

Ethics Tools, Resources, and Case Studies

July 13, 2023
NSPE- Illinois Society of Professional Engineers

Professional Engineering Licensure: Rigorous for a Reason

1

Today' Speaker



Bill Atkinson P.E., F. NSPE
NSPE President 2023-2024
Director of Engineering and Service at Vermont Mechanical Inc.
Vermont Licensing Board Member 2005-2016

Bill.Atkinson@vtmechanical.com

Professional Engineering Licensure: Rigorous for a Reason

2

Objectives

- Where Ethics is showing up
- Breaking down the Ethical Decision making process
- Take the Quiz on Engineering Ethics
- NSPE's place in the discussion
 - the NSPE Canons and Resources
 - Group work and discussions on BER Cases
 - (Handouts – Ethics exam, BER cases)

Professional Engineering Licensure: Rigorous for a Reason

3

"No man can always be right, so the struggle is to do one's best to keep the brain and conscience clear; Never to be swayed by unworthy motives or inconsequential reasons, But to strive to unearth the basic factors involved And then do one's duty."

– **Dwight D. Eisenhower**
(1890-1969)
General of the Army and 34th President of the United States



Professional Engineering Licensure: Rigorous for a Reason

4



Professional Engineering Licensure: Rigorous for a Reason

5

How does Ethics come into play ?

- Technical problems are easy to solve.



Professional Engineering Licensure: Rigorous for a Reason

6



How does Ethics come into play ?

- Technical problems where people and money are involved are difficult.



Professional Engineering Licensure: Rigorous for a Reason

7



NSPE Fundamental Canons

Fundamental Canons Engineers, in the fulfillment of their professional duties,

- 1. Hold paramount the safety, health, and welfare of the public.
- 2. Perform services only in areas of their competence.
- 3. Issue public statements only in an objective and truthful manner.
- 4. Act for each employer or client as faithful agents or trustees.
- 5. Avoid deceptive acts.
- 6. Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

Professional Engineering Licensure: Rigorous for a Reason

8



NSPE Board of Ethical Review

- The Board of Ethical Review is a [panel of engineering ethics experts](#) that has served as the profession's guide through ethical dilemmas since 1946. The board consists of seven licensed members who are appointed by the NSPE president. The purpose of the BER is to render impartial opinions pertaining to the interpretation of the [NSPE Code of Ethics](#), develop materials, and conduct studies relating to ethics of the engineering profession.

Professional Engineering Licensure: Rigorous for a Reason

9



Nine Steps to Break down Ethical Decisions NSPE Ethics reference Guide –

- Stop and Think



Professional Engineering Licensure: Rigorous for a Reason

10



Nine Steps to Break down Ethical Decisions

- Stop and Think
- Clarify Goals



Professional Engineering Licensure: Rigorous for a Reason

11



Nine Steps to Break down Ethical Decisions

- Stop and Think
- Clarify Goals
- Determine Facts Known/Unknown



Professional Engineering Licensure: Rigorous for a Reason

12



Nine Steps to Break down Ethical Decisions

- Stop and Think
- Clarify Goals
- Determine Facts Known/Unknown
- Develop Options



Professional Engineering Licensure: Rigorous for a Reason

13



Nine Steps to Break down Ethical Decisions

- Stop and Think
- Clarify Goals
- Determine Facts Known/Unknown
- Develop Options
- Consider foreseeable results and options



Professional Engineering Licensure: Rigorous for a Reason

14



Nine Steps to Break down Ethical Decisions

- Stop and Think
- Clarify Goals
- Determine Facts Known/Unknown
- Develop Options
- Consider foreseeable results and options
- Refer to the NSPE Ethics Resources



Professional Engineering Licensure: Rigorous for a Reason

15



Nine Steps to Break down Ethical Decisions

- Stop and Think
- Clarify Goals
- Determine Facts Known/Unknown
- Develop Options
- Consider foreseeable results and options
- Refer to the NSPE Ethics Resources
- Refer to State Registration law for guidance



Professional Engineering Licensure: Rigorous for a Reason

16



Nine Steps to Break down Ethical Decisions

- Stop and Think
- Clarify Goals
- Determine Facts Known/Unknown
- Develop Options
- Consider foreseeable results and options
- Refer to the NSPE Ethics Resources
- Refer to State Registration law for guidance
- Consult with respected staff or outside professionals



Professional Engineering Licensure: Rigorous for a Reason

17



Nine Steps to Break down Ethical Decisions

- Stop and Think
- Clarify Goals
- Determine Facts Known/Unknown
- Develop Options
- Consider foreseeable results and options
- Refer to the NSPE Ethics Resources
- Refer to State Registration law for guidance
- Consult with respected staff or outside professionals
- Decide the course of action and take it.



Professional Engineering Licensure: Rigorous for a Reason

18

NSPE Ethics Quiz



Professional Engineering Licensure: Rigorous for a Reason

19

5 BER cases

- Ethics Pre-test
- Test Review



Professional Engineering Licensure: Rigorous for a Reason

20

BER Cases to Review

- Case 1 2004-09 - An Engineer inspects a cracked foundation for a project that he had originally designed.
- Case 2007-03 – A Mechanical engineer discovers a structural issue that wasn't in their scope of review but poses a Public Safety Risk.
- Case 2017-03 – An Engineer determine that there was a design issue that may cause public harm which has broad reaching effects.
- Case 2019-10 – An Engineer discovers a construction change that could cause public harm.
- Case 92-3 – An Engineer does an inspection for a customer that it is determined has in the past altered reports prior to releasing them to their clients.

Professional Engineering Licensure: Rigorous for a Reason

21

Board of Ethical Review Case Discussions

Discussion
Read the facts of the case
Questions to discuss with your group –
 Were the action(s) that the professional took appropriate?
 What would they have had to do to in order to meet their ethical obligations and when?
 Was the public adequately protected by their actions?
 Was the core issue a design issue or an Ethical issue?
 Past issue? What if anything should be done with that?
 What NSPE Canners provided guidance that the professional could have used in this case?
 Do you have an example of a case where you were faced with an ethical dilemma similar to the case that you reviewed?
 Professional Engineering Licensure: Rigorous for a Reason

22

Board of Ethical Review Case Discussions

Polling question: Was Engineer's conduct –

- A. Ethical
- B. Unethical
- C. Complicated



Professional Engineering Licensure: Rigorous for a Reason

23

Board of Ethical Review Case Discussions

Where did the Board of Ethical Review Land on the issue



Professional Engineering Licensure: Rigorous for a Reason

24



Board of Ethical Review 04-09 Decision

Question:
Was it ethical for Engineer A to inspect his own work or should an independent professional engineer be retained to inspect Engineer A's work?

References:
Section II.4.4. - NSPE Code of Ethics: 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.
Section II.4.2. - NSPE Code of Ethics: Engineers in public service as members, advisors, or employees of a governmental or quasi-governmental body or department shall not participate in decisions with respect to services solicited or provided by them or their organizations in private or public engineering practice.

Discussion:
Over the years, the question of an engineer reviewing his or her own work has been the subject of NSPE Board of Ethical Review opinions. In the strictest sense, an engineer reviewing his/her own work can raise basic questions of objectivity and impartiality, particularly under circumstances where a public agency is involved and the public health and safety is concerned.

Professional Engineering Licensure: Rigorous for a Reason

25



Board of Ethical Review 04-09 Conclusion

Conclusion:
It was not ethical for Engineer A to inspect his own work. In view of the fact that a question has been raised by the building inspector concerning the sufficiency of the foundation, it would be appropriate for there to be an independent third-party review of the foundation.

Professional Engineering Licensure: Rigorous for a Reason

26



Board of Ethical Review 07-03 Discussion

Question:
What is Engineer A's obligation under the circumstances?

References:
Section I.1 - NSPE Code of Ethics: Engineers, in the fulfillment of their professional duties, shall hold paramount the safety, health, and welfare of the public.
Section II.1.8 - NSPE Code of Ethics: 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.c. - NSPE Code of Ethics: Engineers shall not reveal facts, data, or information without the prior consent of the client or employer except as authorized or required by law or this Code.
Section II.1.f. - NSPE Code of Ethics: 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.4. - NSPE Code of Ethics: Engineers shall act for each employer or client as faithful agents or trustees.

Professional Engineering Licensure: Rigorous for a Reason

27



Board of Ethical Review 07-03 Conclusion

Conclusion:
It would be ethical for Engineer A to first give the building manufacturing company the opportunity to contact the local code enforcement authorities and only if the building manufacturing company does not act within a reasonable period of time, take further action including personally contacting the building code enforcement authorities, and if necessary, contacting appropriate state building officials.

Professional Engineering Licensure: Rigorous for a Reason

28



Board of Ethical Review 17-13 Decision

Question:
Did Engineer A fulfill his ethical obligations under the NSPE Code of Ethics by providing the report to the insurance company that retained him?

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 I.2. - Engineers, in the fulfillment of their professional duties, shall perform services only in areas of their competence.
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 III.1.b. - Engineers shall advise their clients or employers when they believe a project will not be successful.

Professional Engineering Licensure: Rigorous for a Reason

29



Board of Ethical Review 17-13 Conclusion

Conclusion:
Contrary to the advice of the State Board of Professional Engineers, Engineer A did not fulfill his ethical obligations under the NSPE Code of Ethics by only providing the report to the insurance company that retained him. Engineer A had a responsibility to take additional steps beyond merely submitting a written report to the insurance company, including contacting local building officials, individual homeowners, and the local homeowners or community civic association to advise them of his findings.

Professional Engineering Licensure: Rigorous for a Reason

30



Board of Ethical Review 19-10 Decision

Question:

What are Engineer A's ethical 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 I.2. -- Engineers, in the fulfillment of their professional duties, shall perform services only in areas of their competence.
- 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 III.1.b. -- Engineers shall advise their clients or employers when they believe a project will not be successful.

Professional Engineering Licensure: Rigorous for a Reason

31



Board of Ethical Review 19-10 Conclusion

Conclusion:

Engineer A had an obligation to continue to pursue a resolution of the matter by working with Client B and in contacting in writing the supervisor of the county official, the fire marshal, or any other agency with jurisdiction, advising them of the structural deficiencies.

Professional Engineering Licensure: Rigorous for a Reason

32



Board of Ethical Review 92-3 Conclusion

QUESTIONS:

1. Is it ethical for Engineer A to continue association with the referral firm after he learns that IJK, Inc. has a history of changing reports?
2. Is it ethical for Engineer A to continue association with the referral firm after learning that IJK, Inc. is indicating a fee for Engineer A's services to the IJK, Inc. client which is different from the fee charged by Engineer A?

Professional Engineering Licensure: Rigorous for a Reason

33



Board of Ethical Review 92-3 Conclusion

Section II.1.d. -Engineers shall not permit the use of their name or firm name nor associate in business ventures with any person or firm which they have reason to believe is engaging in fraudulent or dishonest business or professional practices.

Section II.5.b. -Engineers shall not offer, give, solicit or receive, either directly or indirectly, any political contribution in an amount intended to influence the award of a contract by public authority, or which may be reasonably construed by the public of having the effect or intent to influence the award of a contract. They shall not offer any gift, or other valuable consideration in order to secure work. They shall not pay a commission, percentage or brokerage fee in order to secure work except to a bona fide employee or bona fide established commercial or marketing agencies retained by them.

Section III.3.a. -Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact necessary to keep statements from being misleading or intended or likely to create an unjustified expectation; statements containing prediction of future success; statements containing an opinion as to the quality of the Engineers' services; or statements intended or likely to attract clients by the use of showmanship, puffery, or self-laudation, including the use of slogans, jingles, or sensational language or format.

Professional Engineering Licensure: Rigorous for a Reason

34



Board of Ethical Review 92-3 Decision

CONCLUSIONS:

1. It was unethical for Engineer A to continue association with the referral firm after he learns that IJK, Inc. has a history of changing reports.
2. It was unethical for Engineer A to continue association with the referral firm after learning that IJK, Inc. is indicating a fee for Engineer A's services to IJK's client which is different from the fee charged by Engineer A.

Professional Engineering Licensure: Rigorous for a Reason

35



Board of Ethical Review Case Discussions

Is there a further sanction warranted ? Is this a licensure or litigation case or both

Do you agree with the BER Conclusion ?



Professional Engineering Licensure: Rigorous for a Reason

36

