COMPETENCE TO CERTIFY ARMS STORAGE ROOMS

Case No. 98-8

Facts:
Engineer A, a professional engineer with expertise in civil engineering, served as a Civilian Building and Grounds Division Chief at a U.S. Army installation. An Army official requests that Engineer A certify that certain arms storage rooms and arms storage racks on the military installation are in accordance with certain specific, lengthy, and detailed Army physical security, arms, ammunition, and explosive regulations, which are cross-referenced with other Army regulations. Engineer A has no significant training or knowledge in these areas. There are comprehensive training programs available for this type of work, but training funds are not available.

Question:
Would it be appropriate for Engineer A to certify as a qualified engineer the arms storage rooms and arms storage racks as requested by the Army official?

References:

Section II.1.	-	*Code of Ethics:*	*Engineers shall hold paramount the safety, health and welfare of the public.*
Section II.2.a.	-	*Code of Ethics:*	*Engineers shall undertake assignments only when qualified by education or experience in the specific technical fields involved.*
Section II.2.b.	-	*Code of Ethics:*	*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.*

Discussion:
This case appears to raise at least two important ethical issues for professional engineers -- (a) the obligation of the engineer to practice solely within the engineer's area of professional competency (See Code Section II.2.a.) and (b) the certification of certain facts by an engineer, which has been the subject of state engineering board regulation in recent years. (See Code Section II.2.b.).

The Board of Ethical Review has had the opportunity to review the question of the ethical obligation of licensed engineers to practice solely within their area of competency on numerous occasions. In BER Case 94-8, Engineer A, a professional engineer, was working with a construction contractor on a design/build project for the construction of an industrial facility. During the construction of the project, the

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construction contractor separately retained the services of Engineer B, a professional engineer, to design structural footings as part of the facility. Engineer B's degree and background were in chemical engineering. Engineer A had been unable to establish that Engineer B had any apparent subsequent training in foundation design and Engineer A had reservations concerning the competence of Engineer B to design the structural footings and reports his concerns to the contractor. The Board determined that it would be unethical for Engineer B to perform the design of the structural footings as part of the facility and also that Engineer A had an ethical responsibility to question Engineer B's competency and report his concerns to the contractor. This position was based upon a variety of considerations. The Board noted that there was at least a reasonable basis for Engineer A to conclude that Engineer B did not possess the competence to perform the required task. While it may be possible for Engineer B as a consultant to the contractor to retain the services of a competent structural engineer to design the structural footings for the facility, the Board did not think it would be feasible under the facts. It appeared that under the facts, Engineer B was retained specifically for the sole and exclusive purpose of designing the structural footings in question. If Engineer B were to seek a separate firm to perform that task, the Board would have to seriously wonder what it was Engineer B was actually hired to perform and for what Engineer B was being paid.

Importantly, in BER Case 94-8, the Board also noted that Engineer A has an objective basis to determine whether Engineer B has sufficient education, experience, and training to perform the required structural design services. If Engineer A determined that Engineer B did not possess the required education, training, and experience to perform the services, the Board was of the view that Engineer A had an ethical obligation to confront Engineer B to make his concerns known to Engineer B, recommending that Engineer B withdraw from the project. If Engineer B refused to acquiesce to Engineer A's recommendation, Engineer A had an obligation under the Code to bring the matter to the attention of his client and to the authorities as appropriate, and if necessary, withdraw from the project if his concerns were not met.

In another case, BER Case 85-3, a local county ordinance required that the position of county surveyor be filled by a P.E. The first appointee to the position was not a P.E. and was therefore deemed unqualified to continue in the position. The county commissioners met and decided to appoint an engineer, a P.E. with experience and educational background solely in the field of chemical engineering. The engineer accepted the position. The duties and responsibilities of the position of county surveyor included oversight of surveying reports and highway improvement projects but did not include actual preparation of engineering or surveying documents. After considering the two earlier cases, the Board decided it was unethical for Engineer A to accept the position as county surveyor.

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As the Board noted in BER Case 85-3, obviously, there are important distinctions in applying the Code language to a consulting practice and applying the language in the context of an employment relationship. In the former situation, the firm has a good deal more discretion and flexibility and may be able to structure its work force to fit the needs and requirements of a particular job for which the firm is being retained. For example, if an engineering firm is retained to perform engineering and land surveying services and the firm does not have expertise in the area of land surveying, under the provisions of the Code, the firm should retain individuals with that expertise.

Because of the relatively dynamic nature of private consulting practice, engineering firms frequently establish joint ventures and subcontracts, hire additional qualified personnel, or make other arrangements in order to serve the needs of a client more effectively and efficiently. However, the Board noted that from a practical standpoint, it would be extremely difficult, if not impossible in the usual employment context, for a county surveyor with no background or expertise in surveying to perform effective oversight of surveying reports and highway improvement projects for the county. The Board could not see any way in which the engineer could be acting in accordance with Section II.2.b. under these facts, because whatever course of action he took would result in unethical conduct and compromise his role as county surveyor.

Although, the cases cited are not precisely the same as the facts in the present case, the Board believes these cases illustrate the important fundamental point that licensed engineers must make all efforts to perform professional services solely within their area of competence and not be unduly influenced either by employer or by client pressures that could cause grave danger to the public health and safety.

In the present case, the competency issues at stake pose a clear and present danger to the public health and safety. Making certain that a military hardware storage facility is designed and built safely involves keen awareness of many complex and detailed procedures, rules, and regulations that are unique to this field of endeavor. While Engineer A may be a very competent engineer, Engineer A is clearly not knowledgeable in this very technical and complicated area. While there may be comprehensive training programs available, the facts reveal that insufficient funds exist for Engineer A to participate in such programs.

Finally, the Board should also note that even if Engineer A had the ethical competency to perform the services required, it would not have been ethically proper for Engineer A to “certify” compliance with the military regulations as requested. A party that provides a certification of certain statements is generally providing a guarantee that the statements are correct. By certifying that certain arms storage rooms and arms storage racks on

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the installation are in accordance with certain specific, lengthy, and detailed Army physical security, arms, ammunition, and explosive regulations that are cross-referenced with other Army regulations, Engineer A is guaranteeing that this statement is correct. Because it is clear that such information is clearly beyond the scope of knowledge of Engineer A (since it would be impossible for Engineer A to perform the detailed and exhaustive inspection of the facility that would be required), such a statement, if made by Engineer A would be misleading, deceptive and, on that basis, not ethical. State engineering licensure boards are beginning to make such certifications violations of state board rules of professional conduct; and the BER encourages these rule modifications.

Conclusion:

It would not be ethical for Engineer A to certify as a qualified engineer the arms storage rooms and arms storage racks as requested by the Army official.

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