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FIRE PROTECTION FUNCTIONAL AREA CDNS BIENNIAL REVIEWS

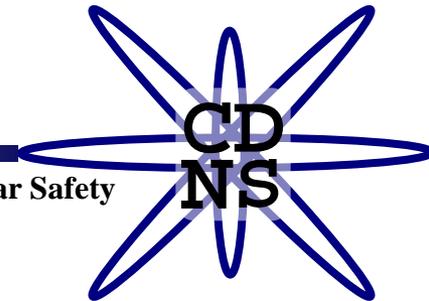
May 15, 2012

Carl Sykes



Topics

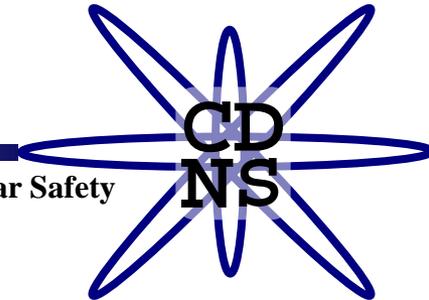
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- **Biennial Review Purpose**
- **Summary of Fire Protection Results**
- **Fire Protection CRAD**
- **Fire Protection Issues**

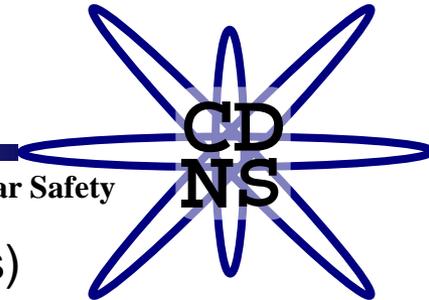
Biennial Review Purpose

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- Provide objective, value-added information for NNSA managers
 - Site Office oversight capability
 - Contractor implementation of nuclear safety requirements
 - Focus is on Site Office (fed)
- Promote continuous improvement where deficiencies are identified
- Encourage consistent application of nuclear safety requirements across NNSA

Functional Areas



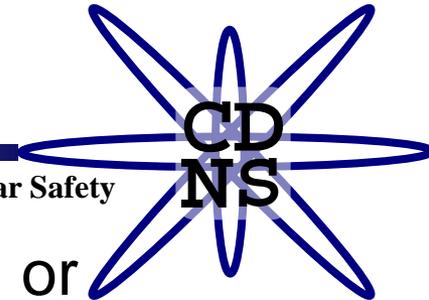
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Conduct of Engineering
Conduct of Operations
Contractor Training and Qualification
Criticality Safety
Emergency Preparedness
Facility Representative
Federal Training and Qualification
Feedback and Improvement
Fire Protection
ISMS (FRAM)

ISMS (Contracts)
Maintenance
Nuclear Explosives Safety
Packaging & Transportation
Quality Assurance
Radiation Protection
Radioactive Waste
Safety Basis
Startup and Restart

Definitions

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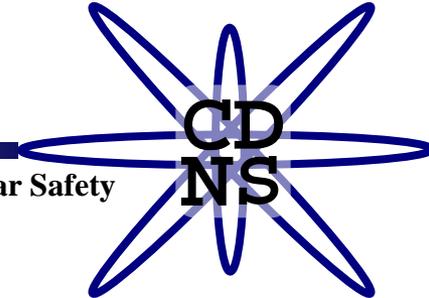


- **Management Concern-** A significant issue, or collection of similar issues, that indicates a systemic problem.
- **Noteworthy Practice-** A condition, practice, or situation identified that is highlighted for the attention of management for possible expanded implementation at the site or communication to other NNSA sites.

Noteworthy Practices are disseminated in the NNSA Technical Bulletins

Summary of Results

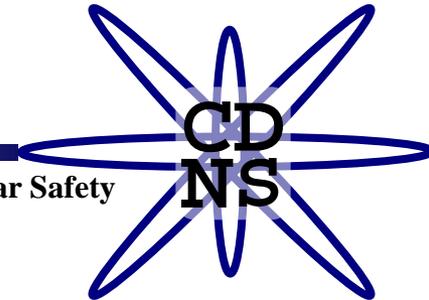
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- Seventeen noteworthy practices in second and third round reviews thus far.
 - PXSO had six in 2011, with three being in Conduct of Engineering.
 - NSO had two in 2008 and three in 2011.

Grades

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EE	Exceeded Expectations for baseline review
ME	Meets Expectations for a baseline review
NI	Needs Improvement for a baseline review
met	Objective Met for a follow-up review
not	Objective Not Met for a follow-up review
	Functional Area was not reviewed



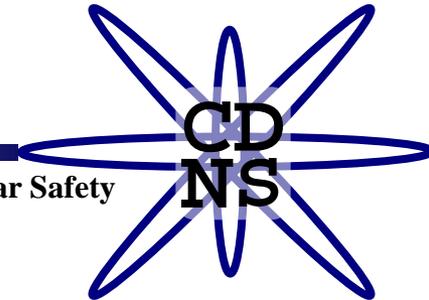
Site Office Results

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	PXSO			NSO			LSO			LASO		SSO		YSO		SRSO		
	'05	'07	'11	'05	'08	'11	'06	'08	'11	'07	'09	'06	'09	'06	'09	'05	'08	'10
Conduct of Engineering	EE	X	EE	NI	met	ME	ME	met	ME	NI	met	ME	met	ME	met	ME	met	ME
Conduct of Operations	ME	met	ME	NI	not	NI	NI	met	ME	NI	met	NI	not	ME	met	ME	met	ME
Contractor Training and Qualification	ME	met	NI	NI	met	ME	ME	met	ME	NI	met	ME	met	ME	met	ME	met	ME
Criticality Safety	ME	met	ME	NI	met	NI	X	met	ME	ME	met	ME	met	ME	not	X	X	X
Emergency Preparedness	ME	X	X	ME	X	ME	ME	X	X	X	met	ME	X	ME	X	X	X	ME
Facility representative	ME	met	ME	ME	met	ME	NI	met	met*	NI	met	ME	not	ME	met	ME	met	ME
Federal Training and Qualification	ME	met	ME	NI	met	ME	ME	met	ME	NI	met	ME	met	ME	met	ME	met	ME
Feedback and Improvement	ME	met	ME	NI	met	ME	NI	met	ME	NI	met	NI	not	ME	met	ME	met	ME
Fire Protection	ME	met	ME	NI	met	ME	NI	met	ME	NI	met	NI	not	ME	met	ME	met	ME
ISMS.1 FRAM	ME	met	ME	NI	met	ME	ME	met	ME	NI	met	ME	met	ME	met	ME	met	ME
ISMS.2 Contracts	ME	met	ME	NI	met	ME	ME	met	ME	ME	met	ME	met	ME	met	ME	met	ME
Maintenance	ME	met	ME	NI	met	ME	ME	met	ME	NI	not	NI	not	ME	met	ME	met	ME
Nuclear Explosives Safety	X	not	X	X	met	X	X	X	X	X	X	X	X	X	X	X	X	X
Packaging and Transportation	ME	met	NI	NI	met	ME	ME	met	met*	ME	met	ME	met	ME	met	ME	met	ME
Quality Assurance	NI	met	ME	NI	met	ME	ME	met	ME	ME	met	ME	met	ME	met	ME	met	ME
Radiation Protection	ME	met	ME	NI	met	ME	NI	not	ME	ME	met	ME	met	ME	met	X	met	ME
Radioactive Waste Management	ME	met	ME	ME	met	ME	ME	met	ME	NI	met	NI	met	ME	met	NI	met	ME
Safety Basis	ME	met	ME	NI	met	ME	ME	met	ME	NI	met	ME	met	EE	met	ME	met	ME
Startup and Restart of Nuclear Facilities	ME	met	ME	NI	met	ME	NI	met	ME	NI	not	ME	met	EE	met	NI	met	ME

Fire Protection

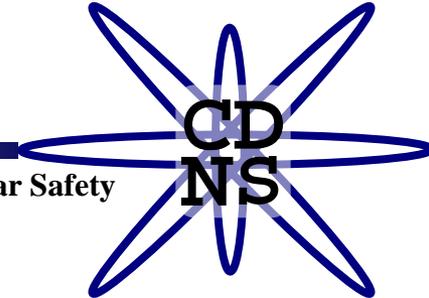


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Fire Protection

Office	Grade	# Issues
SRSO '05	ME	4
SRSO '08	met	1
SRSO '10	ME	1
PXSO '05	ME	1
PXSO '07	met	0
PXSO '11	ME	1
NSO '05	NI	6
NSO '08	met	8
NSO '11	ME	3
LSO '06	NI	5
LSO '08	met	7
LSO '11	ME	4
LASO '07	NI	9
LASO '09	met	8
SSO '06	NI	10
SSO '09	not	5
YSO '06	ME	4
YSO '09	met	3

Fire Protection CRAD



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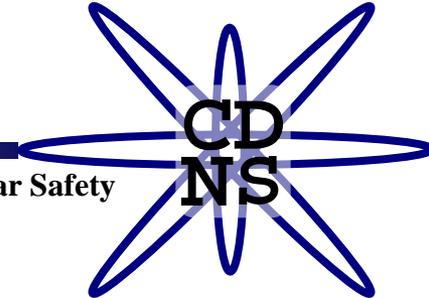
OBJECTIVE

The Site Office has documented and implemented a fire protection program that complies with DOE requirements and the Site Office oversight processes and procedures have ensured that an effective fire protection safety management program has been implemented by the Site Contractor.

CRITERIA:

1. The Site Office has documented and implemented a fire protection program (DOE O 420.1B).

Fire Protection CRAD

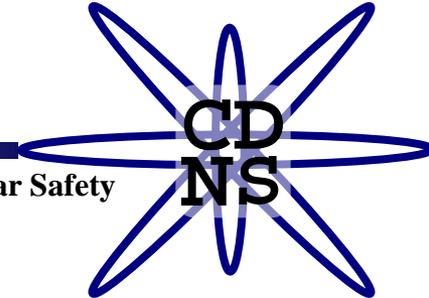


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CRITERIA:

2. **The Site Office has documented and implemented processes and procedures to effectively oversee contractor performance** in this functional area. The Fire Protection Program Manager reviews and validates performance data from various sources including the Annual Fire Protection Summary Report, corporate performance evaluation reports, and performance based incentives (DOE O 226.1A; NA-1 SD 226.1A; DOE O 420.1B).
3. **Site Office procedures and mechanisms ensure that the Site Contractor's fire protection program is defined** in accordance with contract requirements and that the implementing mechanisms comply with DOE expectations. The Contractor is staffed with adequate numbers of technically competent, experienced, fully qualified personnel, including fire protection engineers, technicians, and firefighting personnel (DOE O 420.1B).

Fire Protection CRAD

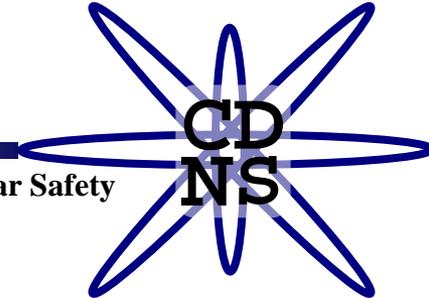


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CRITERIA:

4. **Site Office procedures and mechanisms ensure that Fire Hazard Analyses (FHAs) have been prepared for each nuclear facility** and that the results have been integrated into the Documented Safety Analysis (DSA) and Technical Safety Requirements (TSRs) (DOE O 420.1B).
5. **Site Office procedures and mechanisms ensure that a baseline needs assessment has been completed** that establishes the minimum required capabilities of site firefighting forces. The assessment includes staffing, apparatus and equipment, and pre-fire plans. Required information is incorporated into the site Emergency Plan, FHAs and DSAs (DOE O 420.1B).

Fire Protection CRAD



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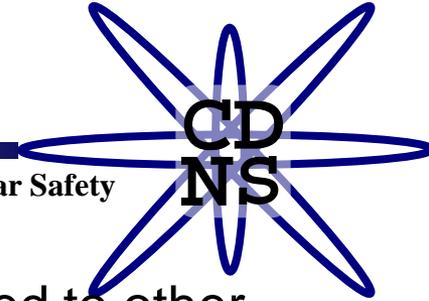
CRITERIA:

6. **Site Office procedures and mechanisms ensure that fire protection systems are designed, installed, and maintained to ensure reliable operation.** Design requirements per DOE O 420.1B are observed. Qualified fire protection staff review plans and specifications for all new facilities and for significant modifications to existing facilities (DOE O 420.1B).

7. **Site Office procedures and mechanisms ensure** that the Site Office and Site Contractor have **a process** for developing, reviewing, recommending approval, tracking, and maintenance of **fire safety equivalencies and exemptions.** (DOE O 420.1B).

Fire Protection Issues

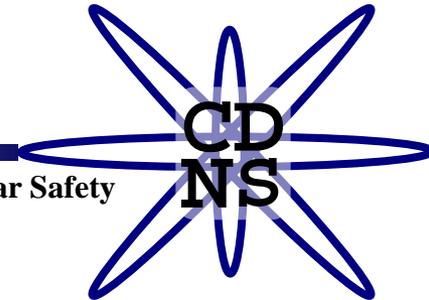
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- Two noteworthy practices
 - PXSO Fire Protection (FP) Engineer is cross-qualified to other Safety System Oversight positions.
 - NSO and contractor established a joint Fire Safety Committee.
- Functional area of FP had significantly higher number of identified issues than other functional areas.
 - Many findings were minor regulatory infractions which were easily corrected.

Fire Protection Issues

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- Numerous issues identified at SRSO, NSO, LSO, LASO and SSO for inadequate handling or processing of exemptions or equivalencies.
- NSO, LSO, LASO and SSO were not completing required FP assessments.



Questions?

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