Part I - You are a Security Advisor at Indian Point Nuclear Power Plant which is located 35 miles from New York City. In a nuclear reactor, uranium is used in a fission process to generate electricity; when the uranium is no longer fit for generating electricity, it must be disposed of. However, at more than 5000 degrees Fahrenheit, the spent rods cannot just be thrown into a dumpster, so they are placed in large pools of cold water.

Your supervisor advises you that the Nuclear Regulatory Commission (NRC) will be visiting the plant in order to conduct an inspection of the facility. In this inspection, the NRC is going to observe a security drill in which you are going to play the role of a terrorist. However, your supervisor instructs you to “have a bad day” and to insure the security guards in the drill prevail. He specifically instructs you to initiate your “attack” at a prearranged time and along a prearranged route.

1. (25 points) It appears that the NSPE Fundamentals Canons that are most relevant to this case include:
   1. Hold paramount the safety, health, and welfare of the public.
   4. Act for each employer or client as faithful agents or trustees.

   Should you abide by your bosses' wishes? Defend your answer utilizing the NSPE canons cited above and any other canons that you feel are relevant.

Part II - In part I., you abide by your bosses' wishes, and allow the security guards to prevail. The NRC is pleased with the results of the drill and prepares a positive report of the security drill. However, you are worried that the spent rods are extremely vulnerable to terrorist attacks. In the event of a terrorist attack, radiation would be released into the environment causing health hazards for thousands of people.

2. (25 points) Use whistleblowing guidelines from class reading and class discussion as well as relevant provisions from codes of ethics and ethical theories to describe the course of action you should now take. Justify your course of action.

Part III - One of your engineering colleagues reports that she knows of a device you could install that would greatly increase the security of the stored spent rods. The device is manufactured by a company in foreign country X. On contacting them about purchasing the device, you are told that a substantial payment to a government official will be necessary to ensure that the shipment moves through customs without undue delays.

3. (30 points) Drawing from our discussions of international issues as well as relevant provisions from codes of ethics and ethical theories, explain what you would recommend doing in this situation and why.

Part IV - NEW SCENARIO - You are the chief of engineering at company Z. A rival company announces a new product - directly competing with the largest source of your company's sales. An engineer in your company comes into your office one morning and closes the door. Then he tells you that he ran into a friend of his who is an engineer at the rival company at a college alumni function. The friend admitted to him that the rival company developed their new product through reverse engineering your company's competing product, being careful not to violate any patents your company holds. Your engineer then hands you a sample of the rival product (which is not yet on the market). "Turn about is fair play," he says. "We can get started today taking our company's product to the next level."

4. (30 points) What would be your response? Draw on our discussions of reverse engineering and ethical principles to defend your response.