

Construction News Sense



How Different is Sandia National Laboratories (SNL) Construction Than Construction Outside of the Site?

The oversight model at SNL is significantly different than standard construction. Does this effort change our risk profile?

The Occupational Safety and Health Administration (OSHA) gives the vast majority of violations (resulting in citations) from targeted inspections, employee complaints, and post-accident investigations. These citations are lagging indicators of safety and are related to direct causes of construction accidents that were both reported and generally significant in nature.

SNL receives data from many sources that show a greater emphasis on proactive, leading indicators. OSHA citations must be linked to an actual violation of regulation and must meet a detailed administrative process. Conscientious “owners” of construction processes understand the consequence of significant events and the moral responsibility to manage higher-risk activities.

The figure below shows some of the data used to trend and track construction activities at SNL.

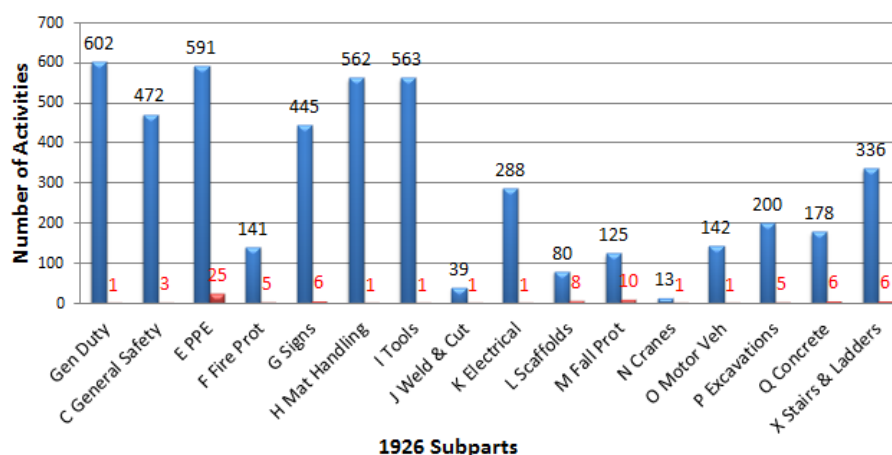
Compliant vs. Non-compliant Observations OSHA 1926 for July – September 2012



643 Total Construction & Service Observations

5431 Total 1926 Compliant Activities

■ Compliant Activities = 4777 ■ Non-compliant Activities = 80



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Top 5 OSHA Most Cited Violations for FY2012 and Other Enforcement Initiatives

1. Fall Protection (1926.501): This standard outlines when fall protection is required, which systems are appropriate for given situations, the proper construction and installation of safety systems, and the proper supervision of employees to prevent falls. It is designed to protect employees on walking/working surfaces (horizontal or vertical) with an unprotected side or edge above 6 feet.
2. Hazard Communication (1910.1200): This standard addresses the hazards of chemicals produced on the workplace and imported into the workplace. It also governs the communication of those hazards to workers.
3. Scaffolding (1926.451): This standard covers general safety requirements for scaffolding, which should be designed by a qualified person and constructed and located in accordance with that design. Employers are required to protect construction workers from falls and falling objects while working on or near scaffolding at heights of 10 feet or higher.
4. Respiratory Protection (1910.134): This standard directs employers on establishing or maintaining a respiratory protection program. It lists requirements for program administration; worksite-specific procedures; respirator selection; employee training; fit testing; medical evaluation; respirator use; and respirator cleaning, maintenance and repair.
5. Ladders (1926.1053): This standard covers general requirements for all ladders.

As seen from the graph, the most common noncompliance identified during Facilities Management and Operations Center (FMOC) inspections is related to personal protective equipment (PPE). This is consistent with Behavior Based Safety (BBS) observations because improper PPE is commonly identified as unsafe behavior. OSHA citations often result in corrective actions, but sometimes these actions are taken after an injury has occurred. Leading indicators such as FMOC compliance and BBS observations can identify issues before an injury occurs.

While we can clearly see the differences in performance in construction safety both from an injury and oversight standpoint, we as a team need to work on continuous improvement processes. SNLs total recordable case rate (TRCR) for construction is 1.02 and the overall construction industry TRCR is 4.7. We believe the use of leading indicators to identify problems before an injury takes place contributes significantly to this low TRCR. Construction practices continue to change and become more sophisticated; this why we need to adjust quickly, understand what the data is telling us, and communicate effectively. As we continue to understand the balance for frequency of noncompliance and risk of a single point failure, we will need to adjust our overall program.

Greg Kirsch, FESH Lead, 4844

REMINDER: The next Quarterly Construction Safety Seminar is scheduled for January 23, 2012 from 2:00 – 4:00, Mountain View Club, Sandia 1.

See you there! Happy Holiday's

