

Expert Witness—Chair of Standards and Safety Committee

Case No. 19-3

Facts:

Engineer A is a professional engineer with expertise in mechanical engineering who also serves as a forensic engineering expert. Engineer A, who chairs a boiler code standards and safety committee within an engineering society, has been requested by Attorney X, a defense attorney, to conduct an investigation and potentially serve as an expert witness on behalf of a boiler manufacturer in connection with a personal injury case involving a pressure vessel explosion. Engineer A learns that the forensic engineering expert for the plaintiff, Engineer B, is a member of one of the technical subcommittees within the boiler code standards and safety committee that Engineer A chairs.

Question:

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

NSPE Code of Ethics References:

- Section II.3.a. - Engineers shall be objective and truthful in professional reports, statements, or testimony. They shall include all relevant and pertinent information in such reports, statements, or testimony, which should bear the date indicating when it was current.*
- Section II.3.c. - Engineers shall issue no statements, criticisms, or arguments on technical matters that are inspired or paid for by interested parties, unless they have prefaced their comments by explicitly identifying the interested parties on whose behalf they are speaking, and by revealing the existence of any interest the engineers may have in the matters.*
- Section II.4.a. - Engineers shall disclose all known or potential conflicts of interest that could influence or appear to influence their judgment or the quality of their services.*

NSPE BER Case References: [67-1](#), [02-8](#), [07-12](#)

Discussion:

As the NSPE Board of Ethical Review has noted on several occasions, professional engineers are frequently called upon and play a critical role as forensic engineering experts in connection with civil litigation. These professional engineers have an ethical responsibility to perform these services with honesty and integrity and to be truthful and honest in their professional reports regardless of their role, whether performing work in the private sector or as members of organizations with public roles, such as professional or technical societies.

This Board has examined various situations, including those involving a professional engineer working in both the public and the private sector during the same period of time. For example, in the early [BER Case No. 67-1](#), John Doe, a professional engineer, was a county engineer and a member of the county planning board. He also engaged in part-time consulting practice. Doe prepared the plans for a subdivision

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development in his capacity as a consulting engineer; then, as county engineer, he recommended approval of his plans to the county planning board. As a member of the county planning board, he later voted to approve those plans. In ruling that Doe's actions were unethical, the Board found it abundantly clear that his operations were in direct conflict with the NSPE Code of Ethics. In his capacity as an engineer in private practice, Doe had prepared plans for approval by a governmental body on which he served as a member. Said the Board, "[Doe] would be in violation of NSPE Code even if he had not been a member of the county planning board by virtue of his employment as the county engineer and the responsibility of the county engineer to submit the plans to the county planning board with recommendation."

Thirty-five years later in [BER Case No. 02-8](#), Engineer A served as a traffic engineer for the State Department of Transportation. Engineer A reviewed private engineering firm contracts and traffic signal plans, specifications, and estimates submitted from outside entities (developers, municipalities, etc.) for traffic signal work performed on the state highway system. Prior to Engineer A's employment with the State DOT's traffic engineering division, Engineer A performed airport design through a consulting firm that performed no traffic signal work in the state highway system. The State DOT contracted directly with municipalities by means of a grant agreement to fund improvements to municipal airports. The State DOT did not contract directly with consultants hired by the municipalities for their airport improvements, nor was the state involved in the selection of airport consultants other than to provide Federal Aviation Administration guidelines with respect to consultant qualifications-based-selection procedures.

Engineer A was approached by his former consulting engineering firm to serve on a part-time basis in seeking contracts with municipalities for design work associated with the airport improvements (master plans, runway extensions, etc.) while continuing to work as an employee with the State DOT. In deciding that it would be unethical for Engineer A to do so, the Board noted that it could easily foresee the potential for a conflict of interest for Engineer A as a state highway employee in his relations with municipalities' work and as a representative for the consulting firm working on municipal airports in his relations with the same municipalities. While the scope of his responsibilities (state highways versus airports) were clearly different, his role in one or another area could be compromised in certain situations and circumstances. Highways link to airports and decisions in one sphere could have an impact on decisions in another sphere. For example, there are airport and highway hubs that are inextricably linked, and the traffic and airport issues are often closely related. Moreover, clear ethical appearance issues would presumably need to be addressed.

With regard to Engineer A's dual role as a governmental employee and a private employee, assuming both the state governmental agency and the engineering firm were aware of Engineer A's activities as a dual employee and did not object to those activities, the Board believed, based on the engineer's obligation to serve as faithful agent and trustee, that there was a violation of the NSPE Code of Ethics under the facts and circumstances presented. The Board also cautioned Engineer A to be mindful of the

issues raised earlier relating to the need to carefully follow all applicable governmental procedures, policies, and liability concerns and to avoid the use of public resources in the performance of private work.

More recently, in [BER Case 07-12](#), Engineer A served on the State X Environmental Quality Council. The State Y Environmental Quality Council conducted a hearing on proposed rules for coal bed methane discharge permits. Engineer A was retained to testify by a coal bed methane company. In State Y, Engineer A began his testimony by stating that he was a licensed professional engineer only in State X. Engineer A then stated that he was employed by the US Department of Energy, working in the coal bed methane arena. Engineer A's PowerPoint presentation listed his job title with the US DOE. Although Engineer A also provided consulting services, primarily for coal bed methane companies, Engineer A never stated in his testimony that he worked for coal bed methane companies. When asked at the end of his testimony if he was testifying on behalf of the DOE, Engineer A said, "I am testifying on my own behalf."

Later, a newspaper article on the hearing reported that a "US DOE researcher" testified at the hearing, and it was later revealed that Engineer A's attendance at the hearing was paid for by the coal bed methane company through his consulting business. The Board of Ethical Review was faced with the following questions:

- Was it ethical for Engineer A to provide expert testimony in the manner described?
- Was it ethical for Engineer A to serve as an expert witness under the circumstances?

Following extensive discussion, the Board of Ethical Review determined:

- It was unethical for Engineer A to provide expert testimony in the manner described.
- It was unethical for Engineer A to serve as an expert witness under the circumstances.

In finding Engineer A's conduct unethical, the Board of Ethical Review noted that virtually all of the ethical considerations noted in [BER Case Nos. 67-1](#) and [02-8, and possibly more](#), were clearly apparent in the later case. As an employee of the US Department of Energy, working in its coal bed methane division, Engineer A had a clear conflict of interest that would make it virtually impossible for him to work as a part-time consultant in this same area for private clients—which the facts suggest Engineer A in fact did. To do so would be to breach the basic trust as an honest and faithful agent for his employer. In addition, Engineer A's use of the same PowerPoint presentation illustrates one of the problems in attempting to draw a line between Engineer A's activities as a government employee and as a private consultant. An obvious question to ask was whether Engineer A negligently or intentionally used the presentation with the US DOE representation, since that action could be viewed either as a careless error or as an intentional effort to provide greater credibility to his testimony. In either case, said the Board, it was entirely inappropriate, since it appears that Engineer A was not testifying in an official capacity on

behalf of the US DOE, as was reported in the newspaper. At the same time, it was not entirely clear from the facts on whose behalf Engineer A was testifying.

Turning to the facts in the present case, the Board sees a clear difference from the earlier cases. In the present case, Engineer A is serving as a volunteer to a technical society standards-setting committee to develop fact-based objective technical codes and standards for the benefit of the public. It would appear that Engineer A would be offering opinions as a mechanical engineer with expertise in safety engineering independent of any role as the safety codes and standards chair. While Engineer A's opinion may be informed somewhat by his experience in working with safety codes and standards, presumably Engineer A will exercise independent judgment and discretion in rendering his opinion. Unless there is some other direct business or professional relationship or history that Engineer A may have had that is not revealed under the facts, there does not appear to be any conflict.

While there may be the potential for an organizational conflict of interest between Engineer A's role on behalf of the technical society and another professional or technical society (the facts do not suggest this type of conflict), Engineer A's role as a private forensic engineering expert should not present any clear or apparent conflict of interest.

At the same time, Engineer A should be mindful of certain critical obligations clearly required under the facts. First, Engineer A has an obligation to (1) fully disclose to Attorney X his role as the chairman of the boiler code standards and safety committee within an engineering society and (2) advise Attorney X that Engineer B serves as a member of one of the technical subcommittees within the boiler code standards and safety committee. In addition, Engineer A also has an obligation to be respectful of Engineer B in his role as a member of one of the technical subcommittees within the boiler code standards and safety committee and also not engage in any written or verbal exchanges with Engineer B regarding the pending litigation without direction from legal counsel.

Conclusions:

1. Engineer A's role as a private forensic engineering expert should not present any clear or apparent conflict of interest.
2. Engineer A has an obligation to (1) fully disclose to Attorney X his role as the chairman of the boiler code standards and safety committee within an engineering society, and (2) advise Attorney X that Engineer B serves a member of one of the technical subcommittees within the boiler code standards and safety committee.
3. Engineer A has an obligation to be respectful of Engineer B in his role as a member of one of the technical subcommittees within the boiler code standards and safety committee and also not engage in any written or verbal exchanges with Engineer B regarding the pending litigation without direction from legal counsel.

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