



MIDLAND CONTENTIONS

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

J. Kane
Rec'd 1/18/83

JAN 14 1983

Docket Nos: 50-329
and 50-330

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

SUBJECT: ASSIGNMENTS FOR MIDLAND OL CONTENTIONS

By Appendix 1 of the enclosed Memorandum and Order (Rewritten Contentions of M. Sinclair) dated December 30, 1982, the Licensing Board identifies, rewrites and renumbers the admitted contentions for the Midland OL hearing. NRC sponsors for each contention are marked on the enclosed copy and are tabulated on Enclosure 2.

Schedules for filing of testimony will be established later. We are sending this table to responsible reviewers by copy of this memorandum. If there are questions, I can be reached at X28474.

Ronald W. Hiron for

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

Enclosures:
As stated

cc: See next page

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3pp.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:
Charles Bechhoefer, Chairman
Dr. Frederick P. Cowan
Dr. Jerry Harbour

II
Paton/Wright
Witcomb Chandler
Rutberg
FF

In the Matter of
CONSUMERS POWER COMPANY
(Midland Plant, Units 1 and 2)

ASLBP Nos. 78-389-03 OL
80-429-02 SP

Docket Nos. 50-329 OL
50-330 OL

Docket Nos. 50-329 OM
50-330 OM

December 30, 1982

MEMORANDUM AND ORDER
(Rewritten Contentions of M. Sinclair)

A. In our Special Prehearing Conference Order, dated February 23, 1979, we accepted a number of contentions of intervenor Mary Sinclair (numbered 28-57)^{1/} for purposes of discovery, subject to their being rewritten following the completion of discovery and the issuance in some cases of further staff reports. We also rejected two contentions as written (numbered 6 and 7) but permitted them to be resubmitted after discovery.

1/ The numbers referred to are those appearing in the contentions as submitted, modified to eliminate duplicate numbers after 45 by numbering consecutively from that point on. All accepted contentions have been renumbered as indicated in Appendix 1 to this Memorandum and Order. In the future, contentions should be identified through the renumbered nomenclature.


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Ms. Sinclair submitted rewritten versions of various of these earlier contentions on August 12, 1982 (numbers 28, 30, 31, 32, 35, 36, 40, 45, 50 and 52) and September 20, 1982 (numbers 6, 34, 37, 43, 57 and, in a separate filing, 56). She has withdrawn other contentions of those which were eligible to be rewritten. The Applicant responded to these contentions on September 3 and 30, 1982 (2 filings on September 30). The Staff filed its responses on September 10 and 30, 1982. As permitted by Board orders, Ms. Sinclair responded to the views of the Applicant and Staff on October 4 and 15, 1982.

In our Memorandum and Order dated September 17, 1982, we accepted contentions 28 (Water Hammer) and 30 (Steam Generator Tube Degradation), to which neither the Applicant nor Staff had any objection. We are now renumbering these contentions as Sinclair contentions 3 and 4, respectively (see Appendix 1 to this Memorandum and Order).

At the evidentiary hearing on November 22, 1982, we announced our rulings on the remaining rewritten contentions (Tr. 9854-72). We stated that we would issue a further written opinion explaining the grounds for our rulings. We do so here.

Accepted

1. Contention 6 

This contention asserts that, as a result of certain specified deficiencies in the construction QA/QC program, the Midland facility fails to meet applicable requirements and the QA/QC program has failed to detect such violations. The Staff offers no objection to this contention. The Applicant objects to two assertions which, it claims, are open-ended allegations without basis or adequate specificity. The Applicant

also objects to two subparts of the contention on the ground that the contention ignores the Applicant's resolution of the matters in question.

We are accepting this contention with two sentences revised to eliminate the open-ended assertions to which the Applicant objects. (Ms. Sinclair offers no objection to one of these revisions.) The Applicant's objections to the two subparts cannot be accepted at this time, inasmuch as they go to the merits of the contention. Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 547-49 (1980). In its revised form, this contention is renumbered as Sinclair contention 1 (see Appendix 1).

2. Contention 31 ⁵

Accepted

This contention relates to Anticipated Transients Without Scram (ATWS). It sets forth several reasons why that event allegedly could occur at Midland. The Applicant opposes this contention primarily on the ground that ATWS is the subject of a pending rulemaking, citing Potomac Electric Power Co. (Douglas Point Nuclear Generating Station), ALAB-218, 8 AEC 79 (1974). The Staff offers no objection to this contention, to the extent the contention seeks to litigate the Applicant's conformance with current regulatory requirements relating to ATWS (in particular, § 15.8 of the Standard Review Plan). In her reply, Ms. Sinclair explicitly states that the contention seeks only to question the Applicant's conformance with existing requirements.

In our Prehearing Conference Order dated August 14, 1982, LBP-82-63, we pointed out that

When a matter is involved in rulemaking, the Commission may elect to require an issue which is part of that rulemaking to be heard as part of that rulemaking. Where it does not impose such a requirement, an issue is not barred from being considered in adjudications being conducted at that time.

16 NRC ___, ___ (slip op., p. 21). The Applicant here concedes that the Federal register notice initiating the ATWS rulemaking (46 Fed. Reg. 57521, November 24, 1981) does not explicitly bar Licensing Boards from taking up an ATWS issue. But it claims that the Douglas Point line of cases includes no such requirement. In ~~order~~^{order} words, as we understand the Applicant's view, once a matter becomes the subject of rulemaking, it is barred from consideration in licensing adjudicatory proceedings.

We disagree with the Applicant's reading of the Douglas Point line of cases. In all of the cases cited by the Applicant, the subject matter of the rulemaking was a matter which, in the absence of a modification of the rules (through the pending rulemaking or otherwise) could not have been considered through adjudication. Thus, Douglas Point involved the adjudicatory consideration of the environmental effects of certain aspects of the uranium fuel cycle (in particular, waste disposal). A rulemaking on that subject was completed on April 22, 1974 (39 Fed. Reg. 14188, 14191), when the Commission promulgated the predecessor to its current Table S-3 (see 10 CFR § 51.23(c)). Prior to that time, Appeal Board rulings (which had explicitly been permitted by the Commission to remain in effect during the rulemaking) precluded consideration of such fuel cycle issues. Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-56, 4 AEC 930 (1972); id., ALAB-179, 7 AEC 159, 163-64 .

(1974); Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-60, 5 AEC 261 (1972); Long Island Lighting Co. (Shoreham Nuclear Power Station), ALAB-99, 6 AEC 53 (1973). The Douglas Point ruling relates to the consideration of fuel cycle issues prior to the adoption of Table S-3. The Appeal Board's statement that Licensing Boards "should not accept in individual license proceedings contentions which are * * * the subject of general rulemaking" (8 AEC at 85) must be read in that context. We construe the Douglas Point line of cases, therefore, as standing for no more than that, during a rulemaking on a particular subject, there shall be no different consideration of an issue (absent Commission direction to the contrary) than there would have been in the absence of the rulemaking.

It is well established, of course, that the Commission has authority to determine whether a particular issue shall be decided through rulemaking, through adjudicatory consideration, or by both means. F.P.C. v. Texaco, Inc., 377 U.S. 33, 42-44 (1964); United States v. Storer Broadcasting Co., 351 U.S. 192, 202 (1955). "[T]he choice made between proceeding by general rule or by individual, ad hoc litigation is one that lies primarily in the informed discretion of the administrative agency." N.L.R.B. v. Bell Aerospace Co. 416 U.S. 267, 293 (1974). See general discussion in Douglas Point, supra, 8 AEC at 84. In the exercise of that authority, the Commission may preclude or limit the adjudicatory consideration of an issue during the pendency of a rulemaking, and in the past it has on occasion done so. See, e.g., 44 Fed. Reg. 61372, 61373 (October 25, 1979) (the so-called "waste confidence" proceeding).

Because there appears to be no legal requirement dictating whether a particular issue must be considered through rulemaking or adjudication, the choice becomes one of policy. Policy questions of this sort are for the Commission to make (e.g., through notices of rulemaking) but are beyond the scope of authority delegated to Licensing Boards. Where--as in the case of ATWS--the Commission has not limited the Licensing Boards' authority to hear an issue, a Licensing Board cannot decline to hear such an issue just because it happens to involve a matter involved in rulemaking. See Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2), LBP-82-1A, 15 NRC 43 (1982). We will therefore consider the ATWS issue under the same standards as would have governed consideration of that issue prior to the rulemaking.^{2/}

In electing this course of action, we note that we are avoiding an undesirable effect which adopting the Applicant's reading of Douglas Point necessarily would entail. Namely, where conformance with a safety standard has been a litigable issue, the consideration by the Commission of changes in that standard would, under the Applicant's reading, completely remove the conformance issue from adjudicatory consideration. The Commission routinely considers changes in many of its safety and environmental standards. Thus, adoption of the Applicant's position would

^{2/} Since ATWS particularized standards appear in the Standard Review Plan and not in a specific regulation (other than general coverage in the General Design Criteria, 10 CFR Part 50, Appendix A), the particular ATWS standards may be modified, upon proper showing, at the behest of an applicant or other party. See Perry, LBP-82-1A, supra. Ms. Sinclair here seeks to litigate only conformance with current standards, and we are so limiting her contention.

likely have the effect of removing many significant and traditionally acceptable issues from adjudicatory consideration.^{3/} Absent explicit direction from the Commission, we are unwilling to sanction this result, which we view as inconsistent with the NRC's regulatory framework.

We are therefore admitting contention 31. We are rewording it to clarify certain statements to which the Applicant directed our attention. The contention as accepted has been renumbered as Sinclair contention 5 (see Appendix 1).

3. Contention 32. → 6

Accepted

This contention relates to reactor vessel fabrication and potential embrittlement and pressurized thermal shock. The Applicant and NRC Staff object only to that portion of the contention which referenced a memorandum of Demetrios Basdekas, on the ground that this portion is so vague that it lacks the requisite specificity, basis and nexus. In her reply, Ms. Sinclair acknowledged that the Basdekas quotation is not specific to Midland and amended her contention to omit the reference. As so amended, we admit the contention, renumbered as Sinclair contention 6 (see Appendix 1).

4. Contention 34. → 7

Accepted

As we read this contention, it raises certain questions concerning (1) pipe supports, and (2) restraints (including snubbers used for component restraints). The Staff offers no objection to this

^{3/} The Applicant sought to have Ms. Sinclair's revised new contention 7 rejected on the same basis. We declined to do so. LBP-82-63, supra. That contention is being renumbered as Sinclair contention 18 (see Appendix 1).

contention. The Applicant objects to the portion concerning the use of snubbers as component supports, on grounds of lack of specificity (and in particular because it parallels the wording used in the 1978-9 version of the contention). The Applicant opposes the remainder of the contention on the ground that it represents a new contention not accompanied by an adequate showing of good cause for lateness.

In her reply, Ms. Sinclair claims that the contention is reasonably specific. She also indicates that, through discovery, she obtained information relating to the operability of snubbers as a component of the pipe support system, and that the contention represents a "fair development" of the issue from its initial formulation in 1978. We agree. We note, with respect to the Applicant's reference to unchanged wording since 1979, that in our 1979 Special Prehearing Conference Order we did not reject this contention for lack of specificity; rather, we grouped it with others raising generic safety issues and, recognizing continuing developments in this area, required all such contentions to be rewritten after discovery.

We are renumbering this contention as Sinclair contention 7 (see Appendix 1).

5. Contention 36 → 8

Accepts
This contention raises several questions concerning systems interaction at the Midland facility. The Applicant objects only to the last two sentences of the contention. The Staff objects to the last sentence.

The next-to-last sentence claims that the Staff, in its SER, has failed to require a comprehensive program to evaluate systems

interaction. The Applicant claims that it in fact has proposed such a program, although it appears in other documents. This objection goes to the merits of the contention and cannot be given credit at this stage of the proceeding. Moreover, as Ms. Sinclair points out, the SER explicitly states that the Applicant has not described such a comprehensive program (SER, p. C-12).

As for the last sentence, the Applicant and Staff oppose it because it is based on the affidavit of Mr. Howard, portions of which are to be litigated in conjunction with another contention (renumbered Sinclair contention 15); and also because it lacks specificity, since it does not pinpoint the portions of the Howard affidavit on which it is based. In her reply, Ms. Sinclair identified the particular pages of that affidavit bearing on the allegations of this contention.

We accept this contention in its entirety, but with the last sentence limited to the particular segments of the Howard affidavit identified by Ms. Sinclair. We have renumbered this contention as Sinclair contention 8 (see Appendix 1).

6. Contention 37

Rejected
This contention questions the current design criteria for the postulation of pipe breaks. Both the Applicant and Staff point out that the basis cited relates to ECCS performance during small break LOCAs and has nothing to do with piping design. They also assert that, if ECCS performance is sought to be challenged, the contention is untimely, without adequate justification pursuant to 10 CFR 2.714(a)(1). We agree with these claims and reject the contention.

Revised

7. Contention 40

9

This contention deals with the lack of adequate environmental qualification methods to satisfy the requirements for safety related equipment. It relies on a statement in the SER indicating that environmental qualification is still an open item. The Applicant first asserts that the contention should be rejected because it raises a question of law as to applicable environmental qualification standards. The Applicant also claims that, if conformance with current standards is being questioned, the contention lacks specificity, in that it fails to point out the respects in which the environmental qualification program is deficient. The Staff opposes the contention on the latter ground.

Ms. Sinclair replies that she is not making a legal challenge and is questioning only the Applicant's ability to meet current requirements. She stresses that the SER states that the Applicant has not provided the Staff with adequate information to enable the Staff to evaluate the environmental qualification program, and that in such circumstances her claim that the Applicant has not demonstrated that its program meets current NRC requirements follows logically. We agree and accept the contention, to the extent it asserts that current requirements are not satisfied (renumbered as Sinclair contention 9, see Appendix 1). Once the Staff has evaluated the Applicant's environmental qualification program, and prior to the commencement of hearings on this issue, Ms. Sinclair will be required to define more specifically the deficiencies (if any) which she perceives in the program.

8. Contention 45

Rejected

This contention alleges that asserted deficiencies in control cables can cause a loss of offsite power. The Applicant objects because of failure to state a basis with reasonable specificity--i.e., a lack of showing how control cable deficiencies (dealt with by the newspaper article cited) could have any effect on the reliability of offsite power. The Staff opposes the contention for lack of clarity. We reject it for both those reasons. We note that, in her reply, Ms. Sinclair referred to a number of instances where electrical malfunction can result in a loss of offsite power, but she did not demonstrate how control cable deficiencies (were they to exist) could affect offsite power. Her assertion that there will be more than usual snow and icing on elevated objects such as power lines does not accomplish this purpose; in any event, claims regarding snow and icing will be litigated under revised contention 56 (renumbered as Sinclair contention 11).

9. Contention 50.

(10)

Accepted

This contention asserts that occupational exposures of workers cannot be controlled because of quality control failures built into the heating, ventilating and air conditioning system. It cites the disclosures of employees of the Zack Co. (the HVAC subcontractor).

The Applicant does not object to this contention. The Staff indicates that it lacks particularity in that, except for Dean Darty, none of the Zack Co. employees have been identified.

We admit this contention; but we note that, in resolving the contention, the heretofore unidentified Zack Co. employees will have to be identified (possibly under protective order, should confidentiality be found

warranted) and the particular quality control failures in question specified. We renumber this contention as Sinclair contention 10 (see Appendix 1).

Rejected 10. Contention 52.

As the Applicant points out, this contention, which questions the reliability of the emergency onsite diesel generator, as well as the fuel oil and service water lines entering and exiting the diesel generator building, overlaps issues already being litigated in the soils portion of this consolidated proceeding and hence is redundant. Ms. Sinclair agrees that, if all issues regarding the reliability of the emergency onsite diesel generator are to be litigated, there would be no need to litigate contention 52. We reject the contention on the ground that no issues are presented here which are not being litigated elsewhere. (We decline to base this ruling on the Staff's response, which in our view goes to the merits of the contention.)

11. Contention 56.

This contention was conditionally accepted by us in our 1979 Special Prehearing Conference Order. But at the prehearing conference in August, 1982, Ms. Sinclair withdrew this contention because of a similar one being advanced by Ms. Stamiris. When it appeared that Ms. Stamiris' contention might be rejected, Ms. Sinclair sought to resubmit her contention. The Staff indicated that it would not object on timeliness grounds, and neither the Applicant nor Staff have advanced timeliness objections.

The contention asserts that, should all AC power be lost to the Midland facility, station blackout could occur; a variety of bases are assigned. Although these bases are not identified by number, the Staff has divided them into 8 bases and has numbered them consecutively. The Staff offers no objection to the contention insofar as it is supported by bases 1, 5, 7, and part of 8. The Applicant objects to the entire contention, either for vagueness or because of coverage in the soils hearings.

At the outset, we reiterate that station blackout requires a loss of both offsite and onsite power simultaneously. We have considered each basis in the context of whether it in conjunction either with other bases or a total loss of offsite power could result in station blackout (Tr. 9866). We will treat each basis in the order identified by the Staff

Accepted

The first basis concerns ice storms and the effect of ice formation on cables, power lines and other equipment. The Staff offers no objection to this basis, and the Applicant opposes it on the merits (arguments which we cannot accept in determining admissibility of a contention). We accordingly accept it as a basis for the station. (We are modifying the last sentence to clarify its applicability to "exterior safety related" equipment "associated with" the diesel generator building.)

Rejected

The second basis, opposed by the Staff as well as the Applicant, raises questions with respect to the ability of the diesel generator building to withstand ice and snow loads. As we pointed out in rejecting a somewhat similar contention advanced by Ms. Barbara Stamiris,

The coupling of alleged building failure with station blackout presumes the negative outcome of the not-yet-completed OM proceeding (an outcome which, on its own, would prevent issuance of an operating license, if not corrected).

LBP-82-63, supra, 16 NRC at ___ (slip op., p. 33(a)). For this reason, we reject basis 2 as a permissible basis for this contention.

Accepted

The third basis questions the adequacy of the combustion air intake and exhaust systems for the diesel generator building, because of asserted QC failures of the Zack Co., the subcontractor that installed the systems. The basis is opposed by the Staff and Applicant because, they claim, it raises the same QA questions which are already the subject of admitted contentions (Sinclair renumbered contentions 15, 16 and 17, see Appendix 1). In her reply, Ms. Sinclair agreed to litigate the issue under those other contentions. However, as the Board observed during the hearing, the condition of the mechanical components of the combustion air intake and exhaust systems (raised by this basis) is not necessarily coextensive with the acceptability of the Zack QA program (raised by contentions 15-17) (Tr. 9866-68). Moreover, the Board was recently notified about problems which may exist with respect to the diesel generator exhaust piping. See letter dated October 28, 1982, from James E. Brunner, CPC, to Licensing Board; see also Nonconformance Report M01-5-2-166, Rev. 1, dated November 30, 1982, transmitted to the Board and parties by letter dated December 14, 1982 from Mr. Brunner. These conditions might contribute to station blackout. In these circumstances, we are accepting for litigation the third basis of this contention.

Rejected
The fourth basis relates to misrouted cables; it is founded on testimony presented earlier in this proceeding. As the Staff points out, that issue is not yet closed and will be heard in later hearings on the QA program. Moreover, the claimed relationship to station blackout is impermissibly vague. We therefore reject basis 4 for these reasons.

Accepted
The fifth basis claims that offsite power lines share a common corridor and could be affected simultaneously by heavy icing. The Staff does not object to this basis; the Applicant does not mention it specifically. Since the allegations, if proved, identify a situation which might contribute to station blackout, we accept this basis.

Rejected
The sixth basis suggests that there should be a specific time requirement during which the plant must be capable of accommodating a station blackout. We are unaware of any such requirement imposed by NRC rules or requirements. For that reason, we reject the basis as a matter of law. We also note that Ms. Sinclair has made no showing that the time within which decay heat will be removed in the event of station blackout is inadequate.

Rejected
The seventh basis, which is not opposed by the Staff, seems to raise a turbine missile issue; it claims that the placement and orientation of each turbine generator is unfavorable and could adversely affect the operation of the auxiliary feedwater system. No nexus to station blackout is supplied, and we are not aware of how the allegations would relate to station blackout. We are thus rejecting this basis.

Accepted + late ruling on jurisdiction
The eighth and final basis identifies 7 loss-of-offsite power events at other reactors. With respect to the first 6, no nexus of the

events to the Midland facility is provided; indeed, in only one case is the nature of the event set forth, but the detail is insufficient for us to ascertain its relationship to Midland. With respect to the seventh event, we agree with the Staff that the contention is alleging that, as happened at Big Rock, severe weather conditions increase the likelihood and the duration of a loss of offsite power. Limited to this event, we accept this basis as support for the contention. (We are deleting the paranthetical reference to the effect of weather conditions on emergency planning, as it has no bearing on this contention. Those conditions may, however, be pertinent to Sinclair contention 2, as renumbered.)

In her reply submitted on October 15, 1982 (at pp. 4-5), Ms. Sinclair referred to several other events at other reactors (Rancho Seco, Turkey Point 3 and 4, and Oconee) which, she claimed, could occur at Midland and contribute to station blackout. We were not sure of the relationship between these reactors and Midland, particularly with respect to the similarity of the respective diesel generators. We therefore requested the Applicant and Staff to brief this question (Tr. 9870). We did not establish a specific date for such briefs, and we have not yet received them. It is possible that the referenced events could constitute a further basis (or an addition to basis 8) for this contention. We are deferring ruling on this matter until receipt of briefs. The Applicant and Staff (and other parties if they wish) should file such briefs by Monday, January 24, 1983. Thereafter, we will determine whether the contention should be expanded.

As for now, we are accepting this contention to the extent we have indicated. It is renumbered as Sinclair contention 11 (see Appendix 1); the bases which we are admitting (1, 3, 5, and part of 8) have been redesignated as bases 1-4.

12. Contention 57.

Accepted
This contention questions the adequacy of the electrical system. Neither the Staff nor Applicant objects to the contention insofar as its scope is limited to fire protection (rather than extending generally to accident conditions). Ms. Sinclair agreed to this limitation, and we are accepting the contention as so limited. We have modified the contention to reflect this limitation (see Tr. 9870-71) and have renumbered it as Sinclair contention 12 (see Appendix 1).

Rejected for now
B. In our February 23, 1979 Special Prehearing Conference Order, we rejected Ms. Sinclair's proposed contentions 20 and 21 as impermissible challenges to the Commission's fuel cycle rule (Table S-3, 10 CFR § 51.23(c)). Thereafter, as a result of the April 27, 1982 decision of the U.S. Court of Appeals in Natural Resources Defense Counsel, Inc. v. NRC, 685 F.2d 459 (D.C.Cir. 1982), which raised questions concerning the validity of certain aspects of Table S-3, Ms. Sinclair resubmitted a contention which challenges Table S-3. Because of our expectation of Commission guidance on how to deal with fuel cycle questions in licensing proceedings, we deferred ruling on the contention at the August 1982 prehearing conference. LBP-82-63, supra, 16 NRC at ___ (slip op. pp. 11-12).

On September 9, 1982, Ms. Sinclair again resubmitted her Table S-3 contention, citing an August 16, 1982 Memorandum Order of the Court of

Appeals on this same subject. The Applicant and Staff recommended that we continue to defer ruling on the contention pending issuance of the policy statement.

The policy statement on fuel cycle matters was issued on October 29, 1982. 47 Fed. Reg. 50591 (Nov. 8, 1982). Copies were transmitted to the Board and parties by the Applicant on November 4, 1982 and by the Staff on November 5. In its transmittal, the Applicant moved that Ms. Sinclair's fuel-cycle contention be dismissed. We heard oral argument on this motion on November 20, 1982 (Tr. 9654-83).^{4/} The Staff supported dismissal of the contention on the basis of the policy statement. Ms. Sinclair (supported by Ms. Stamiris) challenged the validity of the policy statement on the basis of its inconsistency with the Court's decision, and they sought either acceptance of the contention or, if we believed the policy statement required dismissal, a statement by us of our agreement with the policy statement.

We do not believe it would be appropriate for us to comment on the validity of the policy statement or the adequacy of Table S-3 in its current form; among other things, we are not sufficiently knowledgeable of the underlying record in the Table S-3 rulemaking or before the Court of Appeals to render any comment that would be meaningful. We also note that the mandate of the Court of Appeals on the Table S-3 decision has not issued and

^{4/} We granted the Staff's request to permit it to file a further statement on this matter (Tr. 9683). Thereafter, the Staff advised the Board by telephone that it did not wish to file such a statement.

will not issue for some time, inasmuch as the U.S. Supreme Court has granted certiorari.

We agree with the Applicant and Staff that the policy statement requires that we consider the current Table S-3 as being in effect; that we consider fuel cycle issues only in that context; and, as a result, that Ms. Sinclair's proposed fuel cycle contention be dismissed as an impermissible challenge to that rule. In accordance with the policy statement, our decision in the OL proceeding, and any license authorization which may eventuate therefrom, will be subject to the outcome of the judicial proceedings in this matter now before the Supreme Court. See Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-704, 16 NRC (December 8, 1982). As we have indicated previously, we should fuel cycle questions of the type sought to be litigated by Ms. Sinclair become litigable prior to the conclusion of this proceeding, we will permit Ms. Sinclair to resubmit her fuel cycle contention without regard to timeliness (assuming she does so within a reasonable time after any statement by the Commission which might permit such issues to be considered by us).

C. In Appendix 1 to this Memorandum and Order, we are setting forth and renumbering all contentions accepted for the OL phase of this proceeding and not abandoned or dismissed. These contentions include those considered in our 1979 Special Prehearing Conference Order, our August, 1982 Prehearing Conference Order (LBP-82-63), our September 17, 1982 and October 29, 1982 (LBP-82-95) memoranda and orders, and this Memorandum and Order. Excluded from this listing are contentions being dealt with in the soils portion of this proceeding--i.e., those of Ms. Stamiris dealt with in our Prehearing

Conference Order dated October 24, 1980, Ms. Sinclair's original
contention 24, and the single contention of Mr. Wendell H. Marshall.

In Appendix 2 to this Memorandum and Order, we are setting forth corrections to the portions of the transcript of November 22, 1982 (Tr 9854-72) in which we announced our rulings on Ms. Sinclair's rewritten contentions.

For the reasons stated, it is, this 30th day of December, 1982

ORDERED

1. That Ms. Sinclair's rewritten contentions 6, 31, 32, 34, 36, 40, 50, 56 (in part), and 57 (renumbered as contentions 1, 5, 6, 7, 8, 9, 10, 11 and 12), to the extent indicated herein, are hereby accepted.

2. That the Applicant and Staff (and other parties that wish to do so) file briefs with respect to renumbered contention 11, as described on page 16, supra, by January 24, 1982.

3. That Ms. Sinclair's rewritten contentions 37, 45 and 52 are hereby rejected.

4. That Ms. Sinclair's proposed fuel cycle contention is hereby dismissed and her request dated September 9, 1982 is denied.

5. That transcript changes set forth in Appendix 2 are hereby adopted.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Charles Bechhoefer
Charles Bechhoefer, Chairman
ADMINISTRATIVE JUDGE

Appendices:

1. OL contentions
2. Transcript corrections, pp. 9854-72

APPENDIX 1

OL Contentions

Sinclair Contention 1 (formerly original contention 6)

QA Non-Conformance

Serious and repeated deficiencies in the quality assurance/quality control program for Midland demonstrate that construction of the facility has consistently failed to meet applicable requirements, and that the quality assurance/quality control program has failed to detect these violations and assure proper corrective measures.

Deficiencies in the quality assurance/quality control program at Midland include the following:

a. Violations of regulatory procedures

According to an internal NRC memorandum from R. B. Landsman, Soil Specialist, to W. D. Shafer, Chief, Midland section, dated August 24, 1982, the Applicant has violated the Board's Order of April 30, 1982, by going ahead with construction activities in direct violation of a requirement to obtain prior NRC staff approval. That example indicates that the Applicant has engaged in deception.

b. Alteration of Weld Radiographs

According to I&E Bulletin No. 82-01, Rev. 1, Supplement 1 (August 18, 1982), alterations have been discovered in at least four sets of piping weld radiographs for piping supplied to Midland by ITT Grinell Industrial Piping, Inc. of Kernersville, North Carolina. These radiographs were altered over a period of six years. As a result of the alterations, the quality of the welds is unknown. It is

R111

R111

doubtful that all of the affected welds can be identified and corrected since some may no longer be accessible for inspection.

This is a violation of Criteria I, II, VII, IX, X, XI, XV, XVI, and XVII of Appendix B to 10 CFR Part 50. Not only has the Applicant permitted the installation of noncomplying materials, it has failed to assure that its supplier has an effective quality assurance program as well. This extended failure in an area crucial to reactor safety raises serious questions about the existence of deficiencies in all vendor-supplied items.

R11

c. Defective Welds in Control Panel

According to I&E Information Notice No. 82-34 (August 30, 1982), Midland Units 1 and 2 contain defective welds in the main control panels that were not prevented or detected as required by the quality assurance program.

R11
(all)

d. Faulty welding, piping, and electrical installation

The following demonstrate quality assurance/quality control failures in a broad range of areas. They demonstrate, generally, that the Applicant was incapable of preventing or detecting construction failures through its quality assurance program. To the extent that the Applicant discovered such failures, it was through highly unusual reinspections, which are not a normal part of the quality assurance program, and which cannot be relied upon to assure reactor safety:

1. Non-Conformance Report of June 19, 1982, which is a part of the reinspection to which the Applicant has committed, states that 66 weld joints were non-conforming out of 146 reinspected.

all
R II

2. Report on Safety Concern and Reportability Evaluation (June 21, 1982) discussed welding defects that were discovered during reinspection of a sample of installed vendor supplied structural beams. The report states, "The location of all [defective] beams is not known, but the sample included beams in the Auxillary building and both containments...The safety impact of weld failure is unknown due to the diverse functions and locations of approximately 2,400 beams."

3. Quality Action Request (QARF 175) closed out August 24, 1982, indicates that an "increase of approximately 164% has been experienced in the area of (welding) deficiencies."

4. Non-Conformance Report, closed out on August 26, 1982, states that contrary to ASME requirements, radiographs submitted by Craven Energy Systems displayed mottlings in the vertical weld seams of the borated water storage tanks, a safety related building.

5. The NRC has identified (Inspection Reports 50/329/82-07 and 50/330/82-07) defective installation of pipe supports and restraints (NRC response to Interrogatories, p. 4), 127 deficiencies, 28% due to defective welds were reported.

6. According to Applicant's response to Inspection Report 82-07 (Aug. 13, 1982) in the Hanger Report (Aug. 9, 1982), results of the reinspection showed that out of 123 hangers inspected, only 55% were acceptable.

7. According to Applicant's May 5, 1982, report of the exit meeting of April 23, 1982, the reinspection conducted by Applicant of piping hangers that had previously been inspected and accepted by

Bechtel QC revealed that 43.9% of the hangers inspected were identified as non-conforming. (Attachment 15 to Aug. 13, 1982 Report)

8. In its August 30, 1982, letter to the Applicant, Region III stated that while the Applicant's response identified corrective actions taken or planned to be taken regarding the 50 defective hangers identified in Applicant's reinspection, Region III has "no confidence that the remaining hangers have been installed in accordance with the original drawings and specifications."

9. The Safety Concerns and Reportability Evaluation (June 17, 1982) states that the minimum wall thickness of Piping Class ELB utilizes materials of a different allowable stress (17,500 psi) than the specifications for fittings (15,000 psi) for this class of piping.

10. Inspection Report 81-23, July 26, 1982, discussed, in addition to rodent damage to insulation, a multitude of discrepancies in the penetrations such as: "conductor insulation cracking at module-conductor interfaces; cracks in the module epoxy insulation; inadequate crimping by use of improper sized lugs, improper crimping, loose terminations, and use of the wrong crimp; butt splices improperly crimped which could be easily pulled apart and were covered with questionable insulation; and loose coaxial cable connections." These have not been prevented or properly detected by Applicant's quality assurance program.

all
R III

Sinclair Contention 2 (formerly original contention 27)

Evacuation Plan

*Paul
Roberts* 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.

Sinclair Contention 3 (formerly original contention 28)

Water Hammer
AFW Ring

W. J. Paul
A. A. Serkin
Contention 3 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 operating procedures to prevent damaging water hammer events; and
- 3) expand the preoperational testing program to insure that these design features and operating procedures do prevent damaging water hammer events.

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.

SG Fuel Degradation
& Pond Chemistry

Sinclair Contention 4 (formerly original contention 30)

C.
M^cCrackin

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 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.

Sinclair Contention 5 (formerly original contention 31)

ATWS
(conform to SRP 15.8)

W. Jester

Numerous non-safety related systems, the feedwater system, main steam system, makeup and purification system, non-vital electrical power systems, and the integrated control systems, can lead to

W. Jensen

Anticipated Transients Without Scram (ATWS). (NRC Response to Interrogatory 10.c) Since there have been no routine inspection and quality control standards applied to these non-safety systems, and the general quality control during construction of even safety related systems has been so poorly done (amply documented in the record of these hearings), there is an even greater probability of ATWS at Midland. However, this scenario has not been analyzed in the SER. Furthermore, B&W reactors, such as the Midland reactors, experience the largest pressure rise and thus are the most difficult to modify to achieve adequate safety margins to prevent ATWS events. (NUREG-0460, April, 1978, p. 46) Therefore, the findings required by 10 CFR §§ 50.57(a)(3)(i) and 50.57(a)(6) cannot be made.

Sinclair Contention 6 (formerly original contention 32)

R_x Vessel Weld

B. Elliott

There is no assurance that suitable safety margins can be maintained throughout the design life of the Midland Plant with the materials used for reactor vessel fabrication. This makes the Midland reactors unusually susceptible to reactor embrittlement and to pressurized thermal shock (PTS). For example, an investigation following the severe PTS at the Rancho Seco reactor indicated that the limiting material in the Rancho Seco reactor vessel was fabricated using the same weld wire and flux as the limiting material in the Midland reactor vessel beltline and has equivalent chemical composition and fracture toughness properties. This indicates that the Staff's conclusions concerning the Rancho Seco reactor vessel beltline

materials are applicable to the Midland Unit 1 reactor vessel beltline materials. (NRC response to Interrogatory 11.e) Furthermore, a memorandum to the Midland file, dated June 14, 1977, by G. S. Keeley of Consumers Power Co. and sent to S. H. Howell, et al., described a memorandum which A. J. Birkle had written to R. C. Bauman on March 22, 1977, on the status of Midland NSSS-12 reactor vessel girth weld fracture toughness. (Discovery Response, Consumers Power Co.) This memorandum pointed out that there was "a chance that the NSSS-12 reactor vessel could have a low level of fracture toughness at the operating temperature after 10 years of operation." The low level was with reference to the 50 ft-lb upper shelf criteria of 10 CFR 50, Appendix G & H. It also indicated that this could possibly be corrected by annealing the vessel which is not now a viable approach although an EPRI R&D effort is underway.

These points, as well as the fact that the Midland nuclear plants were designed over a decade ago, and contain the same defective material as the Rancho Seco nuclear plant means that findings required by 10 CFR §§ 50.57(a)(3)(f) and 50.57(a)(6) cannot be made.

Sinclair Contention 7 (formerly original contention 34)

Sinclair & Supports

J. Rajan
& R III The installation of pipe supports and restraints has been deficient such that there can be no assurance that the public health and safety will be protected. In particular,

(a) There has been an inadequate examination of the use of snubbers as component supports, and there has been inadequate consideration of actual and potential snubber malfunction.

R II (b) Inspection Reports 50-329/82-07 and 50-330/82-07 identify extensive deficiencies in installation of pipe supports and restraints. (NRC staff response to Interrogatory 13.b, p. 4). The Applicant's response to the Inspection Report was determined to be unacceptable. (Letter, J. A. Mooney, to J. G. Keppler, dated August 13, 1982, file O.4.2, Serial 17572 and letter, R. F. Warnick to J. W. Cook, dated August 30, 1982.)

As a result of these deficiencies, the findings required by 10 CFR 50.57(a)(3)(i) and 50.57(a)(6) cannot be made.

Sinclair Contention 8 (formerly original contention 36)

Systems interaction

J. Coffman
§ R II Systems interaction, identified as an unresolved safety problem applicable to Midland in the SER (C-4), has special significance at Midland because the most serious accidents resulting from systems interaction failures have occurred in B&W reactors. The serious events and their special problems with systems interaction include the following:

- 1) The persistent operator disbelief of high temperature data from incore thermocouples and system RTD's was one major, out of many, causes for the TMI-2 accident. This disbelief was based on the rationale that the

former were not safety-grade equipment while the latter were outside the calibrated range of the detectors. (NUREG-0600, p. 10, and "Daniel Ford, Three Mile Island, Thirty Minutes to Meltdown") In the case of the high temperatures, acceptance of the temperature data as valid might have prompted a higher high-pressure-injection flow rate and a reluctance to subsequently depressurize the plant to use the core flood tanks. (NUREG-0600, p. 11) This is one example of non-safety related equipment impacting on safety systems.

*all
A. Coffman*

- 2) At Crystal River, an accident on February 16, '80, is of interest because of systems interaction where the integrated control system input, the PORV positioning, the instruments used for manual control of ECCS and the entire non-nuclear instrumentation (NNI) power supply depended on one 24 VDC line within the NNI power supply system. (NUREG-0667)

- 3) At Davis-Besse I on April 19, 1980, maintenance activities allowed an elimination of redundant power supplies that were supporting the decay heat removal function. Concurrent construction activities caused the loss of working power supply and subsequently

decay heat removal was lost for over two hours.

(USNRC I&E Information Notice 80-20, May 8, 1980) (NRC
Response to Interrogatory 15.e)

Colburn

In spite of this repeated history of systems interaction problems at B&W reactors, the staff SER specifically fails to require a comprehensive program to evaluate all systems which could interact.

(SER at C-12.) Moreover, the apparent use of non-safety grade materials for safety grade functions at Midland, as specified on the listed pages of the Howard affidavit, significantly increases the risk of adverse system interactions. (Howard affidavit, pp. 11, 12, 13, 16, 17 and 18.)

R11

Sinclair Contention 9 (formerly original contention 40)

Equipment Qualification

Contention 9 deals with lack of adequate qualification methods to satisfy the requirements for safety related equipment.

H. Walker

Contrary to NRC Response to Interrogatory 19(a), a Commission decision in the UCS Petition for Emergency and Remedial Action (CLI 81-21, May 27, 1980), 11 NRC 707, requires that all plants under licensing review must meet the equivalent of the IEEE 1974 Standard in order to satisfy GDC 4 (10 CFR 50, Appendix A). In fact, the SER admits that this standard has not been met. (SER, pp. 3-36) Thus, absent further action, the findings required by 10 CFR §§ 50.57(a)(3)(i) and 50.57(a)(6) cannot be made.

Zack & Dartey

Sinclair Contention 10 (formerly original contention 50)

R III

The occupational exposure of regular workers or transient workers at the Midland nuclear plant cannot be controlled as the NRC Response to Interrogatory 29(a) states, because of the extensive quality control failures that the disclosures of Zack Co. employees and Dean Dartey indicate have been built into the heating, ventilating and air conditioning system at the Midland nuclear plant. Therefore, the findings required by 10 CFR §§ 50.57(a)(3)(i) and 50.57(a)(6) cannot be made.

Blackout

Sinclair Contention 11 (formerly original contention 56)

There is no basis for a finding of reasonable assurance that the Midland facility can be operated safely during a loss of all AC power and resulting station blackout, for the following reasons:

W. to face
+ Dm Chopra
+ R III

Dm Chopra

1. FES 4-10 states that "ice storms are not uncommon in the vicinity of the site." Furthermore, p. 5-6 states that because of the heavy fogging from the cooling pond, "during cold weather formation of ice on elevated objects also increases." This means that the cables, power lines and other exterior safety related equipment associated with the DGB will be more likely to fail due to ice formation than would normally be expected.

2. *R II* To the extent that the Zack Co. was responsible for the design, construction and installation of the combustion air intake and exhaust systems for the DGB, these cannot be relied upon to function properly due to the well documented Zack quality control failures.

The Staff's conclusions that the design of the combustion air intake and exhaust system is acceptable (Ibid. SER 3.9.3 and 9.5.8) does not take into account the extensive disclosures made about Zack's quality control breakdowns on the HVAC system provided by Albert Howard in July, 1982, after the SER was issued in May, 1982. (Also see contentions 15, 16 and 17.)

Therefore, Staff's assumptions for these statements are based on false and incomplete data, and the resolution of these items remains uncertain.

3. *Om Chopra* Two start up transformers are to provide redundant, independent sources of off site power to the 4160-VESF buses of both Units 1 and 2. While the lines for these transformers have independent rights of way, they do share a common corridor near the Midland plant (SER 8-4). This means that they could both be affected simultaneously by the heavy

icing that can be expected in the vicinity of the cooling pond, according to FES 9-19.

4. In Applicant's response to Sinclair's "Discovery Question for Consumers Power Co. on New Contentions Accepted August 14, 1982" (Interrogatory I - Contention 3.a), the LER's from Palisades and Big Rock were included which were a part of the record used for the severe accident probability assessment report NUREG/CR-2497 (June, 1982), "Precursors to Potential Severe Core Damage Accidents: 1969-1979, a Status Report."

*Oh
Chopra*

Seven of the 9 events reported involved a loss of off site power. One event, which occurred at Big Rock, was caused by an intense winter storm - rain changing to heavy snow and ice. High winds caused lines to sway, causing what is referred to as "galloping conductors" in which line faults occurred as the lines move relative to one another. The line was de-energized for approximately two hours until repairs, who were hampered by considerable blowing and drifting of snow, could make essential repairs.

Since all these adverse conditions that can affect the performance of the DGB and the redundant emergency power systems which must operate to prevent station blackout are present at Midland, the findings required by 10 CFR §§ 50.57(a)(3)(i) and 10 CFR §§ 50.57(a)(6) cannot be made on the basis of this information.

*W.
de Paul*

Cable #14
Cable #15

Sinclair Contention 12 (formerly original contention 57)

There is no basis for a finding of reasonable assurance that the electrical system at Midland will function adequately because:

1. It is vulnerable to damage by fire. In late 1975, it was learned that Bechtel--the architect-engineer for the Midland project--had tolerated cases where non-safeguard cables routed in safeguard raceways had terminated and a new non-safeguard cable (same circuit) had been continued in a different safeguard channel's raceway. So far as appears, at that time Bechtel took no corrective action to prevent recurrence of that problem and was unable to give positive assurances that other cables did not similarly violate the single failure criterion. Further, in September and October 1978, a fire test of a full-scale vertical cable tray array demonstrated that the configuration of fire protection features used in the test would not be acceptable for application in nuclear power plants. The final test reports of several tests conducted for the NRC fire protection research program have not yet been issued. (NRC Response to Interrogatory 36.a). There is no assurance that the same cable problems, and the same inadequate fire protection features, do not exist at Midland. There can be no reasonable assurance that the electrical system at Midland will function adequately under fire conditions.

R111

Ready
study

2. According to an affidavit by an anonymous electrician at the plant, there were serious quality control lapses in the electrical systems that he installed. For example, where a cable design called for three shielded pairs of 16-gauge wire, the cable shop would use

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6-stranded 16-gauge wire with the shielding around the entire bundle. (Midland Daily News, July 28, 1982). This could result in a weaker signal than necessary through the wires, and it could contribute to the likelihood of shorting, which could disrupt service and pose a fire hazard.

R III

Class 9

Sinclair Contention 13 (formerly revised new contention 3)

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.

D. Mitchell

Ed. Pontreant

Progress & design

Sinclair Contention 14 (formerly revised new contention 5)

The Staff DEIS is deficient in that it continues to base its analysis of the cooling pond's effectiveness in controlling thermal

To ANL
(Pn. & Carson)

discharges (DEIS at 4-6) and ice and fog generation (DEIS at 5-7) 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 effects of the cooling pond.

Ed.
Pantier
(for AML)

Sinclair Contention 15 (formerly revised new contention 6, as rewritten, and Stamiris revised contention 2)

Howard
affidavit

R III

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:

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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 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 documentaiton. 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 (sic) 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 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 subtier 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" or 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).

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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 of 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 the 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.

all RIII
"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 showed 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 specification", 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 reported 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.

MPQAD

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 its 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).

25. 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 article dated 7/20/82, 6/28/82, and Howard affidavit, 7/30/82).

Sinclair Contention 16 (formerly revised new contention 8, as rewritten)

The Zack Company of Chicago which has been the contractor responsible for the heating, cooling and ventilating system of the

Zack Wald
Beard

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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), 50.57(3) and Part 50, Appendix B.

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Sinclair Contention 17 (formerly revised new contention 16, as rewritten)

Zack Walker Center

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 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 10 CFR Part 50, Appendix B.

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Synergism on
Cables

Sinclair Contention 18 (formerly revised new contention 7)

H. Walker

The issue of synergism between chemicals and radiation 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. (Industrial Research and Development, June, 1982) 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 synergistic 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.

Stamiris Contention 1 (formerly new FES contention plus contentions 1b and 1c)

The new production-costs and cost-savings analyses of the FES, represented by revised table 2.1 (p. A-32) and the revised cost/benefit analysis (p. 6-4) and revised economic statements derived therefrom do not accurately and fully represent the cost/benefit balance of the Midland plant to the public, and should therefore not be accepted as presented, for the following reasons:

- Mark Fields* a. The cost-benefit analysis employs unrepresentative and inconsistent methodologies in deriving production cost estimates and benefits.
- M. Fields* b. The cost-benefit analysis improperly relies on cost savings as a benefit of operations.
- M. Fields* c. Even if the cost-benefit analysis may utilize cost savings as a benefit, the cost savings set forth in the FES are unjustified, in that they are based to too great an extent on purchased power.
- M. Fields* d. The cost-benefit analysis improperly factors in increased construction costs in computing the benefits of the facility, and improperly relies on local taxes as a benefit.
- Fields* e. The cost-benefit analysis improperly omits dewatering operating expenses as a cost of operation.
- F. Corbett* f. The cost of decommissioning in the cost benefit analysis is understated, in that it estimates only \$235 million for decommissioning while CPC estimated about \$500 million for Big Rock and Palisades in 1980.

D. Elliott

g. The cost-benefit analysis estimates about a 36-year lifespan for the facility despite the shorter life expectancy and/or derated capacity of Unit I due to its defective weld (SER, P. C-10).

Stamiris Contention 2 (formerly revised contention 6)

*J. Kane
& R. Bongolis*

The NRC risk assessment in the DES and FES does not consider potential effects of permanent dewatering on groundwater relationships.

Stamiris Contention 3 (formerly revised contention 8)

Hood & Herman

The ACRS has recommended an assessment of Midland's design adequacy and construction quality in its 6/18/82 report (SEK 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 accepted by the Applicants in the Houston Power and Light (South Texas) OL proceeding. 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 NRC has not required (SEK Supplement 1, p. 19-2(1)), and CPC has not committed (7/9/82 Tedesco to Cook letter) to such an independent audit.

APPENDIX 2

TRANSCRIPT CORRECTIONS OF BOARD
RULINGS ON REWRITTEN CONTENTIONS (TR. 9854-72)

<u>Page</u>	<u>Line</u>	<u>Change</u>
9854	7	"that" to "than"
9855	5	"anticipated transients without scram ATWS" to "Anticipated Transients Without Scram (ATWS)."
9856	17	"of" to "and"
9856	22	"Demetrius Basdekas" to "Demetrios Basdekas"
9857	13	first "safety" to "non-safety"
9857	18	"was" to "were"
9857	23	"record produced" to "record can be produced"
9857	23-24	"can be used to" to "appropriate witnesses are present"
9859	2	add comma after "information"
9859	9	omit "an"
9859	18	"on" to "in"
9864	2	"sentence" to "group"
9865	7	"soil specialist" to "Soil Specialist,"
9865	10	"Boards order" to "Board's Order"
9865	11	"activity" to "activities"
9865	12	first "to" to "of"
9865	17	"support" to "supports"
9865	17	"restraint" to "restraints"
9865	21	"basic supply" to "basis supplied"

<u>Page</u>	<u>Line</u>	<u>Change</u>
9866	3	"construed, the" to "considered that"
9866	5	"off-site" to "on-site"
9866	11	"threee" to "three"
9866	12	delete "Board's"
9866	13	delete "the Staff in"
9866	15	"bases" to "basis"
9866	16	"bases" to "basis"
9866	21	"bases" to "basis"
9866	23	"conditions" to "condition"
9868	10	"produce" to "consider"
9869	2	"the same" to "some"
9869	3	"but the" to "but as the"
9869	3	"worded. We" to "worded, we"
9869	5	second "is" to "are"
9869	21	"based" to "bases for the contention"
9869	23	"affects" to "effects"
9870	17-18	"aspect of contention should include as part of Basis A" to "aspect of the contention should be included as part of basis 8"
9870	22	"limit" to "limiting"
9870	25	"accidents" to "accident"
9871	2	"will" to "can"
9871	3	"in" to "at"
9872	21	"ruling these" to "rulings on these"

Midland OL Contentions from
Appendix 1 of 12/30/82 Memorandum and Order

<u>Contention No.</u>	<u>Keyword</u>	<u>NRC Sponsor</u>
Sinclair 1	QA Non-Conformance	W. Shafer (RIII)
Sinclair 2	Evacuation Plan	D. Rohrer
Sinclair 3	Waterhammer	W. LeFave & A. Serkiz
Sinclair 4	SG Tube degradation/Pond chemistry	C. McCracken
Sinclair 5	ATWS	W. Jensen
Sinclair 6	Reactor Vessel Weld	B. Elliott
Sinclair 7	Snubbers and Supports	J. Rajan & W. Shafer
Sinclair 8	Systems Interactions	F. Coffman & W. Shafer
Sinclair 9	Equipment Qualification	H. Walker
Sinclair 10	Zack and Dartey	W. Shafer
Sinclair 11	Station Blackout	W. LeFave, O. Chopra, and W. Shafer
Sinclair 12	Cable QA and Fires	W. Shafer & R. Eberly
Sinclair 13	Class 9/Accident Precuson Report	J. Mitchell
Sinclair 14	Cooling Pond Performance/Fog and Ice	E. Pentecost (for ANL-Carson)
Sinclair 15	Howard Affidavit	W. Shafer
Sinclair 16	Zack Weld Records	W. Shafer
Sinclair 17	Zack Welder Certifications	W. Shafer
Sinclair 18	Cable Synergism	H. Walker
Stamiris 1a-e	Cost-Benefit Analysis	M. Fields
Stamiris 1f	Cost-Benefit Analysis	F. Cardile
Stamiris 1g	Cost-Benefit Analysis	B. Elliott
Stamiris 2	Dewatering	J. Kane & R. Gonzales
Stamiris 3	Audit	D. Hood & R. Hernan