

---

# **UPF Implementation of DOE-STD-1189**

## **Integrating Safety Into The Design Process**



# Safety-in-Design Integration Team

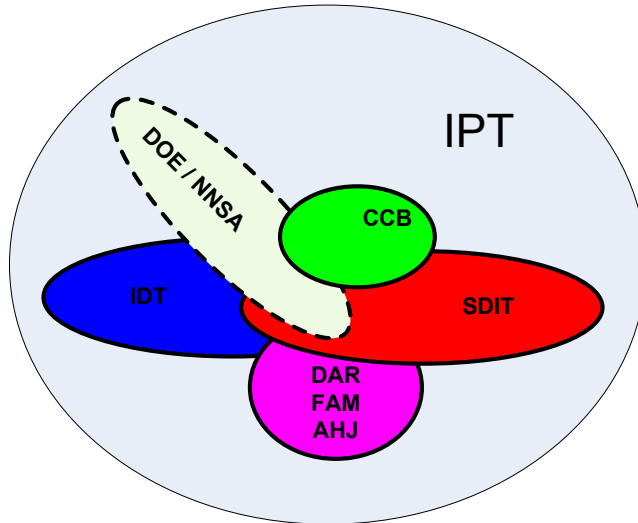
---

- SDIT Objectives:

- Ensure collaboration and consensus between design and safety support functions has occurred.
- Capture, manage, and work with designers to develop solutions to concerns, cross-discipline professional differences of opinion, and requirement conflicts that arise during the design process.
- Achieve consensus on a low composite design solution that meets requirements and criteria before recommending that design proceed related to that concern.
- Elevate any requirement conflicts, minority reports, and concerns that are unable to be resolved in a timely manner the DAR, affected FAMS, and/or AHJs for resolution.
- Trend all design solutions that result in a change to the baseline.
- Ensure design integration tools are used consistently (e.g. 3D/4D computer-aided design (CAD), document review software, requirements management software, and other collaborative software).



# Integrated Management Plan



CCB – Change Control Board  
 IDT – Integrated Design Team  
 IPT – Integrated Project Team  
 FAM – Functional Area Manager  
 AHJ – Authority Having Jurisdiction  
 SDIT – Safety-In-Design Integration Team  
 DAR – Design Authority Representative  
 DOE – Department of Energy  
 NNSA – National Nuclear Security Administration

| Core Team                |                           |                                |                           | Other Subject Matter Experts (as required) |                           |   |                           |
|--------------------------|---------------------------|--------------------------------|---------------------------|--|---------------------------|---|---------------------------|
| Organization             | Supported By Project/Site | Organization                   | Supported By Project/Site | Organization                               | Supported By Project/Site | Organization                                    | Supported By Project/Site |
| Safety                   | Site                      | Safety Analysis Engr.          | Project                   | Construction Safety                        | Site                      | Maintenance                                     | Site                      |
| Industrial Hygiene       | Site                      | Criticality Safety             | Project                   | Construction                               | Site                      | UPF Start-up                                    | Site                      |
| Rad Con                  | Site                      | Fire Protection                | Site & Project            | Procurement                                | Project                   | Technology Development                          | Project                   |
| Environmental Compliance | Site                      | Nuclear Operations & Start-up  | Site                      | Human Performance Improvement              | Site                      | Technical Specialists (inc. Design Engineering) | Site & Project            |
| Waste Operations         | Site                      | Safeguards and Security        | Project                   | Legal                                      | Site                      | Y-12 Readiness                                  | Site                      |
| Emergency Preparedness   | Site                      | Operations                     | Site & Project            | Project Controls                           | Project                   | Occupational Medicine                           | Site                      |
| Emergency Response       | Site                      | Environmental, Safety & Health | Project                   |  |                           |   |                           |
| Quality Assurance        | Project                   |                                |                           |  |                           |   |                           |

Oversight by YSO (Project and Site)



# SDIT Meetings/Actions

---

- Actions to-date:
  - Integrated Management Plan Input
  - Charter and Approaches Input
  - Work Flow Diagram Input
  - Monthly SDIT Project Status Meetings
  - Issue Specific SDIT Meetings
    - Design Criteria
    - Machining Containment
    - HVAC Confinement
    - SS, SDC-2 Fire Alarms
  - Daily Collaboration Within Co-located Project Team



# Issue Tracking

---

- Meeting Minutes
- Project Action Item List
- InfoWorks



## 20 - 20 Hindsight

---

- First Issue Specific SDIT Meeting
  - Key personnel did not attend
  - Wrong mix of organizational representation
  - Too many attendees
  - Inflexible positions
- Distribution of Meeting Minutes
- Conflicts In Personnel Schedules



# Unexpected Benefits

---

- Excellent Forum To Resolve Non-safety Technical And Programmatic Issues
- Information Exchange Within Integrated Design Team
- Training Opportunities

