

Principles for Maintaining an Effective Technical Conscience



Principle 1 – Senior Leaders

Senior leaders and corporate executives respect and reinforce the importance of technical considerations with a consequence-biased approach in decision-making.

Senior site leaders and corporate executives ensure preservation of operation, design and safety margins. This is demonstrated by understanding, respecting, promoting and reinforcing the importance of technical considerations in decisions that reflect the need to operate and maintain the plant within the requirements of design, licensing basis, and beyond design basis emergency response strategies. Senior leaders understand the need to apply technical conservatism and consider potential worst-case outcomes in decisions that affect nuclear safety. Senior leaders also ensure the appropriate balance between technical conservatism, plant operating margins, and business needs for matters that affect plant reliability. In addition, senior leaders promote the culture for all nuclear professionals to identify and advocate for the resolution of important issues and to perform work in a high-quality manner.

Principle 2 – Technical Authority

Leaders accept, support and exercise their technical authority.

Engineering leaders recognize their unique role as the technical authority and exercise a deep sense of personal obligation to uphold their design and licensing basis technical authority. All leaders recognize and accept their ownership and authority to address plant technical issues, proactively communicate functional area experience and knowledge to resolve issues, and ensure high-quality technical products and decisions are developed.

Principle 3 – Advocacy

Engineers and technical staff identify, communicate and advocate timely resolution of technical concerns.

Engineers and technical staff apply their expert knowledge and skills to identify trends and emerging technical issues, communicate concerns, and advise management staff of potential consequences. Engineers advocate the timely resolution of conditions that affect requirements of plant design; licensing basis; beyond design basis emergency response strategies; and operating, design, or safety margins. A consequence-bias is maintained and worst-case outcomes are considered when addressing technical concerns.

Principle 4 – Quality

Engineers and technical staff adhere to sound principles and judgment to produce high-quality products and decisions.

Engineers and technical staff ensure that their products are of high quality from start to finish before signing them off as complete. They develop technical recommendations and decisions by using facts, codes, standards, operating experience, and review and verification processes.

Principle 5 – Challenging Plant Conditions

Nuclear professionals identify, question and advocate to resolve issues that may compromise nuclear safety or plant reliability.

Nuclear professionals challenge plant conditions; technical bases of decisions; accuracy of technical information and specifications that may compromise nuclear safety; plant performance; and requirements of plant design, licensing basis, or beyond-design-basis emergency response strategies. All advocacy positions are formulated based on the best available facts, fundamentals, operating and functional area experience, and analytical techniques.