

ETHICS IN ENGINEERING: MAINTAINING PROFESSIONAL INTEGRITY

NSPE-ID[®] IDAHO SOCIETY OF
PROFESSIONAL ENGINEERS

ISPE 2025 Annual Meeting
June 13, 2025



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NSPE Code of Ethics



What is Ethics?

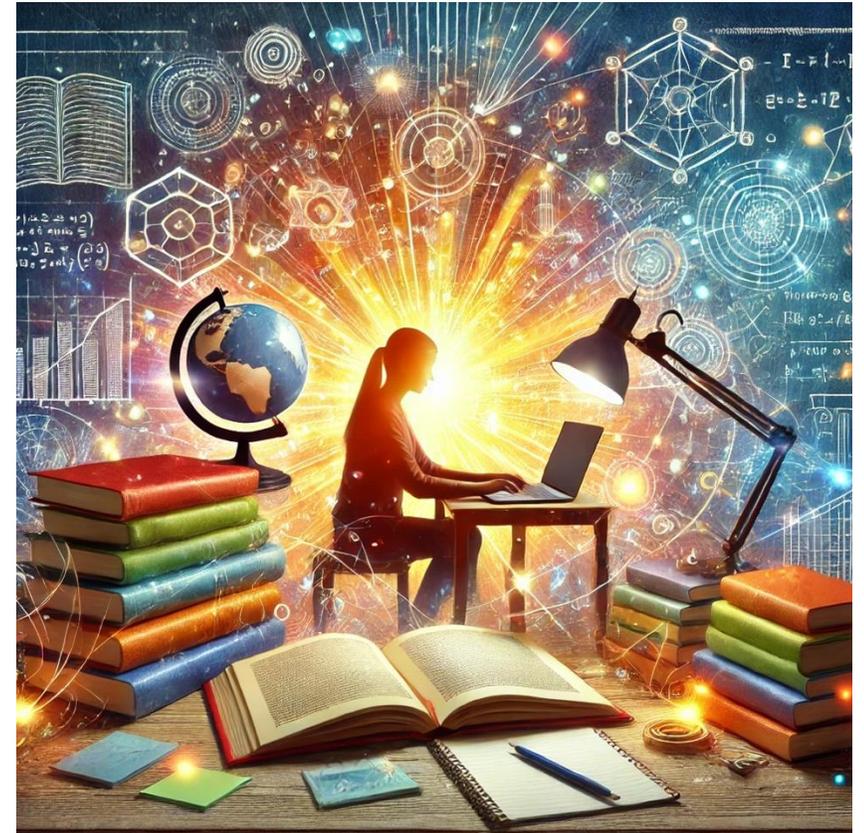
- Moral principles
- Right and wrong
- Dilemmas
- Competing interests

- Engineering Ethics
 - A set of standards defined by the professional community which provides a guide for behavior that is expected from the professional.



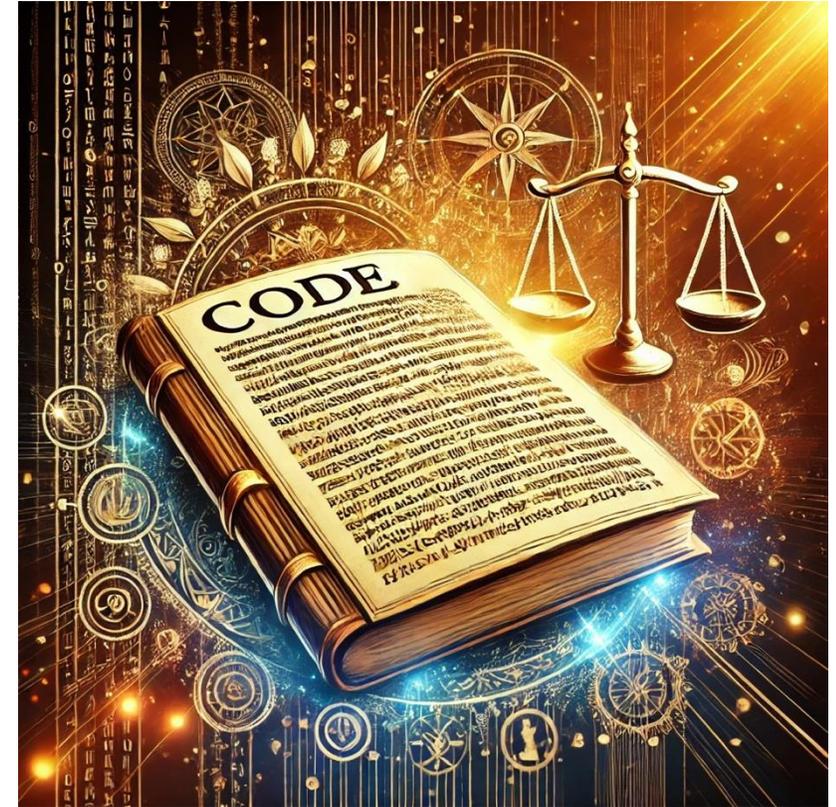
Why Study Ethics?

- Familiarize yourself with standards
- Practice makes us better
- Variations in standards
 - States
 - Organizations
 - Country
 - Culture
 - Licensure Laws
- Professional growth



NSPE Code of Ethics

- First engineering ethics – 19th Century
- Canon of Ethics in 1946
- NSPE Board of Ethical Review (BER) created in 1954
- Canon of Ethics → Code of Ethics in 1964
- Many updates over the years



NSPE Code of Ethics

I. Fundamental Canons

Engineers, in the fulfillment of their professional duties, shall:

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.

II. Rules of Practice

1. Engineers shall hold paramount the safety, health, and welfare of the public.
2. Engineers shall perform services only in the areas of their competence.
3. Engineers shall issue public statements only in an objective and truthful manner.
4. Engineers shall act for each employer or client as faithful agents or trustees.
5. Engineers shall avoid deceptive acts

*Selected text from the code

NSPE Code of Ethics

III. Professional Obligations

1. Engineers shall be guided in all their relations by the highest standards of honesty and integrity.
2. Engineers shall at all times strive to serve the public interest.
3. Engineers shall avoid all conduct or practice that deceives the public.
4. Engineers shall not disclose, without consent, confidential information concerning the business affairs or technical processes of any present or former client or employer, or public body on which they serve.
5. Engineers shall not be influenced in their professional duties by conflicting interests.
6. Engineers shall not attempt to obtain employment or advancement or professional engagements by untruthfully criticizing other engineers, or by other improper or questionable methods.
7. Engineers shall not attempt to injure, maliciously or falsely, directly or indirectly, the professional reputation, prospects, practice, or employment of other engineers. Engineers who believe others are guilty of unethical or illegal practice shall present such information to the proper authority for action.
8. Engineers shall accept personal responsibility for their professional activities, provided, however, that engineers may seek indemnification for services arising out of their practice for other than gross negligence, where the engineer's interests cannot otherwise be protected.
9. Engineers shall give credit for engineering work to those to whom credit is due and will recognize the proprietary interests of others.

*Selected text from the code

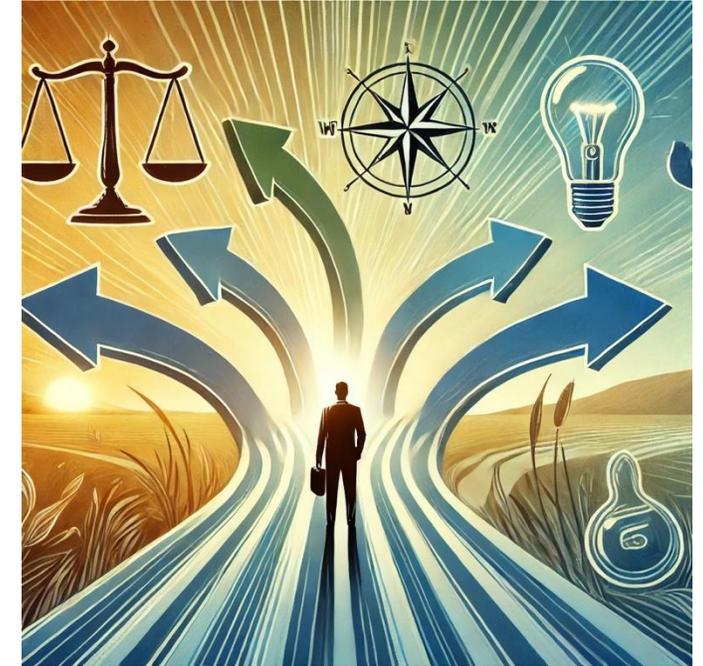
NSPE Board of Ethical Review (BER)

- Group of experienced NSPE members with a passion for ethics. There are 7 members plus chair (All PEs)
- Receive/collect/review real world cases faced by our members.
- Interprets and suggests revisions to the NSPE Code of Ethics
- Promotes the competent practice of PEs and their obligation to protect the health, safety and welfare of the public.



Nine Steps to Ethical Decision Making

1. Stop and think
2. Clarify goals
3. Determine facts known and unknown
4. Develop options
5. Consider foreseeable results of options
6. Refer to the NSPE Ethics Resources
7. Refer to state licensure law for guidance
8. Consult with respected staff or outside professionals
9. Decide the course of action and take it



BER CASES OF INTEREST

- Case No. 20-01 Job Qualifications-Disclosure of Material Fact
- Case No. 21-09 Misrepresentation of Qualifications
- Case No. 19-7 Confidentiality-Fire Investigation
- Case 13-2 Expert Witness-Conflict with Attorney



Case No. 20-01 Job Qualifications-Disclosure of Material Fact

Presentation of the Facts

- Engineer Intern A, an Engineer Intern in State Y with a BS in engineering, an MS in management, and five years of experience, was planning on relocating to State X and applied for a position advertised by XYZ Consultants. The qualifications listed in the advertisement included 4+ years' experience, with a PE in State X required or achieved within 90 days after date of hire.
- At his interview, Engineer Intern A explains he is not a licensed PE in State Y but indicates an intention to take the PE exam in the coming weeks. He also explains that he will be relocating to State X in several months and will be available for work. Engineer Intern A did not indicate in the interview his previous attempts to pass the PE exam, and XYZ Consultants did not ask. XYZ Consultants offered the position to Engineer Intern A with the expectation that Engineer Intern A was on the track to obtain a PE license.
- A month after starting work, Engineer Intern A indicated to his supervisor that the PE exam results had been released and that his third attempt to pass the PE exam had been unsuccessful. Engineer Intern A also explained that the State X licensing board required additional experience and new references following a third failure before sitting for the exam again.

Question for the Group

- Was it ethical for Engineer Intern A not to have mentioned at the interview his two previous failures at passing the PE exam if he was not asked that question by XYZ Consultants?
- What sections of the NSPE Code of Ethics apply?

Case No. 20-01 Job Qualifications-Disclosure of Material Fact

Relevant NSPE Code of Ethics References and Application

Section I.5 – *Engineers, in the fulfillment of their professional duties, shall avoid deceptive acts.*

While Engineer Intern A did not lie, omitting the previous exam failures may be seen as borderline deceptive, especially if the information would likely have influenced the hiring decision.

Section I.6 – *Engineers shall conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.*

Ethical conduct includes being transparent in job interviews. Engineer Intern A's omission may not enhance trust or the profession's reputation.

Section II.3.a – *Engineers shall be objective and truthful in professional reports, statements, or testimony. They shall include all relevant and pertinent information.*

Although the omission occurred during an interview and not a formal report, the principle of full disclosure of relevant facts arguably applies. Previous PE exam attempts are pertinent when licensure within 90 days is expected.



Case No. 20-01 Job Qualifications-Disclosure of Material Fact

Section II.5.a – *Engineers shall not falsify their qualifications or permit misrepresentation of their or their associates' qualifications.*

Engineer Intern A did not misstate his qualifications but may have allowed a misrepresentation by omission.

Section III.1.e – *Engineers shall not promote their own interest at the expense of the dignity and integrity of the profession.*

Concealing exam history to secure a position could be seen as prioritizing personal gain over professional integrity.

Section III.3.a – *Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact.*

Omitting two failed attempts at the PE exam could be interpreted as a material omission given the job requirement.



Case No. 20-01 Job Qualifications-Disclosure of Material Fact

NSPE Board of Ethical Review's Determination

The NSPE Board of Ethical Review concluded the following:

1. Ethicality of Non-Disclosure:

It was **not unethical** for Engineer Intern A to withhold information about previous PE exam failures, given that no direct questions were asked and no false statements were made during the interview process.

2. Transparency and Trust:

While not unethical, Engineer Intern A's decision undermined the trust between employee and employer. Full transparency would have strengthened the professional relationship and avoided later misunderstandings.

3. Professional Prudence:

The Board emphasized that **disclosure would have been prudent** and professionally appropriate. As engineers are held to a high standard of honesty and integrity, openly sharing material facts—even if not directly asked—aligns with best ethical practices.



Case No. 21-09 Misrepresentation of Qualifications

Presentation of the Facts

- Engineer A is a licensed Professional Engineer in three states (C, D, and E) and is a Board-certified Diplomate in Forensic Engineering.
- Attorney X contacts Engineer A, seeking the services of a non-engineering expert to provide testimony in State M.
- Engineer A agrees to evaluate the case, prepare an expert opinion, and provide testimony.
- The licensing statute in State M specifies that any engineer providing expert testimony in a State M court must be licensed in State M.
- Engineer A signs the report as “Consultant A, Board-certified Diplomate in Forensic Engineering,” making no reference whatsoever to licensure status.



Question for the Group

- Was Engineer A's self-description in the expert report ethical?
- What sections of the NSPE Code of Ethics apply?

Case No. 21-09 Misrepresentation of Qualifications

Relevant NSPE Code of Ethics References and Application

Preamble - *Engineers must adhere to the highest standards of honesty, integrity, and ethical conduct.*

Application: Engineer A's inclusion of the title "Board-certified Diplomate in Forensic Engineering" could mislead others into believing they were qualified to practice engineering in State M, violating the principle of honesty and integrity.

Section I.1 - *Engineers shall avoid deceptive acts.*

Application: By not disclosing the lack of licensure in State M while using a title that includes "Engineer," Engineer A engaged in a potentially deceptive act.

Section II.5.a - *Engineers shall not falsify their qualifications or permit misrepresentation of their or their associates' qualifications.*

•**Application:** Although Engineer A did not explicitly claim to be licensed in State M, the use of the title "Board-certified Diplomate in Forensic Engineering" implies engineering licensure, which is required for that credential, creating a misrepresentation of qualifications.



Case No. 21-09 Misrepresentation of Qualifications

Section III.1.d - *Engineers shall not promote their own interest at the expense of the dignity and integrity of the profession.*

•**Application:** Engineer A's actions could undermine public trust in the engineering profession by misusing professional titles, thereby compromising the profession's dignity and integrity

Section III.3.a - *Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact.*

•**Application:** By omitting any reference to licensure status and using the "Engineer" title, Engineer A omitted critical information that might mislead others regarding their qualifications to testify in State M.



Case No. 21-09 Misrepresentation of Qualifications

NSPE Board of Ethical Review's Determination

The NSPE Board of Ethical Review concluded the following:

1. Providing Expert Services: It was not unethical for Engineer A to provide non-engineering expert services in State M, provided that Engineer A qualified as an expert based solely on non-engineering credentials.

2. Use of Title: By using the designation “Board-certified Diplomate in Forensic Engineering,” Engineer A misrepresented their qualifications. This title incorporates the term “Engineer,” which implies licensure, thus violating ethical standards.

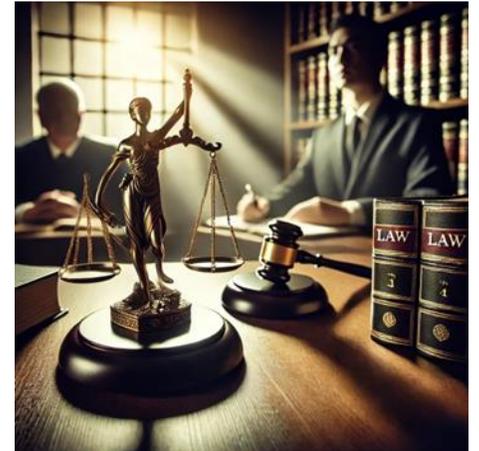
3. Unlicensed Practice: Engineer A’s use of the title also brought them under the purview of State M’s licensing laws, making their actions both unethical and unlawful.



Case No. 19-7 Confidentiality-Fire Investigation

Presentation of the Facts

- Engineer A is retained by Attorney X, representing Client Y, a plaintiff in a lawsuit against the owner of a building and several building material manufacturers, to conduct a forensic engineering investigation in connection with a building fire that resulted in the death and injury of several individuals.
- Following the completion of Engineer A's investigation and report, Attorney X and Client Y enter into a private settlement with the building owner and the building material manufacturers.
- Under the terms of the settlement, which is approved by the court, Engineer A is ordered not to reveal the contents of her forensic engineering investigation report.
- Engineer A is concerned that her settlement will undermine her obligation to the public, because she believes the forensic engineering report contains important findings relating to the use of manufactured building materials.



Question for the Group

- What are Engineer A's obligations under the circumstances?
- What sections of the NSPE Code of Ethics apply?

Case No. 19-7 Confidentiality-Fire Investigation

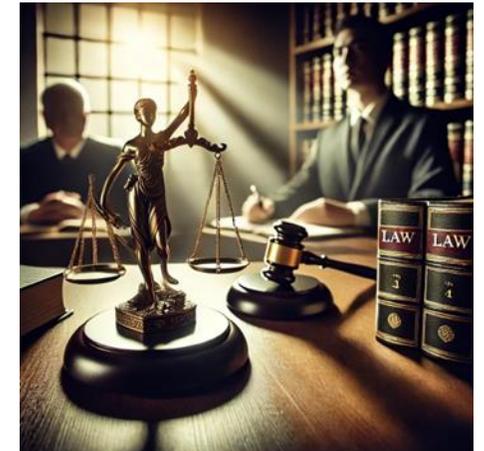
Relevant NSPE Code of Ethics References and Application

Section II.1 - *Engineers shall hold paramount the safety, health, and welfare of the public.*

•**Application:** Engineer A's concern about the manufactured building materials relates to this principle, as the findings may have implications for public safety.

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.*

•**Application:** Engineer A's judgment has been limited by the confidentiality clause. While the court order must be adhered to, this provision emphasizes the importance of protecting public welfare when life or property is at risk.



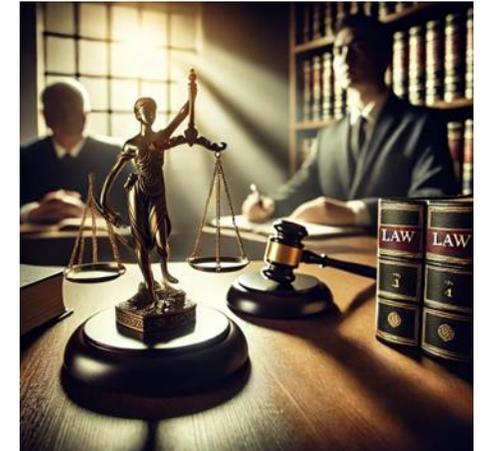
Case No. 19-7 Confidentiality-Fire Investigation

Section III.2.a - *Engineers are encouraged to participate in civic affairs and work for the advancement of the safety, health, and well-being of their community.*

•**Application:** Engineer A may explore ways to address her concerns within the constraints of the confidentiality agreement, such as publishing research that highlights the technical issues without revealing specifics of the case.

Section III.4 - *Engineers shall not disclose, without consent, confidential information concerning the business affairs or technical processes of any present or former client or employer.*

•**Application:** The court order explicitly prohibits Engineer A from revealing the report's findings. Balancing this requirement with public safety concerns is critical.

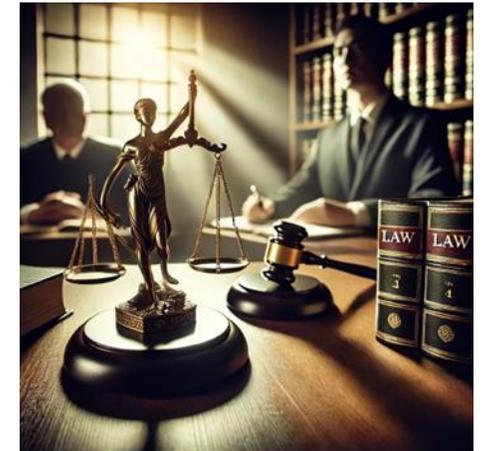


Case No. 19-7 Confidentiality-Fire Investigation

NSPE Board of Ethical Review's Determination

The Board concluded that:

- 1. Confidentiality:** Engineer A has an ethical obligation to maintain the confidentiality of her forensic engineering report, as required by the court-approved settlement.
- 2. Alternative Actions:** Engineer A may consider constructive alternatives, such as developing and publishing research to address the technical concerns identified in the report, without revealing specific facts or compromising the confidentiality agreement.
- 3. Balancing Obligations:** The Board emphasized that while public health and safety is paramount, professional engineers must also adhere to legal obligations, such as court orders. Constructive alternatives should be pursued to address safety concerns without breaching confidentiality.



Case No. 13-2 Expert Witness-Conflict with Attorney

Presentation of the Facts

- Attorney A, representing Client B, contacted Engineer Q by telephone to explore whether Engineer Q could assist with a litigation matter.
- During the call, Engineer Q took minimal handwritten notes concerning the incident but did not discuss any liability theories.
- Engineer Q sent Attorney A a fee schedule requiring a signed agreement and payment of an engagement retainer before proceeding.
- A year and two months later, Attorney B, representing another party in the same matter, contacted Engineer Q and retained his services.
- No signed fee schedule or engagement retainer had been received from Attorney A, and no substantive discussions had taken place between Attorney A and Engineer Q.
- After accepting the engagement with Attorney B, Attorney A contacted Engineer Q, stating that he was ready to proceed and angrily claimed that Engineer Q had already been engaged because of the initial contact.
- Attorney A threatened to seek disqualification of Engineer Q from working with Attorney B.



Question for the Group

Was it unethical for Engineer Q to agree to accept the engagement with Attorney B? What sections of the NSPE Code of Ethics apply?

Case No. 13-2 Expert Witness-Conflict with Attorney

Relevant NSPE Code of Ethics References and Application

Section II.4.a - *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.*

•**Application:** Engineer Q's limited initial interaction with Attorney A did not result in substantive involvement in the litigation, nor was there a conflict of interest to disclose when engaging with Attorney B.

Section II.4.b - *Engineers shall not accept compensation from more than one party for services on the same project unless the circumstances are fully disclosed and agreed to by all interested parties.*

•**Application:** Engineer Q did not accept compensation from Attorney A, and no agreement was formalized, so no conflict arose under this provision.



Case No. 13-2 Expert Witness-Conflict with Attorney

Section III.4 - *Engineers shall not disclose confidential information concerning the business affairs or technical processes of any present or former client without consent.*

•**Application:** Since no substantive information was shared during the initial contact with Attorney A, there was no confidential information to protect or disclose.

Section III.4.a - *Engineers shall not promote new employment related to a specific project without the consent of all interested parties.*

•**Application:** Engineer Q was not formally engaged by Attorney A and was free to accept the engagement with Attorney B without obtaining additional consent.

Section III.4.b - *Engineers shall not participate in an adversary interest without consent if they have gained specialized knowledge from a former client.*

•**Application:** Engineer Q did not gain specialized knowledge from Attorney A during their limited interaction, allowing him to engage with Attorney B ethically.



Case No. 13-2 Expert Witness-Conflict with Attorney

NSPE Board of Ethical Review's Determination

The Board concluded the following:

1.Engagement with Attorney B: The NSPE BER determined it was not unethical for Engineer Q to accept the engagement with Attorney B. The absence of a formal agreement, retainer payment, or substantive discussion with Attorney A placed Engineer Q on firm ethical ground.

2.Responsibility of Attorney A: The Board noted that Attorney A's failure to formalize an agreement with Engineer Q does not obligate Engineer Q to refrain from accepting work with Attorney B.

3.Courtesy and Best Practices: While Engineer Q was not obligated to contact Attorney A before accepting the engagement with Attorney B, doing so could have been a courteous approach to avoid misunderstandings.



Learning Assessment Questions

1. If engineers' judgment is overruled under circumstances that endanger life or property, they shall notify their employers or clients and such other authority as may be appropriate.
 - True - see NSPE Code of Ethics 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.
2. It is sufficient that Engineers, in the fulfillment of their professional duties, carefully consider the safety, health, and welfare of the public.
 - False - see NSPE Code of Ethics I.1.
 - Hold paramount the safety, health, and welfare of the public.



Learning Assessment Questions

3. Engineers shall not reveal facts, data...information without the prior consent of the client or employer except as authorized or required by law or this Code.
- True - see NSPE Code of Ethics II.1.c.
 - 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.



NSPE Ethics Resources

- Engineers' Creed
- NSPE Code of Ethics
- NSPE Ethics Study Guide
- NSPE Ethics Reference Guide
 - Subject reference guide to NSPE Code of Ethics
 - List of BER cases by subject
 - Code of Ethics BER case index

Subject Reference Guide to NSPE Code of Ethics

The following is a subject reference guide to the current NSPE Code of Ethics. Key subject words direct the user to the specific code provision(s) which address the particular subject.

Advertising	I.5.; II.5.; III.3.a.; III.3.b.
Associating with Others	II.1.d.; III.9.b.
Community Service/Civic Affairs	III.2.a.
Competence	I.2.; II.2.a.; II.2.b.; II.2.c.
Confidential Information	II.1.c.; III.4.; III.4.a.; III.4.b.
Conflict of Interest	II.4.; II.4.a.; II.4.b.; II.4.c.; II.4.d.; II.4.e.; III.5.; III.5.a.; III.5.b.

Consolidated Table of Contents to the Opinions of the Board of Ethical Review

Case No.	Subject
12-1	Academic Integrity—Obligation of Engineering Faculty Who Becomes Aware of Cheating
79-5	Academic Qualifications
05-12	Academics—Student Use of Previous Examinations
73-2	Advertisement, Classified—Contract Work
65-7	Advertisement, Use of Engineers' Creed in Political Advertisement
65-13	Advertisement, Use of Engineer's Name in, to Validate Findings
64-8	Advertising of Engineering Services

NSPE Code of Ethics Case Index

The following is a Code of Ethics Case Index, designed to aid the user in better understanding the modern NSPE Code of Ethics. Code sections are listed, followed by individual cases in which that Code section or an earlier version of that Code section was interpreted. This index should help the user understand the full dimensions of the Code sections because it lists all cases in which the Code sections were mentioned even if the Code sections were not paramount in deciding the case. Also, please visit the [NSPE Ethics Cases](#) and [Code of Ethics](#) which was established to provide NSPE members with a tool to research and access the NSPE Code of Ethics and the opinions of the NSPE Board of Ethical Review and assist them in their everyday professional practice.

NSPE Code of Ethics Section	BER Case Number	NSPE Code of Ethics Section	BER Case Number
<i>Preamble</i>	91-1, 91-9, 92-4, 92-5, 92-6, 92-9, 93-2, 93-4, 93-5, 93-7, 94-2, 94-3, 94-4, 94-6, 94-7, 94-10, 94-11, 95-1, 95-7, 99-6, 00-10, 18-12		99-11, 00-5, 02-1, 03-3, 04-5, 04-8, 05-2, 07-3, 07-11, 08-10, 08-12, 09-1, 09-3, 10-7, 12-2, 13-9, 13-11, 14-4, 14-12, 15-2, 15-6, 15-11, 16-10, 17-3, 18-5, 18-9, 19-7, 19-10, 20-04
<i>I.I.</i>	71-5, 75-15, 76-4, 79-2, 80-1, 88-4, 88-6, 89-7, 92-4, 92-6, 93-7, 97-5, 98-5, 98-9, 99-7, 99-8, 01-7, 01-8, 02-1, 03-3, 03-6, 03-9, 04-5, 04-8, 05-2, 06-8, 07-3, 08-1, 08-4, 08-10, 09-2, 09-8, 09-9, 09-12, 10-5, 14-4, 15-2, 15-4,	<i>III.b.</i>	88-5, 92-4, 94-4, 96-4, 97-5, 98-5, 00-2, 02-5, 03-9, 08-2, 08-12, 09-2, 09-3, 09-6, 10-7, 11-6, 13-11, 14-4, 15-2, 15-4, 15-11, 16-1, 16-5, 16-10, 17-6, 18-7, 18-8, 18-9

NSPE Ethics Hotline

Hotline for Members



Licensure and Ethics Hotline

Are you an NSPE member with a question about engineering licensure, ethics, or law? If so, send an e-mail to ethics@nspe.org.

- Please note that NSPE does not provide legal advice.
- NSPE is not an arbiter of complaints against professional engineers.
- If you are facing a legal issue or question related to engineering practice, we encourage you to obtain legal advice.

[**ethics@NSPE.org**](mailto:ethics@NSPE.org)



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Thank you!

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BER CASES OF INTEREST

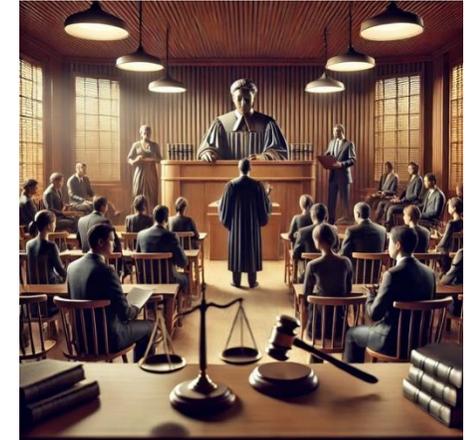
- Case No. 21-10 Protecting Public Health, Safety, and Welfare
- Case No. 19-3 Chair of Standards and Safety Committee
- Case No. 16-7 Discovery of New Data Following Submission of Report
- Case 17-3 Discovery of Structural Defect Affecting Subdivision



Case No. 21-10 Protecting Public Health, Safety, and Welfare

Presentation of the Facts

- City passes an ordinance requiring a sprinkler system in residences with less than eight feet between them and makes the ordinance effective as to all construction which has not yet received an occupancy permit.
- This means that projects under construction must have a sprinkler system added.
- Engineer A, who happens to have both structural and fire protection credentials, is hired by Homeowner to design a retaining wall system to stabilize a rear yard.
- Homeowner allowed Engineer A to store equipment in the integral garage.
- Engineer A observes that the builder routed the piping for the retrofitted sprinkler system through the unheated garage, exposing the pipes to freezing temperatures.



Question for the Group

- What are Engineer A's obligations?
- What sections of the NSPE Code of Ethics apply?

Case No. 21-10 Protecting Public Health, Safety, and Welfare

Relevant NSPE Code of Ethics References and Application

Preamble - *Engineers must adhere to the highest standards of honesty, integrity, and ethical conduct.*

•**Application:** Engineer A's actions should demonstrate integrity and a commitment to protecting public health, safety, and welfare, even when it may not align with client or builder convenience.

Section I.1 - *Engineers shall hold paramount the safety, health, and welfare of the public.*

•**Application:** The potential freezing of sprinkler pipes poses a risk to public safety, as inoperable sprinkler systems could lead to insufficient fire protection. Engineer A must prioritize addressing this risk.

Section I.4 - *Engineers shall act for each employer or client as faithful agents or trustees.*

•**Application:** Engineer A has a duty to act in the best interest of the client by pointing out potential risks and providing recommendations to mitigate them.



Case No. 21-10 Protecting Public Health, Safety, and Welfare

Section II.1.c - *Engineers shall not reveal facts, data, or information without the client's prior consent except as required by law or the Code.*

•**Application:** Engineer A's observation should first be discussed with the client (Homeowner). Any escalation to authorities must align with this provision if public safety is at significant risk.

Section III.1.b - *Engineers shall advise clients or employers when they believe a project will not be successful.*

•**Application:** If Engineer A determines that the sprinkler system is at high risk of failure, they must inform the client to ensure necessary modifications are made.

Section II.1.f - *Engineers having knowledge of any Code violation shall report it to appropriate bodies or authorities.*

•**Application:** If the hazard remains unresolved and Engineer A believes it constitutes a public safety risk, they may have an obligation to notify relevant authorities.

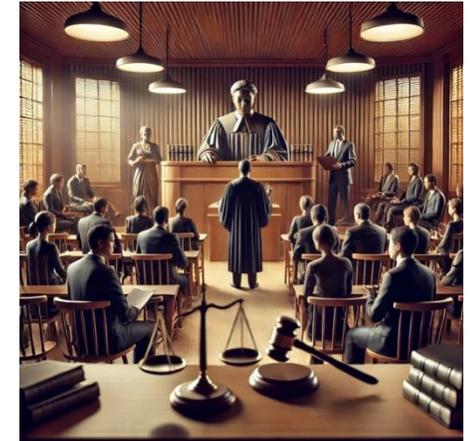


Case No. 21-10 Protecting Public Health, Safety, and Welfare

NSPE Board of Ethical Review's Determination

The BER concluded the following regarding Engineer A's obligations:

- **Duty to Advise the Client:** Engineer A must notify the Homeowner in writing about the risks associated with the freezing pipes and their potential to render the sprinkler system inoperable.
- **Focus on Public Safety:** If Engineer A reasonably believes the inoperability of the sprinkler system poses an imminent risk to public health, safety, and welfare, they are obligated to report this to the client.
- **No Duty to Investigate Further:** Engineer A is not required to conduct additional investigations or recommend specific mitigation measures but must clearly communicate the risks.



Case No. 19-3 Chair of Standards and Safety Committee

Presentation of the Facts

- Engineer A is a professional engineer with expertise in mechanical engineering who also serves as a forensic engineering expert.
- Engineer A, who chairs a boiler code standards and safety committee within an engineering society, has been requested by Attorney X, a defense attorney, to conduct an investigation and potentially serve as an expert witness on behalf of a boiler manufacturer in connection with a personal injury case involving a pressure vessel explosion.
- Engineer A learns that the forensic engineering expert for the plaintiff, Engineer B, is a member of one of the technical subcommittees within the boiler code standards and safety committee that Engineer A chairs.



Question for the Group

- What are Engineer A's ethical obligations under the circumstances?
- What sections of the NSPE Code of Ethics apply?

Case No. 19-3 Chair of Standards and Safety Committee

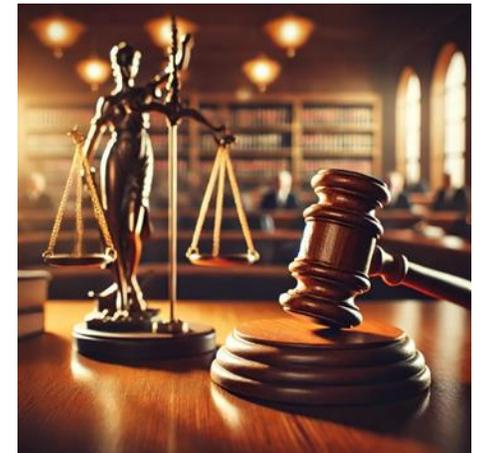
Relevant NSPE Code of Ethics References and Application

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.*

•**Application:** Engineer A must ensure all expert opinions and testimony are objective, truthful, and include all relevant details, regardless of the potential overlap with their role as chair of the technical committee.

Section II.3.c - *Engineers shall issue no statements, criticisms, or arguments on technical matters that are inspired or paid for by interested parties, unless they have prefaced their comments by explicitly identifying the interested parties on whose behalf they are speaking, and by revealing the existence of any interest the engineers may have in the matters.*

•**Application:** Engineer A must explicitly disclose their dual role to Attorney X, identifying their position as chair of the boiler code standards and safety committee and its potential influence on their opinions.



Case No. 19-3 Chair of Standards and Safety Committee

Section II.4.a - *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.*

•**Application:** Engineer A must disclose to Attorney X the potential conflict of interest arising from their oversight of Engineer B, a member of the technical subcommittee involved in the case.



Case No. 19-3 Chair of Standards and Safety Committee

NSPE Board of Ethical Review's Determination

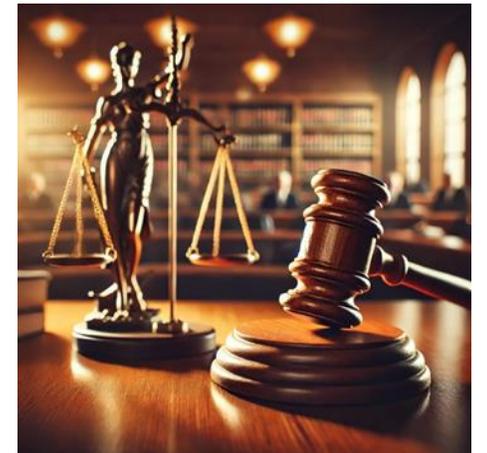
The Board concluded the following:

1.No Clear Conflict of Interest: Engineer A's role as a private forensic engineering expert does not present a clear or apparent conflict of interest under the circumstances.

2.Obligations of Disclosure:

1. Engineer A must fully disclose to Attorney X their role as chair of the boiler code standards and safety committee within the engineering society.
2. Engineer A must inform Attorney X that Engineer B, the plaintiff's expert, is a member of a technical subcommittee within the same committee that Engineer A chairs.

3.Professional Conduct: Engineer A must respect Engineer B's role in the technical subcommittee and refrain from engaging in any communication regarding the pending litigation without specific direction from legal counsel.



Case No. 16-7 Expert Witness-Discovery of New Data Following Submission of Report

Presentation of the Facts

- Engineer A is a professional engineer performing forensic engineering services for attorneys in connection with pending litigation.
- Engineer A is retained by Attorney X to perform a forensic engineering investigation and prepare a written report regarding a mechanical product failure that resulted in extensive injuries to Attorney X's client.
- Engineer A conducts the investigation, prepares the written report with conclusions about the cause of the accident, and submits the report to Attorney X.
- While Attorney X is in the process of settlement negotiations with the defendant's attorney, Engineer A discovers that the data upon which the report's conclusions were based is inaccurate.
- Engineer A determines that, if the more accurate data had been used, the conclusions in the report would have been different.



Question for the Group

- What are Engineer A's ethical obligations under the circumstances? What sections of the NSPE Code of Ethics apply?

Case No. 16-7 Expert Witness-Discovery of New Data Following Submission of Report

Section II.3.a - *Objectivity and Truthfulness in Reports*

- Provision:** Engineers must be objective and truthful in professional reports and include all relevant and pertinent information.
- Application:** Engineer A's discovery of inaccurate data means the original report no longer meets this standard. Engineer A has an ethical duty to update the report to reflect accurate and complete information.

Section II.3.b - *Technical Opinions Based on Facts and Competence*

- Provision:** Engineers may express technical opinions that are based on knowledge of facts and professional competence.
- Application:** Engineer A's professional integrity requires them to correct their technical opinion once new, accurate data is available. Proceeding without doing so would compromise the foundation of their expertise.



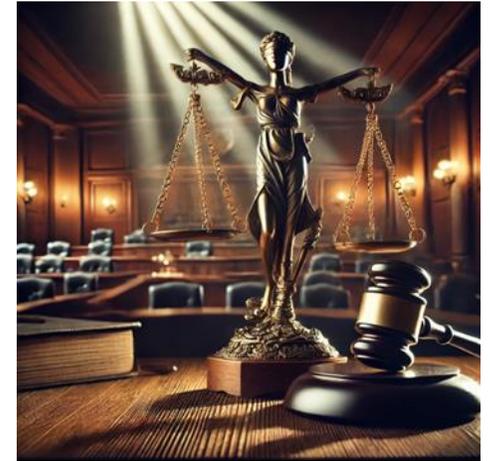
Case No. 16-7 Expert Witness-Discovery of New Data Following Submission of Report

Section III.1.a - *Acknowledging Errors*

- Provision:** Engineers must acknowledge errors and refrain from distorting or altering facts.
- Application:** By acknowledging and correcting the error, Engineer A aligns their actions with the ethical standard of accountability and transparency.

Section III.1.b - *Advising Clients on Challenges*

- Provision:** Engineers must advise clients or employers when they believe a project or outcome will not be successful.
- Application:** Informing Attorney X ensures that settlement negotiations are not based on flawed conclusions, thereby supporting the client's success and integrity.



Case No. 16-7 Expert Witness-Discovery of New Data Following Submission of Report

Section III.3.a - *Avoiding Misrepresentation*

- Provision:** Engineers must avoid statements containing material misrepresentation or omission of material facts.
- Application:** Failure to disclose the corrected data and its implications would constitute a material omission. Engineer A must act transparently to meet this ethical requirement.

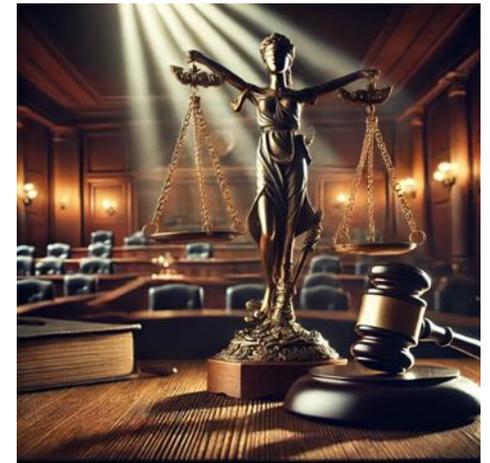


Case No. 16-7 Expert Witness-Discovery of New Data Following Submission of Report

NSPE Board of Ethical Review's Determination

The Board concluded the following:

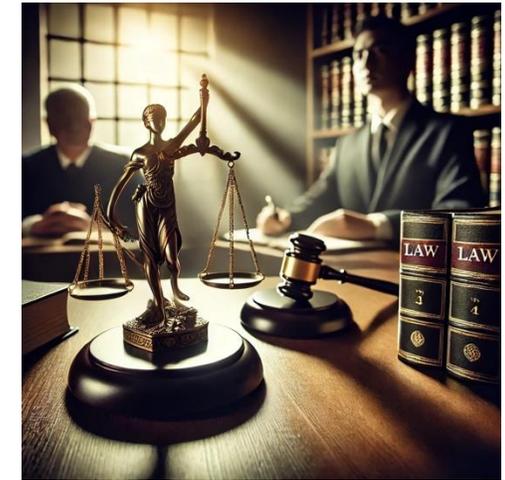
1. Engineer A had an **affirmative ethical obligation** to immediately advise Attorney X of the discovery.
2. Transparency and honesty were critical, as the new data could significantly impact the settlement negotiations.
3. Engineer A's role as a forensic expert mandated adherence to ethical principles, even when the discovery introduced complications to the legal process.



Case No. 17-3 Discovery of Structural Defect Affecting Subdivision

Presentation of the Facts

- Engineer A is a professional engineer and registered architect with extensive design and forensic engineering experience. In performing a forensic engineering investigation for an insurance company, Engineer A is asked to examine a beam that had been burned as a result of arson in a residence under construction.
- Following the initial arson investigation, Engineer A learns that the construction contractor determined the beam could be reused.
- Engineer A examines the 15-foot-long beam and determines that, aside from slight fire damage, the beam looks too light to provide adequate structural support.
- After measuring the tributary area of the roof, floor, and wall bearing on the beam and running structural calculations, Engineer A determines the beam is seriously under-designed.
- Engineer A observes that the residence is part of a tract home subdivision with other identical designs.
- Engineer A writes a report identifying the design defect and submits it to the insurance company.
- Concerned with his obligation to the public beyond informing the insurance company, Engineer A contacts the State Board of Professional Engineers to ask what more could and should be done.
- The Board advises Engineer A that he fulfilled his professional obligation by notifying the insurance company in writing of the defect.



Question for the Group

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

Case No. 17-3 Discovery of Structural Defect Affecting Subdivision

Relevant NSPE Code of Ethics References and Application

Section I.1 - *Engineers shall hold paramount the safety, health, and welfare of the public.*

•**Application:** While Engineer A notified the insurance company, this section suggests an obligation to take further steps to protect public safety, as other homes in the subdivision could be affected.

Section I.2 - *Engineers shall perform services only in areas of their competence.*

•**Application:** Engineer A's calculations and observations fall squarely within his expertise, ensuring the findings are valid and reliable.



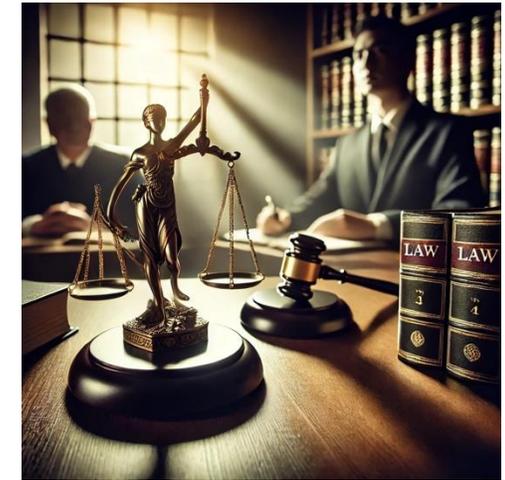
Case No. 17-3 Discovery of Structural Defect Affecting Subdivision

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.*

•**Application:** Engineer A's initial report addressed the defect, but this section implies that further action, such as notifying local building officials or homeowner associations, may be required when client actions are insufficient to mitigate public risk.

Section III.1.b - *Engineers shall advise their clients or employers when they believe a project will not be successful.*

•**Application:** Engineer A fulfilled this obligation by submitting a report to the insurance company. However, broader concerns about other homes in the subdivision suggest a need for additional notifications.



Case No. 17-3 Discovery of Structural Defect Affecting Subdivision

NSPE Board of Ethical Review's Determination

The Board concluded the following:

1. Beyond Minimum Standards: Contrary to the State Board's advice, the NSPE BER determined that Engineer A did not fulfill his ethical obligations under the NSPE Code of Ethics by merely submitting a written report to the insurance company.

2. Additional Steps Required:

1. Engineer A should have contacted local building officials, individual homeowners, and the local homeowners or community civic association to inform them of the defect and its potential implications.
2. These steps align with the higher threshold of ethical conduct established by the NSPE Code of Ethics.

3. Public Safety Priority: While the danger was not deemed imminent, the potential risk to multiple homeowners in the subdivision necessitated a broader response.

