

Study Guide for *Henry's Daughters*



Produced and distributed by the
National Institute for Engineering Ethics
Murdough Center for Engineering Professionalism
Edward Whitacre College of Engineering
Texas Tech University
Lubbock, Texas



TEXAS TECH UNIVERSITY

National Institute *for* Engineering Ethics

Copyright © 2010

Henry's Daughters is designed to raise awareness of the ethical aspects of engineering work, advance knowledge and understanding of professional standards and public obligations and expectations, improve skills in moral reasoning, and strengthen personal dedication to exemplary conduct.

Henry's Daughters **is dedicated to the memory of**

E. D. “Dave” Dorchester, P.E.

Past President, National Institute for Engineering Ethics

Past President, Texas Society of Professional Engineers

Past Chair, Texas Board of Professional Engineers

Distinguished Life Member, NIEE Executive Board

Dave was highly influential in promoting NIEE and Murdough Center ethics programs. In 1989, he established the Professional Development Program of the Texas Board of Professional Engineers. As NIEE President, Dave worked with Dean Bill Marcy to bring NIEE to Texas Tech University.

and

E. Walter LeFevre, Ph.D., P.E.

Past President, National Society of Professional Engineers

Fellow, National Society of Professional Engineers

Past Director, Vice President and Fellow, ASCE

Past President, Arkansas Professional Engineers Board

Distinguished Life Member, NIEE Executive Board

Walt was the longest standing member of NIEE. He appointed the current NIEE director to the original NSPE/NIEE Board of Directors and encouraged all NIEE officers, including the last president of NIEE, Dave Dorchester, actions instrumental in making the current organization possible.

Contributions from the following organizations and individuals are gratefully acknowledged. Contributors are listed in order of the size of their contribution, from largest to smallest.

IEEE Foundation

United Engineering Foundation

Harry E. Bovay, Jr.

Texas Engineering Foundation

Victor O. Schinnerer Co.

William J. Lhota

American Electric Power

American Society of Civil Engineers

American Society of Mechanical Engineers

Fluor Foundation

E. Walter LeFevre

National Council of Examiners for
Engineering and Surveying

National Society of Professional Engineers

US Army Corps of Engineers' Institute for Water
Resources

American Society of Safety Engineers

Donald Hiatte

CONTENTS

| | <u>Page</u> |
|---|-------------|
| Part A: Development of Henry's Daughters | 5 |
| <i>Project Team.....</i> | <i>5</i> |
| <i>Senior Investigators, Producer, Writer-Director</i> | <i>6</i> |
| <i>Special Thanks to Others Helping with Henry's Daughters.....</i> | <i>7</i> |
| <i>Benefits of the Movie</i> | <i>7</i> |
| <i>Objectives.....</i> | <i>8</i> |
| Part B: Suggestions for Using the Movie | 9 |
| <i>Suggested Tests for Evaluating Actions.....</i> | <i>10</i> |
| <i>References.....</i> | <i>11</i> |
| Part C: Story and Cast of Characters..... | 12 |
| Part D: Ethical Issues..... | 16 |
| Part E: Discussion Questions | 17 |
| Suggested Assignment | 23 |



This study guide is available on the Internet at www.niee.org

Part A: Development of Henry's Daughters

Henry's Daughters was developed by the National Institute for Engineering Ethics (NIEE) and the Murdough Center for Engineering Professionalism at Texas Tech University, with significant donations from individuals, engineering societies, and companies. Great Projects Film Company of New York City produced the movie. The script and other information about the movie may be obtained from the NIEE Web site: www.niee.org.

Henry's Daughters is the collaborative product of a team that represents several universities and individuals with experience in various engineering disciplines and philosophy.

Project Team

Joining NIEE/Texas Tech University are co-principal investigators from the University of Illinois at Urbana-Champaign, Arizona State University, and the University of Texas at Austin. These co-PIs provided considerable expertise in engineering ethics education and research.

The project team consists of five Principal Investigators and nine Senior Investigators/Technical Advisors, all members of the Executive Board of NIEE. Together, they represent six engineering disciplines, business, and industry, plus the professions of philosophy and law.

Principal Investigator and Project Director: Jimmy H. Smith, PhD, PE, F.NSPE, F.ASCE, Professor of Civil Engineering and Director, National Institute for Engineering Ethics and Murdough Center for Engineering Professionalism, Ed Whitacre College of Engineering, Texas Tech University

Co-Principal Investigator: Michael C. Loui, PhD, F.IEEE,
Professor of Electrical & Computer Engineering
University of Illinois at Urbana-Champaign

Co-Principal Investigator: Joseph Herkert, D.Sc., PE
Electrical Engineer and Lincoln Professor of Ethics and Technology
Arizona State University

Co-Principal Investigator: Steven P. Nichols, PhD, PE, JD
Professor of Mechanical Engineering and
Director, Cliff Murchison Chair for Free Enterprise
The University of Texas at Austin

Co-Principal Investigator: William M. Marcy, PhD, PE
Electrical/Systems Engineer, Professor of Industrial Engineering,
Texas Tech University; Licensed Software Engineer and
Executive Director, National Institute for Engineering Ethics

Senior Investigators/Technical Advisors

Distinguished Life Members of the NIEE Executive Board

Arthur E. Schwartz
Philip E. Ulmer
Vivian Weil

Elected Members of the NIEE Executive Board

Brock E. Barry
John Fielder
William J. Lhota
Joe D. Manous, Jr.
Byron Newberry
Sarah K.A. Pfattheicher
Carl Skooglund
J. G. “Greg” Soules
Karl D. Stephan
Andrew C. Taylor
Thomas J. Zachman

Society Representatives to the NIEE Executive Board

Thomas W. Smith, ASCE
Taft H. Broome, Jr., ASEE
Edward T. Ostrowski and Alan A. Kornhauser, ASME
William H. Propes, ASSE
Donald L. Hiatte, NCEES
Michael Shirley, NSPE

Project Assistant

Patricia M. Harper, Secretary/Treasurer, Executive Board, NIEE

Producer

Kenneth Mandel, Great Projects Film Company, New York, NY

Writer-Director-Editor

Paul Martin, Great Projects Film Company, New York, NY

Special Thanks to Others

Jose Novoa, Ron Prange, and Halff Associates (Dallas) for use of their offices

Tracy Smith (Fort Worth) for the use of his boat

Kevin Passino, Ohio State University, for his review of script

Elbit Systems, Francis Govers and his team for the use of their robot car ARCHER™, their engineering facilities and patience

Courtroom Sciences, Inc., for the senate chamber location

Benefit to the Engineering Profession

Although *Henry's Daughters* and associated educational materials target engineering students, the movie also applies to practicing engineers and provides a broad perspective on professional responsibilities. Because it contributes to the understanding of and commitment to ethics in engineering work, the movie will enhance the profession.

The movie and the training materials will also be suitable for educating students in business, science, and other majors. This offers an indirect benefit to the engineering profession: encouraged dialogue between engineers and other professionals.



Objectives of the Henry's Daughters Project

1. Produce a movie and associated educational materials that have the following instructional goals:
 - ❖ **Increase Sensitivity** to the ethical dimensions of professional work
 - ❖ **Advance Knowledge** of professional standards and public obligations and expectations
 - ❖ **Develop Judgment** and improve skills in moral reasoning
 - ❖ **Encourage Commitment** to professional ethics and strengthen personal dedication to exemplary conduct
2. Produce a movie that focuses on technical fields, ethical issues and dilemmas that have not been highlighted in prior educational films, including:
 - ❖ Information and communication technology (ICT) in engineering practice and products, especially emerging ICT tools whose risks and impacts are difficult to foresee
 - ❖ Macro-ethical issues in engineering and technology that are presented to students alongside more conventional micro-ethical issues
 - ❖ Gender issues in engineering and technology
3. Produce a movie and associated educational materials that teach audience members these concepts:
 - ❖ Ethical issues are an integral part of making decisions
 - ❖ A professional's obligations go beyond fulfilling a contract with a client or customer
 - ❖ Ethical problems in engineering and technology have both technical and non-technical solutions
 - ❖ ICTs have significant benefits and costs, including threats to privacy
 - ❖ While individual engineers have ethical obligations, the engineering profession also has collective social and ethical obligations to the public
 - ❖ Workplace issues such as gender discrimination are an important part of engineering ethics
4. Produce a high-quality study guide to accompany the movie
5. Conduct an assessment of the movie's educational effectiveness
6. Disseminate the movie, associated educational materials, and anonymous assessment results to a broad audience of engineering educators, engineering professionals, and other relevant audiences.

Part B: Suggestions for Using the Movie

The movie runs for thirty-two minutes and is designed for use in an interactive context with a discussion facilitator. In a professional development workshop or seminar, a minimum of one hour should be allocated for viewing and some discussion.

The facilitator should view the movie in advance and organize the discussion period. For example, the facilitator may break a large audience into smaller groups of three to six participants for small-group discussions.

During the discussion period, the facilitator should assign specific tasks to the participants, such as generating further discussion questions. Specific questions might require participants to:

- ❖ Identify ethical, technical, and economic issues and problems
- ❖ Identify affected parties (stakeholders) and their rights and responsibilities
- ❖ Identify social and political constraints for possible solutions
- ❖ Determine whether more information is needed to make a good decision
- ❖ Suggest alternative courses of action that principal characters could and should take
- ❖ Imagine possible consequences of alternative actions
- ❖ Evaluate alternatives using basic ethical values

In a class of engineering students, the professor might assign a short in-class writing exercise or a longer reflective paper. In writing assignments, students may articulate what they learned from the movie and the discussion.

Sample discussion questions appear in Part E of this guide.



Suggested Tests for Evaluating Actions

(M. Davis [1997], C. Skooglund, J. Smith, & P. Harper)

Viewers might evaluate character actions by applying the following tests:

Harms Test



Do the benefits outweigh the harms, short term and long term?

Reversibility Test



Would I think this was a good choice if I traded places?

Colleague Test



What would my professional colleagues say?
What does my professional code of ethics say?

Legality Test



Would my choice violate a law or policy of my employer?

Publicity Test



How would my choice look on the front page of tomorrow's newspaper?

Common Practice Test



What if everyone behaved this way?

Wise Relative Test



What would my wise old aunt or uncle do? and/or
Would I want them to know what I'm doing?

The Hiding Test



Do I want people to know what I'm doing?

The Self-Respect Test



How will I feel about myself after making this choice?

These evaluation tests promote decisions based on how we would feel about what we do, if someone else knew, or if we would be caught.

However, the best decision is to

Do the right thing *because* it's the right thing to do

—rather than out of fear of negative consequences to ourselves.



References

Davis, M., “Developing and using cases to teach practical ethics,” *Teaching Philosophy*, vol. 20, no. 4, pp. 353–385, 1997.

Harris, C. E., Pritchard, M. S., and Rabins, M. J., *Engineering Ethics: Concepts and Cases*, 4th ed. Belmont, CA: Wadsworth, 2009.

Johnson, D. G., *Ethical Issues in Engineering*. Englewood Cliffs, NJ: Prentice-Hall, 1991.

Martin, M. W., and Schinzinger, R., *Ethics in Engineering*, 4th ed. New York: McGraw-Hill, 2005.

Online Ethics Center for Engineering and Research:
<http://onlineethics.org>

National Institute for Engineering Ethics:
<http://www.niee.org>

Part C: Story and Cast of Characters

Story

Henry, 65, is a retired but still well-connected automobile executive and sometime lobbyist. He is involved in an academia-industry-DOT (Department of Transportation) smart highway design project called SANSHANDS. The project goal is to develop specifications for automated highways and car control systems so that people won't have to drive anymore.

Laura, 29, Henry's older daughter, works at the DOT. She is a PE and will be technical project manager on the SANSHANDS project. As project manager, Laura is responsible for compiling and recommending the specifications for the computer control system that will guide R&D and, ultimately, define the next generation of smart highways. Her recommendations will be considered by the DOT Commissioner before being adopted.

Julie, 21, is Henry's younger daughter. With her father's finagling, she was selected as an intern with OUTOCAR, a local start-up company recently founded by state university engineers in partnership with the University's Business Incubator. A major existing firm, GUIDEME, is competing with OUTOCAR to take the design of SANSHANDS concept to the next level.

The story intertwines the lives of both young women. They live together, and in their off hours, talk a lot about the project. Both are excited to be involved with a project that will impact the future. While most of their discussions focus on their technical and personal challenges, sometimes the women unconsciously cross the ethical line by letting proprietary information slip or by creating software and using another company's product as an example.

As the project evolves, though, both sisters begin to see the corrupting influence that industry money can have on both government and academia. Laura sees representatives of the firm GUIDEME taking DOT executives on fishing excursions. Julie learns that her boss used her work on the project as part of his PhD dissertation without acknowledging her role.

There are pressures within the DOT and other state departments indicating that GUIDEME is the preferred choice. OUTOCAR personnel allege that ethical misconduct and possible criminal violations happened during the project, and so the state senate ethics commission calls Henry and Laura to testify at a hearing on the project.

Henry's Daughters highlights ethical issues encountered by the characters, such as professional relationships, conflicts of interest, favoritism, confidentiality of proprietary information, intellectual property, sexual harassment, and individual privacy. The characters disagree over the tradeoffs between technical performance, safety, reliability, sustainability, flexibility, and cost. The characters also find that political and social factors can influence technical decisions.


Cast of Characters

A close-up photograph of Henry, an older man with a grey beard and mustache, wearing a red and black patterned shirt. He is looking slightly to the right with a thoughtful expression.

Henry

father of two girls
professional engineer
semi-retired lobbyist
for GUIDEME

RODGER BOYCE

A close-up photograph of Laura, a woman with dark hair pulled back, wearing a dark top. She is looking upwards and to the right with a concerned expression.

Laura

Henry's eldest daughter
a professional engineer
in charge of Special Projects
for the State DOT

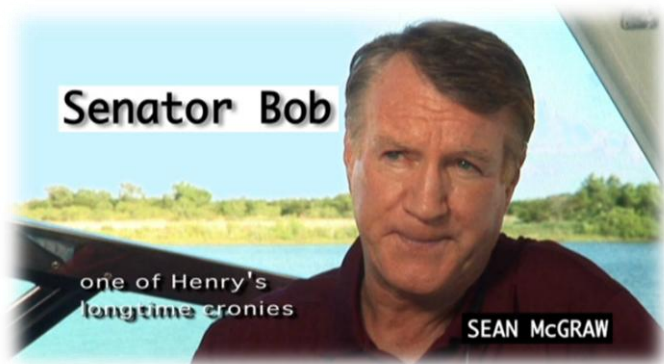
JODY RUDMAN

A close-up photograph of Julie, a young woman with long brown hair, wearing a blue top. She is looking slightly to the right with a neutral expression.

Julie

Henry's younger
daughter
working her first
post-college job
with Outocar

NATALIE COTTRELL





Part D: Observations and Outcomes

Several ethical observations in *Henry's Daughters*:

- ❖ Ethics is an integral and explicit component of ordinary technical and business decision-making in engineering practice. Engineers impact people and should be more concerned about people than objects.
- ❖ Technically competent, ethically sensitive, reasonable people may have different perspectives on an ethical issue, and can disagree when faced with complex ethical issues.
- ❖ Negotiations resolve some of the conflicts shown in the movie, but other ethical conflicts remain unresolved. Ethical problems should be resolved by rational methods.
- ❖ Codes of ethics and guidance from licensing boards are helpful in resolving ethical problems.
- ❖ It is sometimes necessary to make decisions under pressure with incomplete data, insufficient time, and insufficient information.

Consideration of consequences of technical, financial, and ethical decisions is an important element of the movie.

Henry's Daughters is designed to improve students' and practicing engineers' ability to

- ❖ Evaluate alternatives according to basic ethical values and through simple tests
- ❖ Identify and distinguish ethical issues, technical issues, and economic issues
- ❖ Identify affected parties (stakeholders) and their rights and responsibilities
- ❖ Identify social and political constraints on possible solutions
- ❖ Determine whether additional information is needed and available to make a good decision
- ❖ Formulate alternative courses of action
- ❖ Test the alternatives and imagine possible consequences of those alternatives
- ❖ Recognize that the obligations of engineers go beyond fulfilling a contract with a client or customer.

Part E: Discussion Questions

Professional Issues

1. What are the ethical implications when Henry, a lobbyist, hosts a senator on his expensive yacht?
2. Is there a legal or ethical limit to the level at which Henry should host the senator? (For example, expensive yacht vs. inexpensive restaurant)
3. Is there an accepted code of practice or ethics for lobbyists? If not, suggest a few ethical statements for lobbyists.
4. Was it ethical for Henry to pull strings to get Julie her internship?
5. To what extent should engineers consider political factors and social impacts in their engineering work?

Ethics and New Technology Issues

6. What are the responsibilities of engineers when developing new technologies whose risks are difficult to foresee?
7. If GUIDEME has the “best” technology, why should cost and other factors matter?
8. Because the experience base for a new technology is limited, it is difficult to write technical specifications. If engineers believe that the specifications are inadequate for future needs, should they recommend a system with characteristics exceeding those specifications?

Conflict of Interest

9. Was it appropriate for Henry and his daughters to work on the same project for different parties?
10. How should Laura and Henry have handled their apparent conflict of interest?
11. How should Laura and Julie have handled their apparent conflict of interest?
12. Was Laura given the project because of her engineering talents and work ethic or because of Henry’s connections? If so, this might be a conflict of interest. If you are involved in a conflict of interest, what should you do?

Gender Issues

13. Does the appropriate response to sexual harassment depend on the setting—for example, whether one is in a situation with one’s peers versus with one’s supervisor?
14. Are sexist comments disguised as “jokes” acceptable?

15. Would Henry or the senator have treated events differently if either or both of Henry's children had been sons?
16. Does the fact that Laura and Julie are attractive enter into any part of the interaction? Should it?
17. Is there a "glass ceiling" issue in this story?
18. How should the engineering profession address either the "glass ceiling" or the "men's club" issue?
19. Is it permissible for a male employee to put his hand on a female employee's shoulders? Or vice versa? For a male employee to put his hand on another male employee's shoulders?
20. Is it permissible for a male employee to compliment a female employee's appearance? Or vice versa?



Intellectual Property Issues

21. What is proprietary information?
22. Are there ethical limits to what the sisters can share with each other about their work?
23. Is it appropriate for an engineer to discuss work matters with family members?
24. How should employees and engineers decide whether to share some of their information from work when they go home?
25. When and why might using unlicensed software be unethical?
26. Is Julie justified in feeling harmed by the fact that some work she did for OUTOCAR was used as a dissertation without giving her credit?

Issues for Henry

27. What were the unethical actions(s) of Henry?
28. What, if anything, did Henry do that was ethically laudable?

Issues for Laura

29. What were the unethical actions(s) of Laura?
30. What, if anything, did Laura do that was ethically laudable?

Issues for Julie

31. What were Julie's unethical actions?
32. What, if anything, did Julie do that was ethically laudable?
33. As a new employee, what are the limits to the engineering work that she should perform?

Issues for Other Characters

34. Given that the project was assured for GUIDEME, was it appropriate to assign the OUTOCAR project to Warren and Marty's team?
35. Could Warren have done anything to thwart the chain of unethical actions? How could he have ethically acted with the least residual damage?
36. Which of Barry's actions were ethical? Unethical?
37. Was Julie treated appropriately by Barry, Warren, and Marty?
38. Was Marty's treatment of Warren harassment?
39. Should Laura have said something about Marty's treatment of Warren (like she did about the ogling of Julie)?
40. Which of Jeff's actions were ethical? Unethical?

Privacy Issues

41. Biometric information is information about the physical condition or characteristics of individuals. What are the ethical implications of collecting this information?
42. Does tracking vehicle location cause a violation of privacy?
43. Why might a central computer network be more threatening to individual privacy and information security than a decentralized system?
44. Should individual privacy rights be trumped by the law enforcement and safety benefits to the public from collecting such information? Vice versa?

Legal, Regulatory, and Political Issues

45. Should Senator Bob have recused himself from the investigative committee? If not, why not? Is there anything that he should have done differently as a member of the committee?
46. How does an organization's culture affect how engineers practice? How might it affect their dealings with ethical issues? With legal issues?

Effective Communications

47. One team meeting is marked by tension about getting the projector started. Do ethical obligations suffer when the team is dysfunctional? Is some degree of disagreement appropriate? When does conflict become counterproductive?
48. If you were to develop an ethical corporate or organizational culture, how would you encourage workers to feel comfortable about speaking freely about ethical, safety, and legal issues, and see such discussions as an obligation?
49. What are some standards the leadership of an organization should consider when creating an environment that creates good working and communication conditions? How would you set the appropriate standards? How would you make sure that you have communicated those standards effectively so that people not only understand them but also believe you are serious about them?
50. Do organizations have an obligation to host sensitivity training for their managers and their engineers?
51. What has society taught people about sensitivity training?
52. How can sensitivity training be brought into the organization's leadership practices?
53. How can sensitivity training be subsumed into the organization's culture?
54. What do you think you would do to promote trust and respect among your colleagues and other professionals in other departments?



Safety Issues

55. Do accidents “just happen,” or are they “caused”?
56. Whose responsibility is it to make sure that reasonable care and attention is given to safety?
 - a) The engineer-designer?
 - b) The Department of Transportation employee?
 - c) Anyone who observes the problem?
57. Did both designs involve an adequate margin of error?
58. Since complete safety is unobtainable and safety comes at a cost, what is a reasonable amount of protection from failure?

Making Decisions

59. What would engineering codes of ethics say about Henry's activities? About Laura's?
60. When making final decisions, was Henry trying to meet his ethical obligations within the constraints that he had?
61. What options did Henry have?
62. What options did Laura have?
63. What options did Julie have?
64. What would you have done if you had been:
 - a) Henry?
 - b) Laura?
 - c) Julie?
65. Do you think that you would receive the same degree of criticism from your organization if you violated an ethical standard compared to violating or missing a deadline or an objective?
66. Do you put ethical issues on the same level of importance as business objectives? Should you?

Important Elements of Business Relationships

67. What is the most critical element in effective relationships? Loyalty? Obedience? Money? Trust? Openness? Candor? Something else?
68. What role should trust play in our professional and personal interactions?
69. What role should candor play in a professional or personal relationship?
70. Would candor imply effective communications?
71. Could you envision one definition of ethics being "those activities and practices that enhance trust"? Why or why not?
72. Although you will gain many things during a professional career, other things can be taken away from you. Your job could be taken away (and it often is during economic downturns).
 - a) What things can never be taken away, unless you allow them to be? Can your reputation for integrity be taken away?
 - b) List several ways you could protect that reputation.
73. If someone says "I trust you," how does this make you feel about the relationship?

Trust

Candor

Guidance for the Future

In our day-to-day work, we tend to look up to our leaders, supervisors, and/or bosses for guidance and inspiration about how we conduct ourselves.

If we imagined that *we* were the boss, we might ask additional questions. Imagine that you own an organization, have all the necessary money, and need to decide what to produce, where to produce it, how to produce it, and how to set up your organization.

74. What specific actions could you take as the boss to make sure that everyone in your organization felt that they should conduct themselves to the highest standards of professional conduct and professional ethics?
75. What specific attributes would you have in place in your organization to make sure that happened?
76. What would you do to make sure that everyone in your organization conducted themselves to the highest professional and ethical standards? Would some of the following actions come to mind?
 - a) Clearly define your expectations of professional/ethical actions
 - b) Communicate those expectations effectively and continuously
 - c) Live the standards personally. What people see in actions is what they're going to believe
 - d) Create candor and open communication in the environment so that anyone within the organization feels free to bring up and discuss their thoughts, opinions, and ideas, but most of all, they feel free to bring up their concerns, problems, and news, be it good or bad, without fear of suffering some sort of retribution or reprisal



Suggested Assignment

Before viewing *Henry's Daughters*, copy and distribute this page. After the movie, ask viewers to prepare a written response to the questions below. (Suggested length: 2 to 3 pages; 1.5 space; 12 point type; 1 inch margins)

1. List the ethical issues you observed in *Henry's Daughters*.
2. From your personal perspective, prioritize these ethical issues from most critical to least critical.
3. Discuss the movie from these three other perspectives:
 - a) **Henry's Perspective:** Assume you are Henry.
 - i. What specific ethical issues do you face?
 - ii. What are some things that you should consider?
 - iii. From whom or where should you seek guidance?
 - b) **Laura's Perspective:** Assume you are Laura.
 - i. What specific ethical issues do you face?
 - ii. What decisions *would* you change if you were Laura?
 - iii. From whom or where *could* you seek guidance?
 - c) **Julie's Perspective:** Assume you are Julie.
 - i. What specific ethical issues do you face?
 - ii. What decisions *would* you change if you were Julie?
 - iii. From whom or where *could* you seek guidance?
 - d) **Responsibility Perspective:** If you were in charge and had the authority and the funding to make any changes you wanted to make in your organization policies:
 - i. What specific steps would you take to improve the organization culture?
 - ii. Who would you involve in this process?
 - iii. How and when would you communicate the organization policies to:
 - a) Your employees?
 - b) Your clients?
 - c) The public?

Henry's Daughters

An Engineering Ethics Story

Copies of the movie may be purchased by contacting the
National Institute for Engineering Ethics
Box 41023, Lubbock, Texas 79409-1023
Phone: 806-742-3525; Fax: 806-742-0444
Email: Engineering.Ethics@ttu.edu



TEXAS TECH UNIVERSITY

National Institute *for* Engineering Ethics

A Study Guide and information about *Henry's Daughters* ©2010 and our other engineering ethics movies, *Gilbane Gold* ©1989 and *Incident at Morales* ©2005, as well as our ethics seminars, workshops, and ethics courses may be obtained from:

www.niee.org