

Misrepresentation – Changes Made to Engineer’s Report

Case No. 15-2

Facts:

Engineer A, a licensed professional engineer, is employed by engineering firm XYZ Engineering. The firm was hired by a property insurance company to inspect and conduct structural assessments of residential properties damaged by a recent hurricane and to determine whether the damage was hurricane-related (a claim covered by insurance) or due to a pre-existing structural condition (a claim not covered by insurance). Engineer A visits the residential properties and, following his inspection and structural assessment, prepares a series of reports for XYZ Engineering. The majority indicate that the damage was in fact hurricane-related. He then signs and seals the reports. Supervisor B, one of the principals of XYZ Engineering and not a professional engineer, reviews the reports and asks Engineer A to make changes to some of the reports to indicate that the residential property damage was not hurricane-related but due to a pre-existing structural condition. Finding no factual or technical basis for the requested change, Engineer A refuses to make the changes. Supervisor B takes the reports and thereafter sends them to the client, the property insurance company. Later Engineer A hears from residential property owners whose homes he had inspected and noted in his signed and sealed report to be damaged by hurricanes. Those residential property owners advise Engineer A that their property insurance damage claims were denied because the signed and sealed report by Engineer A indicated that the residential property damage was due to a pre-existing structural condition. There is no supplemental technical or other information to indicate any basis for the apparent alteration of Engineer A’s report.

Question:

What are Engineer A’s obligations under the circumstances?

NSPE Code of Ethics References:

- Section I.1 – Engineers, in the fulfillment of their professional duties, shall hold paramount the safety, health, and welfare of the public.*
- Section II.1.a. – 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. – Engineers shall approve only those engineering documents that are in conformity with applicable standards.*
- Section II.1.d. – Engineers shall not permit the use of their name or associate in business ventures with any person or firm that they believe is engaged in fraudulent or dishonest enterprise.*
- Section II.1.e. – Engineers shall not aid or abet the unlawful practice of engineering by a person or firm.*

- Section II.1.f. – Engineers having knowledge of any alleged violation of this Code shall report thereon to appropriate professional bodies and, when relevant, also to public authorities, and cooperate with the proper authorities in furnishing such information or assistance as may be required.*
- 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 III.2.b. – Engineers shall not complete, sign, or seal plans and/or specifications that are not in conformity with applicable engineering standards. If the client or employer insists on such unprofessional conduct, they shall notify the proper authorities and withdraw from further service on the project.*
- Section III.3. – Engineers shall avoid all conduct or practice that deceives the public.*

BER Case References: 86-2; 09-6**Discussion:**

Performing an inspection and assessment of property is one of the most fundamental activities of a professional engineer. Members of the public call upon professional engineers to perform these duties because of the technical knowledge and skill the professional engineer can provide for the benefit of the client.

On different occasions the NSPE Board of Ethical Review has discussed the ethical responsibilities of professional engineers performing services after modifications or changes are made to their work.

In BER Case 86-2, the Chief Engineer within a large engineering firm affixed his seal to some of the plans prepared by licensed engineers working under his general direction who did not affix their seals to the plans. At times, the Chief Engineer also seals plans prepared by nonlicensed 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, the Chief Engineer found it impossible to give a detailed review of the designs. The Chief Engineer believed 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, the Chief Engineer meant that he was involved in helping to establish the concept, the design requirements, and review elements of the design or verifying the project status as the design process progresses. Chief Engineer was consulted about technical questions and he provided answers and direction in these matters. The Board concluded that it was unethical for the Chief Engineer to seal plans that have not been prepared by him, or that he had not checked and reviewed in detail.

More recently, in BER Case 09-6, two professional engineers with similar backgrounds and expertise in electrical engineering were assigned to the same project because of time constraints and other factors, but were given responsibility for different parts of the project. Engineer A prepared, designed, and stamped the design documents for which he was responsible, and Engineer B prepared, designed, and sealed the design documents for which he was responsible. The project and design documents were released for construction. A change in project scope required revision to a subset of the design documents. Both Engineer A and Engineer B made their respective changes and revised the design documents for which they were responsible. It was the practice of the company to require that a professional engineer manually initial the revision block of the document being revised, identifying the responsible engineer. Engineer A delayed release of his revisions, which caused completed revisions by Engineer B also to be held until all design documents were ready to be released. Management strongly encouraged Engineer A to complete his work so that all design documents could be released. Engineer A did so when neither Engineer B nor immediate management was available. In completing his work at the behest of management, Engineer A made minor changes to design documents prepared and revised by Engineer B without consulting Engineer B. It was understood that Engineer A was technically competent to make the revisions to Engineer B's work. In deciding that it was not ethical for Engineer A to make minor changes to design documents prepared and revised by Engineer B without conferring and gaining the approval of Engineer B, the Board noted that, unlike the earlier cases, the case before the Board did not involve a situation in which an engineer was engaging in areas of professional practice that were alien to his experience up until the point of being assigned the task; nor was he seeking to exercise management authority over the entire engineering design process (as was the circumstance in Case 86-2). Instead, the case involved an engineer under considerable pressure to deliver a set of engineering design documents in order for construction to proceed but who, due to the unavailability of another engineer in responsible charge for certain aspects of the work, took it upon himself to make minor changes in the other engineer's work in order to be done. While it may be argued that Engineer A's actions were explainable under the circumstances, for a number of reasons, the Board found it difficult to square Engineer A's actions with the language of the NSPE Code of Ethics. For example, even if Engineer A had some involvement in the work of Engineer B, it was not clear whether Engineer A possessed the competence in the field involved in order to sign and seal Engineer B's work. In addition, under the facts, Engineer A clearly did not exercise responsible charge (direct control or personal supervision) over the work in question, work which was either prepared or supervised by Engineer B. Further, there was no indication that Engineer A took any steps to identify and document the actual changes he made to Engineer B's work. Engineer A's failure to first discuss the situation with Engineer B prior to making the changes to the work was unacceptable. While the Board understood the frequent pressures that engineers sometimes experience due to time, financial, and other constraints, a professional engineer must act ethically, resist such demands, and act in a manner consistent with the NSPE Code of Ethics.

Turning to the facts in the present case, the Board thinks both cited cases are very instructive because they turn on the criticality and the seriousness of a professional engineer signing and sealing a set of engineering drawings, professional report, analysis or similar engineering document. Signed and sealed engineering documents signify that the documents in question were either actually drafted by the professional engineer whose signature and seal accompany them or were prepared under the “responsible charge” (direct control and personal supervision) of the professional engineer whose signature and seal accompany them. Any action to subsequently modify any aspect of the engineering documents by any party who did not actually draft the engineering documents or exercise “responsible charge” over the preparation of the engineering documents thoroughly compromises and undermines the integrity and the veracity that this preparation and approval process is intended to embody.

Under the facts of the present case, this engineering document signing and sealing process appears to have been compromised and undermined for unknown motives and intentions. Such actions cannot be permitted to stand. Engineer A has an obligation to take necessary steps to seek understanding as to the apparent reversing of his findings. If no other information is available that would alter Engineer A’s findings, then Engineer A should require immediate correction if there is an effort to misrepresent the conclusions contained in Engineer A’s report.

Conclusion:

Engineer A has an obligation to seek an understanding of his company’s actions and, if there is an effort to misrepresent the conclusion contained in Engineer A’s report, to seek an immediate correction by contacting appropriate authorities, including the state engineering licensure board and other enforcement officials as appropriate.

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