

Case Study Backgrounder Document

Your Role: Joseph J. Kelly, Junior Engineer

Imagine you are Joseph J. Kelly, a junior engineer at Babcock & Wilcox, an energy technology company with a history dating back to the 1860s. Recently, you were assigned to investigate two incidents at the Davis-Besse nuclear power plant in Toledo, Ohio. Both incidents involved errors by plant operators that could have led to catastrophic meltdowns under different circumstances. Specifically, a Pilot-Operated Relief Valve (PORV) malfunctioned, causing a leak of reactor coolant and destabilizing the reactor's pressurization levels.

Upon analysis, you and your manager, Bert Dunn, identified a critical gap in the training of plant operators. They have been instructed to cease the High-Pressure Injection (HPI) process prematurely, based solely on stabilization of pressurization levels. Both of you concur that operators should be retrained to consider multiple criteria before discontinuing HPI to prevent potential meltdowns.

Interdepartmental Dynamics

Although you recognize the gravity of this issue, you are not part of the department responsible for operator training, known as "Customer Services" or "Nuclear Services." Your interactions with this department have been minimal, and they are colloquially referred to among your engineering colleagues as "those folks across the street." Previous attempts to recommend changes to Customer Services have met with resistance. Bert Dunn's experience suggests that any recommendations will require extensive internal advocacy.

Communication Constraints

Due to your junior-level status within the company and unfamiliarity with Customer Services, you are hesitant to directly communicate your findings and recommendations to them. However, you are also acutely aware that failure to address this training gap could result in severe consequences. Thus, you are compelled to ensure that your observations are acted upon promptly.

Company Profile: Babcock & Wilcox

Babcock & Wilcox is a longstanding energy technology company that initially specialized in steam boilers before expanding into nuclear technology in the 1960s. The company has designed and built nuclear reactors, including the one at Three Mile Island, and provides training for plant operators. The organizational structure is hierarchical, with specialized departments that rarely interact directly. Look at the org chart on the next page to see the various employees/departments relevant to this case.

Given these complexities, you are faced with the challenge of navigating the company's bureaucratic landscape to communicate a critical safety concern effectively. What course of action will you take?

Org Chart

