2).

The independent appraisal will be conducted by a team of nuclear plant construction and quality assurance experts. This team will be supplemented by the addition of an underpinning consultant who will review the design documents, construction plans and construction itself to assure not only that the design intent is being implemented but also that the construction is consistent with industry standards. The assesment will further assure that the QC program is being implemented satisfactorily and that the construction itself is being implemented in accordance with the construction documents. Contract negotiations are in process with Stone and Webster to assume the lead role in this appraisal. They will be assisted by Parsons, Brinkerhoff, Quade and Douglas, Inc who will provide technical expertise.

Based on the discussion outlined above, CP Co believes that the soils program has been thoroughly and critically evaluated, and that all prerequisites for successful implementation have been or are being accomplished. The Company's program, with the initial overview from the independent implementation assessment, and the continuing overview by the NRC staff and management should provide proper assurance that the remedial soils activities will be successfully completed.

JWC/JAM/cl

CC Atomic Safety and Licensing Appeal Board
CBechhoefer, ASLB, w/o
MMCherry, Esq, w/o
FPCowan, AGLB, w/o
RJCook, Midland Resident Inspector, w/o
SGadler, w/o
JHarbour, ASLB, w/o
GHarstead, Harstead Engineering, w/a
DSHood, NRC, w/a (2)
DFJudd, B&W, w/o
JDKane, NRC, w/a
FJKelley, Ewq, w/o
RBLandsman, NRC Region III, w/a
WHMarshall, w/o
JPMatra, Naval Surface Weapons Center, w/a
WOTTO, Army Corps of Engineers, w/o
WDPaton, Esq, w/o
SJPoulos, Geotechnical Engineers, w/a
FRinaldi, NRC, w/a
HSingh, Army Corps of Engineers, w/a
BSTamiris, w/o

DRAFT

oc0982-2607a102

CONSUMERS POWER COMPANY

Midland Units 1 and 2
Docket No 50-329, 50-330

Letter Serial Dated

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

CONSUMERS POWER COMPANY

By

J W Cook, Vice President
Projects, Engineering and Construction

Sworn and subscribed before me this ____ day of _____.

Notary Public
Jackson County, Michigan

My Commission Expires _____

oc0982-2607a102

DRAFT

CONSUMERS POWER COMPANY

Midland Units 1 and 2
Docket No 50-329, 50-330

Letter Serial Dated

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

CONSUMERS POWER COMPANY

By /s/ J W Cook

J W Cook, Vice President
Projects, Engineering and Construction

Sworn and subscribed before me this ____ day of _____.

/s/ Barbara P Townsend

Notary Public
Jackson County, Michigan

My Commission Expires _____

DRAFT

oc0982-2607a102

9/16/82

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

APPLICANT: Consumers Power Company

FACILITY: Midland Plant, Units 1 and 2

SUBJECT: SUMMARY OF SEPTEMBER 8, 1982, MEETING ON
SOILS-RELATED QUALITY ASSURANCE IMPROVEMENTS

On September 8, 1982, the NRC staff met in Bethesda, Maryland with Mr. J. Mooney of Consumers Power Company (the Applicant) to discuss measures being considered to assure successful implementation of the quality plan for the Midland soils remedial work. Meeting attendees are listed in Enclosure 1.

During a September 2, 1982, meeting between NRC management and CPCo management and during an earlier SALP meeting, the NRC indicated that implementation of the quality assurance program needs to be improved, especially in the soils remedial areas. Mr. Mooney noted that in response to these NRC concerns, he is preparing a letter to address measures which will be taken to gauge and assure the successful implementation of the quality program, with particular emphasis in the soils areas. The purpose of the meeting was to discuss a preliminary draft of the letter (Enclosure 2) in the soils areas. Another letter covering the total Midland Quality Program implementation is also being drafted by Mr. Mooney.

Mr. Mooney expects to issue his letters in about a week.

Darl S. Hood, Project Manager
Licensing Branch No. 4
Division of Licensing

Enclosures:
As stated

cc: See next page

DL:LB #4	LA:DL:LB #4	DL:LB #4	AD:L:DL
DHood/hmc	MDuncan	EAdensam	TNovak
9/ /82	9/ /82	9/ /82	9/ /82

~~8249270014~~ 12pp

ENCLOSURE 1

ATTENDEES

September 8, 1982

NRC

T. Novak
D. Hood
W. Shafer (RIII)

CPCo

J. Mooney
J. Cook (part time via telephone)

9/13/82
JAC

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

APPLICANT: Consumer Power Company
FACILITY: Midland Plant, Units 1 and 2
SUBJECT: SUMMARY OF SEPTEMBER 8, 1982, MEETING ON
SOILS-RELATED QUALITY ASSURANCE IMPROVEMENTS

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1. Changes intended to provide greater control of the QC program to the applicant are being considered.
2. All personnel associated with remedial soils work have attended a three-hour QA indoctrination session covering federal regulations, the NRC, and the remedial soils quality plan.
3. A new Quality Improvement Program to advertise the values of "doing it right the first time" is being launched for the soils project.
4. Weekly on site reviews of senior management and bi-monthly briefings of Consumer's chief executive officer are being planned.
5. The applicant is presently establishing an appraisal program which will be independent of the design and construction effort to assess implementation during at least the initial three months of the underpinning of the auxiliary building. This independent appraisal program implementation would be in place prior to any excavation beneath the Electrical Penetration Area or the Control Tower. The independent appraisal will probably be conducted by a team of nuclear plant construction and quality assurance experts, and supplemented with an underpinning consultant who will assure that the

design intent is being implemented and that construction is consistent with industry standards. The assessment is further intended to assure that the QC program is being implemented satisfactorily and that construction is being implemented in accordance with construction documents. Contract negotiations were said to be in process.

6. Mr. Mooney stated that Consumers plans to have an Independent Design Verification study performed for the Midland plant, and will note this commitment in its letter. However, detailed discussions with the NRC must be deferred until sufficient detail has been established.

Mr. Mooney expects to issue his letter in about a week.

Darl S. Hood, Project Manager
Licensing Branch No. 4
Division of Licensing

Enclosure:
List of Attendees

cc: See next page

DL:LB #4	LA:DL:LB #4	DL:LB #4	AD:L:DL
DHood/hmc	MDuncan	EAdensam	TNovak
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September 22, 1982

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Docket Nos.: 50/329/330

MEMORANDUM FOR: Harold S. Bassett, Director
Division of Data Automation and
Management Information
Office of Resource Management

FROM: Darrell G. Eisenhut, Director
Division of Licensing

SUBJECT: REQUEST FOR CASELOAD PANEL VISIT FOR MIDLAND PLANT

We request that Midland Plant, Units 1 and 2 be scheduled for a visit by the Caseload Forecast Panel at your earliest opportunity. The last visit was in July 1981. The visit should include assessment of schedules for remedial soils activities.

We request that the visit be completed within the next month.

Original signed by
Darrell G. Eisenhut

Darrell G. Eisenhut, Director
Division of Licensing

cc: W. Lovelace
J. Keppler

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JA
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OFFICE ▶	*DL:LB#4*	DL:LB#4*	AD:DL*	DL:DL			
SURNAME ▶	DHood:mj	EAdensam	TNovak	DEisenhut			
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Docket Nos.: 50-329/330

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Management Information
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If possible, we would prefer the visit to be completed prior to start of the OL hearing scheduled to begin October 4, 1982.

Darrell G. Eisenhut, Director
Division of Licensing

cc: W. Lovelace
J. Keppler

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~~8210120651~~
I recommend deleting last para.
2/17/82
as modified

OFFICE	DL:LB#4	DL:LB#4	AD:DL	DTR:DC			
SURNAME	DHood:eb	EAdensam	TNovak	DGEisenhut			
DATE	9/17/82	9/18/82	9/14/82	9/17/82			



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

September 22, 1982

Docket Nos. : 50/329/330

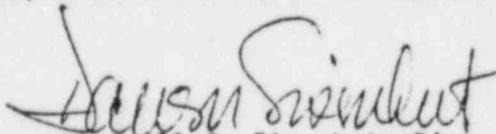
MEMORANDUM FOR: Harold S. Bassett, Director
Division of Data Automation and
Management Information
Office of Resource Management

FROM: Darrell G. Eisenhut, Director
Division of Licensing

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We request that the visit be completed within the next month.


Darrell G. Eisenhut, Director
Division of Licensing

cc: W. Lovelace
J. Keppler

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9/3

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Docket Nos.: 50-329/330

MEMORANDUM FOR: Harold S. Bassett, Director
Division of Data Automation and
Management Information
Office of Resource Management

FROM: Darrell G. Eisenhut, Director
Division of Licensing

SUBJECT: REQUEST FOR CASELOAD PANEL VISIT FOR MIDLAND PLANT

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Darrell G. Eisenhut, Director
Division of Licensing

cc: W. Lovelace
J. Keppler

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~~8210120651~~

DL:LB#4 DL:LB#4 AD:DL DIR:DL
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SEPTEMBER 10 1972

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BOARD NOTIFICATION
82-94

Midland - Zack Part 21 Report on Welder Record Discrepancies

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E. Adensam
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D. Eisenhut/R. Purple
M. Williams
PPAS
H. Denton/E. Case
H. Thompson
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R. Vollmer
S. Hanauer
Attorney, OELD
OI&E
W. J. Dircks, EDO (3)
A. Bennett, OELD (3)
E. Christenbury, OELD
J. Scinto, OELD
S. Chesnut, DL
R. Warnick, R-III
ACRS (16) Members of Midland Project



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

SEPTEMBER 16 1982

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

MEMORANDUM FOR: The Atomic Safety & Licensing Board for
Midland Plant, Units 1 and 2

FROM: Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

SUBJECT: BOARD NOTIFICATION - ZACK PART 21 REPORT
ON WELDER RECORD DISCREPANCIES (BN 82-94)

In accordance with present NRC procedures regarding Board Notifications, the enclosed information is being provided for your information as constituting new information relevant and material to safety issues. This information deals with a report by the Zack Company entitled "Potential 10 CFR 21 Reportable Deficiency Evaluation for Accuracy of Welder Records". The report discusses deficiencies concerning the accuracy of welder records of Zack with regard to heating, ventilation, and air conditioning (HVAC) at the Midland Plant.

The Zack Company is conducting an investigation of the Welder record discrepancies. Zack's report of this investigation is expected on or about September 24, 1982.

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: Board Service List
Licensee Service List

Contact:
S. Chesnut, ONRR
X29788

~~8 210070107~~

VPP-

MIDLAND

Mr. J. W. Cook
Vice President
Consumers Power Company
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Jackson, Michigan 49201

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Mr. R. B. Borsum
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Department of Public Health
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Lansing, Michigan 48909

Mr. Steve Gadler
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St. Paul, Minnesota 55108

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

Ms. Barbara Stamiris
5795 N. River
Freeland, Michigan 48623

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.
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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 Service Commission
6545 Mercantile Way
P.O. Box 30221
Lansing, Michigan 48909

Mr. J. W. Cook

- 2 -

cc: 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
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477 Michigan Avenue
Detroit, Michigan 48226

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Atomic Safety & Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

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Jerry Harbour, Esq.
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

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

4600 W 12TH PLACE • CHICAGO (CICERO) ILL 60650 • 312/242-3434
4401 WESTERN • FLINT MICHIGAN 48506 • 313/736-2040



CUSTOM METAL FABRICATION

August 2, 1982

U.S.N.R.C. Region III Office
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Attn: Mr. J. G. Keppler

Re: Telecon of July 29, 1982 to Mr. Robert Walker
at 4:20 P.M.

Subject: Potential-10CFR21 - Weld Records

Gentlemen:

This letter is to confirm the verbal telephone report given by Mr. D. E. Calkins, Manager of Engineering for the Zack Company on Thursday, July 29, 1982 at 4:20 P.M. to Mr. Robert Walker at the Region III, Glen Ellyn offices of the Nuclear Regulatory Commission.

The attached report and corrective action plan has been prepared by Mr. Martin Skates, Quality Assurance Manager, as my designee for all Zack Company quality related matters.

During the course of an existing internal Zack Company investigation, initiated by the Zack Company officers, a box of paperwork was observed being taken to the trash by a plant employee. The company maintenance man brought the documents to the attention of Zack management.

A preliminary review of the documents (see attached report for details) indicates a possible discrepancy between the welder of record and the welder who may have actually performed the welds.

This potential discrepancy is still in the process of being fully investigated, but the initial indications are that it could have occurred during the 1977 to 1981 time frame.

• FOUNDED TO SOLVE THE UNIQUE METAL FABRICATION NEEDS OF INDUSTRY •
• DEDICATED TO CLEANING AND CUSTOMIZING THE AIR OF THE WORLD •

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U.S.N.R.C. Region III Office
August 2, 1982

Page 2

The Zack Company has initiated and is still in the process of conducting a full scale investigation of this potential discrepancy. However, in an attempt to keep all relevant information open and available to the appropriate parties, the Zack Company is initiating this potential 10CFR21 before it has been determined that a deficiency does exist.

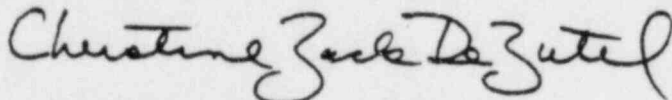
By copy of this letter and the attached report the Zack Company is also confirming the verbal notifications given to the effected utilities.

The Zack Company will cooperate with the Nuclear Regulatory Commission and the respective utilities to the fullest degree possible in the performance of this investigation and its closure.

Should you have any questions or problems concerning this matter, please do not hesitate to contact me or Mr. Martin Skates at (312) 242-3434.

Very truly yours,

THE ZACK COMPANY



CHRISTINE ZACK DE ZUTEL,
PRESIDENT

CZDZ/art

Encl.

cc: Mr. William Harrington
Baldwin Associates
Mr. L. E. Davis
Bechtel Power Company
Mr. Dan L. Shamblin
Commonwealth Edison Company

THE ZACK COMPANY

POTENTIAL 10 CFR21

REPORTABLE DEFICIENCY EVALUATION

FOR

ACCURACY OF WELDER RECORDS

PREPARED BY: David E. Calkins 8/2/82
David E. Calkins, Manager Engineering

REVIEWED BY: M. L. Skates 8/2/82
M. L. Skates, Manager Quality Assurance

APPROVED BY: Christine Zack DeZute 8-2-82
Christine Zack DeZute, President

1.0 Notification:

- 1.1 The Zack Company in accordance with the intent of the reportability requirements within the Code of Federal Regulations, is reporting a Potential 10CFR21 condition relating to a possible discrepancy in the documentation that reflects the welder of record and the welder who may have actually performed the welds.
- 1.2 This report constitutes the Zack Company's official written notification of a Potential 10CFR21 condition and confirms our verbal notification on Thursday, July 27, 1982 at 4:20 PM to Mr. Roger Walker at the Region III Glen Ellyn Offices of the Nuclear Regulatory Commission.

The information relative to this report was obtained Tuesday, July 27, 1982.

The maintenance man observed a box of paperwork being taken to the trash by a plant employee. The maintenance man checked with management to see if the documents should be kept. A review of some of the documents raised questions about welding documentation.

2.0 Identification:

The possible deficiency being investigated is that certain working copies of the shop travelers were obtained and that these copies were compared against the official quality record copies. A possible discrepancy exists between certain information contained on the working copy versus the Q.A. record copy.

The components involved are ductwork (geometrically shaped sheet metal) and hangers (structural steel support members) shipped to the following nuclear facilities:

1. LaSalle Nuclear Power Station
Marseilles, Illinois
2. Clinton Power Station
Clinton, Illinois
3. Midland Power Station
Midland, Michigan

2.2 The work being reviewed for a potential discrepancy by the Zack Company is limited to work performed at its Cicero, Illinois and Chicago, Illinois facilities.

3.0 Potential Deficiency Description:

3.1 The Zack Company utilizes a traveler system to fabricate the components and to record as built, as welded conditions and as inspected verifications. Certain "working" copies (photocopies) of the official travelers utilized by the production tradesmen contain the initials of various tradesmen who apparently performed some function on that component. Relevant information (i.e. welders numbers, material identification, etc.) was then transferred to the official copy (original traveler). The initial review of the working copies of certain travelers indicates that they contain inconsistencies. The Zack Company is in the process of trying to determine if the initials of a welder on the working copy indicate that the individual actually welded on the component, or whether they represent some other function he performed.

4.0 Action Taken To Date:

The Zack Company has initiated the following actions in an effort to determine the ramifications of, the validity of the inconsistencies and the possible safety implications, if any.

- 4.1 The Zack Company has initiated an investigation into the authenticity and validity of the information, the basis for the accumulation for the information, and the reason the information was being discarded.
- 4.2 The individual discarding the box of paperwork (working copies of certain travelers) has been suspended for thirty days pending the results of the Zack investigation.
- 4.3 Pinkerton Security service was obtained to provide 24 hour surveillance of all Zack records to provide assurance that no relevant documents would leave the premises.
- 4.4 The Zack Company has also initiated the gathering of the following types of information to substantiate the quality records and provide the information necessary to determine whether a safety problem exists or not
 - Payroll records will be used to validate time frames welders worked.
 - Validation that all welders available were qualified and certified to perform work.
 - Validating the other inspections performed (i.e. shop, site, client).
 - Obtaining additional clarification relevant to the meaning of information on working copies (photocopies) from available personnel. This information could be obtained in form of telephone conversations, statements, etc.
- 4.5 A management directive has been issued to all Zack Company employees regarding the disposal of documents.

- 5.0 Corrective Action Plan:
- 5.1 To do a full scale investigation of Safety Related Travelers, Weld Wire Issue Slips, Welder Qualifications and Shipment Packages corresponding to the working copies of travelers obtained for the time frame of 1977 through 1981 on the LaSalle Power Station, Midland Power Station and the Clinton Power Station.
- 5.2 As additional temporary surveillance program to verify the identification of the record of welders will be established to substantiate that correct welder identifications are transposed to the record documents.
- 5.3 To bring in-house, additional qualified personnel to assist in the investigation.
- 5.4 To submit a final report to the N.R.C. by August 31, 1982.

Attachment 1

LaSalle Project - 3300

Traveler Information:

1. The yellow traveler is the Quality Control Document that is maintained as a part of Zack's permanent records system for final turnover, also for the Quality Control Inspector verification.
2. The white traveler was a copy of the yellow traveler used by the shop fabrication foremen to record as-built or as-welded conditions during actual fabrication.

A review of one hundred and seventy yellow and white safety-related shop travelers has revealed the following conditions;

- A. Category-I, Seventeen (17) travelers shows the yellow travelers and the white travelers reveals the same welder information.
- B. Category-II, Thirty-eight (38) travelers shows the white traveler contains more welder identification than the yellow traveler.
- C. Category-III, Fifty-eight (58) white travelers shows different welder identification than the yellow traveler.
- D. Category-IV, Fifty-seven (57) yellow travelers shows more welder identifications than white traveler.

Midland Project - 2400

Traveler Information;

1. The yellow traveler is the Quality Control Document that is maintained as a part of Zack's permanent system for final turnover, also used for the Quality Control Inspectors verifications.
2. The white traveler was a copy of the yellow traveler used by the shop fabrication foreman to record as-built or as-welded conditions, during actual fabrication.

A review of nine hundred and fifty-one safety-related shop travelers has revealed the following conditions at this time;

- A. Six hundred and eighty-one (681) travelers shows the yellow travelers and the white travelers reveals the same welder information.
- B. One hundred and thirty (130) travelers shows the white travelers contains more welder identifications than the yellow traveler.
- C. One hundred and forty (140) travelers show unverified welder qualification at the time of issue on the travelers.

Clinton Project - 2900

Traveler Information:

1. The yellow traveler is the Quality Control Document that is maintained as a part of Zack's permanent system for final turnover, also used for the Quality Control Inspectors verifications.
2. The white traveler was a copy of the yellow traveler used by the shop fabrication foreman to record as-built or as-welded conditions, during actual fabrication.

A review of eleven hundred and sixty-six (1166) safety-related shop travelers has revealed the following conditions at this time:

- A. Seven Hundred and twenty (720) travelers shows the yellow travelers and the white travelers reveals the same welder information.
- B. One Hundred and sixty-two (162) travelers show the white traveler contains more welder identifications than the yellow traveler.
- C. Two Hundred and eighty-four (284) travelers show unverified welder qualification at the time of issue dates on the travelers.

BOARD NOTIFICATION
82-94

Midland - Zack Part 21 Report on Welder Record Discrepancies

DISTRIBUTION

Document Control (50-329/330)

NRC PDR

L PDR

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D. Eisenhut/R. Purple

M. Williams

PPAS

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R. Mattson

R. Vollmer

S. Hanauer

Attorney, OELD

OI&E

W. J. Dircks, EDO (3)

A. Bennett, OELD (3)

E. Christenbury, OELD

J. Scinto, OELD

S. Chesnut, DL

R. Warnick, R-III

ACRS (16) Members of Midland Project



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

SEPTEMBER 16 1982

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

MEMORANDUM FOR: The Atomic Safety & Licensing Board for
Midland Plant, Units 1 and 2

FROM: Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

SUBJECT: BOARD NOTIFICATION - ZACK PART 21 REPORT
ON WELDER RECORD DISCREPANCIES (BN 82-94)

In accordance with present NRC procedures regarding Board Notifications, the enclosed information is being provided for your information as constituting new information relevant and material to safety issues. This information deals with a report by the Zack Company entitled "Potential 10 CFR 21 Reportable Deficiency Evaluation for Accuracy of Welder Records". The report discusses deficiencies concerning the accuracy of welder records of Zack with regard to heating, ventilation, and air conditioning (HVAC) at the Midland Plant.

The Zack Company is conducting an investigation of the welder record discrepancies. Zack's report of this investigation is expected on or about September 24, 1982.

A handwritten signature in cursive script, appearing to read "T. M. Novak".

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: Board Service List
Licensee Service List

Contact:
S. Chesnut, ONRR
X29788

8210070107

4pp

MIDLAND

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

cc: Michael I. Miller, Esq.
Ronald G. Zamarin, Esq.
Alan S. Farnell, Esq.
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51st floor
Chicago, Illinois 60602

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Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

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

Mr. Steve Gadler
2120 Carter Avenue
St. Paul, Minnesota 55108

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

Ms. Barbara Stamiris
5795 N. River
Freeland, Michigan 48623

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 Service Commission
6545 Mercantile Way
P.O. Box 30221
Lansing, Michigan 48909

Mr. J. W. Cook

- 2 -

cc: 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

Charles Bechhoefer, Esq.
Atomic Safety & Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Frederick P. Cowan
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6125 N. Verde Trail
Boca Raton, Florida 33433

Jerry Harbour, Esq.
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

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



CUSTOM METAL FABRICATION

August 2, 1982

U.S.N.R.C. Region III Office
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Attn: Mr. J. G. Keppler

Re: Telecon of July 29, 1982 to Mr. Robert Walker
at 4:20 P.M.

Subject: Potential-10CFR21 - Weld Records

Gentlemen:

This letter is to confirm the verbal telephone report given by Mr. D. E. Calkins, Manager of Engineering for the Zack Company on Thursday, July 29, 1982 at 4:20 P.M. to Mr. Robert Walker at the Region III, Glen Ellyn offices of the Nuclear Regulatory Commission.

The attached report and corrective action plan has been prepared by Mr. Martin Skates, Quality Assurance Manager, as my designee for all Zack Company quality related matters.

During the course of an existing internal Zack Company investigation, initiated by the Zack Company officers, a box of paperwork was observed being taken to the trash by a plant employee. The company maintenance man brought the documents to the attention of Zack management.

A preliminary review of the documents (see attached report for details) indicates a possible discrepancy between the welder of record and the welder who may have actually performed the welds.

This potential discrepancy is still in the process of being fully investigated, but the initial indications are that it could have occurred during the 1977 to 1981 time frame.

U.S.N.R.C. Region III Office

August 2, 1982

Page 2

The Zack Company has initiated and is still in the process of conducting a full scale investigation of this potential discrepancy. However, in an attempt to keep all relevant information open and available to the appropriate parties, the Zack Company is initiating this potential 10CFR21 before it has been determined that a deficiency does exist.

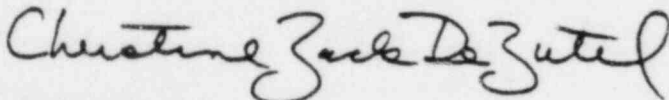
By copy of this letter and the attached report the Zack Company is also confirming the verbal notifications given to the effected utilities.

The Zack Company will cooperate with the Nuclear Regulatory Commission and the respective utilities to the fullest degree possible in the performance of this investigation and its closure.

Should you have any questions or problems concerning this matter, please do not hesitate to contact me or Mr. Martin Skates at (312) 242-3434.

Very truly yours,

THE ZACK COMPANY



CHRISTINE ZACK DE ZUTEL,
PRESIDENT

CZDZ/art

Encl.

cc: Mr. William Harrington
Baldwin Associates
Mr. L. E. Davis
Bechtel Power Company
Mr. Dan L. Shamblin
Commonwealth Edison Company

THE ZACK COMPANY

POTENTIAL 10 CFR21

REPORTABLE DEFICIENCY EVALUATION

FOR

ACCURACY OF WELDER RECORDS

PREPARED BY: David E. Calkins 8/2/82
David E. Calkins, Manager Engineering

REVIEWED BY: M. L. Skates 8/2/82
M. L. Skates, Manager Quality Assurance

APPROVED BY: Christine Zack DeZute 8-2-82
Christine Zack DeZute, President

1.0 Notification:

- 1.1 The Zack Company in accordance with the intent of the reportability requirements within the Code of Federal Regulations, is reporting a Potential 10CFR21 condition relating to a possible discrepancy in the documentation that reflects the welder of record and the welder who may have actually performed the welds.
- 1.2 This report constitutes the Zack Company's official written notification of a Potential 10CFR21 condition and confirms our verbal notification on Thursday, July 27, 1982 at 4:20 PM to Mr. Roger Walker at the Region III Glen Ellyn Offices of the Nuclear Regulatory Commission.

The information relative to this report was obtained Tuesday, July 27, 1982.

The maintenance man observed a box of paperwork being taken to the trash by a plant employee. The maintenance man checked with management to see if the documents should be kept. A review of some of the documents raised questions about welding documentation.

2.0 Identification:

The possible deficiency being investigated is that certain working copies of the shop travelers were obtained and that these copies were compared against the official quality record copies. A possible discrepancy exists between certain information contained on the working copy versus the Q.A. record copy.

The components involved are ductwork (geometrically shaped sheet metal) and hangers (structural steel support members) shipped to the following nuclear facilities:

1. LaSalle Nuclear Power Station
Marseilles, Illinois
2. Clinton Power Station
Clinton, Illinois
3. Midland Power Station
Midland, Michigan

2.2 The work being reviewed for a potential discrepancy by the Zack Company is limited to work performed at its Cicero, Illinois and Chicago, Illinois facilities.

3.0 Potential Deficiency Discription:

3.1 The Zack Company utilizes a traveler system to fabricate the components and to record as built, as welded conditions and as inspected verifications. Certain "working" copies (photocopies) of the official travelers utilized by the production tradesmen contain the initials of various tradesmen who apparently performed some function on that component. Relevant information (i.e. welders numbers, material identification, etc.) was then transferred to the official copy (original traveler). The initial review of the working copies of certain travelers indicates that they contain inconsistencies. The Zack Company is in the process of trying to determine if the initials of a welder on the working copy indicate that the individual actually welded on the component, or whether they represent some other function he performed.

4.0 Action Taken To Date:

The Zack Company has initiated the following actions in an effort to determine the ramifications of, the validity of the inconsistencies and the possible safety implications, if any.

- 4.1 The Zack Company has initiated an investigation into the authenticity and validity of the information, the basis for the accumulation for the information, and the reason the information was being discarded.
- 4.2 The individual discarding the box of paperwork (working copies of certain travelers) has been suspended for thirty days pending the results of the Zack investigation.
- 4.3 Pinkerton Security service was obtained to provide 24 hour surveillance of all Zack records to provide assurance that no relevant documents would leave the premises.
- 4.4 The Zack Company has also initiated the gathering of the following types of information to substantiate the quality records and provide the information necessary to determine whether a safety problem exists or not
 - Payroll records will be used to validate time frames welders worked.
 - Validation that all welders available were qualified and certified to perform work.
 - Validating the other inspections performed (i.e. shop, site, client).
 - Obtaining additional clarification relevant to the meaning of information on working copies (photocopies) from available personnel. This information could be obtained in form of telephone conversations, statements, etc.
- 4.5 A management directive has been issued to all Zack Company employees regarding the disposal of documents.

- 5.0 Corrective Action Plan:
- 5.1 To do a full scale investigation of Safety Related Travelers, Weld Wire Issue Slips, Welder Qualifications and Shipment Packages corresponding to the working copies of travelers obtained for the time frame of 1977 through 1981 on the LaSalle Power Station, Midland Power Station and the Clinton Power Station.
- 5.2 As additional temporary surveillance program to verify the identification of the record of welders will be established to substantiate that correct welder identifications are transposed to the record documents.
- 5.3 To bring in-house, additional qualified personnel to assist in the investigation.
- 5.4 To submit a final report to the N.R.C. by August 31, 1982.

Attachment 1

LaSalle Project - 3300

Traveler Information:

1. The yellow traveler is the Quality Control Document that is maintained as a part of Zack's permanent records system for final turnover, also for the Quality Control Inspector verification.
2. The white traveler was a copy of the yellow traveler used by the shop fabrication foremen to record as-built or as-welded conditions during actual fabrication.

A review of one hundred and seventy yellow and white safety-related shop travelers has revealed the following conditions;

- A. Category-I, Seventeen (17) travelers shows the yellow travelers and the white travelers reveals the same welder information.
- B. Category-II, Thirty-eight (38) travelers shows the white traveler contains more welder identification than the yellow traveler.
- C. Category-III, Fifty-eight (58) white travelers shows different welder identification than the yellow traveler.
- D. Category-IV, Fifty-seven (57) yellow travelers shows more welder identifications than white traveler.

Midland Project - 2400

Traveler Information;

1. The yellow traveler is the Quality Control Document that is maintained as a part of Zack's permanent system for final turnover, also used for the Quality Control Inspectors verifications.
2. The white traveler was a copy of the yellow traveler used by the shop fabrication foreman to record as-built or as-welded conditions, during actual fabrication.

A review of nine hundred and fifty-one safety-related shop travelers has revealed the following conditions at this time;

- A. Six hundred and eighty-one (681) travelers shows the yellow travelers and the white travelers reveals the same welder information.
- B. One hundred and thirty (130) travelers shows the white travelers contains more welder identifications than the yellow traveler.
- C. One hundred and forty (140) travelers show unverified welder qualification at the time of issue on the travelers.

Clinton Project - 2900

Traveler Information:

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A review of eleven hundred and sixty-six (1166) safety-related shop travelers has revealed the following conditions at this time:

- A. Seven Hundred and twenty (720) travelers shows the yellow travelers and the white travelers reveals the same welder information.
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- C. Two Hundred and eighty-four (284) travelers show unverified welder qualification at the time of issue dates on the travelers.

SEPTEMBER 1 6 1982

DISTRIBUTION
See Attached Sheet

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

MEMORANDUM FOR: The Atomic Safety & Licensing Board for
Midland Plant, Units 1 and 2

FROM: Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

SUBJECT: BOARD NOTIFICATION - ZACK PART 21 REPORT
ON WELDER RECORD DISCREPANCIES (BN 82-94)

In accordance with present NRC procedures regarding Board Notifications, the enclosed information is being provided for your information as constituting new information relevant and material to safety issues. This information deals with a report by the Zack Company entitled "Potential 10 CFR 21 Reportable Deficiency Evaluation for Accuracy of Welder Records". The report discusses deficiencies concerning the accuracy of welder records of Zack with regard to heating, ventilation, and air conditioning (HVAC) at the Midland Plant.

The Zack Company is conducting an investigation of the Welder record discrepancies. Zack's report of this investigation is expected on or about September 24, 1982.

Original signed by:
Thomas M. Novak

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: Board Service List
Licensee Service List

Contact:
S. Chesnut, ONRR
X29788

~~8210070107~~

Dk:L DL:L
SChesnut:lb TMNovak
001 102 001 102

B#4
5/B1

SEP 13 1982

MEMORANDUM FOR: Elinor G. Adensam, Chief
Licensing Branch #4, DL

Cecil O. Thomas, Acting Chief
Standardization & Special Projects
Branch, DL

FROM: Thomas M. Novak, Assistant Director
for Licensing, DL

SUBJECT: ZACK COMPANY WELDING RECORDS

It has been determined that the attached information concerning Zack Company welding records may be related to Midland and Clinton and worthy of notification to the appropriate Boards and parties.

For those cases in which this issues is related to a contention, but the hearing has not yet started, you should assure that the substance of this board notification is addressed in the appropriate SER or SSER.

TM
Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: D. Hood, LB#4
H. Williams, SSPB
M. Williams, DL
R. F. Warnick, R-III

~~8210130030~~ 10.
XA

OFFICE	DL:L						
SURNAME	Schesnut:lb	TM Novak					
DATE	09/15/82	09/13/82					



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

SEP 13 1982

MEMORANDUM FOR: Elinor G. Adensam, Chief
Licensing Branch #4, DL

Cecil O. Thomas, Acting Chief
Standardization & Special Projects
Branch, DL

FROM: Thomas M. Novak, Assistant Director
for Licensing, DL

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A handwritten signature in cursive script, appearing to read "Tom Novak".

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: D. Hood, LB#4
H. Williams, SSPB
M. Williams, DL
R. F. Warnick, R-III

~~8210L30030~~

lp.

82-130



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
September 8, 1982

MEMORANDUM FOR: Thomas Novak, Assistant Director for Licensing
Division of Licensing

FROM: Darrell G. Eisenhut, Director
Division of Licensing

SUBJECT: BOARD NOTIFICATION 82-94

I have determined that the attached information concerning the Zack Company welding records should be sent to the appropriate Boards and parties in accordance with the procedures of Office Letter No. 19 (Rev. 1). - You should note that the procedure requires that this information either be issued as a Board Notification, or if more than 30 days exists prior to the hearing, be included in the SER as a testimony.

This notification relates to LaSalle, Midland and Clinton. Issue this item as Board Notification Number 82-94.

[Signature]
for Darrell G. Eisenhut, Director
Division of Licensing

Enclosure:
As Stated

cc: R. F. Warnick
M. Williams
~~J. Kerrigan~~
G. Meyer

S. Chesnut

- our action -

94
UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137



September 1, 1982

MEMORANDUM FOR: D. G. Eisenhut, Director, Division of Licensing, NRR
FROM: R. F. Warnick, Acting Director, Office of Special Cases
SUBJECT: RECOMMENDATION FOR NOTIFICATION OF LICENSING BOARD

Enclosed is a potential 10 CFR 21 report from the Zack Company. The Zack Company is a heating, ventilation, and air conditioning (HVAC) subcontractor at three power plant construction sites within Region III (Clinton, LaSalle and Midland). The subject report discussed deficiencies concerning the accuracy of welder records and is limited to work performed at the Zack facility in Cicero, Illinois. The Zack Quality Assurance (QA) program is an issue which will be addressed in the Midland OM/OL proceedings.

Region III has reviewed the materiality and relevancy of this matter and perceives the information identified in the enclosure to be material and relevant to the Midland OM/OL proceedings. Region III believes NRC policy dictates that the information be forwarded to all sitting boards for cases involving Zack Company as the HVAC subcontractor.

The Zack Company has initiated an investigation of the welder record discrepancies. Region III is presently waiting for a followup report from the Zack Company which will identify the results of this investigation. This followup report is expected by September 10, 1982.

If you have any questions or desire further information regarding this matter, please call me.

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

Enclosure: As stated

cc w/o enclosure:
W. D. Shafer
R. N. Gardner
R. B. Landsman
R. Cook
B. Burgess

84108150658



CUSTOM METAL FABRICATION

August 2, 1982

U.S.N.R.C. Region III Office
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Attn: Mr. J. G. Keppler

Re: Telecon of July 29, 1982 to Mr. Robert Walker
at 4:20 P.M.

Subject: Potential 10CFR21 - Weld Records

Gentlemen:

This letter is to confirm the verbal telephone report given by Mr. D. E. Calkins, Manager of Engineering for the Zack Company on Thursday, July 29, 1982 at 4:20 P.M. to Mr. Robert Walker at the Region III, Glen Ellyn offices of the Nuclear Regulatory Commission.

The attached report and corrective action plan has been prepared by Mr. Martin Skates, Quality Assurance Manager, as my designee for all Zack Company quality related matters.

During the course of an existing internal Zack Company investigation, initiated by the Zack Company officers, a box of paperwork was observed being taken to the trash by a plant employee. The company maintenance man brought the documents to the attention of Zack management.

A preliminary review of the documents (see attached report for details) indicates a possible discrepancy between the welder of record and the welder who may have actually performed the welds.

This potential discrepancy is still in the process of being fully investigated, but the initial indications are that it could have occurred during the 1977 to 1981 time frame.

~~8248160248~~

August 2, 1982

Page 2

The Zack Company has initiated and is still in the process of conducting a full scale investigation of this potential discrepancy. However, in an attempt to keep all relevant information open and available to the appropriate parties, the Zack Company is initiating this potential 10CFR21 before it has been determined that a deficiency does exist.

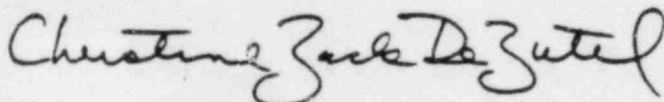
By copy of this letter and the attached report the Zack Company is also confirming the verbal notifications given to the effected utilities.

The Zack Company will cooperate with the Nuclear Regulatory Commission and the respective utilities to the fullest degree possible in the performance of this investigation and its closure.

Should you have any questions or problems concerning this matter, please do not hesitate to contact me or Mr. Martin Skates at (312) 242-3434.

Very truly yours,

THE ZACK COMPANY



CHRISTINE ZACK DE ZUTEL,
PRESIDENT

CZDZ/art

Encl.

cc: Mr. William Harrington
Baldwin Associates
Mr. L. E. Davis
Bechtel Power Company
Mr. Dan L. Shamblin
Commonwealth Edison Company

THE ZACK COMPANY

POTENTIAL 10 CFR21

REPORTABLE DEFICIENCY EVALUATION

FOR

ACCURACY OF WELDER RECORDS

PREPARED BY: David E. Calkins 8/2/82
David E. Calkins, Manager Engineering

REVIEWED BY: M. L. Skates 8/2/82
M. L. Skates, Manager Quality Assurance

APPROVED BY: Christine Zack DeZute 8-2-82
Christine Zack DeZute, President

1.0 Notification:

- 1.1 The Zack Company in accordance with the intent of the reportability requirements within the Code of Federal Regulations, is reporting a Potential 10CFR21 condition relating to a possible discrepancy in the documentation that reflects the welder of record and the welder who may have actually performed the welds.
- 1.2 This report constitutes the Zack Company's official written notification of a Potential 10CFR21 condition and confirms our verbal notification on Thursday, July 27, 1982 at 4:20 PM to Mr. Roger Walker at the Region III Glen Ellyn Offices of the Nuclear Regulatory Commission.

The information relative to this report was obtained Tuesday, July 27, 1982.

The maintenance man observed a box of paperwork being taken to the trash by a plant employee. The maintenance man checked with management to see if the documents should be kept. A review of some of the documents raised questions about welding documentation.

2.0 Identification:

The possible deficiency being investigated is that certain working copies of the shop travelers were obtained and that these copies were compared against the official quality record copies. A possible discrepancy exists between certain information contained on the working copy versus the Q.A. record copy.

The components involved are ductwork (geometrically shaped sheet metal) and hangers (structural steel support members) shipped to the following nuclear facilities:

1. LaSalle Nuclear Power Station
Marseilles, Illinois
2. Clinton Power Station
Clinton, Illinois
3. Midland Power Station
Midland, Michigan

2.2 The work being reviewed for a potential discrepancy by the Zack Company is limited to work performed at its Cicero, Illinois and Chicago, Illinois facilities.

3.0 Potential Deficiency Description:

3.1 The Zack Company utilizes a traveler system to fabricate the components and to record as built, as welded conditions and as inspected verifications. Certain "working" copies (photocopies) of the official travelers utilized by the production tradesmen contain the initials of various tradesmen who apparently performed some function on that component. Relevant information (i.e. welders numbers, material identification, etc.) was then transferred to the official copy (original traveler). The initial review of the working copies of certain travelers indicates that they contain inconsistencies. The Zack Company is in the process of trying to determine if the initials of a welder on the working copy indicate that the individual actually welded on the component, or whether they represent some other function he performed.

4.0 Action Taken To Date:

The Zack Company has initiated the following actions in an effort to determine the ramifications of, the validity of the inconsistencies and the possible safety implications, if any.

- 4.1 The Zack Company has initiated an investigation into the authenticity and validity of the information, the basis for the accumulation for the information, and the reason the information was being discarded.
- 4.2 The individual discarding the box of paperwork (working copies of certain travelers) has been suspended for thirty days pending the results of the Zack investigation.
- 4.3 Pinkerton Security service was obtained to provide 24 hour surveillance of all Zack records to provide assurance that no relevant documents would leave the premises.
- 4.4 The Zack Company has also initiated the gathering of the following types of information to substantiate the quality records and provide the information necessary to determine whether a safety problem exists or not
 - Payroll records will be used to validate time frames welders worked.
 - Validation that all welders available were qualified and certified to perform work.
 - Validating the other inspections performed (i.e. shop, site, client).
 - Obtaining additional clarification relevant to the meaning of information on working copies (photocopies) from available personnel. This information could be obtained in form of telephone conversations, statements, etc.
- 4.5 A management directive has been issued to all Zack Company employees regarding the disposal of documents.

5.0 Corrective Action Plan:

- 5.1 To do a full scale investigation of Safety Related Travelers, Weld Wire Issue Slips, Welder Qualifications and Shipment Packages corresponding to the working copies of travelers obtained for the time frame of 1977 through 1981 on the LaSalle Power Station, Midland Power Station and the Clinton Power Station.
- 5.2 As additional temporary surveillance program to verify the identification of the record of welders will be established to substantiate that correct welder identifications are transposed to the record documents.
- 5.3 To bring in-house, additional qualified personnel to assist in the investigation.
- 5.4 To submit a final report to the N.R.C. by August 31, 1982.

Attachment 1

LaSalle Project - 3300

Traveler Information:

1. The yellow traveler is the Quality Control Document that is maintained as a part of Zack's permanent records system for final turnover, also for the Quality Control Inspector verification.
2. The white traveler was a copy of the yellow traveler used by the shop fabrication foremen to record as-built or as-welded conditions during actual fabrication.

A review of one hundred and seventy yellow and white safety-related shop travelers has revealed the following conditions;

- A. Category-I, Seventeen (17) travelers shows the yellow travelers and the white travelers reveals the same welder information.
- B. Category-II, Thirty-eight (38) travelers shows the white traveler contains more welder identification than the yellow traveler.
- C. Category-III, Fifty-eight (58) white travelers shows different welder identification than the yellow traveler.
- D. Category-IV, Fifty-seven (57) yellow travelers shows more welder identifications than white traveler.

Midland Project - 2400

Traveler Information;

1. The yellow traveler is the Quality Control Document that is maintained as a part of Zack's permanent system for final turnover, also used for the Quality Control Inspectors verifications.
2. The white traveler was a copy of the yellow traveler used by the shop fabrication foreman to record as-built or as-welded conditions, during actual fabrication.

A review of nine hundred and fifty-one safety-related shop travelers has revealed the following conditions at this time;

- A. Six hundred and eighty-one (681) travelers shows the yellow travelers and the white travelers reveals the same welder information.
- B. One hundred and thirty (130) travelers shows the white travelers contains more welder identifications than the yellow traveler.
- C. One hundred and forty (140) travelers show unverified welder qualification at the time of issue on the travelers.

Clinton Project - 2900

Traveler Information:

1. The yellow traveler is the Quality Control Document that is maintained as a part of Zack's permanent system for final turnover, also used for the Quality Control Inspectors verifications.
2. The white traveler was a copy of the yellow traveler used by the shop fabrication foreman to record as-built or as-welded conditions, during actual fabrication.

A review of eleven hundred and sixty-six (1166) safety-related shop travelers has revealed the following conditions at this time:

- A. Seven Hundred and twenty (720) travelers shows the yellow travelers and the white travelers reveals the same welder information.
- B. One Hundred and sixty-two (162) travelers show the white traveler contains more welder identifications than the yellow traveler.
- C. Two Hundred and eighty-four (284) travelers show unverified welder qualification at the time of issue dates on the travelers.

6/B1

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Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

MEMORANDUM FOR: Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

THRU: Elinor G. Adensan, Chief
Licensing Branch No. 4
Division of Licensing

FROM: Melanie A. Miller, Project Manager
Licensing Branch No. 4
Division of Licensing

SUBJECT: ADMITTED MIDLAND CONTENTIONS

Enclosed is a tabular listing of all contentions accepted by the board for litigation (Attachment 1). The table is provided for informational purposes and will be continuously updated as changes in contention status occur. The intervenor's name and contention number are listed with a corresponding key phrase provided for each contention for easy reference. Additionally, the date under the contention number refers to the year it was accepted by the board and is listed to avoid confusion in redundant contention numbers. Attachment 2 summarizes the contentions and the reviewers responsible for testimony. This attachment is also subject to change.

We are sending this table to responsible reviewers by copy of this memorandum. If there are questions, I can be reached at X24259.

MA
Melanie A. Miller, Project Manager
Licensing Branch No. 4
Division of Licensing

Enclosures:
As stated

cc: See next page

82-1090613

23 pp.

HA

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DATE	10/26/82	10/26/82				

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D. Hood
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J. P. Knight
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M. Lefave
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F. Rinaldi
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ATTACHMENT 1

ADMITTED MIDLAND CONTENTIONS

Admitted Midland Contentions

<u>Contention #</u>	<u>Key Phrase</u>	<u>Contention</u>
Sinclair 3 (1982)	severe accidents	The assessment of the likelihood and severity of "severe accidents" (or class 9 accidents) in the DES is inadequate in that it relies for methodology and probability of occurrence of severe accidents on the Rasmussen Report (WASH-1400) DES 5-45-66. However, a new NRC report reveals that the Rasmussen methodology, at least as it pertains to more severe accidents (total meltdown), significantly understates the risk of such accidents by a factor of 20. Precursors to Potential Severe Core Damage Accidents: 1969-1979, a Status Report, NUREG/CR/2497 (June 1982). This report shows that probabilities of severe accidents should be derived on the basis of actual accident sequences and significant events, rather than the Rasmussen methodology. The failure of the DES to incorporate this analysis cripples the entire Class 9 analysis of the DES.
Sinclair 5 (1982)	cooling pond	The staff DEIS is deficient in that it continues to base its analysis of the cooling pond's effectiveness in controlling thermal discharges (DEIS at 4-6) and ice and fog generation (DEIS at 5-9) on a study based on cooling pond performance in a substantially different climatic region. Instead, the DEIS should analyze information from the Dresden, Illinois nuclear facility (or other data from a comparably sized and situated facility) for both purposes, and present the baseline data from that facility to allow the agency and the public to reach an informed decision on the adverse affects of the cooling pond.
Sinclair 7 (1982)	synergism	The issue of synergism between chemicals and radiation (Contention 61, (old 55) <u>Contentions of Mary Sinclair, 1978</u>) must be re-opened based on a new study. Scientists at Sandia National Laboratory, Albuquerque, New Mexico, have conducted tests sponsored by the NRC on polymer cable insulation and jacketing used in nuclear power containment buildings. (<u>Industrial Research and Development, June, 1982</u>)

<u>Contention #</u>	<u>Key Phrase</u>	<u>Contention</u>
		<p>They have found that long-term low doses of gamma radiation degrades many polymers more than do equal doses administered at higher rates in shorter testing times. Besides the dose rate effect, the researchers have also found that <u>synergistic</u> effects can occur when polymers are exposed to radiation and mildly elevated temperatures. Dr. Roger Clough, of Sandia National Laboratory, has stated that the present testing method underestimates the long-term effects and synergisms that display themselves only in longer tests. This study indicates that the useful life of the plant will be shortened considerably because of this problem.</p>
Sinclair 6 (1982)	QA-Howard	See Enclosure 1
Sinclair 8 (1982)	QA-records	<p>The Zack Company of Chicago which has been the contractor responsible for the heating, cooling and ventilating system of the Midland nuclear plant has filed a non-compliance report with the NRC on or about August 4, 1982, indicating that two sets of records -- a shop record and a QA record -- which are required to be kept to guarantee the integrity of the welds and therefore, must be signed by the same welder, were, in fact, signed by two different persons. This violates the federal standards for documentation for safety-related systems in a nuclear power plant. This breakdown in quality control means the principal method that the NRC has for guaranteeing the integrity of the welds in the HVAC system (which is already built into a large part of the plant) has failed and that therefore the protection of the public health and safety cannot be guaranteed as required by 10 CFR §§50.57(1), 50.57(2), and 50.57(3) and Part 50, Appendix B.</p>
Sinclair 16 (1982)	QA-welders	<p>In the Part 21 report that Zack Co. filed which was signed by Dave Calkins of Zack and prepared by Howard McGrance of Consumers Power Co., it was disclosed that 140 Travelers showed unverified welder qualifications for fabrication welds. Without qualified welders for this large</p>

<u>Contention #</u>	<u>Key Phrase</u>	<u>Contention</u>
		number of welds, the necessary guarantee for the protection of the public health and safety cannot be met as required by 10 CFR §§50.57(1), 50.57(2) and 50.57(3). In addition, this report indicates that the quality assurance in construction of these plants has not been met as required by Part 50, Appendix B.
Sinclair 24 (1979)	ground stability	The present site for the Midland facility is not only inappropriate for the reasons set forth in Contention 9, but also affirmatively unsafe. Serious questions have been raised concerning the ground stability of portions of the site. At least one of the essential buildings of the reactor complex is reported sinking, and construction has been halted on that building. As a result of the serious and unresolved questions concerning ground stability, the findings required by 10 CFR §§50.57(a)(3) and 50.57(a)(6) cannot be made.
Sinclair 27 (1979)	evacuation	Recently discovered information indicates that the Advisory Committee on Reactor Safeguards conditioned the acceptability of the present Midland site for the project on the existence of a highly effective evacuation system. However, no adequate evacuation plans exist. Aerial surveys of traffic conducted during the construction permit stage of these proceedings, and taken during shift changes, indicated that evacuation in an acceptable time cannot be accomplished. Further, relying on the evacuation plans of Dow Chemical Company is inadequate. During the evacuation following the recent chlorine leak, evacuation procedures were chaotic and all communications were either jammed or ineffectual. In fact at an NRC conference held in Midland, Michigan on September 8, 1978, both the County Road Commission and the Midland Planning Commission admitted that they have not considered evacuation routes. As a result, the findings required by 10 CFR §50.57(a)(3)(i) and §50.57(a)(6) cannot be made.

<u>Contention #</u>	<u>Key Phrase</u>	<u>Contention</u>
Sinclair 28 (1982)	water hammer	<p>Contention 28 deals with the water hammer problem of pressurized water reactors of the Midland type. This problem is identified as one of the unresolved safety issues applicable to Midland 1 & 2 in the SER, C-4. Babcock and Wilcox (B&W) plants with an internal auxiliary feedwater (AFW) feed ring of the same design as Midland in recent events, have shown a marked susceptibility to internal damage of the feed ring as a result of water hammer. From this, reduced cooling in the steam generators could occur as a result of inadequate AFW flow following loss of normal feedwater flow. (NRC Response to Interrogatory 7) Since this effect involves critical safety systems, the Task A-1 report (Jan., 1980) states that systematic review procedures in the OL review process will require the Applicant to: 1) address potential water hammer problems in various systems; 2) demonstrate that there are adequate design features and 3) expand the preoperational testing program to insure that these design features and operating procedures do prevent damaging water hammer events.</p> <p>However, the SER does not indicate that these criteria have been met by the Applicant. As a result of this omission, the findings required by 10 CFR §§50.57(a)(3)(i) and 50.57(a)(6) cannot be made.</p>
Sinclair 30 (1982)	tube integrity	<p>The degradation of steam tube integrity due to corrosion induced wastage, cracking reduction in tube diameter, and vibration induced cracks is a serious unresolved safety problem at the Midland nuclear plant. It is admitted that the chemistry of the cooling water is critical to prevention of steam tube failure, (NUREG-0886). However, the fact that these plants depend on cooling water from the cooling pond increases the likelihood of corrosion and poor water chemistry because the DEIS states that the plant dewatering system will first be discharged to the cooling pond. (DEIS at 5-2). That means that many wastes, including radioactive</p>

<u>Contention #</u>	<u>Key Phrase</u>	<u>Contention</u>
		materials from leaks and spills on the reactor site, can enter the cooling pond and disrupt the chemistry of the pond. Therefore, due to this contribution of an undetermined amount and quality of ground dewatering inflows to the cooling pond, the NRC's bland assurance that corrosion is unlikely due to the lack of sodium thiosulfate, is unsatisfactory. (NRC Response to Interrogatory 9.j.) In fact, due to the contribution of groundwater, the NRC is not fully aware of the likely constituents of the cooling pond, and the findings required by 10 CFR §§50.57(a)(3)(i) and 50.57(a)(6) cannot be made.
Stamiris 1b, c (1982)	cost benefit	NRC's economic cost benefit analysis of the DES is faulty and misleading because it: b. underestimates decommissioning costs c. overestimates lifespan of Unit 1
Stamiris 2 (1982) (consolidated with Sinclair 6)	internal reporting	CPC/NRC internal reporting systems intended to allow plant workers to raise concerns or criticisms about inadequate workmanship or practices are ineffective because they have resulted in job losses due to QA/QC reporting. (Midland Daily News articles dated 1/20/82, 6/28/82, and Howard affidavit, 7/30/82)
Stamiris 6 (1982)	groundwater	The NRC risk assessment in the DES does not consider potential effects of permanent dewatering on groundwater relationships.
Stamiris 8 (1982)	audit	The ACRS has recommended an assessment of Midland's design adequacy and construction quality in their 6/18/82 report (SER Supplement 1, Appendix G). In order to assure that this audit be thorough and objective, it must be performed by an independent third party of a competing contracting firm. Such a requirement was imposed by the ASLB in the Houston Power and Light, 50-498 and 50-499 OL proceeding, 4/30/82. And, due to the pattern of design deficiencies (4/20/82 SALP, p. 16) such an independent audit is necessary to assure the design integrity of this plant. However, the

<u>Contention #</u>	<u>Key phrase</u>	<u>Contention</u>
		NRC has not required (SER Supplement 1, p. 19-2(1)), and CPC has not committed (7/9/82 Tedesco to Cook letter) to such an independent audit.
Stamiris 1c, b, d (1980)	managerial attitude	See Enclosure 2
Stamiris 2a-d (1980)	schedule pressures	See Enclosure 3
Stamiris 3 (1980)	QA-soils	See Enclosure 4
Stamiris 4 (1980)	inadequate remediation	See Enclosure 5
Marshall 2 (1979)	settling	Present geological conditions, according to newspaper accounts, is causing the settling of the generator building at the Nuclear Power Plant site.
Warren 1 (1980)	fill soil	The composition of the fill soil used to prepare the site of the Midland Plant - Units 1 and 2 is not of sufficient quality to assure that pre-loading techniques have permanently corrected soil settlement problems. The NRC has indicated the <u>random</u> fill dirt was used for backfill. The components of random fill can include loose rock, broken concrete, sand, silt, ashes, etc. all of which cannot be compacted through pre-loading procedures.
Warren 2	seepage	A. Because of the known seepage of water from the cooling pond into the fill soils in the power block area, permanent dewatering procedures being proposed by Consumers Power Company are inadequate, particularly in the event of increased water seepage, flooding, failure of pumping systems and power outages. Under these conditions, Consumers cannot provide reasonable assurance that stated maximum levels can be maintained.

B. Given the facts alleged in Contention 2.A, and considering also that the Saginaw Valley is built upon centuries of silt deposits, these highly permeable soils which underlie, in part, the diesel generator building and other class I structures may be adversely affected by increased water levels producing liquefaction of these soils. The following will also be affected:

- 1) borated water tanks
- 2) diesel fuel oil tanks.

Warren 3
(1980)

DGB stress

Pre-loading procedures undertaken by Consumers Power have induced stresses on the diesel generating building structure and have reduced the ability of this structure to perform its essential functions under that stress. Those remedial actions that have been taken have produced uneven settlement and caused inordinate stress on the structure and circulating water lines, fuel oil lines, and electrical conduit.

Sinclair Contention #6

NRC regulations at 10 CFR Part 50, Appendix B require that applicants for operating licenses develop and implement a quality assurance program for the protection of the public from improper materials or unworkmanlike practices. This QA program includes such elements as procurement document control, control of purchased material, equipment, and services, proper inspections and handling of nonconforming materials, corrective actions, and audits by trained personnel. However, the affidavit attached to this contention and summarized below shows clearly that the QA program for the Midland plant was not in compliance with these requirements, and that therefore, quality assurance and control cannot be established at the Midland nuclear plant.

As basis for this contention, intervenor Mary Sinclair references the affidavit of Mr. Albert T. Howard, a former Quality Assurance Documentation Supervisor for Zack Company, (from October 19, 1981 through April 30, 1982) which was under contract to supply equipment for the heating, ventilating and air conditioning (HVAC) system of the Midland plant.

His affidavit documents the complete breakdown of the QA program for the Midland plant, leading to his dismissal for refusing to conform to Zack's improper QA practices. Those improper practices, with regard to the Midland plant specifically, or all of Zack's nuclear clients generally, are detailed as follows:

1. Howard states that his supervisor, Mr. Calkins, had investigated and reported the QA problems Zack was having with the Midland plant to the Midland plant to the Midland Site Manager as early as August 28, 1981. (at 4)
2. As a result of this report, "major QA reorganizations" were undertaken at Midland, to correct improper QA documentation. Id.
3. Soon after Howard's promotion to Supervisor of the Documents Assurance Department, Howard became aware of "serious deficiencies" in QA documentation. (at 5).
4. On November 18, 1981, a Midland QQ contract employee directed Howard to sign a form attesting to having completed the requisite training for his position, in spite of the fact that Howard did not receive such training. Id.
5. On November 30, 1981, Howard reviewed reports which summarized various QA deficiencies at Midland, including such terms as:

"certs altered"; "white out used and retyped"; and "heat number altered to agree with certification"; missing signatures; certifications missing; lack of test data for purchases; correspondence that steel had been purchased without verification and traceability; and stickers indicating compliance with professional standards. As the summary noted on the latter item, "Authenticity of the signatures is questionable." (at 6).

6. On November 30, 1981, Howard also received a report from Calkins describing the "breakdown of the quality assurance program", resulting in, inter alia, improper modifications to documents. Id.
7. The report described in 6 concluded that the corrective action recommended was to "promise -- with a plan -- not to repeat the misconduct." No "offenders" were to be dismissed. (at 7).
8. Bechtel communicated to Zack in a December 21, 1982 [sic], letter that the reported deficiencies (see 1, 5) were a "paperwork problem", and that it was their opinion that "It is highly probable that Zack ordered correct materials for the Midland project from their sub-tier vendors and that the vendors' intent was to comply with Zack's purchase order requirements." (emphasis added). Howard disagreed strongly with Bechtel's attempt to minimize the seriousness of the QA document breakdown at Zack. (at 9).
9. Howard states that the Zack "internal report/audit" of Bechtel's QA documentation (in 8) was seriously deficient in that it knowingly understated the number of purchase orders to be evaluated, and therefore that Zack's assurance to Bechtel that a "total document audit" was completed was "simply not true." (at 10).
10. Howard reports that "several times" he discussed with Zack management that "delivered materials did not conform to site specifications, and that many of Zack's vendors were unapproved as suppliers of material to nuclear sites." (at 11).
11. Howard's affidavit then states that a Mr. Perry contacted Commonwealth Edison QA manager about the deficiency in delivered materials, who then contacted Consumers Power at the Midland site. Consumers apparently then contacted the president at Zack, who informed Howard that she "did not appreciate our calls outside the company." (at 11, 12).
12. On November 5, 1980, the Bechtel Power Corporation sent a letter to the Zack Company. Howard reports that the letter "makes it clear that Bechtel Power Corporation had sufficient knowledge of material being shipped to the site in nonconforming condition." (at 14).
13. Howard states that a September 1981 letter to Zack Company from U.S. Steel describes a "serious misunderstanding" regarding purchases of steel for 26 purchase orders at all three sites (including Midland).

Howard states that the letter points out that the Zack

"confirming orders" all read "Safety-Related". The U.S. Steel letter points out that first, the orders had not been purchased as "Safety-Related"; and second, that since the purchase orders were not called in as safety-related, they were not handled through the "V&T" (Verification and Testing) program." (at 16).

Howard points out that the use of the term "Safety-Related" implied that the items received the quality verification required by regulation, which was inaccurate. Id.

14. Mr. Howard's affidavit states further that Zack did not confine its purchases to those from "approved" vendors.

"Another vendor, the Delta Screw Company, also failed a fall audit. A fall 1981 Zack letter from Mr. Calkins allegedly removed Delta Screw Co. from the approved vendors list for failure to comply with the requirements of a Quality Assurance program as required by the NRC. However, I knew that Zack Company did not follow its own "approved vendors list". A list of the P.O.s from December 21, 1981 to February 1982 reveals that, in fact, Delta Screw received approximately 38 purchase orders from the Zack Company before being put back on the approved vendors list in February 1982." (at 18).

15. Howard also describes that Zack personnel were not adequately trained to perform their duties. This lack of training included the president of Zack, who "assured the utility management that all problems relating to the Zack QA/QC breakdown were under control and her personal supervision". (at 18, 19).
16. Howard's affidavit describes the notes of a meeting on November 3, 1981, at the Midland site, with all relevant QA personnel in attendance. The notes show that the principal purpose of the meeting was to decide "whether or not to report the QA breakdown under 10 CFR 50.55(e) to the NRC". (at 19). The notes further state that Zack was to "try to get material certified to federal specifications", and to "revise or clarify existing requirements so that the purchases would be acceptable." Id.
17. Howard describes a steadily increasing level of "intimidation and verbal abuse" from management, apparently designed to induce Howard's resignation. (at 22).

18. Howard then states that he confided in Mr. Leonard of MPQAD (at Midland) of the "awkward difficulties" with QA at Zack. (at 22). He advised Howard that he recognized Zack's "large number of problems over the years," and that he should report any specific allegations under a confidentiality agreement. Id.
19. On April 13, 1982, Howard called Leonard and report QA problems at Zack. Howard reported these allegations officially through the MPQAD allegation system on April 15. (at 23).
20. Despite Leonard's promise of confidentiality, Howard reports that "on April 16, 1982, Mr. Calkins [his supervisor at Zack] called me into his office and told me I had betrayed him and that he was not going to speak to me anymore". Id.
21. Soon after his visit with Calkins, Howard received a copy of a memorandum from the president of Zack to all employees. "Without mentioning me by name, this memo referred to and then denied the allegations I had made to Mr. Leonard. It also denied us access to the files without upper management permission". Id.
22. After a short review of the Zack files, Mr. Leonard informed Howard that he failed to find anything wrong "of substance" with the Zack QA documents. Mr. Leonard stated to Howard that "I was fired once, too, you know." (at 24).
23. On April 30, 1982, Howard was fired by the president of Zack for "incompetence". Nevertheless, she acknowledged that Zack's QA performance was "appalling". (at 24, 25).
24. On May 3, 1982, Howard reported the QA deficiencies at Zack to NRC investigators. (at 25). While he left with them documents relating "alterations", "possible forgeries", and admissions by Zack that it's failure to qualify vendors was a "serious program deficiency", the NRC has not contacted Howard further until July 21, 1982 (the date of the affidavit). Although he called and visited the office several times, no interest was shown by the NRC in his revelations. (at 26).

Stamiris Contention 1 (1980)

Consumers Power Company statement and responses to NRC regarding soil settlement issues reflect a less than complete and candid dedication to providing information relevant to health and safety standards with respect to resolving the soil settlement problems, as seen in:

- *(a) the material false statement in the FSAR (Order of Modification, Appendix B);
- *(b) the failure to provide information resolving geologic classification of the site which is pertinent to the seismic design input on soil settlement issues (Responses to FSAR Questions 361.4, 361.5, 361.7 and 362.9);
- (d) the failure to provide adequate acceptance criteria for remedial actions in response to 10 CFR §50.54(f) requests (as set forth in Part II of the Order of Modification);

and this managerial attitude necessitates stricter than usual regulatory supervision (ALAB-106) to assure appropriate implementation of the remedial steps required by the Order Modifying Construction Permits, dated December 6, 1979.

*April 20, 1981, Supplement to Contention 1

Examples of CPCo. reluctance to provide requested information:

1. 3/31/80 NRC meeting notation of Applicant's reluctance to provide NRC consultants with requested information.
2. Vol. III, Tab 65 50-54f, 8/6/79 meeting, attitude that "needlessly conservative decisions may be formulated on the 'what it' type questions" by the NRC on dewatering.
3. The 11/24/80 S.A.L.P. assessment on CPCo. - NRR interface as presented by D. Hood in the following statements regarding soil settlement issues:

A big contributor to the inability to make meaningful progress in this matter is the quality of responses gotten. We have set some kind of record on the number of questions re-asked, which speaks poorly for CPCo.-NRR interface. ...The bottomline is there seems to be a lack of appreciation or support of Staff review necessities and a tendency to push ahead despite the lack of proper assurances."

4. The perfunctory manner in which CPCo. deponents answered questions. (I will tabulate examples from the depositions I attended.)

*These items have previously been litigated.

Examples of information withheld or incorrectly given:

5. The failure of CPCo. to discuss the Administration Building settlement problem with the NRC, as they did with their consultants, in the early meetings on the DGB settlement.
6. The false FSAR statements beyond the one cited as a "material false statement" in the December 6 Order, as discussed in the 4/3/79 Keppler - Thornburg memo, and the 6/13/79 Thornburg - Thompson memo.

*Stamiris Contention 2 (1980)

Consumers Power Company's financial and time schedule pressures have directly and adversely affected resolution of soil settlement issues, which constitutes a compromise of applicable health and safety regulations as demonstrated by:

- a) the admission (in response to §50.54(f) question #1 requesting identification of deficiencies which contributed to soil settlement problems) that the FSAR was submitted early due to forecasted OL intervention, before some of the material required to be included was available:
- b) the choice of remedial actions being based in part on expediency, as noted in Consumers Power Company consultant R. B. Peck's statement of 8-10-79;
- c) the practice of substituting materials for those originally specified for "commercial reasons" (NCR QF203) or expediency, as in the use of concrete in electrical duct banks (p. 23 Keppler Report) **;
- d) continued work on the diesel generator building while unresolved safety issues existed, which precluded thorough consideration of Option 2 - Removal and Replacement Plan.

*April 20, 1981, Supplement to Contention 2

Further examples of the effect of financial and time pressures on soil settlement issues:

Examples	Effect on soil settlement issues
1. 11/7/78 Bechtel action item: "proceed with preparations for preload as rapidly as possible"	1. Root causes not adeq. investigated. Organizational deficiencies not eliminated prior to proceeding with remediation
2. 11/7/78 decision to fill pond "immediately, because the amount of river water available for filling is restricted"	2. Affected piezometric measurements during preload
3. 11/7/78 "5-month period is available in the schedule for preloading"	3. The surcharge was removed at the end of this 5 months despite lack of NRC satisfaction that secondary consolidation was assured

* These items have previously been litigated

**March 22, 1979, Keppler Investigation Report conducted by Region III, Dec. 78-Jan. 79.

4. Failure to grout gaps prior to cutting of duct banks, failure to cut condensate lines when first suggested, failure to break up mudmat at DGB
 5. Choice to continue construction of DGB
 6. Early FSAR submittal and inadequate review of FSAR
 7. Failure to reconstruct geometry of area prior to fill placement, failure to await NRC approval before proceeding with Preload, selection of "least costly feasible alternative" for DGB
 8. Failure to excavate loose sands as committed to in PSAR
 9. Installation of ; preload instrumentation was subject to time pressure assoc. with frost protection considerations
 10. Appeals to NRC to consider financial plight and schedule deadlines as in Seismic Deferral Motion
 11. Depth and breadth of surcharge limited by practical consideration of DGB, Turbine B. structures
 12. Changes to design (DGB foundation), material, or procedural [sic] specifications without proper approval
4. Resulted in additional stresses to DGB which could have been avoided
 5. Eliminated practical consideration of Removal & Replacement Option
 6. Precluded early detection of inconsistencies which could have prevented some of the s.s. problems
 7. Varying degrees of caution and conservatism were foregone in favor of cost and schedule advantages
 8. Contributed to inadequacy of subsoils
 9. Expenditures for preload instrumentation (CJD 11/1/78 memo) prior to formal adoption of preload = premature commitment
 10. If granted, would affect seismic--soil settlement standards
 11. Afforded less than optimum conditions for surcharge
 12. Contributed to settlement or stress problems and allowed conflicts to go unnoticed as preventative indicators

*Stamiris Contention 3 (1980)

Consumers Power Company has not implemented its Quality Assurance Program regarding soil settlement issues according to 10 CFR Part 50, Appendix B regulations, and this represents a repeated pattern of quality assurance deficiency reflecting a managerial attitude inconsistent with implementation of Quality Assurance Regulations with respect to soil settlement problems, since reasonable assurance was given in past cases (ALAB-100, ALAB-106 and LBP-74-71) that proper quality assurance would ensure and it has not.

The Quality Assurance deficiencies regarding soil settlement include:

- a) 10 CFR Part 50, Appendix B, Criteria III, V, X and XVI as set forth in the Order of Modification;
- b) 10 CFR Part 50, Appendix B, additional criteria denoted by roman numerals below:
 - I. The Applicant has failed to assume responsibility for execution of the QA program through its failure to verify and review FSAR statements (pp. 6-8 and p. 21, Keppler Report) and through its reliance on final test results not in accordance with specified requirements (p. 16, Keppler Report);
 - II. The QA program was not carried out according to written policies, procedures and instruction, in that oral directions were relied upon and repeated deviations from policies occurred regarding compaction procedures (p. 9-14, Keppler Report);
 - VII. Control of purchased material has not been maintained, in that examination and testing of backfill materials did not occur in accordance with regulations (NRC QF29, NRC QF147);
 - IX. Control of non-destructive testing was not accomplished by qualified personnel using qualified procedures regarding
 - a) moisture control (Keppler Report p. 14-16; QA Request SD40, NRC QFS52, 172, 174 and 199);
 - b) compaction procedures (Keppler Report, p. 9; NRC QFS 68, 120 and 130); and
 - c) plant fill work (pp 24 and 25, Keppler Report);

*These items have previously been litigated.

- XI. Test programs did not incorporate requirements and acceptance limits adequately in the areas referenced in a, b and c above, and do not meet these requirements regarding soil settlement remedial actions;
 - XIII. Measures were not adequately established to prevent damage or deterioration of material regarding frost effects on compacted fill (pp. 16 and 17, Keppler Report);
 - XV. Measures were not taken to control non-conforming material in order to prevent the inadvertent use (NRC QF29 and QF127);
- c) the settlement of the Administration Building in 1977 should have served as a quality indicator, preventing the same inadequate procedures from occurring in the 1978 construction of the diesel generator building causing its eventual settlement.

Stamiris Contention 4 (1980)

Consumers Power Company performed and proposed remedial actions regarding soils settlement that are inadequate as presented because:

- A. Preloading of the diesel generator building
 - 1) does not change the composition of the improper soils to meet the original PSAR specifications;
 - 2) does not preclude an unacceptable degree of further differential settlement of diesel generator building;
 - 3) does not allow proper evaluation of compaction procedures because of unknown locations of cohesionless soil pockets;
 - 4) may adversely affect underlying piping, conduits or nearby structures; and
 - 5) yields effects not scientifically isolated from the effects of a rise in cooling water and therefore not measured properly;
- *B. Slope stability of cooling pond dikes is not assured because they were built with the same improper soils and procedures (NRC QF172);
- C. Remedial soil settlement actions are based on untested assumptions and inadequate evaluation of dynamic responses of those structures to such things as dewatering, differential soil settlement, and seismic characteristics:
 - a. Auxiliary Building Electrical Penetration Areas and Feedwater Isolation Valve Pits
 - b. Service Water Intake Building and its Retaining Walls
 - c. Borated Water Storage Tanks
 - d. Diesel Fuel Oil Storage Tanks;
- D. Permanent dewatering
 - 1) would change the water table, soil and seismic characteristics of the dewatered site from their originally approved PSAR characteristics - characteristics on which the safety and integrity of the plant were based, thereby necessitating a reevaluation of these characteristics for affected Category I structures;

*These items have previously been litigated.

- 2) may cause an unacceptable degree of further settlement in safety related structures due to the anticipated drawdown effect;
- 3) to the extent subject to failure or degradation, would allow inadequate time in which to initiate shutdown, thereby necessitating reassessment of these times.

Therefore, unless all the issues set forth in this contention are adequately resolved, the licensee actions in question should not be considered an acceptable remediation of soil settlement problems.

Summary of Contentions to be Litigated

<u>Contention</u>	<u>Key Phrase</u>	<u>Reviewer(s)</u>
Sinclair 3	severe accidents	Frank Rowsome
Sinclair 5	cooling pond	Jim Carson and Steve Tsai, ANL
Sinclair 7	synergism	Hal Walker
Sinclair 6	QA - Howard	Wayne Shafer, RIII
Sinclair 8	QA - records	Wayne Shafer, RIII
Sinclair 16	QA - welders	Wayne Shafer, RIII
Sinclair 24	ground stability	Joe Kane, J. P. Knight
Sinclair 27	evacuation	Dave Rohrer
Sinclair 28	water hammer	Bill LeFave, Al Serkiz
Sinclair 30	tube integrity	Cy Cheng, Ray Gonzales
Stamiris 1b, 1c (1982)	cost benefit	Barry Elliot, Maurice Messier, Nick Fields, Frank Cardile
Stamiris 6	groundwater	Joe Kane, Ray Gonzales
Stamiris 8	audit	Darl Hood
Stamiris 1d (1980)	managerial attitude	Joe Kane
Stamiris 4 (1980)	inadequate remediation	Joe Kane, Ray Gonzales, Frank Rinaldi
Marshall 2	settling	Joe Kane, J. P. Knight
Warren 1	fill soil	Joe Kane
Warren 2	seepage	Joe Kane, Ray Gonzales, Frank Rinaldi
Warren 3	DGB stress	Joe Kane, J. P. Knight, Frank Rinaldi, Paul Chen

OFFICE ▶	.....	.....	.....	.....	.....	.....	.....
SURNAME ▶	.....	.....	.....	.....	.....	.....	.....
DATE ▶	.....	.....	.....	.....	.....	.....	.....



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

OCT 17 1982

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

MEMORANDUM FOR: Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

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

FROM: Melanie A. Miller, Project Manager
Licensing Branch No. 4
Division of Licensing

SUBJECT: ADMITTED MIDLAND CONTENTIONS

Enclosed is a tabular listing of all contentions accepted by the board for litigation (Attachment 1). The table is provided for informational purposes and will be continuously updated as changes in contention status occur. The intervenor's name and contention number are listed with a corresponding key phrase provided for each contention for easy reference. Additionally, the date under the contention number refers to the year it was accepted by the board and is listed to avoid confusion in redundant contention numbers. Attachment 2 summarizes the contentions and the reviewers responsible for testimony. This attachment is also subject to change.

We are sending this table to responsible reviewers by copy of this memorandum. If there are questions, I can be reached at X24259.

Melanie A. Miller

Melanie A. Miller, Project Manager
Licensing Branch No. 4
Division of Licensing

Enclosures:
As stated

cc: See next page

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OCT 27 1982

- 2 -

cc w/encl:

W. Paton

M. Wilcove

N. Wright

D. Hood

R. Hernan

F. Rowsome

J. Carson, ANL

H. Walker

W. Shafer, RIII

J. Kane

J. P. Knight

D. Rohrer

W. Lefave

C. Anderson

C. Cheng

R. Gonzales

B. Elliot

M. Messier

N. Fields

F. Cardile

F. Rinaldi

P. Chen, ETEC

S. Tsai, ANL

ATTACHMENT 1

ADMITTED MIDLAND CONTENTIONS

Admitted Midland Contentions

<u>Contention #</u>	<u>Key Phrase</u>	<u>Contention</u>
Sinclair 3 (1982)	severe accidents	The assessment of the likelihood and severity of "severe accidents" (or class 9 accidents) in the DES is inadequate in that it relies for methodology and probability of occurrence of severe accidents on the Rasmussen Report (WASH-1400) DES 5-45-66. However, a new NRC report reveals that the Rasmussen methodology, at least as it pertains to more severe accidents (total meltdown), significantly understates the risk of such accidents by a factor of 20. Precursors to Potential Severe Core Damage Accidents: 1969-1979, a Status Report, NUREG/CR/2497 (June 1982). This report shows that probabilities of severe accidents should be derived on the basis of actual accident sequences and significant events, rather than the Rasmussen methodology. The failure of the DES to incorporate this analysis cripples the entire Class 9 analysis of the DES.
Sinclair 5 (1982)	cooling pond	The staff DEIS is deficient in that it continues to base its analysis of the cooling pond's effectiveness in controlling thermal discharges (DEIS at 4-6) and ice and fog generation (DEIS at 5-9) on a study based on cooling pond performance in a substantially different climatic region. Instead, the DEIS should analyze information from the Dresden, Illinois nuclear facility (or other data from a comparably sized and situated facility) for both purposes, and present the baseline data from that facility to allow the agency and the public to reach an informed decision on the adverse affects of the cooling pond.
Sinclair 7 (1982)	synergism	The issue of synergism between chemicals and radiation (Contention 61, (old 55) <u>Contentions of Mary Sinclair, 1978</u>) must be re-opened based on a new study. Scientists at Sandia National Laboratory, Albuquerque, New Mexico, have conducted tests sponsored by the NRC on polymer cable insulation and jacketing used in nuclear power containment buildings. (<u>Industrial Research and Development, June, 1982</u>)

<u>Contention #</u>	<u>Key Phrase</u>	<u>Contention</u>
Sinclair 6 (1982)	QA-Howard	They have found that long-term low doses of gamma radiation degrades many polymers more than do equal doses administered at higher rates in shorter testing times. Besides the dose rate effect, the researchers have also found that <u>synergistic</u> effects can occur when polymers are exposed to radiation and mildly elevated temperatures. Dr. Roger Clough, of Sandia National Laboratory, has stated that the present testing method underestimates the long-term effects and synergisms that display themselves only in longer tests. This study indicates that the useful life of the plant will be shortened considerably because of this problem.
Sinclair 8 (1982)	QA-records	See Enclosure 1
Sinclair 16 (1982)	QA-welders	The Zack Company of Chicago which has been the contractor responsible for the heating, cooling and ventilating system of the Midland nuclear plant has filed a non-compliance report with the NRC on or about August 4, 1982, indicating that two sets of records -- a shop record and a QA record -- which are required to be kept to guarantee the integrity of the welds and therefore, must be signed by the same welder, were, in fact, signed by two different persons. This violates the federal standards for documentation for safety-related systems in a nuclear power plant. This breakdown in quality control means the principal method that the NRC has for guaranteeing the integrity of the welds in the HVAC system (which is already built into a large part of the plant) has failed and that therefore the protection of the public health and safety cannot be guaranteed as required by 10 CFR §§50.57(1), 50.57(2), and 50.57(3) and Part 50, Appendix B.
		In the Part 21 report that Zack Co. filed which was signed by Dave Calkins of Zack and prepared by Howard McGrance of Consumers Power Co., it was disclosed that 140 Travelers showed unverified welder qualifications for fabrication welds. Without qualified welders for this large

<u>Contention #</u>	<u>Key Phrase</u>	<u>Contention</u>
		number of welds, the necessary guarantee for the protection of the public health and safety cannot be met as required by 10 CFR §§50.57(1), 50.57(2) and 50.57(3). In addition, this report indicates that the quality assurance in construction of these plants has not been met as required by Part 50, Appendix B.
Sinclair 24 (1979)	ground stability	The present site for the Midland facility is not only inappropriate for the reasons set forth in Contention 9, but also affirmatively unsafe. Serious questions have been raised concerning the ground stability of portions of the site. At least one of the essential buildings of the reactor complex is reported sinking, and construction has been halted on that building. As a result of the serious and unresolved questions concerning ground stability, the findings required by 10 CFR §§50.57(a)(3) and 50.57(a)(6) cannot be made.
Sinclair 27 (1979)	evacuation	Recently discovered information indicates that the Advisory Committee on Reactor Safeguards conditioned the acceptability of the present Midland site for the project on the existence of a highly effective evacuation system. However, no adequate evacuation plans exist. Aerial surveys of traffic conducted during the construction permit stage of these proceedings, and taken during shift changes, indicated that evacuation in an acceptable time cannot be accomplished. Further, relying on the evacuation plans of Dow Chemical Company is inadequate. During the evacuation following the recent chlorine leak, evacuation procedures were chaotic and all communications were either jammed or ineffectual. In fact at an NRC conference held in Midland, Michigan on September 8, 1978, both the County Road Commission and the Midland Planning Commission admitted that they have not considered evacuation routes. As a result, the findings required by 10 CFR §50.57(a)(3)(i) and §50.57(a)(6) cannot be made.

<u>Contention #</u>	<u>Key Phrase</u>	<u>Contention</u>
Sinclair 28 (1982)	water hammer.	<p>Contention 28 deals with the water hammer problem of pressurized water reactors of the Midland type. This problem is identified as one of the unresolved safety issues applicable to Midland 1 & 2 in the SER, C-4. Babcock and Wilcox (B&W) plants with an internal auxiliary feedwater (AFW) feed ring of the same design as Midland in recent events, have shown a marked susceptibility to internal damage of the feed ring as a result of water hammer. From this, reduced cooling in the steam generators could occur as a result of inadequate AFW flow following loss of normal feedwater flow. (NRC Response to Interrogatory 7) Since this effect involves critical safety systems, the Task A-1 report (Jan., 1980) states that systematic review procedures in the OL review process will require the Applicant to: 1) address potential water hammer problems in various systems; 2) demonstrate that there are adequate design features and 3) expand the preoperational testing program to insure that these design features and operating procedures do prevent damaging water hammer events.</p> <p>However, the SER does not indicate that these criteria have been met by the Applicant. As a result of this omission, the findings required by 10 CFR §§50.57(a)(3)(i) and 50.57(a)(6) cannot be made.</p>
Sinclair 30 (1982)	tube integrity	<p>The degradation of steam tube integrity due to corrosion induced wastage, cracking reduction in tube diameter, and vibration induced cracks is a serious unresolved safety problem at the Midland nuclear plant. It is admitted that the chemistry of the cooling water is critical to prevention of steam tube failure, (NUREG-0886). However, the fact that these plants depend on cooling water from the cooling pond increases the likelihood of corrosion and poor water chemistry because the DEIS states that the plant dewatering system will first be discharged to the cooling pond. (DEIS at 5-2). That means that many wastes, including radioactive</p>

<u>Contention #</u>	<u>Key Phrase</u>	<u>Contention</u>
		materials from leaks and spills on the reactor site, can enter the cooling pond and disrupt the chemistry of the pond. Therefore, due to this contribution of an undetermined amount and quality of ground dewatering inflows to the cooling pond, the NRC's bland assurance that corrosion is unlikely due to the lack of sodium thiosulfate, is unsatisfactory. (NRC Response to Interrogatory 9.j.) In fact, due to the contribution of groundwater, the NRC is not fully aware of the likely constituents of the cooling pond, and the findings required by 10 CFR §§50.57(a)(3)(1) and 50.57(a)(6) cannot be made.
Stamiris 1b, c (1982)	cost benefit	NRC's economic cost benefit analysis of the DES is faulty and misleading because it: b. underestimates decommissioning costs c. overestimates lifespan of Unit 1
Stamiris 2 (1982) (consolidated with Sinclair 6)	internal reporting	CPC/NRC internal reporting systems intended to allow plant workers to raise concerns or criticisms about inadequate workmanship or practices are ineffective because they have resulted in job losses due to QA/QC reporting. (Midland Daily News articles dated 7/20/82, 6/28/82, and Howard affidavit, 7/30/82)
Stamiris 6 (1982)	groundwater	The NRC risk assessment in the DES does not consider potential effects of permanent dewatering on groundwater relationships.
Stamiris 8 (1982)	audit	The ACRS has recommended an assessment of Midland's design adequacy and construction quality in their 6/18/82 report (SER Supplement 1, Appendix G). In order to assure that this audit be thorough and objective, it must be performed by an independent third party of a competing contracting firm. Such a requirement was imposed by the ASLB in the Houston Power and Light, 50-498 and 50-499 OL proceeding, 4/30/82. And, due to the pattern of design deficiencies (4/20/82 SALP, p. 16) such an independent audit is necessary to assure the design integrity of this plant. However, the

<u>Contention #</u>	<u>Key phrase</u>	<u>Contention</u>
		NRC has not required (SER Supplement 1, p. 19-2(1)), and CPC has not committed (7/9/82 Tedesco to Cook letter) to such an independent audit.
Stamiris 1a, b, d (1980)	managerial attitude	See Enclosure 2
Stamiris 2a-d (1980)	schedule pressures	See Enclosure 3
Stamiris 3 (1980)	QA-soils	See Enclosure 4
Stamiris 4 (1980)	inadequate remediation	See Enclosure 5
Marshall 2 (1979)	settling	Present geological conditions, according to newspaper accounts, is causing the settling of the generator building at the Nuclear Power Plant site.
Warren 1 (1980)	fill soil	The composition of the fill soil used to prepare the site of the Midland Plant - Units 1 and 2 is not of sufficient quality to assure that pre-loading techniques have permanently corrected soil settlement problems. The NRC has indicated the <u>random</u> fill dirt was used for backfill. The components of random fill can include loose rock, broken concrete, sand, silt, ashes, etc. all of which cannot be compacted through pre-loading procedures.
Warren 2	seepage	A. Because of the known seepage of water from the cooling pond into the fill soils in the power block area, permanent dewatering procedures being proposed by Consumers Power Company are inadequate, particularly in the event of increased water seepage, flooding, failure of pumping systems and power outages. Under these conditions, Consumers cannot provide reasonable assurance that stated maximum levels can be maintained.

B. Given the facts alleged in Contention 2.A, and considering also that the Saginaw Valley is built upon centuries of silt deposits, these highly permeable soils which underlie, in part, the diesel generator building and other class I structures may be adversely affected by increased water levels producing liquefaction of these soils. The following will also be affected:

- 1) borated water tanks
- 2) diesel fuel oil tanks.

Warren 3
(1980)

DGB stress

Pre-loading procedures undertaken by Consumers Power have induced stresses on the diesel generating building structure and have reduced the ability of this structure to perform its essential functions under that stress. Those remedial actions that have been taken have produced uneven settlement and caused inordinate stress on the structure and circulating water lines, fuel oil lines, and electrical conduit.

Sinclair Contention #6

NRC regulations at 10 CFR Part 50, Appendix B require that applicants for operating licenses develop and implement a quality assurance program for the protection of the public from improper materials or unworkmanlike practices. This QA program includes such elements as procurement document control, control of purchased material, equipment, and services, proper inspections and handling of nonconforming materials, corrective actions, and audits by trained personnel. However, the affidavit attached to this contention and summarized below shows clearly that the QA program for the Midland plant was not in compliance with these requirements, and that therefore, quality assurance and control cannot be established at the Midland nuclear plant.

As basis for this contention, intervenor Mary Sinclair references the affidavit of Mr. Albert T. Howard, a former Quality Assurance Documentation Supervisor for Zack Company, (from October 19, 1981 through April 30, 1982) which was under contract to supply equipment for the heating, ventilating and air conditioning (HVAC) system of the Midland plant.

His affidavit documents the complete breakdown of the QA program for the Midland plant, leading to his dismissal for refusing to conform to Zack's improper QA practices. Those improper practices, with regard to the Midland plant specifically, or all of Zack's nuclear clients generally, are detailed as follows:

1. Howard states that his supervisor, Mr. Calkins, had investigated and reported the QA problems Zack was having with the Midland plant to the Midland plant to the Midland Site Manager as early as August 28, 1981. (at 4)
2. As a result of this report, "major QA reorganizations" were undertaken at Midland, to correct improper QA documentation. Id.
3. Soon after Howard's promotion to Supervisor of the Documents Assurance Department, Howard became aware of "serious deficiencies" in QA documentation. (at 5).
4. On November 18, 1981, a Midland QQ contract employee directed Howard to sign a form attesting to having completed the requisite training for his position, in spite of the fact that Howard did not receive such training. Id.
5. On November 30, 1981, Howard reviewed reports which summarized various QA deficiencies at Midland, including such terms as:

"certs altered"; "white out used and retyped"; and "heat number altered to agree with certification"; missing signatures; certifications missing; lack of test data for purchases; correspondence that steel had been purchased without verification and traceability; and stickers indicating compliance with professional standards. As the summary noted on the latter item, "Authenticity of the signatures is questionable." (at 6).

6. On November 30, 1981, Howard also received a report from Calkins describing the "breakdown of the quality assurance program", resulting in, inter alia, improper modifications to documents. Id.
7. The report described in 6 concluded that the corrective action recommended was to "promise -- with a plan -- not to repeat the misconduct." No "offenders" were to be dismissed. (at 7).
8. Bechtel communicated to Zack in a December 21, 1982 [sic], letter that the reported deficiencies (see 1, 5) were a "paperwork problem", and that it was their opinion that "It is highly probable that Zack ordered correct materials for the Midland project from their sub-tier vendors and that the vendors' intent was to comply with Zack's purchase order requirements." (emphasis added). Howard disagreed strongly with Bechtel's attempt to minimize the seriousness of the QA document breakdown at Zack. (at 9).
9. Howard states that the Zack "internal report/audit" of Bechtel's QA documentation (in 8) was seriously deficient in that it knowingly understated the number of purchase orders to be evaluated, and therefore that Zack's assurance to Bechtel that a "total document audit" was completed was "simply not true." (at 10).
10. Howard reports that "several times" he discussed with Zack management that "delivered materials did not conform to site specifications, and that many of Zack's vendors were unapproved as suppliers of material to nuclear sites." (at 11).
11. Howard's affidavit then states that a Mr. Perry contacted Commonwealth Edison QA manager about the deficiency in delivered materials, who then contacted Consumers Power at the Midland site. Consumers apparently then contacted the president at Zack, who informed Howard that she "did not appreciate our calls outside the company." (at 11, 12).
12. On November 5, 1980, the Bechtel Power Corporation sent a letter to the Zack Company. Howard reports that the letter "makes it clear that Bechtel Power Corporation had sufficient knowledge of material being shipped to the site in nonconforming condition." (at 14).
13. Howard states that a September 1981 letter to Zack Company from U.S. Steel describes a "serious misunderstanding" regarding purchases of steel for 26 purchase orders at all three sites (including Midland).

Howard states that the letter points out that the Zack

"confirming orders" all read "Safety-Related". The U.S. Steel letter points out that first, the orders had not been purchased as "Safety-Related"; and second, that since the purchase orders were not called in as safety-related, they were not handled through the "V&T" (Verification and Testing) program." (at 16).

Howard points out that the use of the term "Safety-Related" implied that the items received the quality verification required by regulation, which was inaccurate. Id.

14. Mr. Howard's affidavit states further that Zack did not confine its purchases to those from "approved" vendors.

"Another vendor, the Delta Screw Company, also failed a fall audit. A fall 1981 Zack letter from Mr. Calkins allegedly removed Delta Screw Co. from the approved vendors list for failure to comply with the requirements of a Quality Assurance program as required by the NRC. However, I knew that Zack Company did not follow its own "approved vendors list". A list of the P.O.s from December 21, 1981 to February 1982 reveals that, in fact, Delta Screw received approximately 38 purchase orders from the Zack Company before being put back on the approved vendors list in February 1982." (at 18).

15. Howard also describes that Zack personnel were not adequately trained to perform their duties. This lack of training included the president of Zack, who "assured the utility management that all problems relating to the Zack QA/QC breakdown were under control and her personal supervision". (at 18, 19).
16. Howard's affidavit describes the notes of a meeting on November 3, 1981, at the Midland site, with all relevant QA personnel in attendance. The notes show that the principal purpose of the meeting was to decide "whether or not to report the QA breakdown under 10 CFR 50.55(e) to the NRC". (at 19). The notes further state that Zack was to "try to get material certified to federal specifications", and to "revise or clarify existing requirements so that the purchases would be acceptable." Id.
17. Howard describes a steadily increasing level of "intimidation and verbal abuse" from management, apparently designed to induce Howard's resignation. (at 22).

18. Howard then states that he confided in Mr. Leonard of MPQAD (at Midland) of the "awkward difficulties" with QA at Zack. (at 22). He advised Howard that he recognized Zack's "large number of problems over the years," and that he should report any specific allegations under a confidentiality agreement. Id.
19. On April 13, 1982, Howard called Leonard and report QA problems at Zack. Howard reported these allegations officially through the MPQAD allegation system on April 15. (at 23).
20. Despite Leonard's promise of confidentiality, Howard reports that "on April 16, 1982, Mr. Calkins [his supervisor at Zack] called me into his office and told me I had betrayed him and that he was not going to speak to me anymore". Id.
21. Soon after his visit with Calkins, Howard received a copy of a memorandum from the president of Zack to all employees. "Without mentioning me by name, this memo referred to and then denied the allegations I had made to Mr. Leonard. It also denied us access to the files without upper management permission". Id.
22. After a short review of the Zack files, Mr. Leonard informed Howard that he failed to find anything wrong "of substance" with the Zack QA documents. Mr. Leonard stated to Howard that "I was fired once, too, you know." (at 24).
23. On April 30, 1982, Howard was fired by the president of Zack for "incompetence". Nevertheless, she acknowledged that Zack's QA performance was "appalling". (at 24, 25).
24. On May 3, 1982, Howard reported the QA deficiencies at Zack to NRC investigators. (at 25). While he left with them documents relating "alterations", "possible forgeries", and admissions by Zack that it's failure to qualify vendors was a "serious program deficiency", the NRC has not contacted Howard further until July 21, 1982 (the date of the affidavit). Although he called and visited the office several times, no interest was shown by the NRC in his revelations. (at 26).

Stamiris Contention 1 (1980)

Consumers Power Company statement and responses to NRC regarding soil settlement issues reflect a less than complete and candid dedication to providing information relevant to health and safety standards with respect to resolving the soil settlement problems, as seen in:

- *(a) the material false statement in the FSAR (Order of Modification, Appendix B);
- *(b) the failure to provide information resolving geologic classification of the site which is pertinent to the seismic design input on soil settlement issues (Responses to FSAR Questions 361.4, 361.5, 361.7 and 362.9);
- (d) the failure to provide adequate acceptance criteria for remedial actions in response to 10 CFR §50.54(f) requests (as set forth in Part II of the Order of Modification);

and this managerial attitude necessitates stricter than usual regulatory supervision (ALAB-106) to assure appropriate implementation of the remedial steps required by the Order Modifying Construction Permits, dated December 6, 1979.

*April 20, 1981, Supplement to Contention 1

Examples of CPCo. reluctance to provide requested information:

1. 3/31/80 NRC meeting notation of Applicant's reluctance to provide NRC consultants with requested information.
2. Vol. III, Tab 65 50-54f, 8/6/79 meeting, attitude that "needlessly conservative decisions may be formulated on the 'what it' type questions" by the NRC on dewatering.
3. The 11/24/80 S.A.L.P. assessment on CPCo. - NRR interface as presented by D. Hood in the following statements regarding soil settlement issues:

A big contributor to the inability to make meaningful progress in this matter is the quality of responses gotten. We have set some kind of record on the number of questions re-asked, which speaks poorly for CPCo.-NRR interface. ...The bottomline is there seems to be a lack of appreciation or support of Staff review necessities and a tendency to push ahead despite the lack of proper assurances."

4. The perfunctory manner in which CPCo. deponents answered questions. (I will tabulate examples from the depositions I attended.)

*These items have previously been litigated.

Examples of information withheld or incorrectly given:

5. The failure of CCo. to discuss the Administration Building settlement problem with the NRC, as they did with their consultants, in the early meetings on the DGB settlement.
6. The false FSAR statements beyond the one cited as a "material false statement" in the December 6 Order, as discussed in the 4/3/79 Keppler - Thornburg memo, and the 6/13/79 Thornburg - Thompson memo.

*Stamiris Contention 2 (1980)

Consumers Power Company's financial and time schedule pressures have directly and adversely affected resolution of soil settlement issues, which constitutes a compromise of applicable health and safety regulations as demonstrated by:

- a) the admission (in response to §50.54(f) question #1 requesting identification of deficiencies which contributed to soil settlement problems) that the FSAR was submitted early due to forecasted OL intervention, before some of the material required to be included was available;
- b) the choice of remedial actions being based in part on expediency, as noted in Consumers Power Company consultant R. B. Peck's statement of 8-10-79;
- c) the practice of substituting materials for those originally specified for "commercial reasons" (NCR QF203) or expediency, as in the use of concrete in electrical duct banks (p. 23 Keppler Report) **;
- d) continued work on the diesel generator building while unresolved safety issues existed, which precluded thorough consideration of Option 2 - Removal and Replacement Plan.

*April 20, 1981, Supplement to Contention 2

Further examples of the effect of financial and time pressures on soil settlement issues:

Examples	Effect on soil settlement issues
1. 11/7/78 Bechtel action item: "proceed with preparations for preload as rapidly as possible"	1. Root causes not adeq. investigated. Organizational deficiencies not eliminated prior to proceeding with remediation
2. 11/7/78 decision to fill pond "immediately, because the amount of river water available for filling is restricted"	2. Affected piezometric measurements during preload
3. 11/7/78 "5-month period is available in the schedule for preloading"	3. The surcharge was removed at the end of this 5 months despite lack of NRC satisfaction that secondary consolidation was assured

* These items have previously been litigated

**March 22, 1979, Keppler Investigation Report conducted by Region III, Dec. 78-Jan. 79.

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|-----|---|-----|--|
| 4. | Failure to grout gaps prior to cutting of duct banks, failure to cut condensate lines when first suggested, failure to break up mudmat at DGB | 4. | Resulted in additional stresses to DGB which could have been avoided |
| 5. | Choice to continue construction of DGB | 5. | Eliminated practical consideration of Removal & Replacement Option |
| 6. | Early FSAR submittal and inadequate review of FSAR | 6. | Precluded early detection of inconsistencies which could have prevented some of the s.s. problems |
| 7. | Failure to reconstruct geometry of area prior to fill placement, failure to await NRC approval before proceeding with Preload, selection of "least costly feasible alternative" for DGB | 7. | Varying degrees of caution and conservatism were foregone in favor of cost and schedule advantages |
| 8. | Failure to excavate loose sands as committed to in PSAR | 8. | Contributed to inadequacy of subsoils |
| 9. | Installation of preload instrumentation was subject to time pressure assoc. with frost protection considerations | 9. | Expenditures for preload instrumentation (CJD 11/1/78 memo) prior to formal adoption of preload = premature commitment |
| 10. | Appeals to NRC to consider financial plight and schedule deadlines as in Seismic Deferral Motion | 10. | If granted, would affect seismic--soil settlement standards |
| 11. | Depth and breadth of surcharge limited by practical consideration of DGB, Turbine B. structures | 11. | Afforded less than optimum conditions for surcharge |
| 12. | Changes to design (DGB foundation), material, or procedural [sic] specifications without proper approval | 12. | Contributed to settlement or stress problems and allowed conflicts to go unnoticed as preventative indicators |

*Stamiris Contention 3 (1980)

Consumers Power Company has not implemented its Quality Assurance Program regarding soil settlement issues according to 10 CFR Part 50, Appendix B regulations, and this represents a repeated pattern of quality assurance deficiency reflecting a managerial attitude inconsistent with implementation of Quality Assurance Regulations with respect to soil settlement problems, since reasonable assurance was given in past cases (ALAB-100, ALAB-106 and LBP-74-71) that proper quality assurance would ensure and it has not.

The Quality Assurance deficiencies regarding soil settlement include:

- a) 10 CFR Part 50, Appendix B, Criteria III, V, X and XVI as set forth in the Order of Modification;
- b) 10 CFR Part 50, Appendix B, additional criteria denoted by roman numerals below:
 - I. The Applicant has failed to assume responsibility for execution of the QA program through its failure to verify and review FSAR statements (pp. 6-8 and p. 21, Keppler Report) and through its reliance on final test results not in accordance with specified requirements (p. 16, Keppler Report);
 - II. The QA program was not carried out according to written policies, procedures and instruction, in that oral directions were relied upon and repeated deviations from policies occurred regarding compaction procedures (p. 9-14, Keppler Report);
 - VII. Control of purchased material has not been maintained, in that examination and testing of backfill materials did not occur in accordance with regulations (NRC QF29, NRC QF147);
 - IX. Control of non-destructive testing was not accomplished by qualified personnel using qualified procedures regarding
 - a) moisture control (Keppler Report p. 14-16; QA Request SD40, NRC QFS52, 172, 174 and 199);
 - b) compaction procedures (Keppler Report, p. 9; NRC QFS 68, 120 and 130); and
 - c) plant fill work (pp 24 and 25, Keppler Report);

*These items have previously been litigated.

- XI. Test programs did not incorporate requirements and acceptance limits adequately in the areas referenced in a, b and c above, and do not meet these requirements regarding soil settlement remedial actions;
 - XIII. Measures were not adequately established to prevent damage or deterioration of material regarding frost effects on compacted fill (pp. 16 and 17, Keppler Report);
 - XV. Measures were not taken to control non-conforming material in order to prevent the inadvertent use (NRC QF29 and QF127);
- c) the settlement of the Administration Building in 1977 should have served as a quality indicator, preventing the same inadequate procedures from occurring in the 1978 construction of the diesel generator building causing its eventual settlement.

Stamiris Contention 4 (1980)

Consumers Power Company performed and proposed remedial actions regarding soils settlement that are inadequate as presented because:

- A. Preloading of the diesel generator building
 - 1) does not change the composition of the improper soils to meet the original PSAR specifications;
 - 2) does not preclude an unacceptable degree of further differential settlement of diesel generator building;
 - 3) does not allow proper evaluation of compaction procedures because of unknown locations of cohesionless soil pockets;
 - 4) may adversely affect underlying piping, conduits or nearby structures; and
 - 5) yields effects not scientifically isolated from the effects of a rise in cooling water and therefore not measured properly;
- *B. Slope stability of cooling pond dikes is not assured because they were built with the same improper soils and procedures (NRC QF172);
- C. Remedial soil settlement actions are based on untested assumptions and inadequate evaluation of dynamic responses of those structures to such things as dewatering, differential soil settlement, and seismic characteristics:
 - a. Auxiliary Building Electrical Penetration Areas and Feedwater Isolation Valve Pits
 - b. Service Water Intake Building and its Retaining Walls
 - c. Borated Water Storage Tanks
 - d. Diesel Fuel Oil Storage Tanks;
- D. Permanent dewatering
 - 1) would change the water table, soil and seismic characteristics of the dewatered site from their originally approved PSAR characteristics - characteristics on which the safety and integrity of the plant were based, thereby necessitating a reevaluation of these characteristics for affected Category I structures;

*These items have previously been litigated.

- 2) may cause an unacceptable degree of further settlement in safety related structures due to the anticipated drawdown effect;
- 3) to the extent subject to failure or degradation, would allow inadequate time in which to initiate shutdown, thereby necessitating reassessment of these times.

Therefore, unless all the issues set forth in this contention are adequately resolved, the licensee actions in question should not be considered an acceptable remediation of soil settlement problems.

Summary of Contentions to be Litigated

<u>Contention</u>	<u>Key Phrase</u>	<u>Reviewer(s)</u>
Sinclair 3	severe accidents	Frank Rowsome
Sinclair 5	cooling pond	Jim Carson and Steve Tsai, ANL
Sinclair 7	synergism	Hal Walker
Sinclair 6	QA - Howard	Wayne Shafer, RIII
Sinclair 8	QA - records	Wayne Shafer, RIII
Sinclair 16	QA - welders	Wayne Shafer, RIII
Sinclair 24	ground stability	Joe Kane, J. P. Knight
Sinclair 27	evacuation	Dave Rohrer
Sinclair 28	water hammer	Bill LeFave, Al Serkiz
Sinclair 30	tube integrity	Cy Cheng, Ray Gonzales
Stamiris 1b, 1c (1982)	cost benefit	Barry Elliot, Maurice Messier, Nick Fields, Frank Cardile
Stamiris 6	groundwater	Joe Kane, Ray Gonzales
Stamiris 8	audit	Darl Hood
Stamiris 1d (1980)	managerial attitude	Joe Kane
Stamiris 4 (1980)	inadequate remediation	Joe Kane, Ray Gonzales, Frank Rinaldi
Marshall 2	settling	Joe Kane, J. P. Knight
Warren 1	fill soil	Joe Kane
Warren 2	seepage	Joe Kane, Ray Gonzales, Frank Rinaldi
Warren 3	DGB stress	Joe Kane, J. P. Knight, Frank Rinaldi, Paul Chen

1/26/82
HML

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

MEMORANDUM FOR: Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

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

FROM: Melanie A. Miller, Project Manager
Licensing Branch No. 4
Division of Licensing

SUBJECT: ADMITTED MIDLAND CONTENTIONS

Enclosed is a tabular listing of all contentions accepted by the board of litigation (Attachment 1). The table is provided for informational purposes and will be continuously updated as changes in contention status occur. The intervenor's name and contention number are listed with a corresponding key phrase provided for each contention for easy reference. Additionally, the date under the contention number refers to the year it was accepted by the board and is listed to avoid confusion in redundant contention numbers. Attachment 2 summarizes the contentions and the reviewers responsible for testimony. This attachment is also subject to change.

We are sending this table to responsible reviewers by copy of this memorandum. If there are questions, I can be reached at X24259.

Melanie A. Miller, Project Manager
Licensing Branch No. 4
Division of Licensing

Enclosures:
As stated

cc: See next page

cc w/encl:

W. Paton
H. Wilcove
H. Wright
D. Hood
R. Hernan
F. Rowsome
J. Carson, ANL
H. Walker
W. Shafer, RIII
J. Kane
J. P. Knight
D. Rohrer
W. Lefave
C. Anderson
C. Cheny
R. Gonzales
B. Elliot
H. Messier
H. Fields
F. Cardile
F. Rinaldi
P. Chen, ETEC

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