

Technical Culture & Safety

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Naval Reactors

Introduction... Naval Reactors

- Main mission – Navy
 - ◆ 104 naval reactors
 - ◆ 82 warships
 - ◆ >55 years of experience
 - ◆ “Cradle to grave” responsibilities
- Civilian projects
 - ◆ Shippingport – Commercial Electric Power

The Incentive... Unique Capabilities

■ Navy

- ◆ True (fully) submersible submarines
 - ★ Unrivaled stealth, endurance, mobility
 - ★ Undetected inside potential adversaries defenses
- ◆ Aircraft Carriers
 - ★ 90,000 tons of American diplomacy
 - ★ The “Big Stick” whenever and wherever needed

■ Deep space exploration

- ◆ Greater mission length
- ◆ More efficient propulsion
- ◆ More science payload
- ◆ Rapid communication

The Challenge... Safety Mainstreaming

- Safety mentality must be pervasive
 - ◆ ...not the main purview of an oversight group
- Core values
 - ◆ People
 - ◆ Formality and Discipline
 - ◆ Technical Excellence & Competence
 - ◆ Responsibility

People

- Pick technically capable people
- Train them extensively and properly
- Put them to the test early
- Expose them to all aspects of the business
- Retain the ones who “walk the (safety) walk”
- Provide continued professional development
- Pass on essential historical corporate knowledge

Formality & Discipline

- Enforce requirements
- Adhere to formal recommendations & actions
- Maintain professional distance
- Be your own worst critic
 - ...and do something about it
- Keep raising the bar of acceptable norms

Technical Excellence & Competence

- No substitute for relevant technical knowledge
 - ◆ ...acceptable management and leadership demand it
- Need ability to ask hard questions
 - ◆ ...and truly understand the answers
- Need to pay close attention to bad news
 - ◆ ... fix small problems before they become large

Responsibility

- Must be able to point to the person responsible
 - ◆ ...or there is no one responsible
- Everyone must feel responsible for the whole
 - ◆ ...not just their piece
- Safety first
 - ◆ ...cost, organization, career, etc., second

Conclusion

- Main message...
 - ◆ Truly safety conscious organizations are committed to values and resulting actions that mainstream safety into day-to-day operations at the level of each individual worker
- This lesson is applicable to technical leadership and management of other complex and unforgiving technologies