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UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck, Member
William C. Parler, Member

In the Matter of)

CONSUMERS POWER COMPANY)

(Midland Plant, Units 1 and 2))

Docket Nos. 50-329 ✓
50-330

Messrs. Judd L. Bacon, Jackson, Michigan
and Harold F. Reis, Washington, D.C., for
the applicant, Consumers Power Co.

Mr. David E. Kartalia for the AEC Regulatory
Staff.

MEMORANDUM AND ORDER

October 5, 1973

(ALAB-152)

Both the applicant and the regulatory staff have
accepted the invitation extended in ALAB-147, RAI-73-9
(September 18, 1973) to seek reconsideration of our
holding in Part IV thereof. That holding was to the
effect that, at least as it had been represented to us,
the quality assurance (QA) organization of the architect-
engineer for the Midland facility (Bechtel) failed in

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one specific respect to comply with the requirements of Appendix B to 10 CFR Part 50. The defect which we found pertained to the work relationship between Bechtel's quality control engineers and its Project Superintendent. It appeared from Bechtel organization charts which had been submitted to us by the applicant that those engineers report to the Project Field Quality Control Engineer who, in turn, reports to the Project Superintendent. In view of the cost and scheduling responsibilities of the Project Superintendent, we concluded that this arrangement could not be squared with Section I of Appendix B -- which in relevant part provides:

The authority and duties of persons and organizations performing quality assurance functions shall be clearly established and delineated in writing. Such persons and organizations shall have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. In general, assurance of quality requires management measures which provide that the individual or group assigned the responsibility for checking, auditing, inspecting, or otherwise verifying that an activity has been correctly performed is independent of the individual or group directly responsible for performing the specific activity. [Emphasis supplied]

Neither of the petitions for reconsideration persuades us to change our opinion that, if in fact the quality control engineers report to the Project Superintendent (albeit through the Project Field Quality Control Engineer),

there is a lack of full compliance with the requirements of Appendix B. Thus, to the extent that they seek an alteration of our interpretation of Appendix B, the petitions are being denied. We are told by the applicant, however, that, contrary to what we had previously been led to believe, the Project Superintendent does not exercise any meaningful degree of supervision over the quality control engineers.^{1/} The relief which we are now ordering takes into account the new assertions in this regard.

I

As we noted in Duke Power Co. (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-128, RAI-73-6 399, 409 (June 13, 1973), and as its terms clearly reflect, Section I of Appendix B embodies the fundamental principle that those charged with the function of assuring the quality of particular work must be independent of the individual or group who have direct responsibility for performing that work. Neither the applicant nor the staff contends otherwise or minimizes the importance of

^{1/} While not going into the matter in as much detail, the staff also suggests that the quality control engineers are independent of the Project Superintendent "to a significant extent".

such independence to the proper execution of a QA program. What they do insist, however, is that the phrase "directly responsible", as used in Section I, should not be taken as embracing an official such as the Bechtel Project Superintendent here involved, even though he may be accountable for the cost and scheduling aspects of the various phases of construction.

1. We can readily agree that the Commission could not have intended "directly responsible" to encompass every company official who might have some measure of responsibility for the cost and scheduling of construction of the particular project at issue. As the applicant and the staff correctly observe, such an expansive reading of that phrase would render compliance with Section I a practical impossibility. For inevitably there will be one or more officials at the pinnacle of the company organization -- if no one else, its President -- who in an ultimate sense will be responsible for both the performance of the construction activities and the assurance that those activities are being properly carried out.

The conclusion that, as the staff puts it, "it is not possible to achieve within a single organization absolute separation of those who perform activities and

those who pass upon the acceptability of such performance" does not, however, dispose of the question which is presented here. What we need decide is not the feasibility or necessity of drawing an impregnable wall between QA personnel^{2/} and those top-level management officials who have broad, general responsibility for the proper conduct of all facets of the company's operations. Rather, the issue before us is whether, giving due regard to its underlying objective, Section I permits a situation in which employees having a QA function report to (i.e., are under the direction and control of) a middle-management field official who (1) is concerned at any particular time with only the single project to which he is then assigned; and (2) is held accountable for the on-schedule progress of the construction work on that project.

We think the mere statement of the question provides its answer. An interpretation of Section I which would countenance such a situation would severely undercut the Section's plainly stated purpose to ensure that the "persons and organizations performing quality assurance functions * * * shall have sufficient authority and organizational freedom" to perform their crucial functions

^{2/} As indicated in ALAB-147 (R.I-73-9 at ____, fn. 11) we are employing the term "QA" to embrace both quality assurance and quality control.

effectively and without reservation. It well might be that, despite his overriding interest in the completion of each phase of construction without untoward delay, a project superintendent would not undertake affirmatively to influence the manner in which QA personnel subordinate to him discharged their functions. But, at the very least, his position in the chain of command vis a vis that of any QA personnel placed under his direction could be expected to produce a chilling effect upon the institution or recommendation by the latter of any QA action which might put the project behind schedule. This is one of the very evils to which Section I appears to be addressed.

2. Our continuing conviction that, for the purposes of Section I, the Bechtel Project Superintendent must therefore be regarded as a person "directly responsible for performing the specific [construction] activity" is not affected by the consideration that there are several supervisory levels in the construction group which come between that Superintendent and the craftsmen who are actually doing the work (e.g., various types of foremen and lower-ranking superintendents). In stressing this fact, the applicant and the staff seem to be suggesting

that, by reason of these intermediate supervisory personnel, the Project Superintendent must be deemed to possess, at most, indirect responsibility for the performance of any specific construction activity at the site.

By giving the narrowest possible scope to "direct" and "specific", one could, of course, conclude that, in the case of welding activities for example, Section I of Appendix B requires only that the quality control engineers detailed to inspect the welds be independent of the welders themselves -- i.e., the persons actually performing the work.^{3/} In the interpretation and application of an AEC regulation, however, we perceive no mandate to accord the language employed by the Commission the most restrictive reach which a lexicologist would find acceptable. Rather, where several alternative interpretations are possible, we should make that choice which comes closest to fulfilling the regulation's objectives. This is particularly so if the regulation is concerned, as is Appendix B, with activities having manifest safety implications.

In this instance, no matter by how many layers of

^{3/} As will be seen, the applicant does urge this general result on the basis of another Section of Appendix B.

supervision he may be separated from the craftsmen, the inescapable fact remains that the Project Superintendent has a significant area of responsibility insofar as the performance of the construction work on his project is concerned; and has a most immediate interest in avoiding scheduling delays and the resultant incurring of additional expense. Certainly the fact that work is actually performed by others does not mean that the direct responsibility for the work resides exclusively with the performer. But even if, in some contexts, the Project Superintendent's responsibility could be thought of as "indirect", within the framework of Appendix B it does no violence to the English language to treat it as being "direct". Indeed, treating his responsibility as indirect for the purpose urged by the applicant and staff would clearly do violence to the fundamental principle of "organizational freedom to identify quality problems" enunciated in Section I.

3. The applicant's reliance upon Section X of Appendix B (a reliance in which the staff seemingly does not join) is likewise unavailing. In relevant part, that Section stipulates that the inspection of activities affecting quality shall be performed by individuals other than those who perform the activity being inspected. But this sensible requirement hardly can be converted, as the applicant would do, into a limitation on the ambit of the entirely discrete Section I. It just does not follow from the fact that it is not permissible for the craftsmen who perform the work also to inspect it, that it is perfectly acceptable for the inspectors to be

subject to the direction of persons on higher levels in the construction group who have cost and scheduling responsibilities.^{4/}

4. No claim has been made to us of any administrative imperative that the Project Superintendent be able to exercise direction over the activities of the quality control engineers.^{5/} Moreover, it appears that at least some other major architect-engineer firms have encountered no serious difficulty in establishing QA organizations which are wholly independent of the construction group. See, e.g., charts following p. 17.1.5-52 of the Preliminary Safety Analysis Report in Virginia Electric and Power Co. (Surry Power Station, Units 3 and 4), Docket Nos. 50-434 and 50-435; and p. 17.1-81 of the Preliminary Safety Analysis Report in Texas Utilities Generating Co. (Comanche Peak Steam Electric Station), Docket Nos. 50-445 and 50-446. It thus cannot be said that our reading of Appendix B calls upon Bechtel to do the impossible, or even something at odds with settled industry practices.

^{4/} A similar non sequitur underlies applicant's reliance upon AEC regulatory guide 1.28, and the material referred to therein. In addition, it might be noted that this regulatory guide does not have the force of a Commission regulation and, therefore, cannot alter the terms of Section I to Appendix B.

^{5/} Indeed, as is discussed later in this opinion (infra, pp.12-13), the applicant disavows the existence of such authority in the Project Superintendent.

5. For the foregoing reasons, we adhere to our ALAB-147 interpretation of the requirements of Section 2 of Appendix B -- namely, that that Section "makes unacceptable an arrangement under which quality control engineers are responsible to an official possessing such duties as those assigned to the Project Superintendent here-involved". RAI-73-9 at _____. Anticipating that we might not accept its position as to the meaning of Section I, the staff has included in its petition for reconsideration an alternative request that we certify the matter to the Commission as a major and novel question of law.

While 10 CFR 2.785(d)(1) gives us the authority to take this step, we decline to do so. In order to certify, we would first have to withdraw our resolution of the Appendix B question.^{6/} Such a withdrawal would carry with

^{6/} Under the Rules of Practice, a certification involves the submission of a legal issue to a higher tribunal for its consideration, without a ruling having been made on that issue by the certifying body. In contrast, a referral involves the submission to the higher tribunal of a ruling which the inferior body has made; the purpose of the referral being to obtain a determination of the correctness of that ruling. The Rules of Practice do not appear to contemplate the referral of rulings of this Board. This is doubtless because the Commission has the power to review sua sponte determinations which we make, whether contained in a final or in an interlocutory order. In this connection, Section 2.786(a) of the Rules expressly provides for the exercise of that power where, in the Commission's judgment, we may have misconstrued a regulation having significance to the public health and safety.

it an implication that we entertain substantial doubt as to what Section I means as applied to the present case -- an implication which would be entirely unwarranted. Further, we are far from clear that, in fact, a major issue of law is involved. In the totality of circumstances, we perceive no good reason why it cannot be left to the Commission to decide for itself, upon its routine examination of our ruling, whether it should exercise its review power.

III

In ALAB-147, we left it open to the applicant and the staff to challenge not merely the correctness of our apprehension of the requirements of Appendix B but, as well, our understanding of the present Bechtel QA organization. As previously noted, that understanding was derived from Bechtel organization charts which were furnished to us by the applicant itself. It appeared clearly from one of those charts that the organizational scheme contemplated that the Project Superintendent would have "functional supervision" of the Project Field Quality Control Engineer -- who, in turn, supervises the quality control engineers performing the actual inspections.

1. The applicant now asserts, however, that, in reality, the quality control engineers are wholly independent of the Project Superintendent insofar as hiring, dismissal, training, assignment and pay are concerned. All of these matters are, according to the applicant, determined by the Chief Field Quality Control Engineer (who is located in San Francisco) upon the recommendation of the Project Field Quality Control Engineer. In this connection, we are informed that the Project Superintendent's advice is solicited only respecting the total number of quality control engineers necessary for the work planned.

As for performance evaluations and salary increases, the applicant is most emphatic in its insistence that the requisite determinations are made within the QA organization -- and that the project construction organization does no more than to assure that any salary increases recommended by the Project Field Quality Control Engineer are "within the limits established by Bechtel's personnel policy for the various pay grades, and within governmental wage guidelines". Any conclusion that a particular increase would not fall within such policy limits and guidelines requires the concurrence of the Chief Field Quality Control Engineer.

2. Additionally, the applicant goes into the question of the power of the Project Superintendent to direct the activities of the quality control engineers. We are referred to the fact that Bechtel's "current" Field Inspection Manual authorizes (in Section 3.8) the Project Field Quality Control Engineer to issue stop-work orders; and we are informed that such orders cannot be countermanded by the Project Superintendent.^{7/} The Bechtel Manual is also cited for the proposition that the Project Superintendent cannot either (1) direct that a quality control inspection be by-passed, or (2) proceed with construction beyond a particular control point unless the inspections called for at that point have been properly completed.

3. If all of these representations are well-founded, the actual relationship between the Project Superintendent and the quality control engineers is, of course, quite different from that suggested by the Bechtel organization charts in our possession. The picture which the applicant

^{7/} The portion of the Manual quoted to us states that the authority to issue a stop-work order is to be "exercised through the Project Superintendent". We assume that this means simply that the Project Superintendent is the company official who is to communicate the order to the concerned employees of the construction group, and that this is a ministerial act on his part. If "exercised through the Project Superintendent" had any broader import, the applicant could not have asserted his lack of authority to countermand stop-work orders.

pains is scarcely one which the term "functional supervision" would readily bring to mind.^{8/}

We see no necessity to attempt ourselves to resolve the apparent conflict between what the Bechtel organization charts reflect and what the applicant avers are the real facts.^{9/} In all events, the Bechtel quality assurance program not only must comply substantively with Appendix B (as we have construed it), but also must include a written and, of course, accurate delineation of the authority and duties of the persons and organizations performing QA functions. At best, there is a present failure to have fulfilled this second requirement. At worst, the Bechtel organization will require substantial revisions to obviate any meaningful possibility that the quality control engineers will be subject to improper command influences in the discharge of their vital functions. Accordingly, no matter where the truth lies, some form of corrective action must be taken.

^{8/} According to the applicant, there is a "functional independence" between the quality control engineers and the Project Superintendent.

^{9/} The applicant does not itself offer any explanation for the conflict.

III

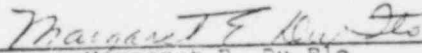
On the basis of the foregoing, the petitions for reconsideration are denied. The relief which we ordered in ALAB-147 is, however, modified as follows:

Within 45 days of the entry of this order, the regulatory staff is to

- a. determine the extent to which, as presently constituted, the Bechtel QA organization is in conformity with the requirements of Section I of Appendix B to 10 CFR Part 50, as construed in ALAB-147 and herein;
- b. require such revision of that organization, if any, as may be necessary to effect promptly such conformity; and
- c. require such revision of the relevant Bechtel organizational charts and manuals as may be necessary to ensure that they fully and accurately delineate the authority and duties of all Bechtel personnel and organizations performing QA functions.

It is so ORDERED.

For the Atomic Safety and Licensing
Appeal Board


Margaret E. Du Flo
Secretary to the
Appeal Board