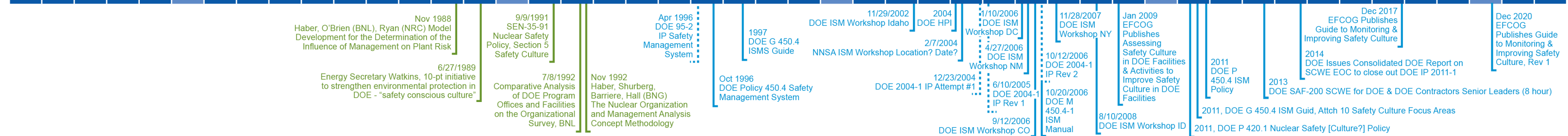
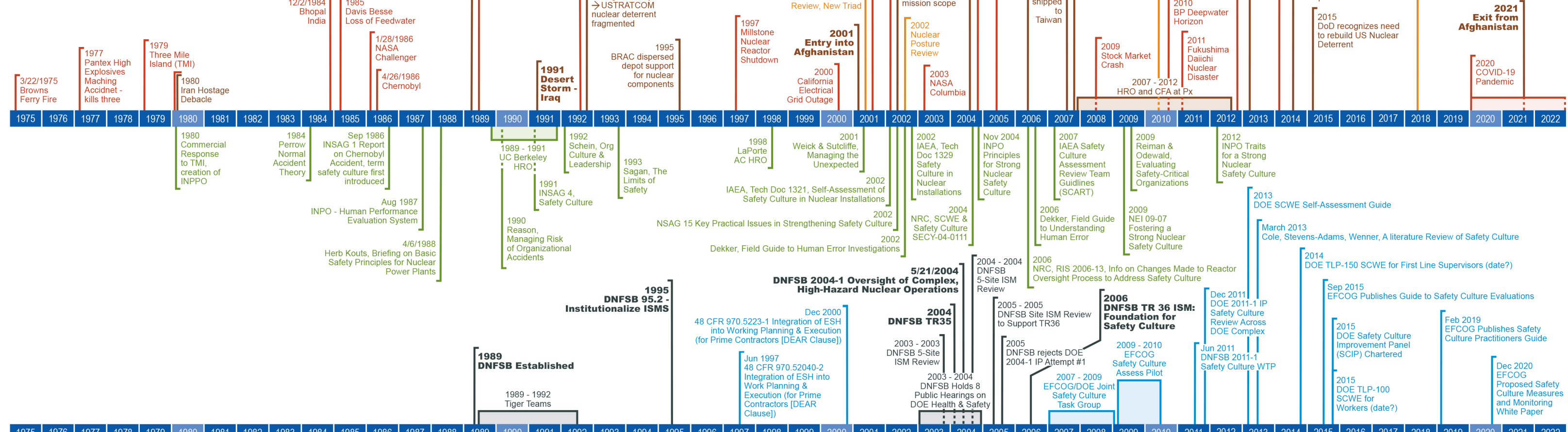


EFCOG Safety Culture History

LEGEND

- DoD Event Drivers
- DoD Nuclear Posture Review
- World Event Drivers
- Response to Events
- DNFSB Drivers
- DOE Responses

Last Updated 8/30/2021



To do:

- Verify all dates and document somewhere else so they won't continue to change (Chernobyl 85? Use your Word timeline.
- You may want to put written material as offpage reference
- Summarize significant events, documents, etc. in boxes
- Add your words around Berlin wall falling, end of cold war, impact on DOD and subsequent impact on DOE
- Tell the story on how DoD lost focus on nuclear
- List significant major event reports and highlight those with lack of HRO
- Do you include your summaries of 2004-1 documents and your white paper
- You missed the chemical safety development work (PHA etc.)
- Coordinate with (Earl, Ed, Cindy, Bill Brown, others?)

DNFSB 2004-1

Concerned that DOE's proposed changes in contract management and nuclear safety oversight exemplified through changes in DOE organizational structure and increase emphasis on productivity improve or reduce safety, and increase or decrease probability of a high-consequence, low-probability nuclear accident.

DNFSB ISM Site Review (2003/04)

- Positives included the fact that all sites:
 - Used formal procedures,
 - Applied process to identify hazards,
 - Authorized hazardous work, and
 - Conducted pre-job briefs.
- Negatives:
 - Deficiencies in WP&C
 - Deficiencies in Feedback & Improvement

DNFSB 2011-1

- List some notes

DNFSB TR 36: ISM as Foundation for Successful Safety Culture

- NDNFSB revisited sites to collection information/data on the effectiveness of safety management system at NNSA sites to help enhance the implementation of ISM (assume from the DOE IP commitment) to support publication of TR 36
- Made case that safety culture at Plants needs improvement because work level ISM is not being effectively used as evidenced by their site-to-site ISM assessment
 - Used ISM Principles to evaluate mgt
 - Used ISM CF to evaluate workers
- Focused mainly on nuclear operations (represents best & most formal ISM practice at sites, not necessarily the best example to get the plant's average)
- Perception from most sites is that ISM is too focused on paperwork and not enough on work
- Still not certain there is clarity if ISM is designed to protect the Plant from the worker or the worker from the Plant (i.e. systems accident or individual accident) as there is a lot of data provided on LT reduction
- Made the pitch that ISM should be the framework to improve the safety culture (p 7-1 ISM basically defines safety culture that is practical in form and function).
- Provided their recommendations to improve effectiveness of ISM (Section 8.0)

2002 ISM Workshop Idaho

- ISM systems not fully established, implementation varies from site to site
- DOE and contractors aware of ISM requirements
- Problems exist with adequacy of requirements, guidance, intent, and expectations for ISM that make effective implementation difficult

2004 NNSA ISM Workshop

- Based on a couple of OA assessments
- Identified a **safety culture** problem where line management has often failed to ensure that work is strictly conducted in accordance with established ISM system processes and procedures

DNFSB TR 35: HRO Attributes

- DNFSB listed "their" HRO Attributes for NNSA sites
- Listed DOE areas needing improvement against HRO attributes
- Added additional facility safety attributes they thought HRO theorist left out
- Provided lessons to be learned from Davis-Besse & Columbia
- May have opened the door on safety culture through the HRO attribute "Safety Attitude"

DOE 2004-1 IP

Safety Resolution:

- Learning from Internal and External Operating Experience
- Strengthen Federal Safety Assurance
- Revitalizing ISM Implementation

Requisite Environment for Effective Implementation of ISM Attributes of ISM Principle + 4 Supplemental HRO Elements + Attributes

DOE Fed Expectations

What parts of TR 36 got incorporated into DOE M 450.4-1?

2006 DOE ISM Workshop (DC)

- ISM Revitalization
- 2004-1 IP
- Safety Culture (INPO, NRC, Amerine)**
- HPI
- Draft ISM Manual
- Implementing DOE O 226.1

DOE M 450.4-1 ISM Manual Rev. 2

- Fed Responsibilities
- ISM Description Documents
- ISM Fed Oversight/Effectiveness Reviews
- Contractor Responsibilities Document (CRD)
- ISM Principles & Attributes for Effective Implementation
- ISM Supplemental Safety Culture Elements & Attributes**

DOE 2011-1 IP

- Add info

2006 DOE ISM Workshop (Alb NM)

- DOE O 226.1 Implementation
- Measuring & Monitoring ISM Improvement
- Feedback & Improvement
- WP&C
- 10 CFR 851 Implementation

2012-2013 DOE Initiated independent EOC safety culture and SCWE Self-Assessments — 35 total to address DOE IP 2011-1

- NNSA - 7 (**WTP, EM, Idaho Cleanup Project, LANL CMRR, Pantex, UPF, SRS, Salt Waste Project**)
- EM - 24 (ID, ORP, WIPP, RL, ORP, CBC, SR, WVDP)
- SC - 2
- NNSA/EM (Joint) - 1
- HQ/HSS - 1

2006 DOE ISM Workshop (Aurora Co)

- Measuring ISM Effectiveness
- DOE Safety Management Oversight
- WP&C
- Feedback improvement/corrective action mgt system
- Integrating safety into design & construction

2007 DOE ISM Workshop (INL)

- Safety Culture**
- WP&C
- Contract Transition
- Integrating Management Systems for Mission Success

2007 DOE ISM Workshop (BNL)

- WP&C
- Feedback & Improvement
- Integrating Management Systems Across Life Cycle
- Developing effective safety culture**
- DOE Implementation of ISM requirements

Recommendations from DOE consolidated report on SCWE Extent of Condition Report:

- Form a DOE Safety Culture Improvement Panel
- Incorporate safety culture/SCWE concepts into training and developing qualified safety culture/SCWE self-assessors
- Evaluate contractual language for consistent approach in implementing SCWE/safety culture

SAF-200 SCWE for DOE & DOE Contractor Senior Leaders (8 hour course) across Department:

- Equips senior leaders to lead a positive shift in their organization and culture by fostering a work environment that promotes trust, a questioning attitude and a receptiveness to raising issues
- Over 2300 Sr. Leaders (Federal & Contractor) trained to date