

Exceptional service in the national interest



Fire Protection, Safety, and Assurance Overview

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Sandia National Laboratories
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Deputy Director

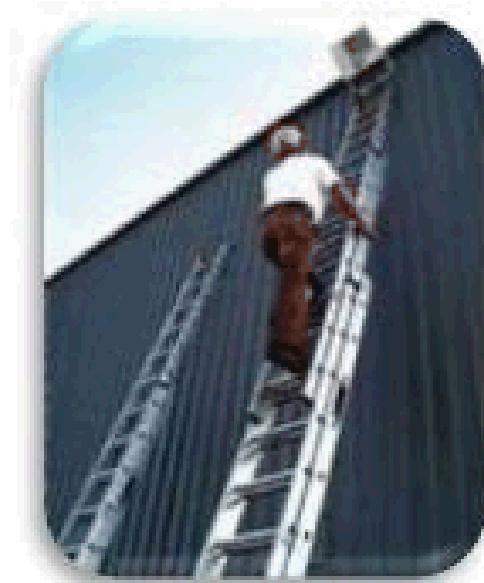
- Responsibilities

- Chief Process Officer
- Building Official
- Assist the Center Director
- Lead Center initiatives
- Lead performance evaluation activities and assist with SFO interface
- Maintain, publish, and communicate the FLT calendar, decisions, issues, and deliverables
- Manage, track, measure, and assess the issues
- Manage, track, measure, and assess staffing acquisition activities
- Manage and facilitate the annual performance and compensation review process



Facilities ES&H

- Safety Staffing (\$1.8M annual budget, includes \$360k CA)
 - 1 Manager (+1 CA)
 - 5 Degreed Safety Professionals (3 Staff, 2 Contract)
 - 3 Safety Technologist Staff (Trades Experience)
 - 4 ½ Matrixed Professional Subject Matter Specialists
 - Industrial Hygiene, Rad Tech, Waste, Environmental
 - 1 Union Safety Liaison (new)
- Asbestos Program (\$800K annual budget)
 - Oversight Management Contract (~ 8 people)
 - Asbestos Removal Contract (ranges from 5 – 30 people)



Facilities Environment, Safety & Health

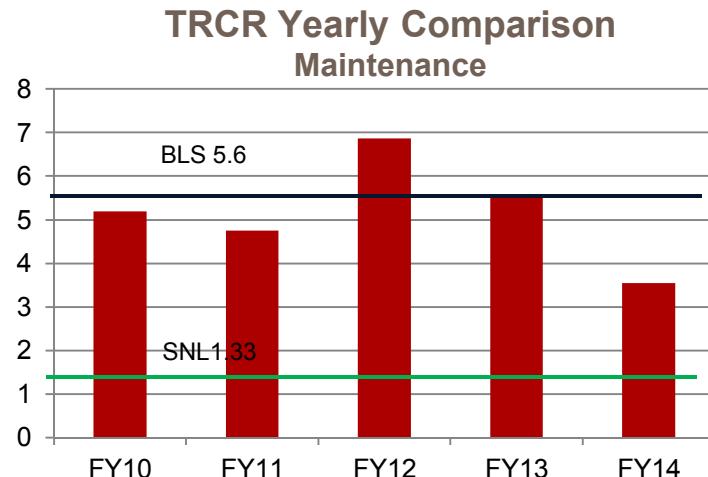
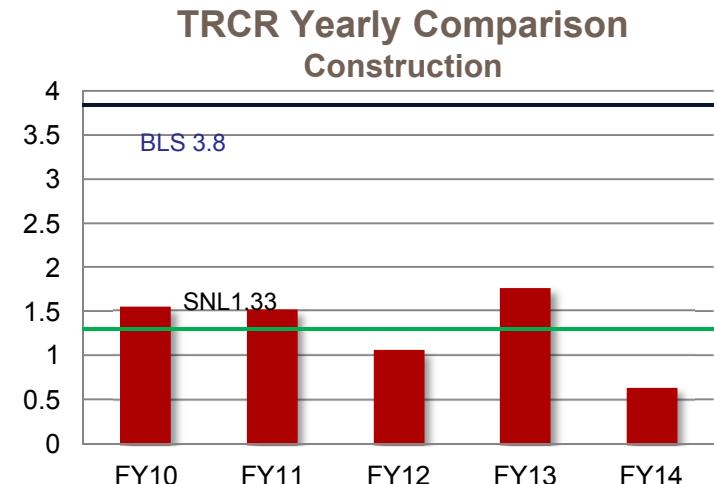
- Plan
 - Ensure DOE/NNSA requirements are reviewed, understood and accepted prior to implementation using the requirements management process to create a safe work environment (Primary driver 10CFR851)
 - Ensure all staff have been trained and are following established processes for service delivery
- Do
 - Perform activity risk identification and management of controls prior to performing work
 - Ensure safety of all personnel and contractors (BBS)
 - Be accountable for ES&H and security of all activities
- Check
 - Track, trend and assess the ES&H and Asbestos management and team execution using process metrics
 - Perform self-assessments
 - Monitor compliance to safety practices.
- Act
 - Improve process by application of lessons learned
 - assign support for audits, occurrences and other activities
- [Engineered Safety Video](#)



Safety Performance

Strengths

- Facilities developed overarching strategies in support of Laboratories Engineered Safety efforts
 - Developed 27 Safety Cases for maintenance, construction, and engineering
 - Excellent leadership from managers, participation from staff and contractors
- In FY14, Facilities achieved the best safety rates in over a decade for both maintenance and construction activities
 - This performance continues the excellent trending results from the past four consecutive years



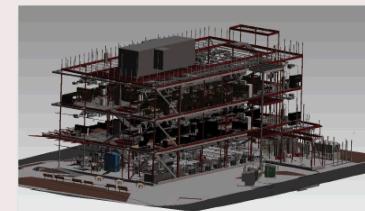
Facilities Fire Protection, Assurance and IT

- 1 Manager (+1 CA)
- Fire Protection (\$5100K annual program budget, includes CA)
 - Fire protection Engineering (\$1400K)
 - 6 Fire Protection Professionals (5 PEs, 1 NICET)
 - 1 Technologist Specialist (NICET)
 - 1 ICC / Plan Review Certified Technologist
 - Fire Dept (\$2M), ITM (\$1.7M)
- IT, Communication and Administrative (\$280K annual budget)
 - Facilities Information Technology
 - 2 Administrative/Technologist (+1 matrixed staff)
 - Document Management
 - 1 Facilities Technologist
 - Communications / Publications
 - 3 Matrixed Communication Specialists
- Assurance – ISO-9001; DOE O 414.1D
 - 2 Matrixed* Staff
 - 2 Process Coordinators



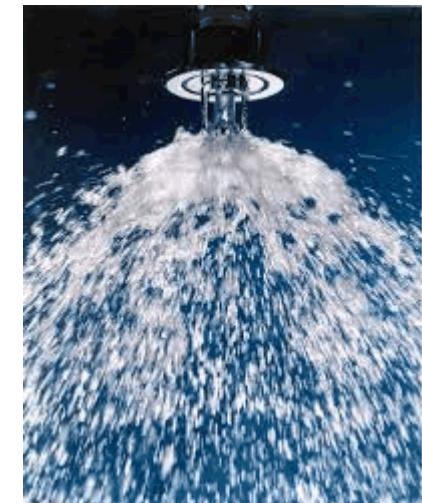
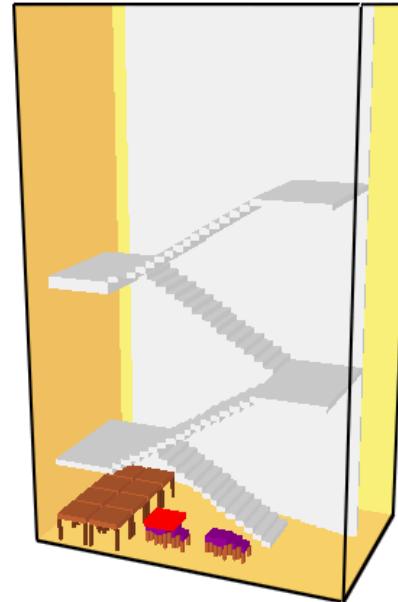
■ Building Information Modeling (BIM) Standards Implemented

The FMOC has implemented BIM standards that will guide contract architectural and engineering (A/E) firms in providing consistent BIM models to Sandia. BIM includes the development and use of multifaceted computer software 3D models, and by developing these models during the design phase of a project, changes and rework are minimized during the construction phase, resulting in reduced cost of projects. According to the General Services Administration's *Building Information Modeling Guide Series 01*, these models can be used to document the building design, as well as simulate the construction and operation of a new or modernized facility. The resulting model is an object-based, data-rich, intelligent, and parametric digital representation of the facility, from which views appropriate to the users' needs can be extracted and analyzed to generate feedback and improvement of the facility design.



Fire Protection Program

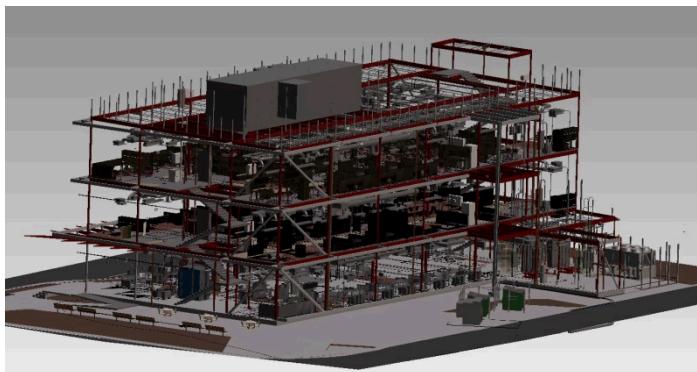
- Administration
 - Policy, Requirements, Risk Mngt, Procedures, Staffing
- Inspection, Testing and Maintenance
 - Fire Protection Systems
 - Internal & Service Contracts
- Emergency Response
 - Investigations
 - Pre-Incident Plans
 - Emergency Operations Planning
- Construction Oversight
 - Code Compliance
 - Certificates of Occupancy
- Operations Oversight
 - Condition Assessments
 - Fire Hazards Analysis / Fire Modeling
 - Permits



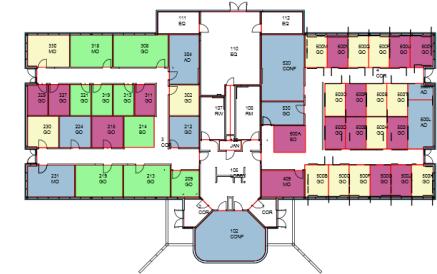
Facilities Information Technology



- Center-Level Perspective (Planning and Budget) for Facilities Related Software and Primary Interface with Corporate IT
- New Initiatives
 - Project Management Collaboration
 - Environmental Management Tracking System (Asbestos)
 - Geographic Information System
 - CADD Support Request System
 - Mobile Laboratory Assessment Tool
 - Mobile Maximo



BIM Modeling



Space Management Module



GIS Mapping

Facilities Communications and Document Control

- Communications
 - News Center
 - Presentations
- Documents
 - [Publications Request System](#)
 - Contract Document Management
 - File Net
 - Forms
 - Guidelines
 - Standards and Specifications

Request for Publications Support (RPS)

Questions? Contact the Publications Team.

Submitter:	D'Antonio,Perry E.
Organization:	04879
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Email:	pedanto@sandia.gov

RPS Job Information

Job Title:

Document Type: Controlled Uncontrolled

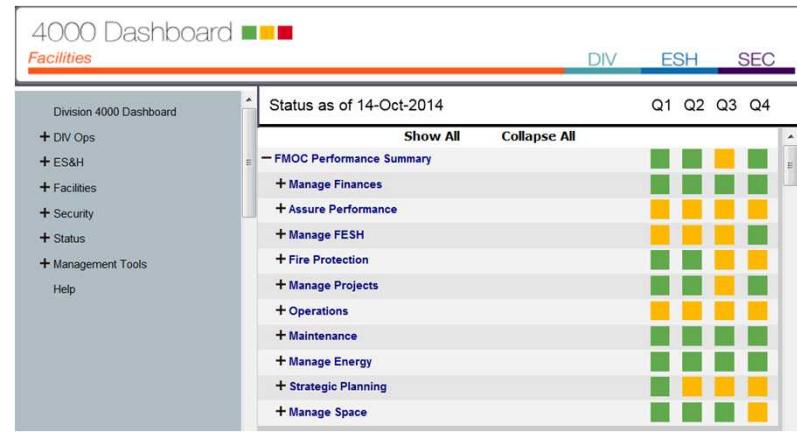
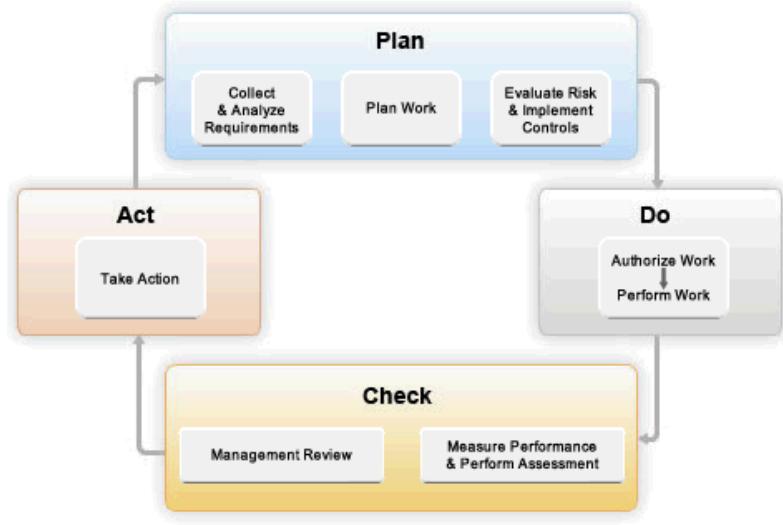
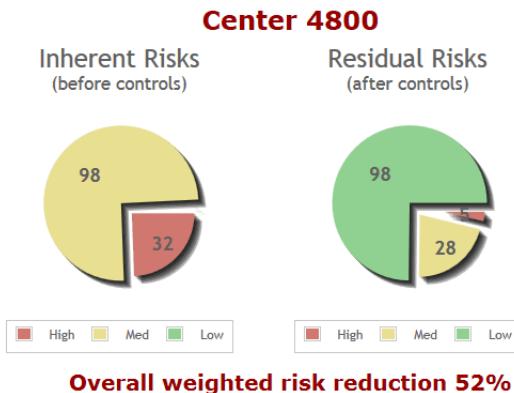
Type of Changes Requested: Administrative Substantive Development

Distribution: Internal External Both Unknown

Turnaround Time: Standard Urgent

Facilities Assurance

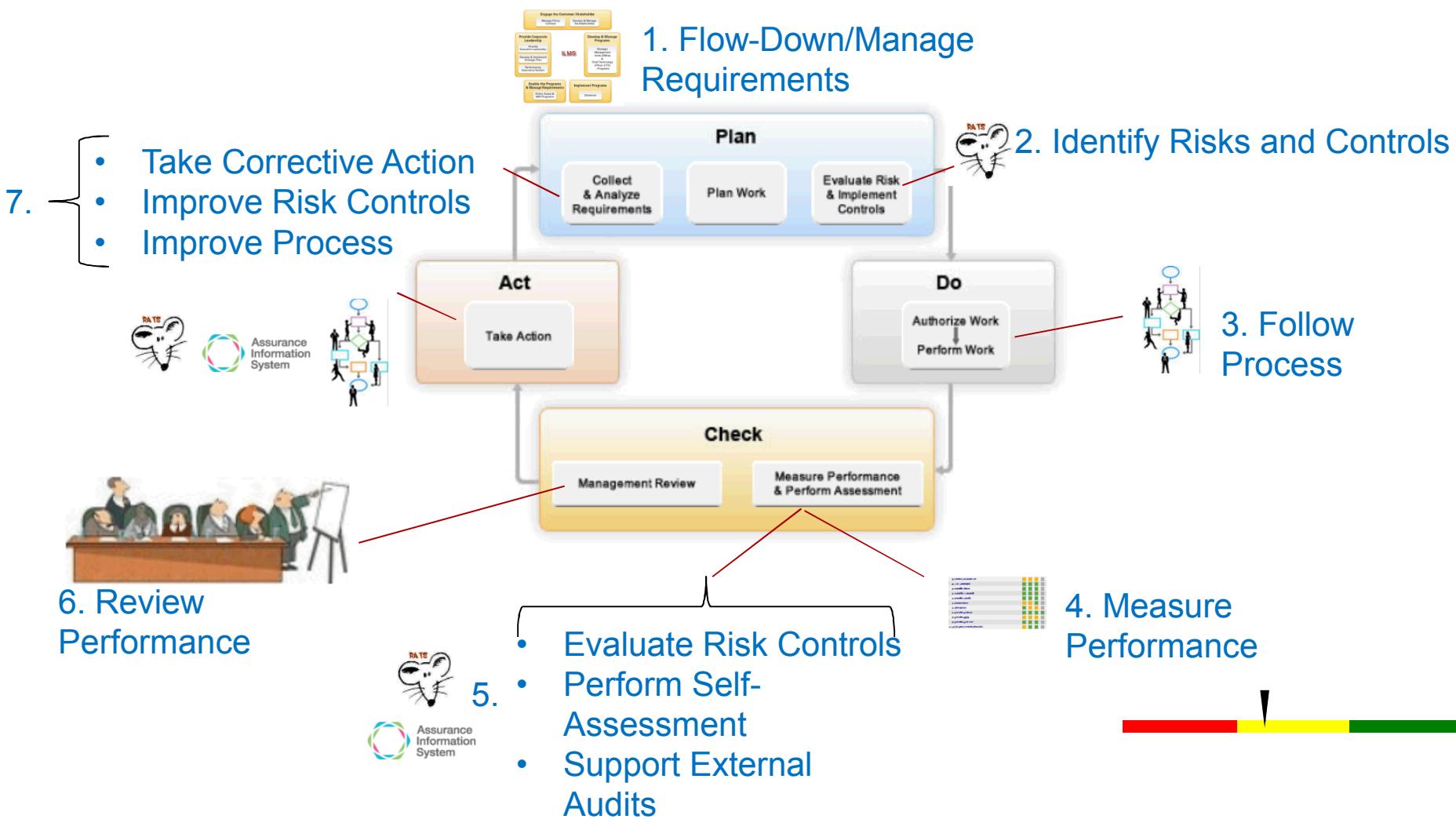
- [Facilities Web Site](#)
- Assurance Information System
- Measurements (Dashboard)
- Process Management System
- Risk assessment Tracking
- Lean Six Sigma Quality Initiatives



Backup Slides

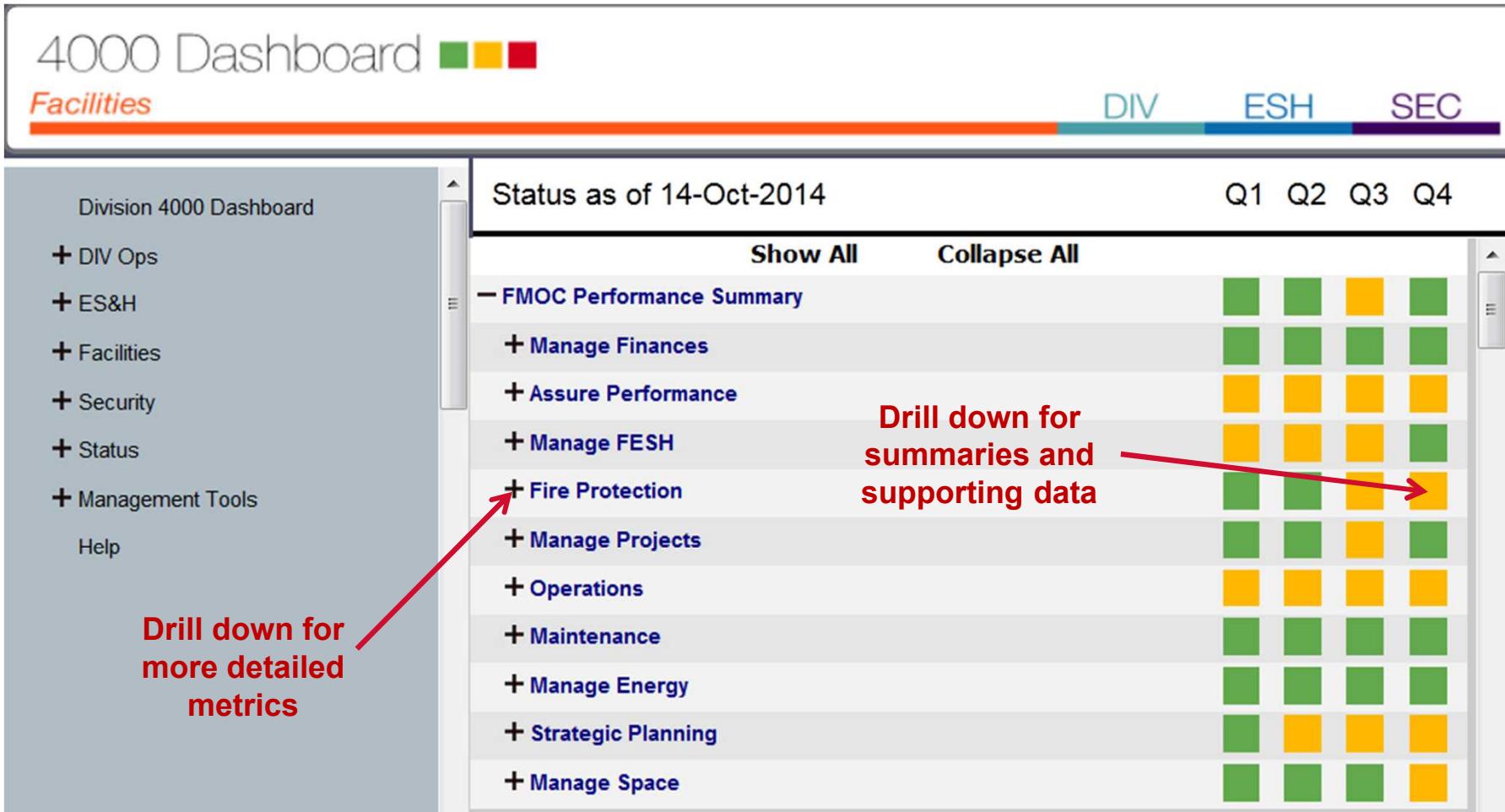


Facilities Assurance System



Measures & Metrics

Overview



4000 Dashboard

Facilities

Division 4000 Dashboard

- + DIV Ops
- + ES&H
- + Facilities
- + Security
- + Status
- + Management Tools
- Help

Status as of 14-Oct-2014

	Q1	Q2	Q3	Q4
Show All	Green	Green	Yellow	Green
Collapse All	Green	Green	Green	Green
FMOC Performance Summary	Yellow	Yellow	Yellow	Yellow
+ Manage Finances	Yellow	Green	Green	Green
+ Assure Performance	Yellow	Yellow	Yellow	Yellow
+ Manage FESH	Yellow	Yellow	Yellow	Green
+ Fire Protection	Green	Green	Yellow	Yellow
+ Manage Projects	Green	Green	Yellow	Green
+ Operations	Yellow	Yellow	Yellow	Yellow
+ Maintenance	Green	Green	Green	Green
+ Manage Energy	Green	Green	Green	Green
+ Strategic Planning	Green	Yellow	Yellow	Yellow
+ Manage Space	Green	Green	Green	Yellow

Drill down for more detailed metrics

Drill down for summaries and supporting data

Key metrics are tracked in our on-line Assurance tool

Metrics Example – Fire Protection

4000 Dashboard

Facilities

Division 4000 Dashboard

+ DIV Ops
+ ES&H
+ Facilities
+ Security
+ Status
+ Management Tools
Help

Status as of 16-Oct-2014

	Q1	Q2	Q3	Q4
+ Assure Performance	Yellow	Yellow	Yellow	Green
+ Manage FESH	Yellow	Yellow	Yellow	Green
— Fire Protection	Green	Green	Yellow	Yellow
— New Mexico	Green	Green	Green	Yellow
FP Systems Craft Activity Backlog	Green	Green	Green	Yellow
Scheduled FP PM Completion	Green	Green	Green	Yellow
Corrective Maintenance Occurrence Trends	Green	Yellow	Green	Yellow
KAFB Fire Department Response Times	Grey	Yellow	Yellow	Yellow
Pre-Incident Plans	Green	Yellow	Yellow	Yellow
Annual DOE Fire Loss Report	Grey	Blue	Blue	Blue
FPA/FHA - Assess Nuclear	Green	Green	Green	Green
FPA - Assess - Mission Critical	Green	Green	Green	Yellow
FPA - Mission Depend. (Not Crit.) / Not Mission Depend.	Green	Green	Yellow	Yellow
Hot Work Permit Audits	Grey	Green	Green	Green
Construction Code Compliance	Yellow	Grey	Green	Green
Fire Protection Program Staffing	Grey	Grey	Blue	Blue
+ California	Green	Green	Yellow	Yellow
+ Manage Projects	Green	Green	Yellow	Yellow

Drill down for details

METRIC | status

Metric: FPA - Assess - Mission Critical

Measure the number annual fire protection assessments (FPAs) per schedule for Mission Critical facilities. Target: 100% completion of mission critical facility FPAs

POC: Julie.Cordero

Risks: None Currently Assigned

Rating: Issue Being Worked

Raw Score: 83.00

Period: FY2014 Qtr: 4

Date of Collection: As of 9/22/2014

Justification:

For the 15 FPAs scheduled in FY14 for Mission Critical facilities, 50 out of the 60 tasks required to complete the FPAs have been completed (83% total completion). All FY13 scheduled FPAs for Mission Critical facilities were completed in FY13, thus none rolled-over into the FY 2014 schedule. All uncompleted FY14 FPAs in this category will be evaluated for roll-over into the FY15 schedule (see Recommended Actions section below).

Issue Statement:

Insufficient staffing to meet FPA targets in FY14. The Fire Protection Manager was in an Acting Senior Manager position and the Fire Marshal was in an Acting Manager position for 9-months in FY14. In addition, one fire protection staff member accepted a position outside the facilities organization (effective 6/27/14). One fire protection staff member was also working a special project for KAFB. These changes resulted in fewer resources to complete the FY14 scheduled FPAs.

Completed Actions:

One new FFE was hired on 9/15/14. This staffing shortage risk has been documented in the 4800 Risk Assessment Tracking System.

Recommended Actions:

Implement the Fire Risk Index (FRI) methodology in FY15. It is a risk-informed methodology that will be the basis for a revised FPA frequency and schedule.

Action Item Links:

None

Evidence Documents:

FPA Schedule

[Close](#) | [Details](#) | [Add Score](#) | [Add Risk](#)

Primary Facility	Additional Buildings Assessed with Primary Building	Asbestos Survey Completed	Assessment Frequency (yrs)	Mission	Assigned FP POC	ITM Check (Draakos)	Pre-Incident Plan (Sanchez)	Life Safety & Health Survey (FP POC)	Unknown where all 4 parts are documented	FIREISFPAs	ITM Check in FireNet Database	Process Review and Opportunities	REVISION DATE: 09/22/2014																		
MISSION CRITICAL FACILITY FPAs COMPLETED																															
6	Number of FPA Tasks Completed (Number of "X's")																														
7	702	N/A	3	MC	LeFleur	X	X	X	X	X	X	X	X	X	X	X	X														
8	720	N/A	3	MC	Draakos	X	X	X	X	X	X	X	X	X	X	X	X														
9	860		3	MC	Draakos	X	X	X	X	X	X	X	X	X	X	X	X														
10	865		3	MC	Draakos	X	X	X	X	X	X	X	X	X	X	X	X														
11	870	YES	3	MC	LeFleur	X	X	X	X	X	X	X	X	X	X	X	X														
12	875	YES	3	MC	Draakos	X	X	X	X	X	X	X	X	X	X	X	X														
13	880	YES	3	MC	Sanchez	X	X	X	X	X	X	X	X	X	X	X	X														
14	894		3	MC	Smith	X	X	X	X	X	X	X	X	X	X	X	X														
15	905	N/A	3	MC	Smith	X	X	X	X	X	X	X	X	X	X	X	X														
16	919	8704	YES	3	MC	TBD	X	X	X	X	X	X	X	X	X	X	X														
17	6526	6527		3	MC	TBD	X	X	X	X	X	X	X	X	X	X	X														
18	6741		3	MC	TBD	X	X	X	X	X	X	X	X	X	X	X	X														
19	6742		3	MC	TBD	X	X	X	X	X	X	X	X	X	X	X	X														
20	9311	9312, 9314		3	MC	TBD	X	X	X	X	X	X	X	X	X	X	X														
21	6812		3	MC	TBD	X	X	X	X	X	X	X	X	X	X	X	X														
MISSION CRITICAL FACILITY FPAs COMPLETED																															
23	Number of FPA Tasks Completed (Number of "X's")																														
24	518	N/A	3	MDNC	Sanchez	X	X	X	X	X	X	X	X	X	X	X	X														
25	519	N/A	3	MDNC	LeFleur	X	X	X	X	X	X	X	X	X	X	X	X														
26	701	N/A	3	MDNC	Sanchez	X	X	X	X	X	X	X	X	X	X	X	X														
27	703	N/A	3	MDNC	LeFleur	X	X	X	X	X	X	X	X	X	X	X	X														
28	750		5	MD	Draakos	X	X	X	X	X	X	X	X	X	X	X	X														

Drill down for supporting evidence

FY15 Q2 Review: Fire Protection, Safety & Assurance



Accomplishments

- ChemPro rollout
- Realigned FP metrics with DOE O 420.1C
- Issued FP Policy
- Key Staffing Positions Filled
 - Senior Manager
 - MTC Safety Lead
 - IT Lead
 - Maintenance Safety Engineer

Assessments, Corrective Actions and Benchmarking

- Improving management of delinquent documents & corrective actions
- Q2 Assessment - Center 4800 Assurance Maturity
- January visits from OMB and AWE

Issues & Risks

- [Dashboard Link](#)
- Office of Enforcement Report B905 / 9920
- Staffing – Action Officer, FP, Pubs/Training/Communications, several acting positions

Major Initiatives

- Validate Safety Cases
- Center 4800 Assurance Maturity Plan
- DOE O 420.1C Implementation Plan
- Installing next gen fire alarm panels
- Automatic sprinkler installations at TTR
- SIAs
 - Center 4800 IT needs
 - Center 4800 communication
- Piloting new project management software

Overview of Major FY14 Accomplishments



Assurance / Policy

- Succession plan – acting Deputy Director / Senior Manager for 9 months
- Developed & communicated Value-Based Leadership tool
- Established a path forward for Line-Managed Construction Policy
- Developed Center 4800 Assurance Maturity Plan that is driving continuous improvement
- Developed communications template to articulate FMOC value to the Mission
- Initiated SIA on employee development / training – also benefits succession planning
- Re-baselined IT cost; reduced costs of licensing; strengthened management accountability & business ops; improved response-time performance to IT issues with Tririga app
- Managed 4800 Dashboard and Corporate Scorecard metrics
- Updated Policies on Projects (align with Line-Managed Construction) and Fire Protection (align with DOE O 420.1C)

Fire Protection

- Succession plan – acting Department Manager for 9 months
- Teamed with SFO and NNSA/HQ to develop DOE 420.1C Implementation Plan
- Championed business case and commissioning authority for installing sprinkler systems at AML and TTR
- Developed FHA for KAFB (Mission Customer request)
- Supported negotiations with Sandia ER, KAFB/FD and SFO on new base support agreement
- Provided technical support to hazardous material procurement tool (ChemPro) that is mitigating corporate risk
- Aligning SNL/CA & TTR fire protection implementation with SNL/NM
- Began developing emergency response baseline needs assessments at TTR and KTF
- Maturing Fire Risk Index methodology to influence decision cost/risk/benefit
- Re-baselined Fire Protection staffing needs
- Highest level of Leadership & Competency: Chair Fire Protection EFCOG; Principal on NFPA / ICC Tech Committees; manager & staff presentations at external events; 1PhD; 6 MS; 6 PEs; 2 NICET; 2 CFEI; 4 pursuing MS Degrees

Safety

- Developed a focus area strategy for improving FMOC Safety Performance – mgmt engagement; accountability; critical/thinking; training
- Mentored Safety Department Manager on re-baselining FESH / Asbestos budget
- Provided review of Engineered safety cases for maintenance and construction

FY14 Improvement Focus Areas

General

- Engaging Management and Workers (trust, confidence, partnership)
- Communicating FMOC contributions to mission success

Assurance / Policy

- Revising construction policy
- Advancing employee development / training / succession planning
- Building Assurance Maturity System – see implementation plan
 - AIS records quality and value to organization
 - Publications consistency, training, and assessment per maturity plan
 - SNL/CA document management system
 - RATS interface / functionality
 - Growing as a learning organization

Fire Protection

- Developing model for TTR fire protection implementation (apply to KTF)
- Building Official role – IAS accreditation
- Maintaining a technical basis for risk-based approach to FP program implementation

Safety

- Achieving excellent safety performance (Engineered Safety, Target Zero, BBS)
- Communicating FMOC safety system approach
- Tying management surveillance to system safety approach

Overview of Recent Accomplishments

Fire Protection

- Significant fire risk reduction at AML
- Influencing DOE O 420.1C implementation for other sites (EFCOG)
- Strengthened qualifications: 2 new MS FPEs; New PE; New FE; 3 enrolled in MS FPE program at Cal Poly

Safety

- Completed engineered safety failure modes analyses for all maintenance activity-level work
- Completed FMOC Safety Plan
- Added new ES&H Coordinator

Assurance

- Aligned FMOC risk management system with corporate/PEP objectives
- Provided consequence criteria for management awareness in RATS
- Conducted RCA to support TA-V Activities; supported 29 Audits & Assessments
- Supported SFO Assistance Visit for 2 projects under ARRA requirements
- Co-authored Fiscal Crisis Contingency Planning Lessons Learned SAND Report
- Aligning CA document management system with NM approach
- Piloting Laboratories' Electronic Signature Services
- Improved timeliness of resolving Production issues in FMS Fac Assess & Space Modules
- Completed Phase 1 of FMS Projects Module training

Current High-Level Issues

EO, SFO, Union relationships

- SFO operating under transactional oversight
- Lack of FLT involvement in decisions affecting the FMOC
- MTC contract negotiations

Right-sizing the FMOC

- Perception that the FMOC can be streamlined
- Sandia O&M and re-cap < 3%, below industry standard 4%
- No FIRP or Line-Item funding
- Growing deferred maintenance

Total Comp driving loss of core competencies

- Discrepancies in pay bands with non-Facilities families for similar work
- External market index values

Improve Performance

- Safety
- Projects
- Space Management

Current High-Level Issues (continued)

Assurance / Policy

- Line-Managed Construction not following requirements
- SFO questioning role qualifications
- IT–Facility Management System software implementation

Fire Protection

- DOE Order 420.1C Implementation Plan
- SFO turnaround time on requests (TTR Baseline Needs Assessment, equivalencies)
- Hazardous materials management

Safety

- TRCR for maintenance (custodial) above corporate goals
- Lack of understanding of Facilities safety assurance system