

09/30/82

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

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Docket Nos. 50-329 OM & OL
50-330 OM & OL

NRC STAFF RESPONSE TO REMAINDER OF INTERVENOR
MARY SINCLAIR'S REVISED CONTENTIONS BASED ON DISCOVERY

I. INTRODUCTION

On September 3, 1982, the Staff completed its responses to Ms. Sinclair's interrogatories submitted to the Staff on June 18, 1982. In accordance with the Board's Prehearing Conference Order, LBP-82-63, 16 NRC ____ (August 14, 1982). Ms. Sinclair, on September 20, 1982, timely submitted revised contentions based upon that discovery. Ms. Sinclair also submitted a revised contention dealing with station blackout. As the Staff stated at the Prehearing Conference, it has no objection on grounds of timeliness, to resubmittal at this time of her station blackout contention (Tr. 8491). The Staff's responses to Ms. Sinclair's revised contentions follow.

II. DISCUSSION

Contention 6

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, that the quality assurance/quality control program has failed to detect these violations and assure proper corrective measures, and that an unknown number of

' DESIGNATED ORIGINAL'

Certified By K. Teeseger

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serious construction violations now remain in the facility in areas where they can neither be examined nor corrected.

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, and it has engaged in deception that has repeatedly been a part of the pattern of the Applicant's actions throughout the construction of Midland.

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 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 XVIII of Appendix B to 10 C.F.R. 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.

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 panel that were not prevented or detected as required by the quality assurance program.

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.

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) and 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 their 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 55 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 penetration 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 has [sic] not been prevented or properly detected by Applicant's quality assurance program.

NRC Staff Response

The Staff does not object to this contention. However, with respect to Ms. Sinclair's example "a," the NRC Office of Investigation is currently investigating the incidents described in the memorandum from Mr. Landsman to Mr. Shafer. Hence, at this time, it cannot be concluded whether the Board's April 30 Order has been violated.

Contention 34

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.

(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 0.4.2, 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 C.F.R. 50.57(a)(3)(i) and 50.57(a)(6) cannot be made.

NRC Staff Response

The Staff does not object to this contention.

Contention 37

The current design criteria for the postulation of pipe breaks and protection therefrom at Midland are inconsistent and have not been justified. According to Supplement 1 to the SER, dated July 13, 1982 (p. 6-2), the Staff is conducting a re-review of B&W's small break LOCA methods. The Staff has determined that integral system experimental data are needed to confirm the predicted behavior of the B&W designed nuclear steam supply system. The Staff has not yet obtained these data. Accordingly, it is not possible to evaluate the safety of the Midland design. Therefore, the findings required by 10 C.F.R. 50.57(a)(3)(i) and 50.57(a)(6) cannot be made with respect to the Midland facility.

NRC Staff Response

The Staff opposes this contention on the grounds that its basis is unrelated to the contention. Analysis of small-break LOCAs is a TMI related item requiring confirmation of the adequacy of the model used for the emergency core cooling system in all B&W reactor plants and is unrelated to the possibility of pipe breaks.

To the extent that Ms. Sincliar wishes to raise a small-break LOCA contention, she is untimely. In any event the contention as phrased is appropriately rejected as being vague and without basis.

Contention 43

It is not possible to assure the security of the Midland facility against sabotage or other terrorist acts without seriously infringing on the constitutionally protected civil liberties of plant workers and citizens of the surrounding community. In such a conflict between constitutional rights and nuclear power, the Constitution must prevail.

Several NRC sponsored reports have been made on the type of security and safeguards that nuclear facilities need. These include among others, the Rosenbaum Report, the Mitre Report, Barton Report and BDM Report. These government studies stress the implementation of intelligence operations as the first and one of the most important lines of defense. (Rosenbaum Report). The priorities are not to preserve basic constitutional rights but to preserve nuclear power as an energy source for our country and the world. (Mitre Report to the U.S. NRC, p. 1-26).

These and other studies are discussed in a report called "Nuclear Power and Civil Liberties - - Can We Have Both," published by the Citizens' Energy Project (CEP) of Washington, D.C., in 1979. That CEP

report states that the Mitre Report says that any group nuclear plants should be monitored as well. (p. 52) The Mitre Report urged the NRC to distribute the intelligence data it gathered to the security officers as [sic] each nuclear facility.

The following statement quoting the Mitre Report is carried on page 53 of this study:

"We recommend that NRC maintain a close working relationship with the intelligence community and keep intelligence agencies aware of the information needed by NRC to meet its safeguard responsibilities."

A quote from the Barton Report in this study says: "In constitutional language, the most serious effects are on freedom of association and discussion (particularly on nuclear issues) and on privacy." (p. 52).

A 1976 GAO Report found that utility employers were regularly used as "confidential informants" in the FBI's investigation of groups and workers at nuclear facilities.

FBI data is recorded in the agency's National Crime Information Center (NCIC) computer. (p. 57) The Georgia Power Co. and Alabama Power Co. have both received information from the computer. (p. 58)

Georgia Power Co. opened secret offices in Atlanta to conduct "security" operations, intelligence, surveillance and harassment of citizen anti-nuclear activists and characterized them as a "bolshevik brain trust set up to wreck the electric business." (p. 78)

Now that this Administration is pressing for the construction of the Clinch River Breeder Reactor to produce plutonium, the warnings on dangers to civil liberties that are carried in the "Harvard Civil Rights--Civil Liberties Law Review," Vol. 10, 1975, p. 369-443 become most important. The report points out that this plutonium is to be used as additional fuel for nuclear reactors (p. 370). The author of this report, Russell Ayres, states, "Plutonium provides the first rational justification for widespread intelligence-gathering against the civilian population. In the past, federal courts have taken a skeptical view of attempts to justify spying on national security grounds, but with the very real threat of nuclear terrorism (which production of plutonium will invite) in the picture, the justification is going to sound very convincing."

The security of this nuclear plant cannot be assured unless serious infringement of civil liberties of workers and the citizens of the community takes place. Therefore the findings required by 10 C.F.R. 50.57(a)(3)(i) and 10 C.F.R. 50.57(a)(6) cannot be made.

NRC Staff Response

The Staff opposes the admission of this contention on two grounds. First, Ms. Sinclair has not revised her original contention, but has instead, submitted an entirely new contention in which she suggests that a security plan for Midland plant would necessitate surveillance that would involve an infringement of the constitutional rights of Midland plant employees and those of the citizens of the surrounding community. The original Contention 43 involved the formulation of a security plan adequate to protect the plant from sabotage. The provisions of the Special Prehearing Conference Order of February 23, 1979 contemplate revision of existing contentions based on new information obtained as a result of discovery in the interim, not admission of entirely new contentions such as this.

Second, this contention fails to satisfy the requirements necessary for its admission, because Ms. Sinclair has failed to state a factual or legal issue appropriate for litigation in this proceeding. At its best, this contention advances a generic concern that is totally unrelated to a specific facility, such as the Midland plant. This contention is of such a speculative nature that it lacks the necessary basis and specificity necessary for its admission in the context of an individual licensing proceeding.

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.

NRC Staff Response

Ms. Sinclair offers numerous bases in support of her contention. The Staff objects to some, but not all of the bases. Hence, the Staff does not object to this contention as limited to the bases to which we have no objection.

Ms. Sinclair's first basis states that:

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 equipment needed for the DGB will be more likely to fail due to ice formation than would normally be expected.

NRC Staff Response To First Basis

The Staff does not object to this basis as support for the contention.

Ms. Sinclair's second basis states that:

This [heavy fogging] also means that more snow weight and ice will form on the DGB. Dr. Charles Anderson in his report on the DGB to the Advisory Committee on Reactor Safeguards on May 20, 1982, addressed the problem of additional heavy snow loads on the DGB saying that this could cause the building to collapse because it is so badly structurally impaired at the present time.

NRC's response to Interrogatory 31.d, p. 51, states: "Diesel generator performance, in general, is not affected by the structure in which it is located, except for extremes such as total building failure, excessive differential movement between diesel generator and building foundations, or improper design of combustion air intake and exhaust systems."

All three of these conditions are likely to affect the DGB performance at Midland. For example, the failure of the building itself could be caused by ice and a heavy snow load, as Dr. Charles Anderson pointed out. Excessive differential movement between diesel generator and building foundations can be expected. In his prepared statement on Structure Interaction Problems (May 20-21, 1982)

Dr. Charles Anderson stated, "It appears that, in this case, especially the DGB -- secondary settlement has not occurred. I believe settlement for the DGB is not yet completed, but will continue for some years causing further stress and cracking to the building"

The uneven settlement thus far indicates that more "differential" settlement can occur.

Thus, the Staff's conclusions (NRC's response to Interrogatory 31.d, p. 52, and SER 2.5.4, and 3.8) that "the applicant's remedial efforts must result in a DGB which conforms to NRC acceptance and can withstand any design basis event without excessive differential movement between the foundations for the diesel generators and the diesel generator building" are made on assumptions that are false. They do not take into account secondary settlement. They are also conclusions drawn months before the hearings on the DGB have even been held which can yield further disclosures that would challenge the validity of these statements. The same is true, and for the same reasons, of Staff's conclusion that the DGB settlement will not impair the structural integrity and functional capability of the underground diesel fuel oil and service water lines entering and exiting the DGB.(Ibid)

NRC Staff Response To Second Basis

The Staff objects to this basis. Settlement of the diesel generator building will be extensively considered in the OM proceeding. To allege that station blackout will result from the inability of the diesel generator building to withstand its settlement is to presume that CPC's remedial fixes will be found to be inadequate. In rejecting a station blackout contention advanced by Intervenor Barbara Stameris, this Board held that presuming a negative outcome of the OM proceeding is not an acceptable basis for an OL contention since such an outcome would by itself prevent CPC from receiving its operating license. Prehearing Conference Order, LBP-82-63, 16 NRC _____ (August 14, 1982) (Slip Opinion at 33a).

Ms. Sinclair's third basis states that:

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 either 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 Contention 6, 8 and 16 accepted by the ASLB on August 14, 1982).

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

NRC Staff Response To Third Basis

The Staff objects to this basis. As this basis acknowledges, quality assurance at Zack is already the subject of admitted contentions. Hence, there is no need to separately litigate it with respect to station blackout.

Ms. Sinclair's fourth basis states that:

In tracking the effectiveness of the A.C. on site emergency power system, the record shows that the NRC has found an unacceptable percentage of misrouted cables, some of which could cause failure of the emergency portion of the on site power and distribution system which is relied upon in case of loss of A.C. power. (Gardner's testimony, Feb. 19, 1982)

NRC Staff Response To Fourth Basis

The Staff objects to this basis. Cable misroutes remain an open item and will be one of the issues litigated at the upcoming quality assurance hearing. As with Ms. Sinclair's third basis, there is no need separately to litigate this matter with respect to station blackout.

Ms. Sinclair's fifth basis states that:

Two start up transformers are to provide redundant, independent sources of off site power 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.

NRC Staff Response To Fifth Basis

The Staff does not object to this basis as support for the contention. (However, we note that Ms. Sinclair's citation to the SER should be to page 8-2, not to page 8-4.)

Ms. Sinclair's sixth basis for the contention states that:

NUREG-0510 (A-20) states that besides requiring diverse power drives for the auxiliary feedwater pumps, studies are underway to determine whether specific time requirements should be required during which the plant must be capable of accommodating a station blackout.

NRC Staff Response To Sixth Basis

The Staff objects to this basis since it fails to affirmatively allege a deficiency in the resolution of this issue as described in the SER. Gulf States Utilities Company (River Bend Station, Units 1 and 2), ALAB-444, 6 NRC 760, 771-73 (1977); Prehearing Conference Order, supra, (Slip opinion at 33a).

Ms. Sinclair's seventh basis for this contention states that:

The acceptance criteria for the auxiliary feedwater system at Midland states that the placement and orientation of each of the Midland turbine-generators is unfavorable with respect to the station reactor buildings and, therefore, could adversely affect the operation of the auxiliary feedwater system. (SER, 3-9).

NRC Staff Response To Seventh Basis

The Staff does not object to this basis as support for this contention. (We note, however, that the citation to the SER should be to page 3-8, not to page 3-9.)

Ms. Sinclair's eighth basis states that:

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."

Seven of the 9 events reported involved a loss of off-site power.

The first loss of power accident occurred at Palisades four months into operation. The accident included the loss of the off site power, as well as the failure of on site power (diesel generator 2 didn't load). Six of the nine loss of power events involved electrical malfunctions due to design errors or unknown causes.

The seventh loss of off site power occurred at Big Rock. It 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 repairmen, who were hampered by considerable blowing and drifting of snow, could make essential repairs. (These types of weather conditions also have significant implications for emergency planning).

NRC Staff Response To Eighth Basis

With respect to the first six loss of power events, Ms. Sinclair has provided no nexus between the events cited and the Midland facility. With respect to the seventh event, Ms. Sinclair is apparently 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, the Staff does not object to this basis as support for the contention.

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 the Bechtel-- the architect-engineer for the Midland project-- had tolerated cases where non-safeguard cables routed in safeguard raceways had been 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 Reponse 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 accident or fire condition.

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 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.

NRC Staff Response

The first part of this contention sets forth three bases as to why the plant is vulnerable to fire damage. None of these bases, however, meets the specificity requirements of 10 C.F.R. § 2.714(b). All three bases stated in support of this aspect of the contention appear to be purely generic in nature. Ms. Sinclair has provided no basis specific with respect to the Midland facility to warrant admitting this part of the contention in this proceeding.

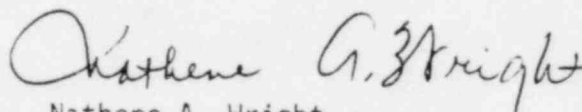
The Staff does not object to the second part of this contention, as limited to the one example set forth. To the extent that this contention

alleges other "serious quality control lapses in the electrical system," the Staff does, however, object. A mere reference to an anonymous affidavit, the contents of which cannot be ascertained does not provide the requisite particularity or basis. Hence, part two to this contention is admissible only as limited to the one example set forth.

Respectfully submitted,



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Dated at Bethesda, Maryland
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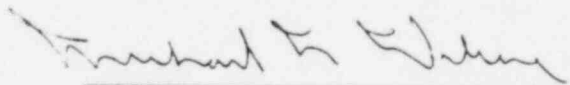
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