

Report on a Case by the Board of Ethical Review

Case No. 86-2

Signing and Sealing Plans Not Prepared by Engineer

Facts:

Engineer A is the Chief Engineer within a large engineering firm, and affixes his seal to some of the plans prepared by registered engineers working under his general direction who do not affix their seals to the plans. At times Engineer A also seals plans prepared by non-registered, graduate engineers working under his general supervision.

Because of the size of the organization and the large number of projects being designed at any one time, Engineer A finds it impossible to give a detailed review or check of the design. He believes he is ethically and legally correct in not doing so because of his confidence in the ability of those he has hired and who are working under his general direction and supervision.

By general direction and supervision, Engineer A means that he is involved in helping to establish the concept, the design requirements, and review elements of the design or project status as the design progresses. Engineer A is consulted about technical questions and he provides answers and direction in these matters.

Question:

Is it ethical for Engineer A to seal plans that have not been prepared by him, or which he has not checked and reviewed in detail?

References:

Code of Ethics-Section II.2.a.-"Engineers shall undertake assignments only when qualified by education or experience in the specific technical fields involved."

Section II.2.b.-"Engineers shall not affix their signatures to any plans or documents dealing with subject matter in which they lack competence, nor to any plan or document not prepared under their direction and control."

Section II.2.c.-"Engineers may accept assignments and assume responsibility for coordination of an entire project and sign and seal the engineering documents for the entire project, provided that each technical segment is signed and sealed only by the qualified engineers who prepared the segment."

Discussion:

The facts in this case raise some of the most fundamental questions concerning the manner in which engineering firms engage in the practice of the profession. Probably the best starting point of this inquiry is an examination of the applicable Code provisions.

Sections II.2.a., II.2.b., and II.2.c. address many of the issues related to the facts of this case. Section II.2.a. seeks to admonish the engineer to accept work only in those areas of practice in which the engineer possesses the proper qualifications in order to competently perform the tasks to which he is assigned. Section II.2.b. examines the issue of ethical responsibility and states that an engineer must sign and seal documents and assume legal responsibility only for that in which he possesses understanding and cognizance. Finally, Section II.2.c. establishes a hierarchy of responsibility by which engineers may coordinate and assume responsibility for entire projects as long as those individuals under the engineer's responsible control are identified as having prepared each technical segment of the work. The rationale behind those rules lies in the recognition that while the signature and seal of the engineer has consequences which go beyond the issue of ethics, the conduct of the engineer in the preparation of the plans and drawings involves the professional judgment and discretion of the engineer-judgment and discretion which are shaped by a variety of ethical concerns.

For example, in the recent Case 85-3 where an engineer with experience and background solely in the field of chemical engineering accepted a position as a county surveyor, we noted that although the duties of the position included oversight of surveying reports and highway improvement but did not include actual preparation of engineering and surveying documents, nevertheless the engineer was unethical in accepting the position. As the Board noted: "It could be stated that Engineer A's responsibilities did not include actual preparation or approval of engineering or surveying documents, that instead such documents would be prepared or approved by qualified individuals, and that Engineer A's role would be to oversee those documents and reports. We are convinced that neither is this the intent of the Code provisions nor is this what is commonly understood to be the proper oversight role of a county surveyor."

Clearly, in Case 85-3, the Board was faced with a situation in which an engineer was seeking to fulfill a role in which he possessed neither the qualifications nor the experience to perform in a competent manner. In the present case there is no indication that Engineer A possesses all of the qualifications or the experience to perform all of the requisite services. Rather, the issue here is the extent to which a professional engineer may ethically seal all of the documents the preparation of which he has delegated to subordinates.

Sections II.2.a, II.2.b, and II.2.c. are mutually dependent Code provisions which must be read together in order for them to have meaning. In the context of the instant case one of the most important aspects of the language of those provisions is the reference to "direction and control" found in Section II.2.b. We think a carefully crafted definition of that provision will assist us in a resolution of the facts in this case.

The term "direction" is generally defined by *Webster's New Collegiate Dictionary* (1981 ed.) as "guidance or supervision of action or conduct; management; a channel or direct course of thought or action." The word "control" is generally defined as "the authority to guide or manage; direction, regulation, and coordination of business activities." It is clear that "direction" and "control" have a meaning which, when combined, would suggest that an engineer would be required to perform all tasks related to the preparation of the drawings, plans, and specifications in order for the engineer to ethically affix his seal. More pertinent to the engineering profession, however, is the National Council of Engineering Examiners Model Law, which is endorsed by this Board and reads as follows: responsible charge--the term "responsible charge" as used in this act shall mean "direct control and personal supervision of engineering work."

We recognize that the role of the chief engineer in an engineering firm may be that of a "manager who provides guidance, direction, and counsel to those within his responsible charge." Indeed, in a large engineering firm this role is crucial to the successful operation of the firm. As in the facts in the instant case, the chief engineer should be involved at the outset of the project in the establishment of the design concept and the design requirements, as well as in the review of the various elements of the design or project status as the project develops. In addition, the chief engineer should be available to consult on technical questions relating to the project design.

To this end, we reiterate the language contained in Section II.2.c. noting that "each technical segment [shall be] signed and sealed only by the qualified engineers who prepared the segment." Finally, we would also note that whereas in the instant case the work is being performed by individuals who are not licensed professional engineers, the firm has an ethical obligation that this work be performed under the direct control and personal supervision of registered engineers who would seal the document.

Conclusion:

It is unethical for Engineer A to seal plans that have not been prepared by him, or which he has not checked and reviewed in detail.

**Note:* This opinion is based on data submitted to the Board of Ethical Review and does not necessarily represent all of the pertinent facts when applied to a specific case. This opinion is for educational purposes only and should not be construed as expressing any opinion on the ethics of specific individuals. This opinion may be reprinted without further permission, provided that this statement is included before or after the text of the case.

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