

Objectivity and Truthfulness—Use of Drone

Case No. 18-11

Facts:

Engineer A is a consulting engineer who performs structural inspections using mechanical drones. The scope of Engineer A's services is solely to identify the physical conditions of the bridge and make recommendations regarding bridge repairs. Engineer A deploys a drone to perform a series of bridge inspections as part of Engineer A's contract for inspection services with the state Department of Transportation. During one of Engineer A's drone inspections for the state Department of Transportation, the drone unexpectedly records an encounter between a law enforcement officer and a motorist that results in the exchange of gunfire. Following his review of the drone recording, Engineer A relays it to the state Department of Transportation noting the gunfire event. The state Department of Transportation advises Engineer A that it does not plan to share the information with state or local law enforcement unless so requested by state or local authorities.

Question:

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

NSPE Code of Ethics References:

- Section II.1. - *Engineers shall hold paramount the safety, health, and welfare of the public.*
- 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 II.4. - *Engineers shall act for each employer or client as faithful agents or trustees.*
- Section III.3.a. - *Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact.*

NSPE BER Case References: BER Cases 82-5, 88-6, 10-5, 12-11, 13-9

Discussion:

When performing professional engineering services, professional engineers sometimes encounter unexpected circumstances that may raise ethical questions or concerns. From time to time, the NSPE BER has addressed these situations.

For example, in BER Case No. 82-5, in which an engineer employed by a large defense industry firm documented and reported to his employer excessive costs and time delays by subcontractors, the BER ruled that the engineer did not have an ethical obligation to continue his efforts to secure a change in the policy after his employer rejected his reports, or to report his concerns to a proper authority, but had an ethical right to do so as a matter of personal conscience. In that case, the BER noted that the case did not involve a danger to the public health or safety, but instead related to a claim of unsatisfactory plans and the unjustified expenditure of public funds. The BER indicated that it could have dismissed the case on the narrow ground that the NSPE Code of Ethics does not apply to a claim not involving public health and safety, but the BER decided that such was too narrow a reading of the ethical duties of engineers engaged in such activities. The BER also stated that if an engineer feels strongly that an employer's course of conduct is improper when related to public concerns, and if the engineer feels compelled to "blow the whistle" to expose facts as he sees them, he may well have to pay the price of loss of employment. In this type of situation, the BER felt that the ethical duty or right of the engineer became a matter of personal conscience, but the BER was unwilling to issue a blanket statement that there was an ethical duty in these kinds of situations for the engineer to continue the campaign within the company and make the issue one for public discussion.

In BER Case No. 88-6, an engineer was employed as the city engineer/director of public works with responsibility for disposal of plants and beds associated with poultry processing facilities, and reported to a city administrator. After (1) noticing problems with overflow capacity, which are required to be reported to the state water pollution control authorities, (2) discussing the problem privately with members of the city council, (3) being warned by the city administrator to report the problem only to him, (4) discussing the problem again informally with the city council, and (5) being relieved by the city administrator of responsibility for the disposal of plants and beds, the engineer continued to work as city engineer/director of public works.

In ruling that the engineer failed to fulfill her ethical obligations by informing the city administrator and certain members of the city council of her concern, the BER found that the engineer was aware of a pattern of ongoing disregard for the law by her immediate supervisor, as well as by members of the city council. After several attempts to modify the views of her superiors, the engineer knew, or should have known, that "proper authorities" were not the city officials, but, more probably, state officials. The BER could not find it credible that a city engineer/director of public works for a medium-sized town would not be aware of this basic obligation. The BER said that the engineer's inaction permitted a serious violation of the law to continue and made the engineer an "accessory" to the actions of the city administrator and others.

In BER Case 10-5, Engineer A worked for ES Consulting, a consulting engineering firm. In performing engineering services for ES Consulting, Engineer A performed construction observation services on a project for Client X. In doing so, Engineer A observed potential safety issues relating to the performance of work by a subcontractor on a project being constructed on an adjacent piece of property for Owner Y, a party with whom neither Engineer A, ES Consulting, nor Client X had any direct relationship. In deciding that Engineer A should bring this potential

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safety issue to the attention of Engineer A's supervisor and ES Consulting, the BER assumed that the potential safety issues did not pose an imminent danger; therefore, Engineer A did not have an obligation to report this issue beyond his superiors at ES Consulting. The BER noted that this was a personal judgment and did not constitute an ethical obligation to take immediate or direct action that could be imposed on Engineer A. To do otherwise would make Engineer A accountable for a wide range of public duties and responsibilities that are beyond the bounds of reason.

Later, in BER Case 12-11, Engineer A was a professional engineer employed by OPQ Construction, a construction contractor hired by the state Department of Transportation to inspect and repair a series of state highway and parkway "on and off" ramps. Commercial vehicles were not permitted on the parkway. Engineer A was directed by his supervisor to design inspection and construction scaffolding for a noncommercial parkway cloverleaf ramp with limited height and width clearance. From his personal experience driving on the parkway to and from work, Engineer A observed commercial vehicles illegally driving on the parkway. Engineer A was concerned that the safety of inspection and construction employees (as well as others) could be endangered if one of these commercial vehicles passed by the proposed inspection and construction scaffolding. In ruling that Engineer A should immediately notify verbally (and in writing if necessary) Engineer A's immediate supervisor at OPQ Construction of the safety hazards to employees (and others) due to commercial vehicles passing by while inspection and repair was being performed on the ramps, the BER noted that appropriate corrective action should be considered and implemented prior to the design and assembly of the inspection and construction scaffolding by Engineer A and OPQ Construction. That could include heightened law enforcement on the parkway and ramps, closing down traffic on the affected exits, a design accommodating commercial vehicles, or some other method for the protection of the inspection and construction employees as well as others.

Turning to the facts in the present case, while the events and circumstances observed by Engineer A and his drone recording device did not directly relate to his role as a professional engineer or within the scope of Engineer A's services as a professional engineer, the issues involved occurred during the performance of Engineer A's professional services and are a matter of significant public interest and concern. Under the facts, Engineer A took appropriate steps to bring this matter to the attention of the state Department of Transportation, Engineer A's client and an appropriate authority. While the BER believes Engineer A fulfilled his ethical responsibility under the NSPE Code of Ethics, since this is a matter of significant public interest and concern and relates to the public health and safety, the BER is of the view that Engineer A should also, consistent with the NSPE Code of Ethics, properly bring the existence of the drone recording to the attention of appropriate local or state law enforcement authorities for further review and investigation, and also advise the state Department of Transportation.

Conclusion:

Engineer A took appropriate steps to bring this matter to the attention of the state Department of Transportation, Engineer A's client and an appropriate authority. While the BER believes Engineer A fulfilled his ethical responsibility under the NSPE Code of Ethics, since this is a matter of significant public interest and concern and relates to the public health and safety, the BER is of the view that Engineer A should also properly bring the existence of the drone recording to the attention of appropriate local or state law enforcement authorities for further review and investigation, and also advise the state Department of Transportation.

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