

# DOE Construction Safety Advisory Committee Meeting

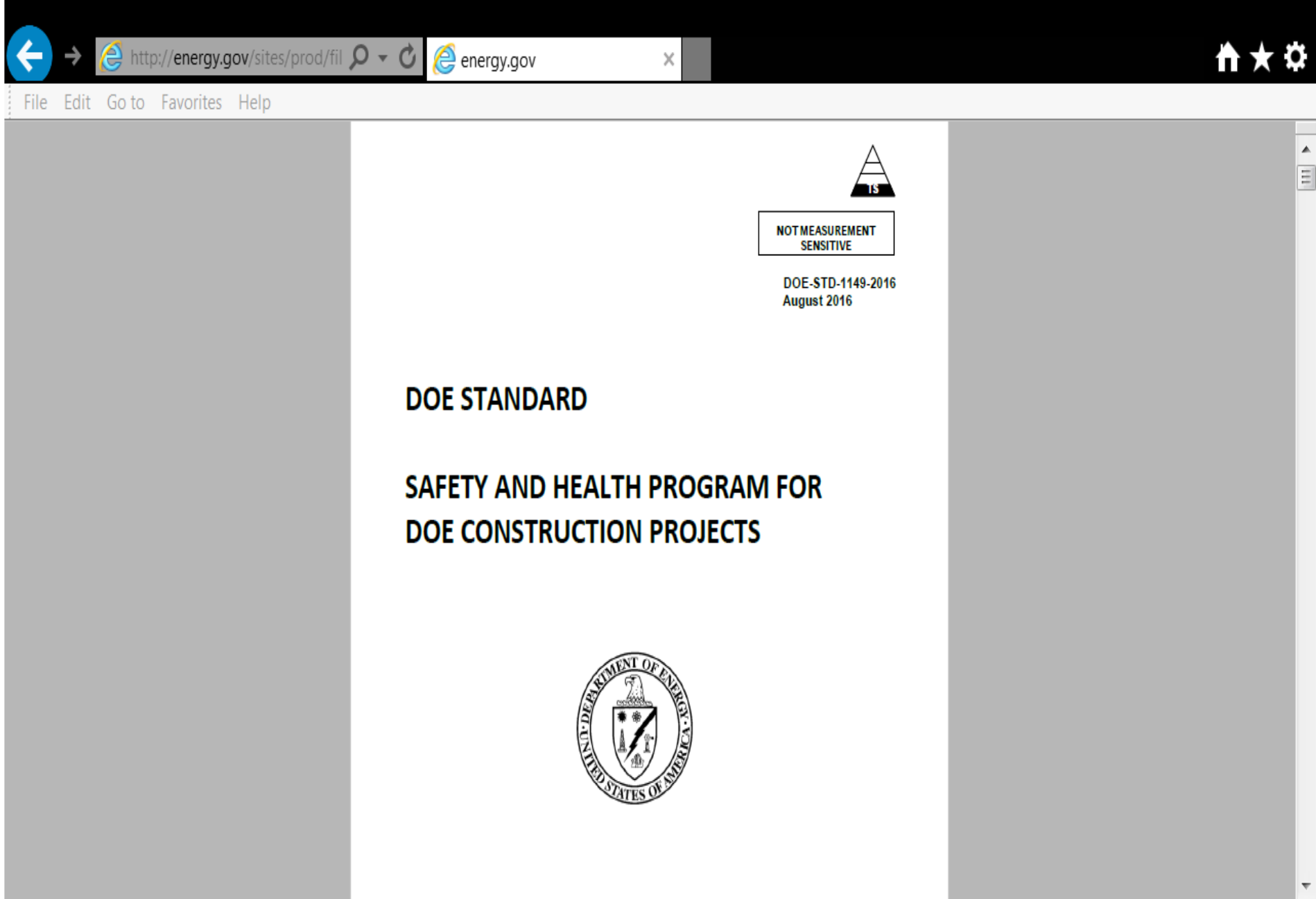
September 28, 2016

# **DOE Construction Safety Advisory Committee Meeting**

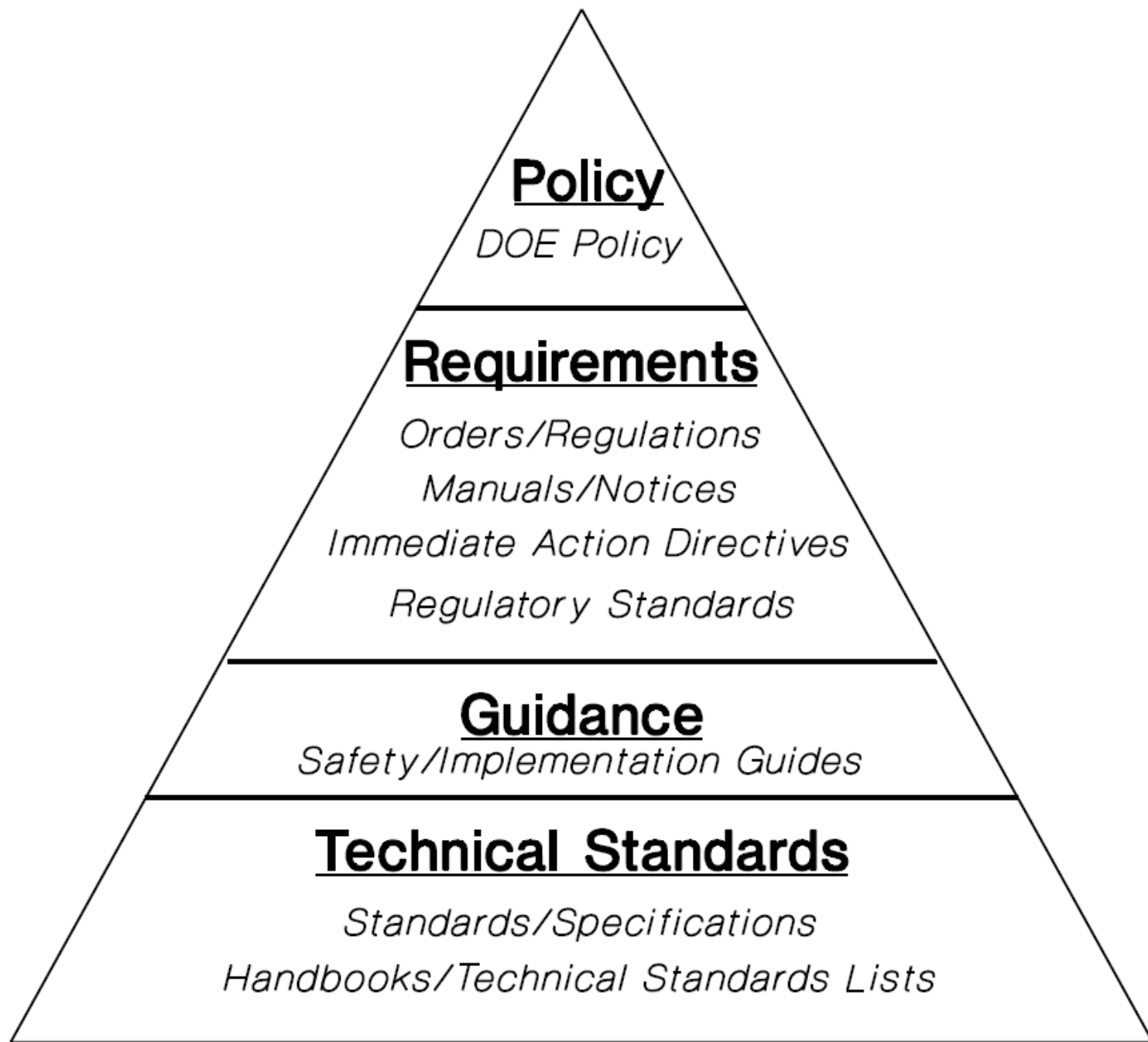
**September 28, 2016**

**10:00 AM – 12:00 PM Central Standard Time**

- 10:00-10:10 “Welcome and Introductions”-Craig Schumann, Chair
- 10:10-10:30 “DOE 10 CFR 851 vs. OSHA 29 CFR 1926”- Craig Schumann, Chair
- 10:30-11:00 “Understanding Confined Spaces in Construction- OSHA 1926 Subpart AA”- Tom Wirgau, Office of Construction Safety Training/OSHA Training Institute
- 11:00-11:30 “Lessons Learned from the 2015 Los Alamos Electrical Arc Flash Event” Jeff Williams, DOE Los Alamos Site Office
- 11:30-11:50 “Fall Protection Issues/Discussion”-Tom Rizzi and Scott Wenholz, DOE SLAC Site Office
- 11:50-12:00 “Closing Remarks/Comments”-Craig Schumann, Chair



***Posted on DOE website September 6***



DOE policy statements are the highest tier of DOE directives.

All other requirements and guidance should flow from Departmental policy.

The second tier includes the requirements documents, **such as Rules**, Orders, Notices, Manuals, Immediate Action Directives, and Regulatory Standards for implementing the top-level policy.

Although Rules cannot be overridden by DOE policy because they are enforceable by law, the Rules developed by DOE should flow from DOE policy.

The third tier includes the guidance documents (such as implementation guides and safety guides).

The guides discuss acceptable methods and approaches for implementing the requirements documents or for implementing Policies.

The fourth and last tier includes **technical standards** which describe established practices and procedures that may be used to implement specific requirements or objectives.

Technical Standards will address subjects which are applicable to multiple requirements documents such as the development of implementation plans for requirements.

DOE Technical Standards do not establish requirements. However, all or part of the provisions in a standard can become requirements under the following circumstances:

(1) they are explicitly stated to be requirements in a Rule, Order, Notice, Manual, Immediate Action Directive, or Regulatory Standard; or

(2) the organization makes a commitment to meet a standard in a contract or in a plan required by a Rule, Order, Notice, Manual, Immediate Action Directive, or Regulatory Standard (such as in an implementation plan).

DOE 10 CFR 851 vs.  
OSHA 29 CFR 1926

What is different?  
What is the same?

### **10 CFR 851.3**

Construction means combination of erection, installation, assembly, demolition, or fabrication activities involved to create a new facility or to alter, add to, rehabilitate, dismantle, or remove an existing facility. It also includes the alteration and repair (including dredging, excavating, and painting) of buildings, structures, or other real property, as well as any construction, demolition, and excavation activities conducted as part of environmental restoration or remediation efforts.

*Compared to OSHA's definition:*

### **29 CFR 1926.32(g)**

"Construction work." For purposes of this section, "Construction work" means work for construction, alteration, and/or repair, including painting and decorating.

**10 CFR 851 became effective:  
February 9, 2007**

What about pre-851?

**This final rule codifies the Department's worker protection program requirements established in DOE Order 440.1A, "Worker Protection Management for DOE Federal and Contractor Employees."**

6860 Federal Register / Vol. 71, No. 27 / Thursday,  
February 9, 2006 / Rules and Regulations

On February 9, 2006, DOE promulgated Part 851, which, in large part, codified DOE Order 440. IA, an Order that set forth comprehensive worker safety and health program requirements and was implemented through contractual agreements with DOE contractors. **Part 851 provides DOE with enforcement tools that were not previously available through Order 440. IA.**

*(February 1, 2007 letter to Savannah River Archaeological Research Program)*

As a general matter, DOE expects that, if contractors at a DOE site have fulfilled their contractual responsibilities for DOE Order 440.1A and ISM properly, **little, if any, additional work will be necessary to implement the written worker safety and health program required by this regulation.**

6860 Federal Register / Vol. 71, No. 27 / Thursday,  
February 9, 2006 / Rules and Regulations

**“DOE notes that the final rule is based on DOE Order 440.1A and replaces Attachment 2, “Contractor Requirements Document of the order.”**

Federal Register /Vol. 71, No. 27 /Thursday, February 9, 2006 /Rules and Regulations

...the final rule has been revised to closely follow the requirements in DOE Order 440.1A. Hence, DOE believes that **implementation of the final rule will result in minimal (if any) additional costs.**

6878 Federal Register / Vol. 71, No. 27 / Thursday,  
February 9, 2006 / Rules and Regulations

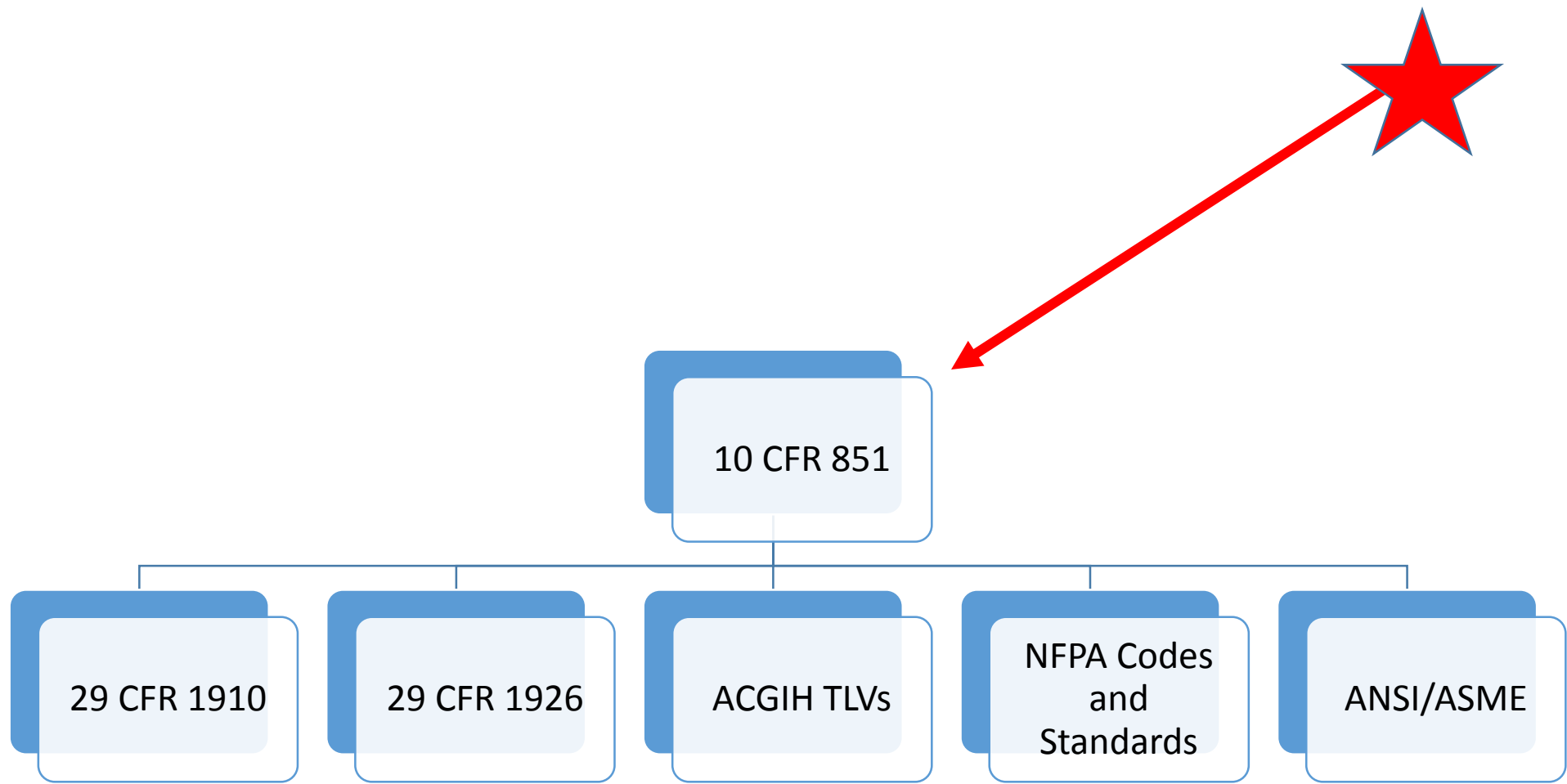
**NOTE: DOE Order 440.1A was approved on 3/27/98**

“the remaining standards in final rule section 851.23(a) are those required by the existing DOE Order 440.1A. **Most facilities should already be in compliance with these standards and, therefore, DOE does not anticipate increased costs.**”

Federal Register /Vol. 71, No. 27 /Thursday, February 9, 2006 /Rules and Regulations 6897

**...DOE Order 440.1A has been successfully and effectively implemented by DOE contractors for close to a decade.**

6860 Federal Register / Vol. 71, No. 27 / Thursday,  
February 9, 2006 / Rules and Regulations



“DOE notes that final rule section 851.20(b)(7) gives workers the right to express concerns about worker safety and health issues. DOE intends for this section to include all health and safety concerns, **not just hazards addressed by specific OSHA standards.**”

Federal Register /Vol. 71, No. 27 /Thursday, February 9, 2006 /Rules and Regulations 6891



## Appendix A to Part 851—Worker Safety and Health Functional Areas

### 2. Fire Protection

(b) An acceptable fire protection program...This includes meeting applicable building codes and National Fire Protection Association codes and standards.

# NFPA® 241

Standard for  
Safeguarding Construction,  
Alteration, and Demolition  
Operations

2013 Edition

## Appendix A to Part 851—Worker Safety and Health Functional Areas

### 2. Fire Protection

(b) ...This includes meeting applicable building codes and National Fire Protection Association **codes and standards.**



NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471  
An International Codes and Standards Organization

1926.34(b)

"Exit marking." Exits shall be marked by a readily visible sign. Access to exits shall be marked by readily visible signs in all cases where the exit or way to reach it is not immediately visible to the occupants.

### Compared to...

NFPA 241(Standard for Safeguarding Construction, Alteration, and Demolition Operations) states in 7.5.6.5 :

“All exit stairs shall be provided with stair identification signs to include the floor level, stair designation, and exit path direction as required to provide for safe egress.”

## What is a major difference in 10 CFR 851 vs. OSHA?

10 CFR 851.11 Development and approval of the worker safety and health program.

(a) Preparation and submission of worker safety and health program. By February 26, 2007, contractors must submit to the appropriate Head of DOE Field Element for approval a **written worker safety and health program that provides the methods for implementing the requirements of Subpart C of this part.**

As a general suggestion, one commenter (Ex. 6) recommended that supplemental proposed Subpart B be cross-walked against OSHA's 29 CFR 1910 and 29 CFR 1926 to identify potential overlaps and deviations between the OSHA standards and the proposed rule. DOE has considered the commenter's concern but believes such an effort would serve no useful purpose, as **the OSHA standards do not establish provisions for a safety and health program.**

Federal Register /Vol. 71, No. 27 /Thursday, February 9, 2006  
/Rules and Regulations 6877

The **rule applies directly to subcontractors.**

A contractor is not automatically liable for a subcontractor's violations.

Federal Register /Vol. 71, No. 27 /Thursday, February 9, 2006 /Rules and Regulations 6875

**DOE looks to the prime contractor for ensuring compliance by its subcontractors at the site.**

*DOE G 440.1-1B 13 (10-20-11)*

All contractors and subcontractors at any tier must be included in some fashion in an approved written WSHP.

The components of the written program addressing subcontractors and small DOE contractors may be tailored to the hazards and complexity of the work and the capabilities of the subcontractor or small DOE contractor.

*DOE G 440.1-1B (10-20-11)*

## Comparison of Worker Safety Standards under Federal OSHA Rules vs DOE's 10 CFR 851

- Written Worker Safety & Health Program – **OSHA does not require an overall written WS&H program.** By contrast, DOE requires contractors to develop a program to meet the requirements of the DOE's worker safety and health rule.
- Worker Involvement--10 CFR 851 requires management to develop a mechanism to involve workers in the development of the worker safety and health program. With the exception of the OSHA VPP Program and 29 CFR 119 "Process safety management of highly hazardous chemicals," where OSHA requires employers to "consult" with employees, **OSHA does not require management to have worker involvement.**
- Stop work procedures --**10 CFR 851 requires management to establish procedures to allow workers to "stop work"** or decline to perform tasks because of a worker's reasonable belief that the task poses an imminent risk or serious physical harm. **With the exception of 1926. 1418 (Subpart CC/Cranes and Derricks) where the operator has the authority to stop and refuse to handle loads,** OSHA can only ask management to stop tasks that pose serious physical harm, but if they do not comply, OSHA must seek relief from federal courts to actually stop work.

- *Chronic Beryllium Disease Prevention Program*—DOE's beryllium rule is enforceable under 10 CFR 850. OSHA's beryllium standard sets an exposure level of 2 ug/M<sup>3</sup> that was established in 1970. DOE's exposure threshold is 0.2 ug/M<sup>3</sup>, which is 10-fold more protective than OSHA.

**"I am personally very committed to issuing a final rule on beryllium," Michaels told S+H. "When I was at the energy department, I issued a final rule that is 10 times stronger than the OSHA standard, currently." (2016)**

- Consensus Standards--10 CFR 851 requires contractors to follow a number of consensus standards (i.e., NFPA, National Electric Code, ANSI Laser standard, etc) that are in many cases 20 years newer than those required by OSHA.
- DOE has identified 10 specific "Functional Areas" (i.e., **Construction Safety**, Fire Protection, Explosives Safety, Pressure Safety, Firearms Safety, Industrial Hygiene, Biological Safety, Occupational Medicine, Motor Vehicle Safety, Electrical Safety) of special interest. The requirements for the specific functional area apply only if the contractor is involved with these types of activities.
- There are also two areas that are reserved for the future: Nanotechnology and Workplace Violence.

- DOE Uses Updated Chemical Exposure Limits-- The OSHA Permissible Exposure Limits (1926.55) are based on the 1970 ACGIH Threshold Limit Values (TLVs) for chemical exposures. By contrast, **10 CFR 851 requires the use of the 2005 ACGIH TLVs.**
- **DOE's penalties are higher than OSHA's--DOE may issue penalties up to \$91,830 for each "serious" violation. (OE has elected to round the amounts slightly downward for ease of administration to \$90,000) OSHA may issue penalties up to only \$12,471 for each serious violation.**
- **For "other-than-serious" violations, DOE may issue penalties up to \$45,915 per violation (OE has elected to round the amounts slightly downward for ease of administration to \$45,000) as compared to OSHA, who may issue penalties only up to \$12,471 per violation.**

DOE received several comments related to the penalty structure described by section 851.5(a). These commenters (Exs. 16, 27, 37, 14, 39, 46) argued that the civil penalty structure under the rule, with its \$70,000 per violation maximum penalty, is **10 times higher than the OSHA penalty structure, and thus disproportionately sanctions DOE contractors compared to other U.S. industries.**

These commenters **believed OSHA's penalty structure should be used and felt the DOE structure was excessively burdensome** given the increased frequency of inspection that tends to be associated with DOE facilities.

**Initially it was \$70K-then \$75K in 2009 and it was raised to \$80 K effective February 2014 and is now \$90 K (effective 7/28/16)**

However, DOE notes that **all contractors, including subcontractors, are responsible for complying with Part 851** to the extent they are responsible for a covered workplace.

In another area related to subcontractor compliance, two commenters (Exs. 37, 47) **were concerned that increased contractor oversight and the potential penalties would have a negative impact on subcontractors and could discourage some subcontractors from performing work on DOE sites.**

DOE is required by statute to implement a worker safety and health program that covers all contractors, **including subcontractors.**

Federal Register /Vol. 71, No. 27 /Thursday, February 9, 2006 /Rules and Regulations 6883

## **What is the OSHA general duty clause?**

**This is used when there is no existing OSHA standard that covers the hazard.**

## **Does DOE have this?**

**10 CFR 851.10(a) parallels OSHA's general duty clause.**

***In addition to DOE's General Duty Clause: 10 CFR 851.10(a) there are some unique standards in 851:***

851.12 (b) “Nothing in this part precludes a contractor from **taking any additional protective action** that is determined to be necessary to protect the safety and health of workers.”

*The rule does not limit contractors from adopting means, methods and practices not specifically referenced in the rule, to protect the safety and health of workers if provisions of the rule do not adequately protect workers...contractors will generally be held responsible if a condition presents a hazard to which workers are exposed, the hazard is recognized, the hazard is causing or has the potential to cause death or serious physical harm, and feasible and useful methods exist to correct the hazard.  
(851 FAQ 10/19/2010)*

851.23 (b) “Nothing in this part must be construed as relieving a contractor from **complying with any additional specific safety and health requirement** that it determines to be necessary to protect the safety and health of workers.”

**Does 851 require compliance  
with all of the OSHA  
standards?**

# NOT COMPLETELY...in 10 CFR 851.23 it says comply with:

(a) (2) Title 29 CFR, Parts 1904.4 through  
1904.11, 1904.29 through 1904.33;  
1904.44, and 1904.46, “Recording and  
Reporting Occupational Injuries and  
Illnesses.”

*This does not include all of 1904.*

And...

## **10 CFR 851.23 Safety and health standards.**

(a) Contractors must comply with the following safety and health standards that are applicable to the hazards at their covered workplace:...

(3) Title 29 CFR, Part 1910, “Occupational Safety and Health Standards,” excluding 29 CFR 1910.1096, “Ionizing Radiation, and 29 CFR 1910.1000, Beryllium

(7) Title 29 CFR, Part 1926, “Safety and Health Regulations for Construction.”

If you look at this closely there are no exclusions in 1926 . The construction regulations of 29 CFR Part 1926 does not exclude 1926.53 “Ionizing Radiation,” but it was never the intent to regulate ionizing radiation as 10 CFR 835 covers it.

## And 851 does not incorporate 29 CFR 1903...

1903.2(a)(1)

Each employer **shall post and keep posted a notice** or notices, to be furnished by the Occupational Safety and Health Administration, U.S. Department of Labor,...

1903.2(a)(3)

Reproductions or facsimiles of such Federal or State posters shall constitute compliance with the posting requirements of section 8(c)(1) of the Act where such reproductions or facsimiles are at least 8 1/2 inches by 14 inches, and the printing size is at least 10 pt.



# Job Safety and Health

## It's the law!

### EMPLOYEES:

#### Must have access to:

- DOE safety and health publications;
- The worker safety and health program for their location;
- This safety and health poster;
- Copies of their medical records and records of their exposures to toxic and harmful substances or conditions; and
- Results of inspections and accident investigations.

#### Must be able to:

- Express concerns related to worker safety and health;
- Decline to perform an assigned task because of a belief that the task poses an imminent risk of death or serious physical harm;
- Stop work in imminently dangerous conditions; and
- Anonymously request an investigation.

### EMPLOYERS must:

- Establish a written Worker Safety and Health Program;
- Use qualified worker safety and health staff;
- Provide mechanisms to involve workers and their elected representatives in developing the safety and health program;
- Establish procedures for workers to report without reprisal job-related hazards and for prompt response to such reports;
- Provide for regular communication with workers about workplace safety and health matters; and
- Display this poster in the workplace where it is accessible to all workers.

#### This poster is available at:

[www.energy.gov/ehss/downloads/job-safety-and-health-poster](http://www.energy.gov/ehss/downloads/job-safety-and-health-poster)

#### 10 CFR 851, *Worker Safety and Health Program*, is available at:

[www.energy.gov/ehss/worker-safety-and-health-program-10-cfr-851doe-o-4401b](http://www.energy.gov/ehss/worker-safety-and-health-program-10-cfr-851doe-o-4401b)

#### How to Request an Investigation:

Employees have the right to request, anonymously if desired, the Office of Enterprise Assessment's Office of Enforcement to conduct an investigation of potential regulatory violations. Employees can make the request at: [www.energy.gov/ea/request-investigation-or-inspection-safety-or-classified-information-security-violations](http://www.energy.gov/ea/request-investigation-or-inspection-safety-or-classified-information-security-violations).

DOE encourages employees to use local employee concerns processes before requesting an enforcement investigation.

For more information, contact:



But there is a requirement for this DOE poster..

10 CFR 851.20(a)(10):

“Inform workers of their rights and responsibility by appropriate means, **including posting the DOE-designated Worker Protection Poster** in the workplace where it is accessible to all workers.”

## Do employees get fined by OSHA?

Section 5(b) of the Act states: “Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to the Act which are applicable to his own actions and conduct.”

**The Act does not provide for the issuance of citations or the proposal of penalties against employees.** Employers are responsible for employee compliance with the standards.

## **Do employees get fined by DOE?**

The commenter (Ex. 48) also asked for clarification regarding whether contractor employees are subject to civil penalty under the rule.

**DOE confirms that contractor employees are not subject to civil penalty;** however, under section 851.20(a)(3) contractors are required to assign worker safety and health responsibilities, evaluate personnel performance, and hold personnel accountable for worker safety and health performance.

Federal Register /Vol. 71, No. 27 /Thursday, February 9, 2006  
/Rules and Regulations 6875

## An example of a significant difference...

851.23 (a) Contractors must comply with the following safety and health standards that are applicable to the hazards at their covered workplace:

(13) National Fire Protection Association (NFPA) 70, “National Electrical Code,” (2005) (incorporated by reference, see § 851.27).

(14) NFPA 70E, “Standard for Electrical Safety in the Workplace,” (2004) (incorporated by reference, see § 851.27).

***This is not in OSHA 1926***

**OSHA 1926. 404 (b)(1)(i) states:**

“The employer shall use either ground fault circuit interrupters as specified in paragraph (b)(1)(ii) of this section or an assured equipment grounding conductor program as specified in paragraph (b)(1)(iii) of this section to protect employees on construction sites.”

However, 10 CFR 851.23 states that Contractors must comply with National Fire Protection Association (NFPA) 70, “National Electrical Code,” (2005).

NFPA 70 Article 590.6 requires GFCI protection on all 125 volt 15,20 and 30 ampere receptacles-it does not allow the AEGCP on construction sites.

**Here is an example where two mandatory standards,  
NFPA 70 and 29 CFR 1926 conflict.**

851.24 Functional areas.

(a) Contractors **must have a structured approach to their worker safety and health program** which at a minimum, include provisions for the following applicable functional areas in their worker safety and health program:  
**construction safety...**

(b) In implementing the structured approach required by paragraph (a) of this section, **contractors must comply with the applicable standards and provisions in Appendix A of this part, entitled “Worker Safety and Health Functional Areas.”**

## **Now the specific construction requirements of 851...**

### Appendix A to Part 851—Worker Safety and Health Functional Areas

This appendix establishes the mandatory requirements for implementing the applicable functional areas required by 10 CFR 851.24.

#### 1. Construction Safety

(a) For each separately definable construction activity (e.g., excavations, foundations, structural steel, roofing) the construction contractor must:

(1) Prepare and have **approved by the construction manager an activity hazard analysis prior to commencement** of affected work.

Such analyses must:

- (i) Identify foreseeable hazards and planned protective measures;
- (ii) Address further hazards revealed by supplemental site information (e.g., site characterization data, as-built drawings) provided by the construction manager;
- (iii) Provide drawings and/or other documentation of protective measures for which applicable Occupational Safety and Health Administration (OSHA) standards require preparation by a Professional Engineer or other qualified professional, and
- (iv) **Identify competent persons** required for workplace inspections of the construction activity, where required by OSHA standards.

***This is not in OSHA 1926***

(b) During periods of active construction (*i.e.*, excluding weekends, weather delays, or other periods of work inactivity), the construction contractor must have a designated representative on the construction worksite who is knowledgeable of the project's hazards and has full authority to act on behalf of the construction contractor.

The contractor's designated representative must make frequent and regular inspections of the construction worksite to identify and correct any instances of noncompliance with project safety and health requirements.

*This specific language is not in OSHA 1926. However, 1926.20(b)(2) does state: "Such programs shall provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by the employers."*

(c) Workers must be instructed to report to the construction **contractor's designated representative**, hazards not previously identified or evaluated. If immediate corrective action is not possible or the hazard falls outside of project scope, the construction contractor must immediately notify affected workers, post appropriate warning signs, implement needed interim control measures, and notify the construction manager of the action taken.

**The contractor or the designated representative must stop work in the affected area until appropriate protective measures are established.**

***This is not in OSHA 1926***

(d) The construction contractor must prepare a **written construction project safety and health plan** to implement the requirements of this section and **obtain approval of the plan by the construction manager** prior to commencement of any work covered by the plan.

In the plan, the contractor **must designate the individual(s)** responsible for on-site implementation of the plan, **specify qualifications for those individuals**, and provide a list of those project activities for which subsequent hazard analyses are to be performed.

The **level of detail** within the construction project safety and health plan should be commensurate with the size, complexity and risk level of the construction project.

The content of this plan need not duplicate those provisions that were previously submitted and approved as required by § 851.11.

***This is not in OSHA 1926***

**Appendix A to Part 851—Worker  
Safety and Health Functional Areas  
1. Construction Safety**

(a)(1) Prepare and have **approved by the construction manager** an activity hazard analysis

(d) The construction contractor must prepare a written construction project safety and health plan to implement the requirements of this section and **obtain approval of the plan by the construction manager**

**Who is the construction manager?**

### **851.3 Definitions**

Construction manager means the individual or firm responsible to DOE for the supervision and administration of a construction project to ensure the construction contractor's compliance with construction project requirements.

For construction, does OSHA 1926 require a written safety program?

Yes.. but only in “Hazardous Waste Operations and Emergency Response”:

1926.65(b)(1)(i) Employers shall develop and implement **a written safety and health program** for their employees involved in hazardous waste operations.

*Can OSHA cite employers for lack of a written program in other areas besides 1926.65?*

Yes- they will cite:

1926.20(b)(1)

It shall be the responsibility of the employer to initiate and maintain such programs as may be necessary to comply with this part.

1926.20(b)(2)

Such programs shall provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by the employers.

There is an OSHA directive on this:

**STD 03-01-001 Title: Clarification of Citation Policy 06/22/1987**

2. Program deficiencies such as lack of management policy, safety and health rules, inadequate assignment of responsibility, or poor employee awareness/participation shall be discussed with the employer.

However, employers should be encouraged to implement a formal safety and health training program with the guidelines in Appendix A.

## What are OSHA's 1926 training requirements?

The general requirement is 1926.21(b)(2):

“The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury.”

***In addition there are specific training requirements for fall protection, powered industrial trucks, hazard communication, hazardous waste; scaffolds, cranes ,ladders, etc.***

## Compared to DOE:

851.25 Training and information.

(a) Contractors must **develop and implement a worker safety and health training and information program** to ensure that all workers exposed or potentially exposed to hazards are provided with the training and information on that hazard in order to perform their duties in a safe and healthful manner.

*“If a subcontractor works under the contractor’s WSHP, then the contractor’s WSHP should describe the approach and process used to flow down the training program requirements to the subcontractor.”  
(851 FAQ 10/19/2010)*

The final rule as specified in section 851.23 requires compliance with OSHA standards (including standards that specify training requirements).

In addition, the final rule contains more detailed provisions for training, in final rule section 851.25, which requires **employers to implement a training program for workers.**

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## In summary:

Two requirements of 10 CFR 851 that are particularly noteworthy are the requirements for a written construction project safety and health plan, and the need to perform detailed activity hazard analyses that identify potential hazards posed by each phase of a construction project and identify the precautions the contractor will take to control those hazards.

The written plan required by 10 CFR 851 is not a generic document that lists general safety rules such as mandatory wearing of long-sleeved shirts, hard hats and safety glasses.

Rather, it must be a “site-specific written project safety and health plan... This plan is the construction contractor’s proposal for implementing the safety and health requirements prescribed by the construction project acquisition documents.” *DOE-STD-1149-2016*

*In the 851 Guide it says:*

*To avoid confusion, it was decided to use the word “program” to describe the safety and health requirements and the word “plan” to describe the contractor's project-specific written proposal to implement these requirements.*

Any questions?

Please contact Craig Schumann

[craig.schumann@science.doe.gov](mailto:craig.schumann@science.doe.gov)

630-252-9176