T7: Enhancements to Fuel Cycle and Independent Spent Fuel Storage Installation Oversight Programs

Enhancements to the Fuel Cycle Oversight Program

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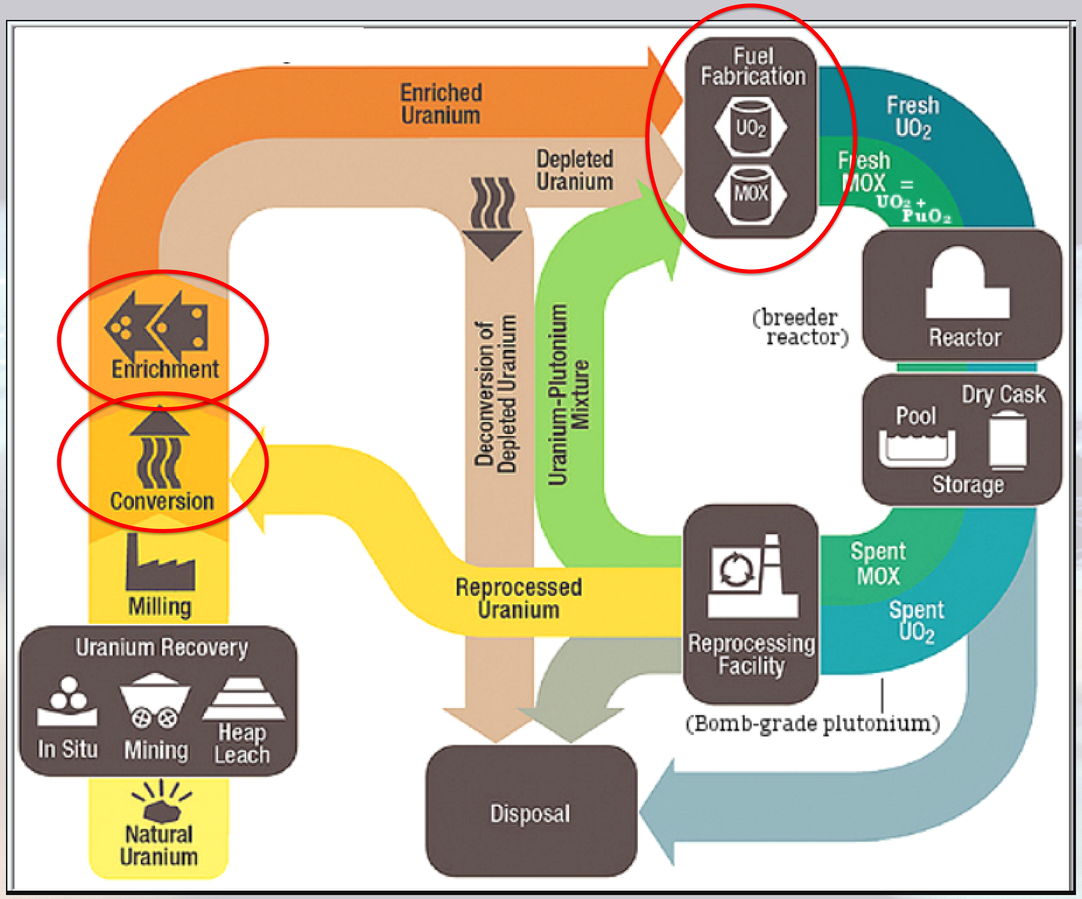
Orientation

- 10 CFR Part 40 and 10 CFR Part 70 licensees
  - Conversion
  - Enrichment
  - Fabrication



Drivers for Change

- The industry continues to evolve
- Historic changes implemented incrementally

Fuel Cycle *Core* Inspections

Smarter Inspection Program

- Fast Facts:
  - Working Group established and charter issued in April 2019
  - Collaboration between Headquarters and Region 2 staff

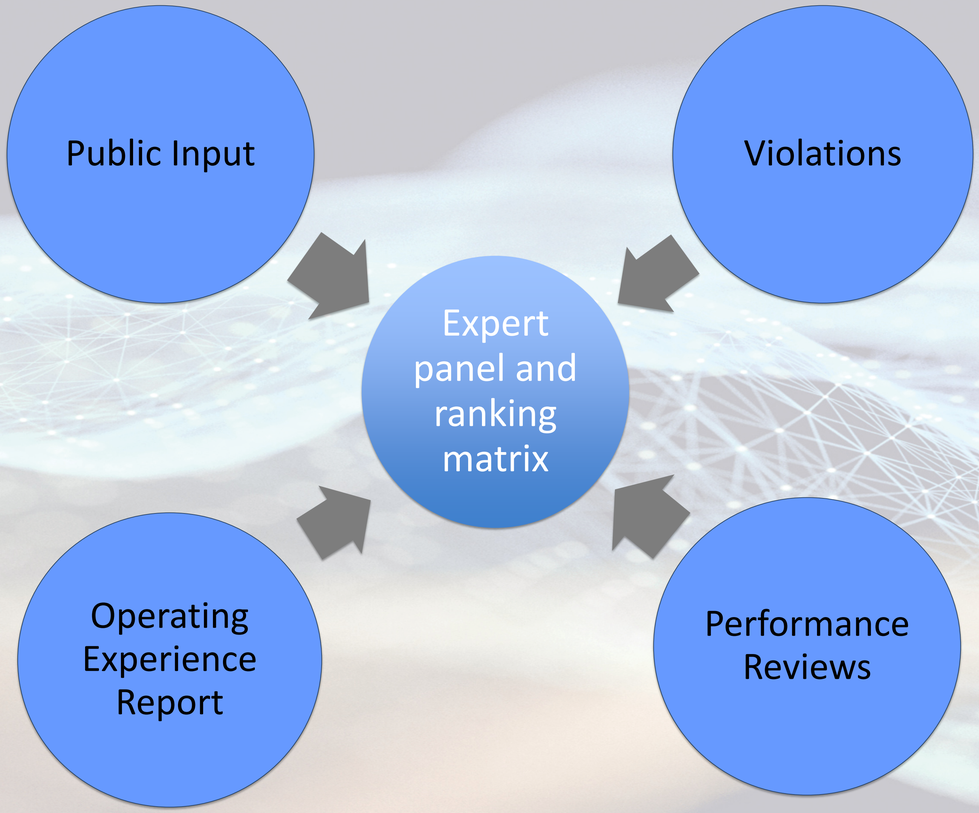
Smarter Inspection Program

- Fast Facts:
  - Physical security and information security areas omitted
  - Sought significant feedback from stakeholders
    - 10 public engagements
  - Current program adequate

Considerations

- Principles of Good Regulation
  - Efficiency
  - Independence
  - Openness
  - Clarity

Evaluation—Information Gathering

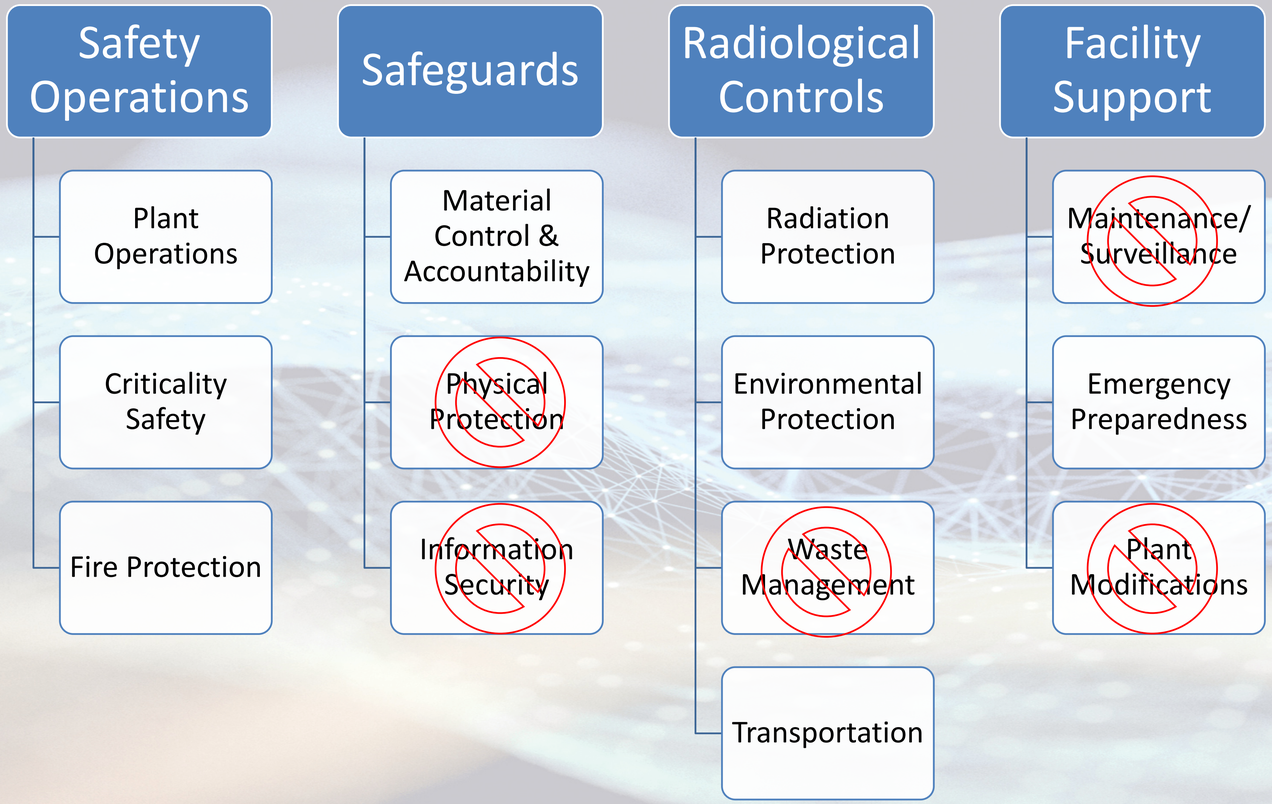


Evaluation—Expert Panel

- Reviewed inspection procedures and manual chapters for:
  - Redundancies and gaps
  - Opportunities for more efficient use of resources

Evaluation—Prioritization and Ranking

- Evaluated eight program areas



Evaluation—Prioritization and Ranking

- Evaluated eight program areas against four criteria
  - Accident sequences
  - Operating experience
  - Complexity of regulatory requirements
  - Public interest
- Factors were weighted

Topics for Consideration

- Reactor engineering inspection benchmarking
  - System of annual, focused, and comprehensive inspections designed to increase program flexibility
- Resident inspectors
  - Shift some inspection from the region to the senior resident inspectors

Topics for Consideration

- Approved Corrective Action Program (CAP)
  - Reduce inspection resourcing based on an approved CAP
- Integrated Safety Analysis (ISA)
  - Modify the core based on each plant's ISA

Recommended Tiering

Technical Areas (Safety)	
Criticality Safety	Tier 1
Chemical Safety	
Fire Safety	Tier 2
Emergency Preparedness	
Radiation Protection	
Transportation	Tier 3
Environmental	

Technical Areas (Safeguards)	
Material Control and Accounting	Tier 1/Tier 2*

*Category 1 facilities ranked Tier 1; Category III and Gas Centrifuge facilities ranked Tier 2

Example Recommendations

- Operations (Category 1 facilities)
  - Reassigned hours from residents, criticality safety and maintenance, re-emphasized chemical sequences
  - Resourcing change: 25 hours/year to 90 hours/year
- Fire Protection (Category 1 facilities)
  - New biennial procedure
  - Resourcing change: 50 hours/year to 15 hours/year

Overall Recommended Results

Annual Hours Direct Inspection

	Category I	Category III	Uranium Conversion	Gas Centrifuge	Gas Centrifuge w/CAP	Laser Enrichment
Current	1672	500	364	708	708	136
Proposed	1502	397	277	573	520	136
% Change	-10.2%	-20.6%	-23.9%	-19.1%	-26.6%	0.0%

Next Steps, and Timeframe

- The NRC will make a final decision and issue a tasking memorandum with the final recommendations report
- Program documents will be revised consistent with the final decision.
- Implement revised program—calendar year 2021