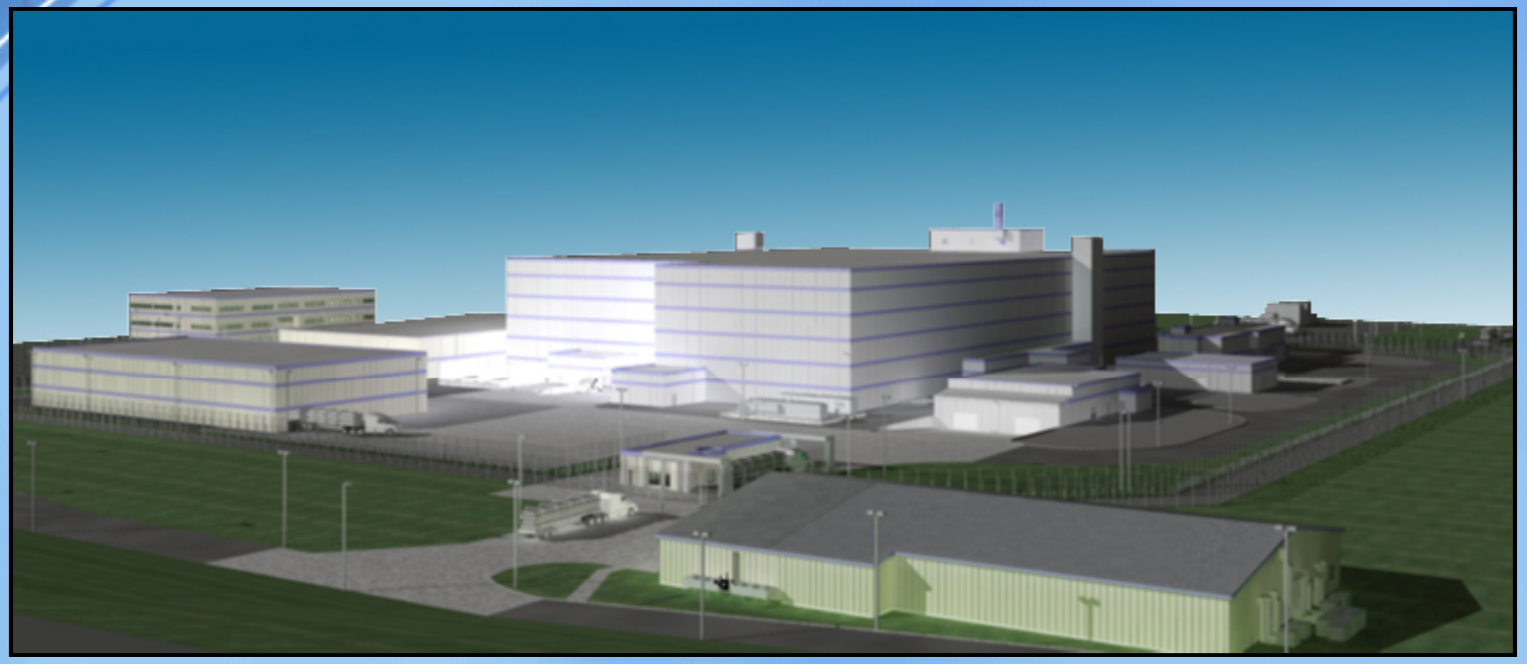
MOX
FUEL FABRICATION FACILITY

National Nuclear Security Administration

MOX Services Planning for Operational Readiness



Sue King
Vice President – Operations

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Enclosure 3

Purpose/Agenda

- Purpose – share latest MOX Services plans to prepare for hot-startup operations

- Agenda
  - Operational Readiness
    - Testing
    - People
    - Programs
  - Readiness Reviews
  - Lessons learned

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Operational Readiness Systems and Components

- Turnover from Construction to Startup Testing
- Testing in increasing complexity
  - Component → System → Sets of Systems
  - IROFS functional testing in conjunction with associated system
- Aqueous Polishing (AP)
  - Water tests
  - Chemical (acid and solvent) tests
- MOX Processing (MP)
  - No surrogate powder used

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Testing Strategy

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Serie	Chemical Units	Mechanical Units
300	Flushing/ Rinsing	
	Turnover	Turnover
400	Energization & Control System	Energization & Control System
	Elementary Water Test (Tank Calibration, Transfer,…)	Component test (Maintenance & Slave Mode)
	Safety Test	
500	Comprehensive Water Test	IntegratedTest / Interfaces (Auto Mod, MMIS)
	Disturbance test	Disturbance Test
	Safety Test	**Safety Test**
600	Acid/Solvent Elementary Test	
	Acid/Solvent Comprehnsive Test	
	Disturbance Test	
	Safety Test	
700	Reaction General Incident (RGI)	

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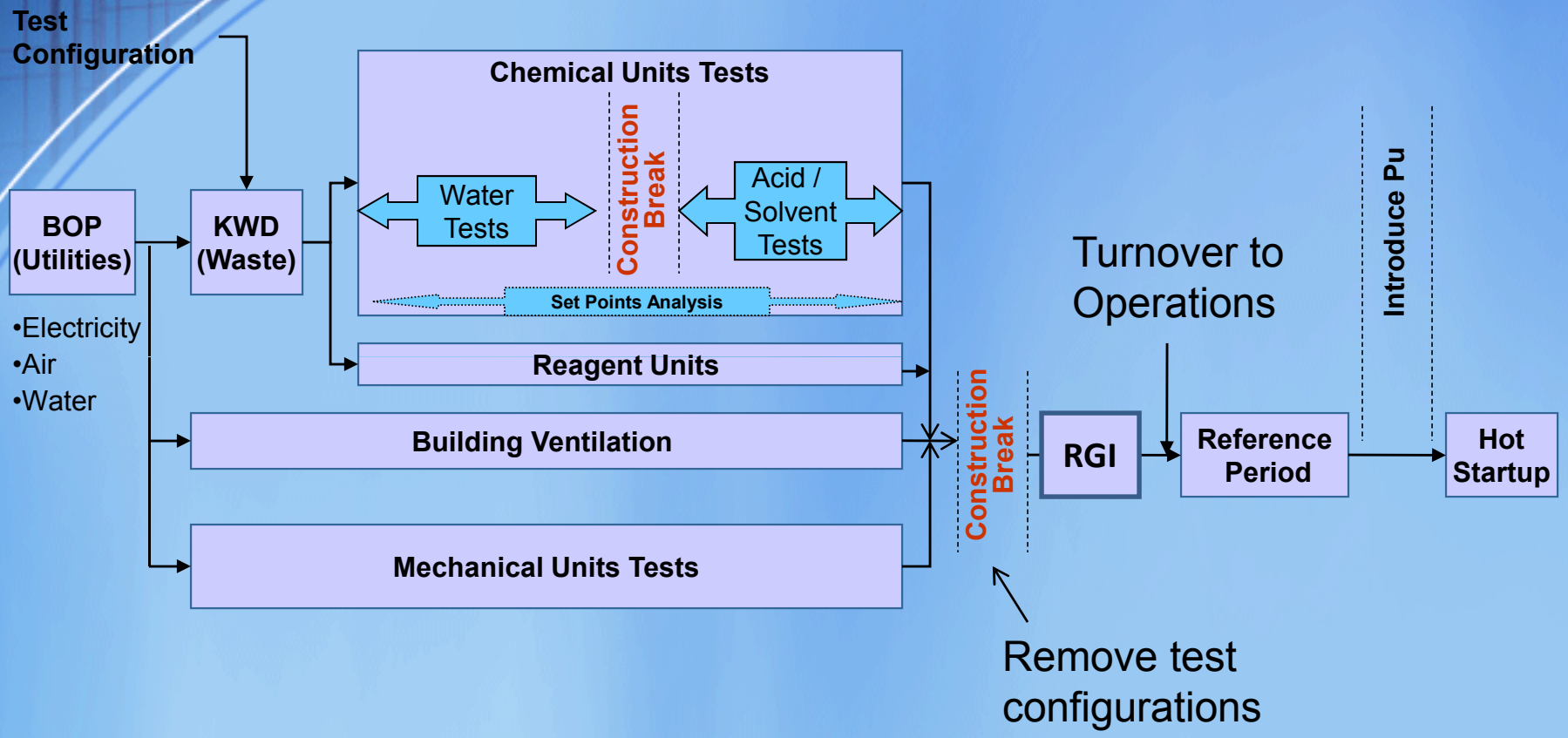
Start-up Test Sequence Overview



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AP In Plant Testing

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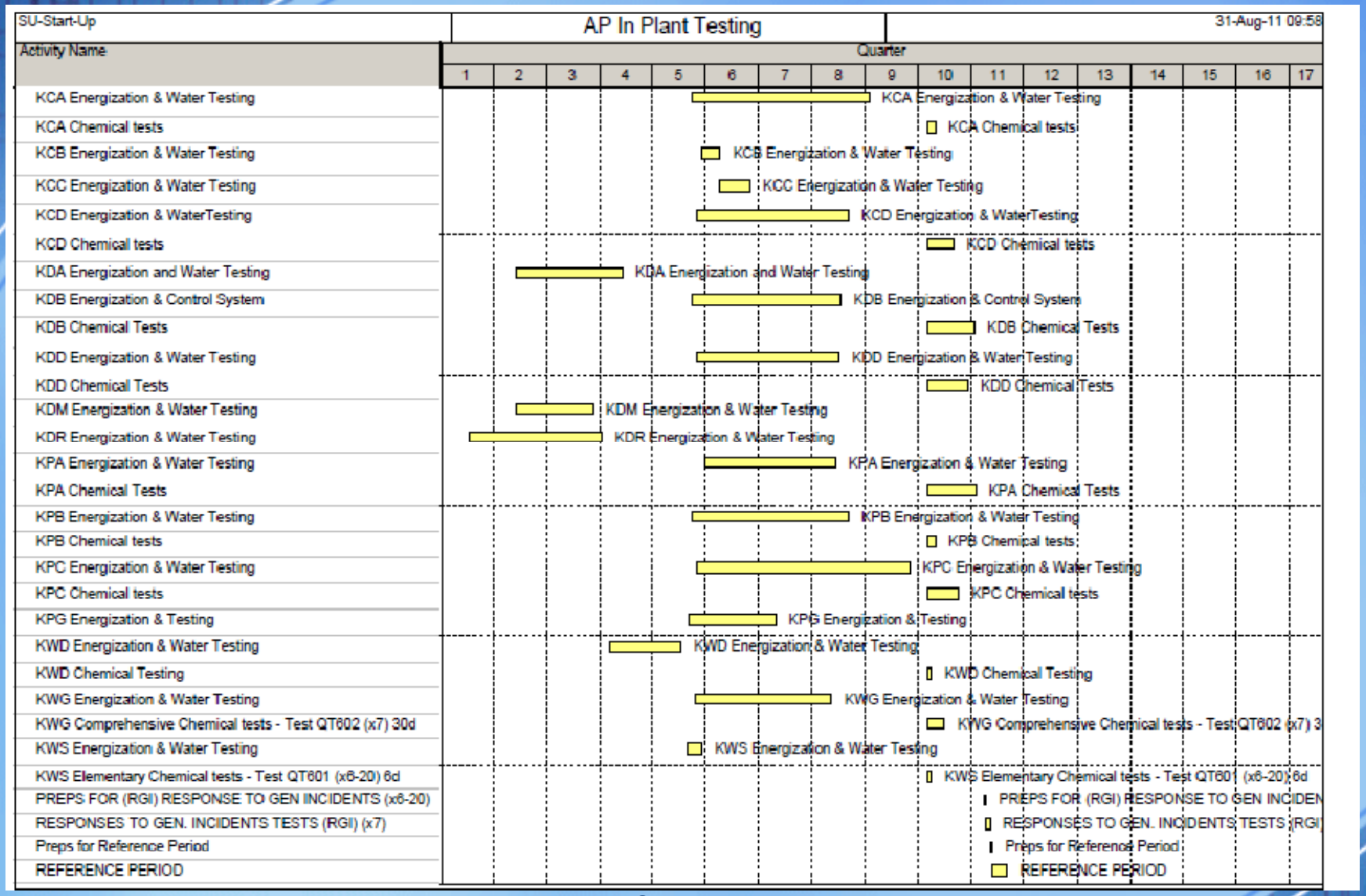
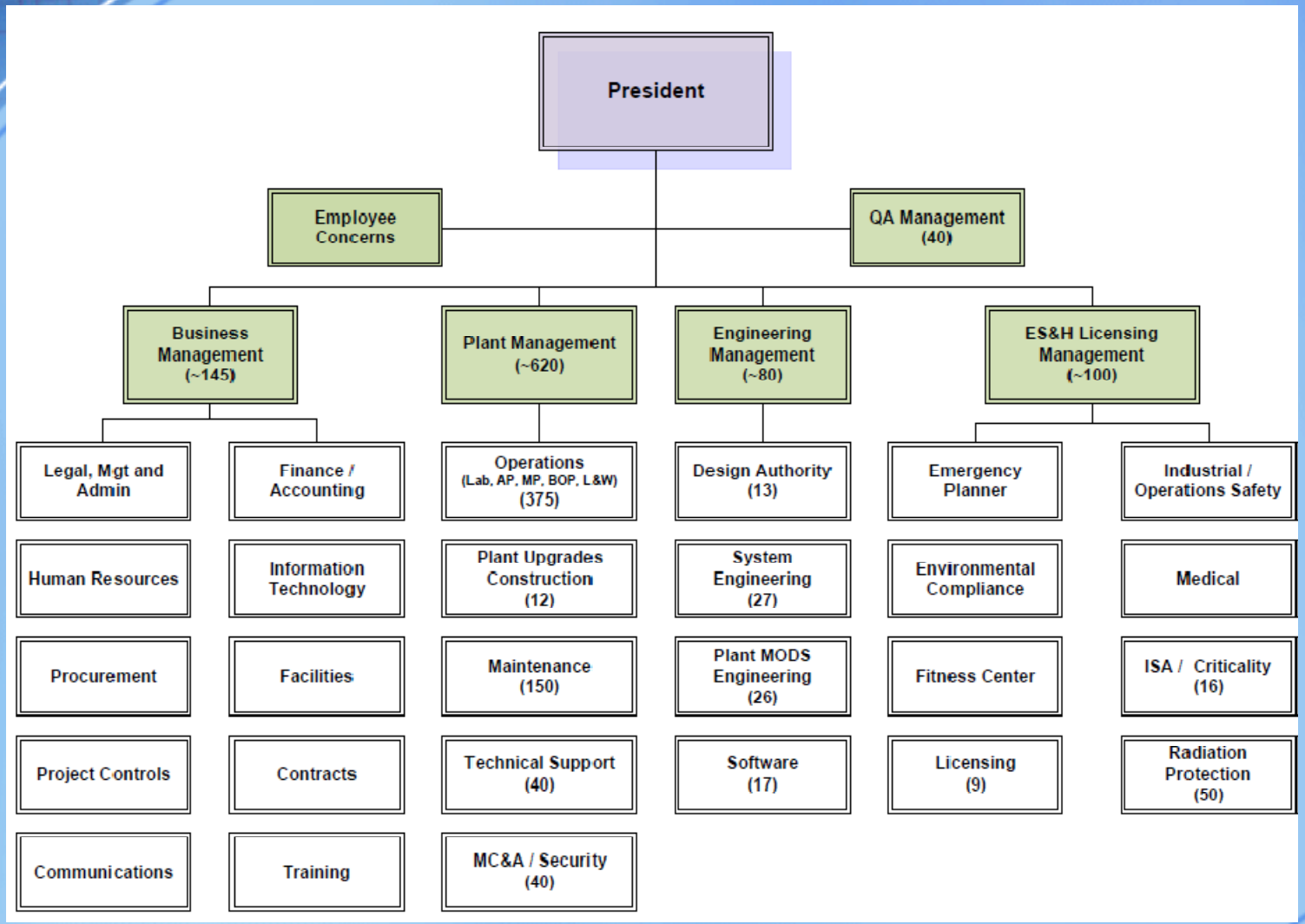


Operational Readiness Organization - Operations Phase



Operational Readiness Staffing

- Staffing
  - Phased approach to operational staffing (i.e., staffing will be ramping up)
  - Expect staffing to come from internal transfers (startup test, engineering) as well as external hires
- Operational staffing varies for functional areas
  - 24/7
  - Two 8 hour shifts/day
  - Day shift only

Operational Readiness Training

- Training
  - Mixture of classroom and on-the-job (hands on)
  - Specific positions will have qualification standards
  - 1000 – 1400 hours of training per operator to qualify
  - ~ 20% will be trained at existing AREVA facilities (US & France)
    - Provide cascade training to remainder of workforce
  - Key personnel training will be complete by start of integrated plant testing
  - Reference plant support during startup
    - ~ 20 full time equivalents (FTEs) in Aiken
    - ~ 6 FTEs part-time support in France

Operational Readiness Programs

- Radiation Protection
- Emergency Preparedness
- Material Control and Accountability
- Physical Security
- Criticality safety
- Fire protection
- Management Measures (including Quality Assurance)
- Maintenance
- Operations
- Safety
- Management and Administration
- Environmental

Readiness Reviews

- Assessment criteria
  - Detailed criteria for each functional area that establishes readiness standard
  - Approved by Department of Energy
- Management self-assessment
  - Based on assessment criteria
  - Department of Energy oversight
  - Prerequisite to declaring functional ready for NRC Operational Readiness Review

Readiness Reviews

- Reference period
  - Demonstrate/simulate operations
  - Radiation protection and security controls in place
- Drills
  - Emergency preparedness
  - Security force
- Compliance crosswalks
  - Ensure implementation of licensing commitments

Lessons Learned

- Verify construction complete prior to operational readiness verifications
  - Consistent with NRC's 10 CFR 70.23(a)(8) verification of completion of construction of Principal Structures, Systems, and Components (PSSCs)
- Verify program readiness prior to demonstration of implementation
- Understanding of "readiness"
  - Detailed standard for each functional area
- Ensure "readiness" prior to NRC readiness inspection
  - Management self-assessment
  - Communicate status of readiness

Summary

- MOX Services developing plans to ensure operational readiness
  - Completion of construction
  - Development of programs and processes
  - Demonstration of implementation
  - Management assessments
  - Incorporating lessons learned
- Continue to communicate status to support NRC inspection planning