

Public Health, Safety and Welfare—Compliance with Fire Code

Case No. 08-12

Facts:

Engineer A, a licensed electrical engineer, works for a state university on construction and renovation projects. Engineer A's immediate manager is an architect, and next in the chain of command is an administrator (Administrator), a man with no technical background. Administrator, without talking to the engineers, often produces project cost estimates that Administrator passes on to higher university officials. In cases where it becomes evident that actual costs are going to exceed these estimates, Administrator pressures the engineers to reduce design features.

One such occasion involves the renovation of a warehouse to convert storage space into office space. Among the specifications detailed by Engineer A is the installation of emergency exit lights. These are mandated by the building code. As part of his effort to bring down actual costs, Administrator insists that the specification for emergency lights be deleted.

Engineer A strongly objects and when Engineer A refuses to yield, Administrator accuses Engineer A of being a disruptive influence in the workplace.

Question:

What are Engineer A's ethical obligations under the circumstances?

References:

- Section II.1. - *NSPE Code of Ethics: Engineers shall hold paramount the safety, health, and welfare of the public.*
- Section II.1.a. - *NSPE Code of Ethics: If engineers' judgment is overruled under circumstances that endanger life or property, they shall notify their employer or client and such other authority as may be appropriate.*
- Section II.1.b. - *NSPE Code of Ethics: Engineers shall approve only those engineering documents that are in conformity with applicable standards.*
- Section II.1.e. - *NSPE Code of Ethics: Engineers shall not aid or abet the unlawful practice of engineering by a person or firm.*
- Section II.4. - *NSPE Code of Ethics: Engineers shall act for each employer or client as faithful agents or trustees.*

Discussion:

Fire codes are among the most fundamental requirements for the protection of the public health and safety. Fire code organizations develop, publish, and disseminate hundreds of consensus codes and standards intended to minimize the possibility and effects of fire and other risks. Virtually every building, process, service, design, and installation is affected by fire code organization documents.

The critical role that engineers play in code and regulatory compliance and related issues has been discussed by the NSPE Board of Ethical Review on previous occasions. For example, BER Case No. 92-4 involved Engineer A, an environmental engineer employed by the state environmental protection division. Engineer A was ordered to draw up a construction permit for the construction of a power plant at a manufacturing facility. Engineer A was told by a superior to move expeditiously on the permit and “avoid any hang-ups” with respect to technical issues. Engineer A believed the plans as drafted were inadequate to meet the regulation requirements and that outside scrubbers to reduce sulphur dioxide emissions were necessary and without them, the issuance of the permit would violate certain air pollution standards as mandated under the 1990 Clear Air Act. Engineer A’s superior believed that plans that involved limestone mixed with coal in a fluidized boiler process would remove 90% of the sulphur dioxide, which would meet the regulatory requirements. Engineer A contacted the state engineering licensure board and was informed, based upon the limited information provided to the board, that suspension or revocation of his engineering license was a possibility if he prepared a permit that violated environmental regulations. Engineer A refused to issue the permit and submitted his findings to his superior. The department authorized the issuance of the permit. The Board ruled that 1) it would not have been ethical for Engineer A to withdraw from further work on the project, 2) it would not have been ethical for Engineer A to issue the permit, and 3) it was ethical for Engineer A to refuse to issue the permit. The Board noted that the situation was a matter that had a direct impact upon the public health and safety. However, the Board noted that it would not have been ethical for Engineer A to withdraw from further work on the project because Engineer A had an obligation to stand by his position consistent with his obligation to protect the public health, safety, and welfare and refuse to issue the permit.

Said the Board, “Engineers have an essential role as technically-qualified professionals to ‘stick to their guns’ and represent the public interest under the circumstances where they believe the public health and safety is at stake.” The Board concluded by noting that the case also raised another dimension that involves the role of the state licensing board in determining the ethical conduct of licensees. Under the facts, Engineer A affirmatively sought the opinion of the state as to whether his approval of the permit could violate the state engineering registration law. We believe Engineer A’s actions in this regard constitute appropriate conduct, and actions are consistent with NSPE Code Section II.1.a.

Conclusion:

In a matter so crucial to the public health, safety, and welfare, Engineer A does not have the luxury of ignoring the situation. As the indispensable party who is technically competent to make the critical life-safety call, Engineer A must stand firm and strongly object to any effort to compromise on this issue. This would include going above both his immediate manager and the Administrator to resolve this issue. When life safety issues are at stake, such as they are in the present case, there is no room for concessions that undermine the public interest.

Board of Ethical Review:

Curtis A. Beck, P.E., F.NSPE
Mark H. Dubbin, P.E., NSPE
Robert C. Gibson, P.E., F.NSPE
James D. Lesikar II, Ph.D., P.E., F.NSPE
Monte L. Phillips, Ph.D., P.E., F.NSPE
Mumtaz A. Usmen, Ph.D., P.E., F.NSPE
Michael L. Shirley, P.E., F.NSPE, Chair

NOTE: The NSPE Board of Ethical Review considers ethical cases involving either real or hypothetical matters submitted to it from NSPE members, other engineers, public officials, and members of the public. The BER reviews each case in the context of the NSPE Code and earlier BER opinions. The facts contained in each case do not necessarily represent all of the pertinent facts submitted to or reviewed by the BER.

Each opinion is intended as guidance to individual practicing engineers, students, and the public. In regard to the question of application of the NSPE Code to engineering organizations (e.g., corporations, partnerships, sole proprietorships, government agencies, and university engineering departments), the specific business form or type should not negate nor detract from the conformance of individuals to the NSPE Code. The NSPE Code deals with professional services, which must be performed by real persons. Real persons in turn establish and implement policies within business structures.

This opinion is for educational purposes only. It may be reprinted without further permission, provided that this statement is included before or after the text of the case and appropriate attribution is provided to the National Society of Professional Engineers' Board of Ethical Review.

To obtain additional NSPE opinions, visit www.nspe.org or call 800-417-0348.