

MEMORANDUM

To: Richard C. DeYoung  
James G. Keppler

From: Michael I. Miller

Date: November 22, 1983

Re: Consumers Power Company Midland Nuclear Power Plant:  
Alleged Violation of April 30, 1982 ASLB Order.

This memorandum is a written version of the remarks I made at the enforcement conference on Tuesday, November 15, 1983. Since I did not read from a prepared text this memorandum will vary in small ways from my oral remarks. I have included citations to the ASLB transcript and attachments to the two investigation reports authored by the Office of Investigations.\*

There was a significant difference in the conclusions reached by the Office of Investigations reports. The June report basically concluded that it was not possible to determine whether a violation of the Board's order had taken place. The September report, however, concludes that there was indeed a violation of the Board order and that the circumstances indicate a "possible ... careless disregard of regulatory requirements" by Consumers Power Company ("CPCo"). The Company is concerned both about the conclusion of violation and the use of the words "careless disregard" since that phrase denotes willfulness under the NRC's Enforcement Policy.

---

\* References to the ASLB hearing transcript are designated "(Tr.p. \_\_)". References to the attachments dated June 2, 1983 OI report and the September 12, 1983 OI report are designated "(Attach. \_\_, Report No. 1)" and "(Attach. \_\_, Report No. 2)" respectively.

The investigation was reopened in order to further investigate two matters.

1. Certain statements attributed to a man named John Donnell, a former Babcock & Wilcox Company employee on loan to MPQAD, the Midland site quality assurance organization, during the first 7 months of 1982. It was asserted that Donnell had stated that he knew Dr. Landsman had prohibited the excavation under the deep-Q duct bank; that the excavation went forward in knowing disregard at Dr. Landsman's direction; and that he was terminated because he had told some unidentified CPCo manager that the excavation was contrary to Dr. Landsman's direction.

2. The reopened investigation also looked further into the circumstances surrounding the meeting which took place at the Midland site on May 20, 1982 which was attended by representatives of NRR, Region III, CPCo and Bechtel.

It is CPCo's position that the reopened investigation regarding Mr. Donnell adds nothing to the facts regarding the violation of the Board order. Mr. Donnell's observations were reported by Dr. Landsman and Mr. R. Cook of Region III. The OI investigators assigned to interview Mr. Donnell, Mr. Walker and Mr. Galanti, had only a passing familiarity with the subject matter of the investigation. While they received approximately a 2 hour orientation by Mr. Weil and therefore had some familiarity with the factual circumstances surrounding the excavation under the deep-Q duct bank, the investigators had no familiarity with the Licensing Board's April 30, 1982 order nor with CPCo's excavation

permit system. John Donnell's testimony has not yet been taken. It is scheduled for December 3, 1983. However, his deposition has been taken by CPCo with the NRC Staff lawyers in attendance. At his deposition Mr. Donnell did not corroborate the statements attributed to him by Dr. Landsman and Mr. Cook and verified that in fact he signed the excavation permit for the excavation under the deep-Q duct bank which is alleged to be a violation of the Board's order (Attach. 6, Report No. 1). Donnell stated emphatically that had he believed the excavation was a violation of the Board Order he never would have signed the permit (for a discussion of the excavation permit system see infra pp. 8-9).

The supplemental OI investigation did not turn up any major new facts with respect to the May 20, 1982 meeting.

The facts as disclosed on the record before the Licensing Board indicates that the NRC was sending mixed signals to CPCo regarding excavations in and around the deep-Q duct bank. These excavations are a part of the freeze wall which has been installed at the Midland site as a temporary construction feature. The freeze wall consists of pipes through which refrigerant is passed. The soil down to the impervious till layer is frozen and the flow of ground water through the site is intercepted. Once the ground water flow is intercepted the excavation for underpinnings under the auxiliary building can be made dry. The freeze wall intercepts safety related underground utilities at 4 locations. At each of those locations a protection method had to be devised which did not compromise the integrity of

the freeze wall while protecting the underground utility from damage resulting from the heaving of the frozen soil.

The freeze wall was first proposed by CPCo to the Staff in mid-1981 and by November 16, 1981 the Staff had formally approved installation of the freeze wall hardware. That approval was the subject of Staff testimony on December 1, 1981 and at that time Mr. Hood, NRC Project Manager, testified that approval of installation was approval of all activities short of turning the freeze wall on (Tr. p. 5489). The Company and the Staff continued their discussion regarding activation of the freeze wall primarily centering on the protection of underground utilities after activation where those utilities intercept the freeze wall. In January 1982 CPCo made a further submittal to the staff which indicated an approximate one foot gap beneath the two duct banks (Attach. 14, Report No. 1 ) The design concept for protection of the underground utilities was presented in schematic form. The NRC thereupon authorized activation of the freeze wall as well. Thus, as of February, 1982 specific NRC approval had been granted for both installation and activation of the freeze wall thereby exempting those activities from the scope of the April 30, 1982 order.

Following the issuance of the Board's April 30 order, CPCo sought to establish the precise limits of the Staff's prior approval of soils related activities. To that end it sent a letter to the Staff dated May 10, 1982, describing, among other matters, the activities for which the Company believed prior approval had been obtained with respect to the freeze wall (Attach. 3, Report No. 1). The letter included the freezewall

activities "utility protection" and "soil removal".

After the February 1982 approval letter from the Staff, work proceeded on all 4 utility crossings. In each instance, field conditions dictated that changes be made in the precise method by which utility protection could be achieved although the concept as described in CPCo's January submittal was honored. For all of the crossing except the deep-Q duct bank, construction associated with utility protection was substantially completed within six weeks after April 30 (See Tr. pp. 21960-964). For each of these 3 crossings a concrete base mat was poured at the bottom of the excavation and a surcharge was applied to the concrete base mat to prevent differential settlement. (This arrangement is shown in the Bechtel drawings which were distributed at the enforcement conference.)

With respect to the deep-Q duct bank, it was discovered that the elevation of the duct bank was about 11 feet lower than anticipated so that the design concept of a one foot gap under the duct bank and angled refrigeration pipes could not be accomplished. As of May 20, 1982 the duct bank had been exposed and the NRC had been apprised of CPCo's intention to excavate underneath the duct bank to the till layer and pour a 9 foot plug of concrete to act as a barrier to ground water in that location.

On May 20, at the request of Dr. Landsman, an informal meeting was held at the Midland site. In addition to Dr. Landsman two representatives of NRR were present, Darl Hood and Joseph Kane. They were present at Midland because of an ACRS subcommittee

meeting on site that day. The impromptu nature of the meeting caused Mr. Hood to be concerned about the lack of public notice which is required for such meetings by NRC policy. Accordingly he requested that no one publish minutes of the meeting and the primary documentary source regarding the subjects discussed at the meeting are the handwritten, uncirculated notes of a Bechtel employee (Attach. 5, Report No. 2)

The May 20 meeting discussed a number of other subjects beyond the 4 utility crossings. With specific reference to the excavation under the deep-Q duct bank Mr. Kane expressed his concern that excavation and back fill with concrete would create a "hard spot" which could result in differential settlement affecting the utility. Similar concerns were expressed with respect to the other 3 utility crossings which were then complete but the NRC Staff gave no indication that these 3 utility crossings were not in compliance with regulatory requirements. At Dr. Landsman's exit interview on May 21 he announced that he had discovered no items of noncompliance during his inspection on the preceding day (Attach. 9, Report No. 1).

While recollections of the various participants in the meeting vary, it seems clear that Dr. Landsman in fact stated that there was to be no excavation under the deep-Q duct bank until NRR approval had been obtained. That admonition was apparently repeated at the May 21 meeting and is recorded in a somewhat confusing manner in CPCo's minutes of the exit interview. Thus, fairly summarized, the May 20 meeting



resulted in CPCo being aware that the NRC was concerned about the concrete back fill under the deep-Q duct bank and that the Company had been directed not to proceed with the excavation until NRR approval took place.

The May 20 meeting was followed by a letter from NRR to CPCo dated May 25, 1982 (Attach. 4, Report No. 1). Mr. Hood has testified that he took account of the discussions of the May 20 meeting in the May 25 letter and that he specifically intended the letter as a "warning" to CPCo not to excavate under the deep-Q duct bank (Tr. p. 21797-98). There is no specific reference to the deep-Q duct bank in the May 25 letter. Both soil removal and utility protection activities are specifically confirmed as having been authorized prior to April 30. Yet as of May 20 the only soil removal and utility protection yet to be done with respect to the freeze wall was the excavation under the deep-Q duct bank. Mr. Hood has testified that his disapproval of the activity "related work in support of the freeze wall" was intended by him to document the fact that the Staff had not approved the excavation under the deep-Q duct bank. With hindsight, it is now apparent that after receipt of the May 25 letter there was confusion between what the NRC Staff intended and what CPCo upper management (particularly Mr. Mooney, CPCo's soils project manager) understood had been approved.

This lack of understanding between CPCo and the NRC staff continued at a design audit conducted in Ann Arbor in late July, 1982. CPCo prepared the agenda for the design audit and included as one item all of the freeze wall crossings.

CPCo indicated that the status of these freeze wall crossings was "confirmatory" thereby acknowledging that CPCo still owed the NRC Staff documentation regarding the concrete back fill at the 4 utility crossings. At the conclusion of the design audit, James Knight of NRR announced that there were no further open items. However, in SSER No. 2 issued in October 1982 the design modifications and back fill of the utility crossings are shown as an open item. The FSAR documentation of the freeze wall crossing is shown as a confirmatory item. These comments in the SSER relate to all 4 crossings including the 3 which were completed between April 30 and May 20, but which have never been asserted to be a violation of the Board order. The notes of the July design audit prepared by Mr. Hood were sent out after the SSER was published and state that the entire freeze wall crossing matter is a confirmatory item (Attachment 16, Report No. 1). In statements given to Mr. Pawlik of the OI, Mr. Hood was reported as saying the issue was an "open confirmatory" issue and Mr. Kane was reported as saying that the issue was a "confirmatory" issue. At the hearings in November, Mr. Hood deleted the word "confirmatory" in his statement and Mr. Kane changed the word "confirmatory" to the word "open" (Tr. pp. 21570-72).

All of the foregoing activity and the communication to and from the NRC Staff involved Mr. Mooney of CPCo, its soils project manager and his assistant, John Schaub. Thus, as of May 25, 1982 and thereafter these men believed that the NRC had indicated its approval of the excavation under the deep-Q duct bank.



Because of problems encountered in excavations and drilling during the first quarter of 1982, CPCo was developing an excavation permit system in the time period from April to early June, 1982. The excavation permit system requires that a representative of CPCo sign the permit, signifying that all necessary NRC approval had been obtained. Mr. Robert Wheeler, CPCo remedial soils section head, was the responsible official for signing off on behalf of CPCo construction. Mr. Wheeler was very conscious of the April 30 order and its requirement for explicit NRC approval. Between April 30 and June 11, 1982 he sought and obtained Dr. Landsman's specific approval for every excavation request or permit at the Midland site. On June 11 Dr. Landsman approved the excavation permit procedure and further stated to Mr. Wheeler that he did not wish to look at all excavation permits prior to the excavation beginning. Dr. Landsman stated in substance, as understood by Mr. Wheeler, that minor excavation could go ahead without prior approval but that he wanted to review excavation permits for major excavations such as the service water pump structure underpinning prior to such an excavation commencing. Mr. Wheeler interpreted Dr. Landsman's approval of minor excavations as extending to all routine non-drilled excavations. Dr. Landsman's understanding of his approval was that it was limited to minor excavations for work that had been previously approved by the NRC. (See Tr. PP. 21933-934). Dr. Landsman stated that he never expressed this limitation to Mr. Wheeler since it was obvious (Tr. p. 21938)

The May 7, 1982 Board order specifically authorizes oral approvals of excavations but directs that any oral approvals be documented by the Staff. Dr. Landsman did not document his June 11, 1982 approval of minor excavations. The only documentation is a handwritten note to the file prepared by Mr. Wheeler on June 11, 1982 (Attach. 10, Report No. 1). On the basis of his understanding of that agreement Mr. Wheeler, through subordinates, authorized the excavation under the deep-Q duct bank and the other excavation which is claimed to be a violation of the Board order, the fire line relocation. It is worth noting that on two occasions after June 11 Dr. Landsman was requested by Mr. Wheeler to review excavation permits for "minor" excavations, Dr. Landsman declined to do so.

No matter what criteria are applied to these excavations they can only be regarded as minor. The excavation under the deep-Q duct bank involves the removal of a minimal quantity of soil especially when compared to the major excavations contemplated at the site. On that basis the fire line relocation excavation would similarly be characterized as minor. If the determination of a major or a minor excavation was to be based on its safety significance, there are strong indications that the safety significance of both these excavations was minimal. The excavation under the deep-Q duct bank has been in place for almost 18 months. No back fill of any sort has been placed in the excavation. There is no indication that the Staff would want the excavation to be refilled with soil although such

a procedure would restore the excavation to its May 20, 1982 condition and could be accomplished quite easily. Similarly no reversal of the fire line relocation has been directed.

At two significant management levels of CPCo, at which the Staff position with respect to excavation under the deep-Q duct bank could have been clarified there were missed communications. Mr. Mooney believed that the excavation had been specifically authorized by the NRC Staff. In this connection it is worth noting that Mr. Kane, although expressing his belief that the Board order has been violated nonetheless stated that he believed that Mr. Mooney was honest and a man of integrity (Tr. pp. 21875-77). Mr. Mooney testified that had he realized the NRC Staff had misgivings about the excavation he would have taken steps to make certain it did not occur. Similarly Mr. Wheeler was charged with the responsibility of determining whether NRC approval for excavation had been obtained and authorized both excavations on the basis of an undocumented oral approval for minor excavations which, in retrospect, was ambiguous.

The second OI investigation report was accompanied by a memorandum to Mr. Keppler from Mr. Hayes. That memorandum uses legal terminology to describe CPCo's culpability. CPCo is characterized as negligent. Viewed from the perspective of December, 1983 with two exhaustive investigations and 7 days of hearings devoted to this issue, it seems clear that the Company bears a burden for failing to have a clear understanding of the

Staff's position. It should have sought further clarification of the Staff position with respect to the deep-Q duct bank. It is also clear that in at least two respects the Staff contributed to missed communications which resulted in the alleged order violation. Could Mr. Hood have expressed himself more clearly in his May 25 letter? He conceded as much in his testimony (Tr. p. 21811). Should Dr. Landsman have documented his oral approval of minor excavations on June 11, 1982? The Board order of May 7 answers that question in the affirmative.

It is CPCo's position that because of the June 11, 1982 approval of minor excavations by Dr. Landsman there was no violation of the Licensing Board's April 30 order. Moreover, because of the ambiguities in the May 25, 1982 letter from NRR to CPCo, Mr. Mooney believed that all the excavations were within the scope of pre-April 30 approvals. Similar considerations lead to the conclusion that there was no violation of Dr. Landsman's May 20 directive. There was no possible motive for violating the Board order, nor is there any objective evidence of willfulness, nor was there any safety significance to the excavations. Escalated enforcement action seems inappropriate.