



NATIONAL SOCIETY OF  
PROFESSIONAL ENGINEERS

## BOARD *of* ETHICAL REVIEW



CASE REVIEW:

# Siting a Truck Stop

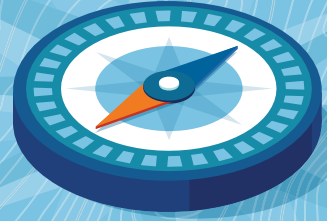
CASE NO. 22-6  
APPROVED MAY, 2023

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## SITING A TRUCK STOP

CASE NO. 22-6

APPROVED 5/23

### FACTS:

Engineer R, a licensed professional engineer in State I with extensive knowledge of environmental regulation learns that a ZZZ Truck Stop will be constructed adjacent to a waterway, specifically a creek; the proposed truck stop is quite close to the location where the creek discharges into a major river in the state. R is aware that the site was used in the past for what would today be characterized as an illegal fill; however, the site was not regulated while it was filled. The county surveyor corroborated R's observations but confirmed that filling occurred before current regulations were in place. As a result of the fill, the proposed construction site is not in a flood plain. Engineer R sees plans for the truck stop and learns the underground fuel storage tanks will be located close to the creek.

Firm C is in a national partnership with ZZZ, and it provides a wide array of site services including taking a project from conceptual site layout through the final design of grading, utilities, and stormwater for complex spaces like the truck stop. Engineer H is employed by firm C and will present the project for approval by the county drainage board at a public hearing.

Engineer R testifies as a member of the public about concerns with fill material and its characteristics, potential of underground tanks to leak, and the proximity of tanks to the creek, acknowledges that in its present condition, the site technically complies with floodplain requirements, but requests the Drainage Board and ZZZ's design firm take into consideration the site history and asks that they look for a different location for the fuel storage tanks. R also points out that analysis of State I's Department of Environmental Management Leaking Underground Storage Tank Database shows that 6% of the underground tanks installed in the previous 5 years experienced a reportable leak or spill.

Following up R's presentation, the Drainage Board vice president asks Engineer H about R's testimony. H stated the tanks were set back substantially from the creek due to the large site plan. H also indicated the site's grading is designed so that if a surface spill occurred, the spill would flow back to the pavement area and not directly toward the creek.

Person B, a representative of ZZZ, also responded and pointed out that fuel storage tanks were generally

placed where they have good access for tanker trucks and there is a reasonable run for the fuel lines to the dispensing pumps. Person B said they would speak with their environmental team to see if there are any other measures they can take. The Drainage Board vice president thanked all for their testimony and then the Drainage Board voted to approve the plan.

After construction begins, R observes the tank locations were not changed. R also learns that Engineer H is not licensed in State I, but is licensed in State O.

## QUESTIONS:

1. Has Engineer R fulfilled ethical obligations by raising concerns and providing public testimony?
2. Is it ethical for Engineer H to speak before the Drainage Board if Engineer H is not licensed in State I?
3. After R learns that Engineer H is not licensed in State I, does R have any additional responsibilities? Note that in the public record, H is simply identified as “person H of Firm C Engineers.”
4. Engineer H’s response to the Board vice-president’s question about R’s testimony addressed concerns with above-ground spills (“the spill will flow back to the pavement area, not directly toward the creek”). Did Engineer H have an obligation to address the issues R raised regarding an underground leak?

## NSPE CODE OF ETHICS REFERENCES:

- |                                  |   |
|----------------------------------|---|
| Canon I.1.                       | Engineers, in the fulfillment of their professional duties shall hold paramount the safety, health and welfare of the public.   |
| Canon I.3.                       | Engineers, in the fulfillment of their professional duties shall issue public statements only in an objective and truthful manner.  |
| Rule 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 as may be required. |
| Professional Obligation III.2.d. | Engineers are encouraged to adhere to the principles of sustainable development in order to protect the environment for future generations.   |
| Professional Obligation III.3.a. | Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact.  |
| Professional Obligation III.8.a. | Engineers shall conform with state registration laws in the practice of engineering.  |

## NSPE BER CASE REFERENCES:

[63-6](#), [79-2](#), [95-5](#), [20-4](#)

## DISCUSSION:

Old BER cases are a rich trove of resources for engineers like R to turn to for guidance about environmental concerns and voicing these concerns publicly. In [BER Case 79-2](#), engineers A and B collaborated on an assignment to make studies and final contours for an existing sanitary landfill. After several presentations to the town council A and B were directed to prepare a new design for the existing site at higher final contours - the new design would provide for a hill 100 feet higher than originally proposed. Engineer C, a resident of the town contended the new design will be environmentally unsound. One of the questions the BER was asked to resolve in 1979 was if it was ethical for C to publicly challenge the design approach adopted by A and B. The BER pointed to [BER Case 63-6](#) where they observed “There may...be honest differences of opinion among equally qualified engineers on the interpretation of the known physical facts.” They also stated that “it is not unethical for engineers to offer conflicting opinions on the application of engineering principles, or to criticize the work of another engineer, at hearings on an engineering project, in the interest of the public, provided such criticism is offered on a high level of professional deportment.”

[BER Case 20-4](#) is particularly relevant. In this situation, engineers A and B find themselves at odds with a metropolitan water commission (MWC) that is in favor of changing the water supply source to one which A and B believe cannot be used safely before additional study and plant capital investment. In [BER Case 20-4](#), the MWC overruled the engineering judgment of A and B. The BER concluded that

“The formal presentations satisfy Engineer A’s and Engineer B’s duty to report. However, in the event that these formal presentations fail to sway the MWC to change its plans, given the gravity of the danger to public health and safety, Engineers A and B have an obligation to further pursue the matter.”

These two cases confirm that R had an obligation to bring forward concerns at the public hearing. As with engineers A and B in [BER Case 20-4](#), engineer R’s formal presentation to the Drainage Board satisfies the duty to report. If R’s judgment, based on experience, indicates the tank location could jeopardize the water quality in the event of a leak, R can raise concern to a higher level, perhaps the state environmental regulatory agency.

Questions 2 and 3 are closely related and raise the question if engineer H misrepresented H’s personal qualifications when testifying to the Drainage Board? Was H practicing engineering? Laws regarding the practice of engineering vary from state to state and should be checked. In the view of the BER, providing verbal engineering input at a public meeting where a public board is relying on such input in its decision-making is likely to be determined to be the practice of engineering, requiring licensure in that jurisdiction. Practitioners should consult the governing statutes and regulations to determine the applicable definition of the practice of engineering.

Question 4 deals with objectivity and truthfulness - issues directly addressed by fundamental Canon 1.3. Should H have addressed R’s concerns about leaks from underground tanks? [BER Case 95-5](#) is applicable here. The facts of this case are quite detailed and specific, but a key fact, and one that the BER focused

on, was an engineer's failure to include relevant information in a report. The board concluded that selective use of facts does a disservice by potentially misdirecting a conclusion; selective use of data led to an incomplete engineering report and is inconsistent with the NSPE Code of Ethics which requires that engineers "shall include all relevant and pertinent information in such reports, statements, or testimony."

Engineer H's redirection of conversation away from issues with the potential for leaks in underground tanks is troubling not only because of the failure to address the issues raised and the failure to include all relevant information in testimony, but also because Professional Obligation III.2.d encourages all engineers to adhere to the principles of sustainable development to protect the environment for future generations. Engineer R's testimony about issues with the site fill and the possibility of leaks from underground fuel storage tanks should have one of two results. First, if true, Engineer H should have explained how the issue had already been evaluated and addressed. Or, second, R's testimony should have caused Engineer H and Firm C to offer/agree to re-examine the plans. If neither of these conditions is true, then Engineer H's testimony was incomplete and misleading.

## CONCLUSION:

1. Engineer R fulfilled ethical obligations regarding environmental concerns at the site of the truck stop through public testimony. If R believes that there is a danger to public health, safety and wel-

fare, R could choose to raise the concerns to a higher regulatory authority.

2. Engineer H's testimony constituted the unlicensed practice of engineering and was consequently unethical. [However, practitioners should consult the governing statutes and regulations to determine the applicable definition of the practice of engineering.]
3. Engineer R has an obligation to report H's unlicensed practice of engineering to State I authorities.
4. Engineer H did not act ethically by failing to address the potential for leaks in underground storage tanks during the presentation and questioning, whether by explaining how the issue had been addressed or by agreeing to re-examine the plans in light of the issue.

## Board of Ethical Review:

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