

EGR 120
Introduction to Engineering
File: N120MD4A

Media Assignment #4

Media Title: “*Incident at Morales*”

Length: 36 minutes

Location: LRC, Bayside Building, TCC - Virginia Beach Campus

Assignment:

View the video listed above and complete the assignment below and submit it to the instructor by the assigned due date.

It is suggested that print a copy of this assignment (along with the attached synopsis and cast of characters) before viewing the video. After viewing the video and classroom discussion, prepare a written assignment in response to the part 3 instructions below. (Suggested length: 2 to 3 pages; 1.5 space; 12 point type; 1 inch margins)

1. List the ethical issues you observed in *Incident at Morales*.
2. From your personal perspective, prioritize these ethical issues from most critical to least critical
3. Discuss the video from either Fred or Wally’s perspectives (complete part A if you last name begins with A-M or complete part b if your last name begins with N – Z):
 - a) **Fred’s Perspective:** Assume you are Fred:
 - i) What specific ethical issues do you (Fred) face?
 - ii) What are some things that you should consider?
 - iii) From whom or where would you seek guidance?
 - iv) List some specific sections of the NSPE Code of Ethics that might be related to the ethical issues listed above.
 - b) **Wally’s Perspective:** Assume you are Wally:
 - i) What specific ethical issues does Wally face?
 - ii) What do you think Wally's motivation was for having “One Rule”?
 - iii) What do you think about Wally’s “One Rule”?
 - iv) What decisions would you change if you were Wally?
 - v) List some specific sections of the NSPE Code of Ethics that might be related to the ethical issues listed above.

To Assist in Responding to the Assignment, the Synopsis and Cast of Characters are Repeated Here

Synopsis:

Phaust Chemical manufactures “Old Stripper,” a paint remover that dominates the market. On learning that *Phaust’s* competitor, *Chemitoil*, plans to introduce a new paint remover that may capture the market, executives at *Phaust* decide to develop a competing product.

To save money in manufacturing the product, *Phaust* decides to construct a new chemical plant in Mexico and hires chemical engineer Fred Martinez, a former design engineer for the consulting company *Chemitoil*, to design the plant.

Problems arise when *Chemistré*, *Phaust’s* parent company in France, slashes budgets 20% across the board. In response, Chuck, the vice president of engineering at *Phaust*, strongly encourages Fred to reduce construction costs.

Fred confronts several engineering decisions in which ethical considerations play a major role: a) whether to use expensive controls manufactured by Lutz and Lutz, which has an inside connection at *Phaust*, b) whether to line the evaporation ponds in order to prevent the seepage of hazardous substances in the effluents into the groundwater, and c) whether to purchase pipes and connectors made with stainless steel or high pressure alloy.

When samples of *Chemitoil’s* new paint remover, “EasyStrip,” become available, it is clear that to be competitive with “EasyStrip,” *Phaust* must change the formulation of its new paint remover, which requires higher temperatures and pressures than originally anticipated. Some unexpected problems arise: a) leakage occurs in one of the connections, and b) the automatic control system fails ; therefore, the plant manager offers to control the process manually. After the plant goes into full operation, an accident occurs, and the plant manager is killed while manually controlling the manufacturing process.

Cast of Characters

Fred: Chemical Engineer hired by *Phaust*

Wally: ... Fred’s supervisor at *Phaust*

Chuck: .. Vice President of Engineering at *Phaust*

Dominique: Corporate liaison to *Phaust* from parent company *Chemistré*

Maria: ... Fred’s wife, a compliance litigator for the U.S. EPA

Hal: Market Analyst at *Phaust*

Jen: Research Chemist at *Phaust*

Peter: Project Manager of construction of the new plant in Morales

Jake: Plant Manager for the *SuisseChem* plant in Big Spring, Texas

Manuel: Plant Manager for the new *Phaust* plant in Morales

Evaluating actions based on ethical values

The study guide for the video suggests actions can be evaluated based on the following criteria.

Actions can be evaluated by whether they honor basic ethical values such as:

- ❖ *Honesty*
- ❖ *Fairness*
- ❖ *Civility*
- ❖ *Respect*
- ❖ *Kindness.*

Actions can also be evaluated by the following tests (cf. Davis, 1997):

- ❖ *Harm test*: Do the benefits outweigh the harms, short term and long term?
- ❖ *Reversibility test*: Would I think this choice was good if I traded places?
- ❖ *Colleague test*: What would professional colleagues say?
- ❖ *Legality test*: Would this choice violate a law or a policy of my employer?
- ❖ *Publicity test*: How would this choice look on the front page of a newspaper?
- ❖ *Common practice test*: What if everyone behaved in this way?
- ❖ *Wise relative test*: What would my wise old aunt or uncle do?

Actions can also be evaluated using codes of ethics, such as the *NSPE Code of Ethics* which will reinforce many of the principles and tests listed above.

For additional recommendations of teaching strategies, see:

- ❖ **Davis, Michael** (1997), “Developing and Using Cases to Teach Practical Ethics,” *Teaching Philosophy*, vol. 20, no. 4, pp. 353–385.