

Creation of Institute of Nuclear Power Operations (INPO)

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Three Mile Island and INPO's Founding

- U.S. nuclear industry's most serious accident ... TMI, March 1979
 - Safety, integrity of the industry, fear of unknown, loss of public trust and confidence
 - Pre TMI 400 reactor-years ... no major event
 - Post TMI 100 new plants cancelled, no new license for 32 years
 - Problems at TMI: human error, equipment, design problems
- Key leaders in industry formed in less than 6 months
- Cornerstone Programs
 - Evaluations
 - Training
 - Analysis
 - Assistance
- Nongovernment ... independent of the industry...not an advocate
- Role: Set and achieve high standards of safety and excellence in performance

Key Factors of Success

- CEO engagement
- Nuclear power Safety Focus
- Support from the Nuclear Power Industry
- Accountability
- Independence

CEO Engagement

- Support and personal involvement fundamental
- Board comprised of CEO's, and senior executives
- Provide briefings to CEO's ... with line management
- Communicate and request action at CEO level
- 100% Participation in annual conference

Nuclear Safety

- Promote highest levels of Safety and Reliability
- Promote Excellence ... not regulatory compliance
- Focus exclusively on “excellence in nuclear power safety”

Support from Industry

- Self-regulation ... nuclear plants subjected to on-site peer review
- Intrusive, comprehensive, performance based evaluations
- Industry participates in developing standards ... INPO decides
- INPO hires competent experienced staff
- INPO delivers evaluations that have substance ... lead to improvements
- Industry provides peers on evaluation teams

Accountability

- First 5 years ... INPO challenged by some members
- Response...Senior executive review conducted ...
 - INPO made stronger
 - More authority
 - Demand more accountability
 - Built credibility
- Reports confidential
- INPO pressure can lead to shutdown
- Formal follow-up action ... up to company Board
 - Escalation and pressure
 - Executive leadership changes
- Performance rating affects insurance premium and coverage

Independence

- Self-regulation role ... must be independent of companies
- Independent from regulator ... Nuclear Regulatory Commission (NRC)
- NRC endorses selected INPO programs
- NRC is updated by companies and INPO

Results After 30 Years

- INPO and self-regulation ... significant performance improvement
- 80's performance
 - Capacity factor ... 63% (typical plant)
 - Auto scrams ... 7 per year per plant
 - Radiation Exposure ... met regulatory requirements
- Today's performance
 - Capacity factor ... 91% (typical plant)
 - Auto scrams ... 0 per year per plant
 - Radiation Exposure ... 1/6 of 80's levels
- Still see unexpected events and trends ... intense corrective actions
- INPO conducts critical self-assessments
- Focus on “organizational safety culture”

Summary

- Self regulation works ... successfully improved safety and performance
- More information: www.inpo.info