

## Professional Competence – Environmental Issues

### Case No. 09-12

#### Facts:

Engineer A, a civil and structural engineer, is engaged by Prospective Owner to do a structural inspection of a residence. The original Home Inspector B was not satisfied that the building was structurally sound, and so he recommended that Prospective Owner, who had made an offer to purchase the house contingent on a satisfactory inspection, retain Engineer A to inspect the foundation of the house. Upon visual inspection, Engineer A determines that the house was in average structural condition for its age and construction type, was not in imminent danger of collapse, but that some upgrades could have been made in connection with earlier renovations to the property. However, Engineer A observes that the moisture levels in the basement were excessive, there is evidence of mold and mildew, and recent repairs exhibiting drainage and damp-proof problems need to be addressed. Prospective Owner, Realtor, and Home Inspector B were present at the time of Engineer A's site visit. Engineer A presents several options for remedying the moisture issue, which in Engineer A's opinion would have a positive impact on the structure. However, the discussion shifts away from the structural conditions and toward health issues related to the home (e.g., respiratory issues, black mold, asthma).

#### Question:

What are Engineer A's obligations under the circumstances?

#### References:

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|-----------------|---|----------------------|---|
| Section I.1.    | - | NSPE Code of Ethics: | <i>Engineers, in the fulfillment of their professional duties, shall hold paramount the safety, health, and welfare of the public.</i>  |
| Section II.2.   | - | NSPE Code of Ethics: | <i>Engineers shall perform services only in the areas of their competence.</i>  |
| Section II.3.a. | - | NSPE Code of Ethics: | <i>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.</i> |
| Section III.2.d | - | NSPE Code of Ethics: | <i>Engineers are encouraged to adhere to the principles of sustainable development<sup>1</sup> in order to protect the environment for future generations.</i>  |

**Footnote 1:** "Sustainable development" is the challenge of meeting human needs for natural resources, industrial products, energy, food, transportation, shelter, and effective waste management while conserving and protecting environmental quality and the natural resource base essential for future development.

**Discussion:**

Today, professional engineers are increasingly relied upon by clients and the public to address environmental and ecological issues. Many professional engineers have the education, qualifications, and experience to offer important direction and assistance as their public and private clients endeavor to address these extremely complex issues affecting the public health and safety.

In recent years, the NSPE Code of Ethics for Engineers was revised to include a new section III.2.d. (cited above), which encourages engineers to adhere to the principles of sustainable development in order to protect the environment for future generations. This provision is intended to promote careful and prudent decision-making in matters affecting the environment. However, this provision was designed to be a general statement which should be understood in the context of the entire NSPE Code of Ethics.

One recent example of the NSPE Board of Ethical Review's interpretation of this provision is BER Case 07-6. In that case, Examining Engineer A was a principal in an environmental engineering firm and was requested by a developer client to prepare an analysis of a piece of property adjacent to a wetlands area for potential development as a residential condominium. During the firm's analysis, one of the engineering firm's biologists reported to Examining Engineer A that in his opinion, the condominium project could threaten a bird species that inhabited the adjacent protected wetlands area. The bird species was not an "endangered species," but it is considered a "threatened species" by federal and state environmental regulators.

In subsequent discussions with the developer client, Examining Engineer A verbally mentioned the concern, but he did not include the information in a written report that would be submitted to a public authority that is considering the developer's proposal. In its decision, the Board at that time decided that it was unethical for the engineer to not include the information about the threat to the bird species in a written report that will be submitted to a public authority that is considering the developer's proposal, and that Examining Engineer A should have included it in the written report and advised the client of its inclusion.

The Board noted, among other things, that as an environmental engineer with consultation by an apparently qualified biologist, Examining Engineer A had technical competence concerning the matters in question. Moreover, said the Board, under NSPE Code Section II.3.a., engineers have an obligation to be objective and truthful in professional reports, statements, or testimony, and include all relevant and pertinent information in such reports. It would be reasonable to assume that the public authority approving the development would be interested in this information. There does not appear to be any indication of an effort on the part of the client to treat the information

as confidential. Examining Engineer A, therefore, had an obligation to include it in the written report and advise the client of its inclusion.

While the facts and circumstances in BER Case 07-6 are somewhat different from the immediate case at hand, there are important parallels between the two cases. Among these parallels include the importance of having competent individuals working as part of the team to determine the most appropriate course of action. In Case 07-6, Examining Engineer A was assisted in the work by an apparently qualified biologist. In the present case, Engineer A was brought into the process by a home inspector who clearly understood that the issue before him (structural soundness of the house) was beyond his area of competence. Another parallel is the importance of providing objective and truthful information to assist a client or the public on matters of concern (e.g., structural soundness, environmental issues).

On the question of professional competence, much like the decision by the Home Inspector to bring in a licensed professional engineer to assist in addressing structural design issues, it is the Board's view that Engineer A had a similar obligation under the facts to recommend that Prospective Owner seek the services of a competent person (e.g., industrial hygienist, biologist, environmental scientist, physician) to address the potential health issues raised by the inspection of the basement. Giving direction or determining matters relating to black mold, asthma, respiratory issues, and so on, are beyond the competence of most professional engineers; therefore, encouraging clients to seek the advice of competent and experienced experts in these areas would be the appropriate course of action to be taken by Engineer A.

**Conclusion:**

Engineer A has an obligation under the facts to recommend that Prospective Owner seek the services of competent and experienced experts (e.g., industrial hygienist, biologist, environmental scientist, physician) to address the potential health issues raised by the inspection of the basement.

**Board of Ethical Review:**

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Samuel G. Sudler III, P.E., NSPE

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