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Case Study Report # 1

I certify that this assignment is the result of my own efforts.

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Step 1: Determine the facts in the situation – obtain all of the unbiased facts possible

Donald Giffels is the president of an engineering consulting firm which was contracted to install equipment at a government facility used to train firefighters. While under contract on the project, Giffels observed what he saw as a lack of safety precautions in the equipment already installed at the facility. Giffels inquired as to the reason for so few precautions. He contacted the designers of the facility who approved the project without providing the appropriate safety measures and informed them of his concerns. He also reached out to other firms who had installed equipment like that which his firm had been asked to install. They claimed that they noticed the same problems but had not spoken with the designers or provided alternatives to the situation. Giffels refused to finish the installation until the issues were dealt with and an alternative to was decided on. Eventually the government agency brought in other firms to deal with the safety concerns and the contract for Giffels firm was modified to address concerns with the safety issues.

Step 2: Define the Stakeholders - those with a vested interest in the outcome

Giffels and the government agency both had vested interest in the outcome. Of course the firefighters who trained at the facility would have been affected by the outcome of the situation, but they were not directly concerned with the precautionary measures in place.

Step 3: Assess the motivations of the Stakeholders - using effective communication techniques and personality assessment

Giffels was motivated by his ethical obligation to provide safety for the firefighters, and by extension, the public. By having signed off on the design for the facility, the government agency appeared to not have taken the safety of the trainees into consideration. It is not apparent as to whether they purposefully refused to implement safety regulations to save production time and costs, or negligently missed the lack of safety of their designs before the final sign off. However, by the end of the ordeal, it seems that by having firms brought in to deal with the safety concerns only after Giffels brought it to public attention, the agency was looking to prevent possible lawsuits or negative attention that might arise.

Step 4: Formulate alternative solutions - based on most complete information available, using basic ethical core values as guide

Giffels could have easily turned a blind eye to the situation as many other firms could certainly have done. He could have taken notice of the lack of safety and instead of completely turning a blind eye or bringing an alternative to the agency, he could have had the agency write a letter absolving it of any responsibility just as another firm did.

Step 5: Evaluate proposed alternatives - short-list ethical solutions only; may be a potential choice between/among two or more totally ethical solutions

In this case, neither of the proposed solutions would have been ethically just. However, it does seem that completely ignoring the lack of safety would be less optimal than taking note of the situation and asking to not be held accountable for whatever may happen. At the very least, the second solution would bring to the attention of the government agency, the fact that there is some sort of problem.

Step 6: Seek additional assistance, as appropriate - engineering codes of ethics, previous cases, peers, and reliance on personal experience, prayer

Per the NSPE Code of Ethics for Engineers, the first fundamental canon is to "Hold paramount the safety, health, and welfare of the public." If the members of the government agency who designed the facility were aware of the lack of safety that would be provided for the firefighters, they would have knowingly violated the very first rule of practice. While they might not have fully realized the possibilities of their decision, they still had the responsibility to provide that right of safety to the people who would be training at the facility. They may not have been held publicly accountable for their acts, but they still had to humble themselves and fix the situation by the end of the ordeal.

Step 7: Select the best course of action - that which satisfies the highest core ethical values

Neither of the proposed alternative solutions were anymore ethical than the solution that factually occurred. It seems that Giffels persistence in trying to establish a safer environment at the training facility was the best ethical decision. His outcome led to the assessment of better safety standards for the facility.

Step 8: Implement the selected solution - take action as warranted

The results of the best solution were documented in the original case study. Insisting that a safer alternative be formulated resulted in other firms being brought in to assess and resolve the situation. There was not a negative outcome for the firefighters as no accidents had occurred before the new standard was implemented. After the changes were made, the environment in which they trained was expected to be far safer.

Step 9: Monitor and assess the outcome - note how to improve the next time

Implementing the solution led to a safer environment for the firefighters and a lower chance of accidents to occur. The government agency would be able to know that it met the ethical standard of providing safety to those who utilize the facility; and not only that, but will be able to defend itself from some who may be concerned in the future. The best solution was implemented in this case and Giffels provides a good example of an engineer holding true to his ethical convictions and acting on them.

While it could have been easy to ignore the situation, he made the ethically responsible decision and the public was all the better because of it.

Appendix

Case 1 (41-5e) Training Firefighters

Donald J. Giffels, civil engineer and president of a large engineering consulting firm, was puzzled by the design of a government facility to train firefighters dealing with fire crashes of airplanes. His firm was under contract to do the civil engineering work for installing equipment at the facility. Because it contaminates the soil, jet fuel had recently been replaced by liquid propane for simulating crash fires. However, Giffels was concerned about a lack of design specificity in a number of areas crucial to safety (e.g., sprinkler systems, safeguards against flashbacks, fuel quantity, and fuel controls). Furthermore, no design analysis was submitted. Giffels concluded that none existed. However, none of this fell within the direct responsibility of Giffels's firm, whose contract was simply to do the civil engineering work required for installation.

Nevertheless, Giffels concluded that his firm could not simply let this go. He contacted the designers and asked them how they could justify putting their professional seal of approval on the design. They replied, "We don't need to. We're the government." Giffels agreed, but he persisted (to the point, he suspects, of making a pest of himself). Noting that it is easy to be a minimalist (e.g., stay within the law), Giffels worried that one might nevertheless fail to fulfill a responsibility to society. He contacted another engineering firm that had installed a similar design at10 sites. It, too, he said, had been concerned about safety when looking at the designs. It contacted a mechanical engineering firm, asking it to do a design study. This request was turned down because of liability fears. So, the civil engineering firm asked the government agency to write a letter absolving it of any responsibility in case of mishaps due to the inadequate design.

While not contesting the legality of this firm's way of dealing with the problem, Giffels insisted that this was not the correct way to proceed. His company refused to proceed with the installation until the safety issues were adequately addressed. The government agency agreed to bring in three other firms to deal with the concerns. Giffels firm's contract was modified to provide assurances that the safety issues would be addressed. Giffels stresses the importance of being able to communicate effectively about these matters— a communication responsibility. Good communication, he says, is essential to getting others on board.

Although successful in his efforts to ensure safety, Giffels says that this is not a story that would receive press notice. However, not resisting, he insists, might well have resulted in press coverage—such as from the deaths of firefighters going through their simulations.

Discuss the ethical challenges facing Giffels and his strategy in dealing with them.