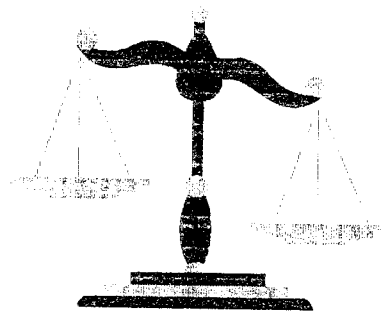


# **NSPE 2000 BER ETHICS CONTEST**



**MARCH 24, 2000**

**SUBMITTED BY**

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## **Facts:**

Engineer A is a graduate engineer in a company's manufacturing facility that uses toxic chemicals in its processing operations. Engineer A's job has nothing to do with the use and control of these materials.

A chemical called "MegaX" is used at the site. Recent stories in the news have reported alleged immediate and long-term human genetic hazards from inhalation of or other contact with MegaX. The news items are based on findings from laboratory experiments, which were done on mice, by a graduate student at a well-respected university's physiology department. Other scientists have neither confirmed nor refuted the experimental findings. Federal and local governments have not made official pronouncements on the subject.

Several colleagues outside of the company have approached Engineer A on the subject and asked Engineer A to "do something" to eliminate the use of MegaX at the processing facility. Engineer A mentions this concern to her manager who tells Engineer A, "Don't worry, we have an Industrial Safety Specialist who handles that."

Two months elapse and MegaX is still used in the factory. The controversy in the press continues, but since there is no further scientific evidence pro or con in the matter, the issues remain unresolved. The use of the chemical in the processing facility has increased and now more workers are exposed daily to the substance than was the case two months ago.

## **Question:**

Does Engineer A have an obligation to take further action under the facts and circumstances?

## **References:**

- Preamble      Engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness and equity, and must be dedicated to the protection of the public health, safety, and welfare.
- Section I.1    Hold paramount the safety, health and welfare of the public.
- Section I.2    Perform services only in areas of their competence.
- Section I.3    Issue public statements only in an objective and truthful manner.
- Section II.2   Engineers shall perform services only in the areas of their competence.
- Section II.3.b Engineers may express publicly technical opinions that are founded upon knowledge of the facts and competence in the subject matter.

# Entry "G"

## **Discussion:**

In this situation, Engineer A is confronted with stories of a potential hazard at the manufacturing facility where she works. The stories are based on unconfirmed laboratory studies which indicate that a certain chemical can be hazardous to mice. Use of the chemical was within Federal and local regulations. Engineer A, acting within the guidelines of the Code of Ethics, raises her concerns to her manager.

The referenced sections of the NSPE Code of Ethics address three issues. First, public health and safety is foremost. The facts presented do not establish that there is a risk to the public health or safety. Second, engineers are to practice in their area of competence. While Engineer A works at the facility, it is clear that she has nothing to do with the chemical in question, so we cannot determine if she has any expertise in that area. Third, engineers can only address issues publicly if their opinions are based on facts and within their area of competence. From the information presented, it would not be ethical for Engineer A to make public statements on this issue. The facts presented do not substantiate a human health hazard.

While Engineer A may wish to seek permission to follow-up further with the Industrial Safety Specialist, we find no basis in the Code of Ethics that obligates her to do so, given these circumstances.

Engineering is a highly respected profession and the public has grown accustomed to relying on engineering judgment. For that reason, engineers are held to a higher standard than the general public. The NSPE Code of Ethics embraces this in every Canon. Engineers must be vigilant of the examples they set and aware of the influence that their actions, statements and opinions may have. Engineers must form their statements and opinions on a sound base of facts, just as they would construct a building upon a solid foundation. The obligation to protect public health, safety and welfare includes protecting them from overreacting to unsubstantiated information.

## **Conclusion:**

Based on the facts presented, there is not sufficient evidence to conclude that there is a hazard to public safety or health and it can not be determined that Engineer A has any expertise with the chemical or process in question. Therefore, Engineer A does not have an obligation to take further action.