Online Ethics Center
FOR ENGINEERING AND SCIENCE

The Explosion of the Challenger

Description

Part Seven of Seven Discussions in the Concerning the Challenger Disaster.

Body

I wrote the following entry in my notebook after returning to my office. "I sincerely hope that this launch does not result in a catastrophe. I personally do not agree with some of the statements made in Joe Kilminster's written summary stating that SRM-25 is okay to fly."

As it turned out, I didn't agree with any of his statements after I had a chance to review a copy of the chart. A review of the chart will produce the following conclusions from anyone having normal powers of reason. The chart lists nine separate statements, seven of which are actually reasons against launch, while one is actually a neutral statement of engineering fact. The remaining statement concerning a factor of safety of three on seal erosion is not even applicable to the discussion which had ensued for over an hour. Therefore, Morton Thiokol senior management reversed a sound technical decision without any re-evaluation of the data they had promised when they requested the caucus.

The next morning I paused outside Arnie Thompson's office and told him and the manager of applied mechanics, who was my boss, that I hoped the launch was safe, but I also hoped that when we inspected the booster joints we would find all the seals burned almost through the joint, then maybe we could get someone with authority to stand up and stop the flights until we fixed the joints.

It was approximately five minutes prior to the launch as I was walking past the room

used to view launches when Bob Ebeling stepped out to encourage me to enter and watch the launch. At first I refused, but he finally persuaded me to watch the launch. The room was filled, so I seated myself on the floor closest to the screen and leaned against Bob's legs as he was seated in a chair. The boosters ignited, and as the vehicle cleared the tower Bob whispered to me that we had just dodged a bullet. At approximately T+60 seconds Bob told me that he had just completed a prayer of thanks to the Lord for a successful launch. Just 13 seconds later we both saw the horror of destruction as the vehicle exploded. We all sat in stunned silence for a short time, then I got up and left the room and went directly to my office, where I remained the rest of the day. Two of my seal task-team colleages inquired at my office to see if I was okay, but I was unable to speak to them and hold back my emotions so I just nodded yes to them and they left after a short silent stay.

Conclusion

Roger Boisjoly made a number of choices in the months leading up to the *Challenger* accident. He consistently took an ethical course of action, often risking his job. Nevertheless, he was unable to avert the January 28 launch. In 1988 Roger Boisjoly was given the American Association for the Advancement of Science Award for Scientific Freedom and Responsibility for his extensive and well conceived efforts to avert the shuttle disaster.

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Use of Materials on the OEC

Resource Type

Case Study / Scenario

Topics

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Safety
Risk
Employer/Employee Relationships

Discipline(s)

Engineering
Mechanical Engineering
Aerospace Engineering