

Sandia National Laboratories



Construction News Sense

Just One More Thing... = Watch Out!

One of my favorite television characters is Lieutenant Columbo, the unkempt, apparently bumbling homicide detective portrayed by the actor Peter Falk. Despite his superficial appearance, Columbo was actually a brilliant detective who could organize small details in a way that would lead to solving a seemingly "perfect" crime. One of Columbo's most notable techniques consisted of conducting a rather low-key interview of the suspect and then leaving. Columbo would either stop in the doorway or would quickly come back and ask the suspect a question beginning with the phrase, "Just one more thing..." The suspect would be caught off guard and would admit to something that would ruin their alibi or otherwise implicate them in the murder. Just like Columbo's suspects, we can be caught off guard by being asked just one more thing. How many times have we been about ready to go to lunch, or home for the day, and the foreman comes up and asks us to do just one more thing? While I don't recommend you tell your foreman to take a hike, this is a situation that demands caution.

We can be caught off guard by other situations. For example, we arrive at a work site and sometimes find that the documentation doesn't match what we see. Other times we find that we do not have the correct supplies or tools for the job, or we need to use unfamiliar equipment or materials.

We may plan carefully for a highly visible or very difficult activity, but let our guard down for the more routine, less difficult activities that follow. I call a situation like this a "Watch out!" When something like this happens, do we think carefully about how to do the job, or do we just hurry up and try to get it done?

A "Watch out!" is a time when we often become distracted and don't consider safety. We don't recognize that the situation has become more hazard-

ous. We may even believe that the changes will make the job easier. A recent activity which resulted in an injury to a contractor worker is an example of a "Watch out!"

A contractor pipefitter, along with two other contract workers, was installing a 10-inch polyvinyl chloride (PVC) pipe as part of a cooling tower repair. At the time of the injury, the worker had both hands on the flange while helping to position the PVC pipe. The 10-inch PVC pipe became free from an obstruction (another pipe or a pipe hanger) and shifted. The flange rotated, pinching the tip of the left little finger of the pipefitter between the flange and an existing 10-inch carbon steel pipe, resulting in a laceration and nerve damage to the finger. The contract workers have extensive experience with handling steel pipe but the contractor's experience with large PVC pipe with movable flanges is very limited. This incident illustrates several "Watch Out!" situations. Contract workers analyzed hazards and controls such as fall protection and hoisting and rigging, but did not analyze hazards specific to PVC pipe. Such specific hazards include the different type of flange and the slipperiness of the pipe. In addition to differences presented by the use of PVC pipe, the congested nature of the work site presented issues with methods used to move the pipe. Two chain falls were used to lift the pipe, but at the time of the injury, only one chain fall was supporting the pipe. Also, workers used a rope as a tag line to help position the pipe rather than hands-on manipulation.

What "Watch out!" situations do you see at your job sites? These situations don't prevent us from doing work, but like Columbo's suspects, we can get caught off guard.

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Content Owner: Greg Kirsch, Org. 04844

Are You Developing Your Next Supervisor?

The Facilities Management and Operations Center (FMOC) continues to see a weakness in field supervision. Our contract states that there must be an authorized person in charge **on each job site**. We often get this confused with a superintendent. On a two-man crew, this could be the lead journeyman. On larger jobs, this could be a delegated superintendent. This person is authorized by the company and has the knowledge needed to identify hazards and address the controls for all personnel, including subcontractors. The pre-task plan review is a key function for this job.

In the construction industry we have been painfully aware of the need for more employees who can oversee work operations (supervisors) that include schedule, cost, customer interface, and of course safety. There has never been a greater need than now for personnel to adapt from the craft level (technical) to a supervisor (managerial) and back to a craft level. What makes this an even greater issue is the complexity of work controls at Sandia. This site falls under unique requirements such as 10 CFR 851, the *Worker Safety and Health Program*; American Conference of Governmental Industrial Hygiene® Threshold Limit Values®; permits (excavation/penetration/hotwork); outage requests; hoisting and rigging; National Fire Protection Association (NFPA®) 70E, *National Electrical Code®*, and so forth. The oversight of subcontractors and manufacturer's representatives is a critical corporate responsibility that often falls on the supervisor.

We all know intuitively that supervisory methods can make dynamic differences in efficiency, quality, and safety within a company. Almost everyone can identify the qualities of good and bad supervisors and the effectiveness of the job site. A fact that is often lost is that most companies promote personnel who possess strong production skills. These skills, however, do not translate into consistent supervisory methods. This article is an opportunity to review the expectations of construction supervisors at Sandia.

The FMOC would like to take the time to identify the potential gap and address supervisory improvement in specific methods. Four causes contributed to the occurrences: (1) Tasks and individual accountability were not made clear to the worker. (2) Progress and status of the task was not adequately tracked. (3) Direct supervisory involvement in the task interfered with overview role. (4) The assignment did not consider the worker's need to use higher-order skills or experience at the site.

Standard Construction Specification 01065, *ES&H for Construction Contracts*, communicates the following:

Prime Contractor Superintendent or Delegate: Shall directly superintend the work at all times during performance of this contract (excluding periods of work inactivity), and until the work is completed and accepted.

1. Superintendent or Delegate shall be knowledgeable of the project's hazards and have full authority to act on behalf of the construction contractor.
2. Superintendent or Delegate shall perform frequent and regular inspections of the construction worksite to identify and correct any instances of noncompliance with the Contract-Specific Safety Plan (CSSP).
3. Workers of all tiers shall be instructed to report hazards not previously identified or evaluated to the Superintendent or Delegate. If immediate corrective action is not possible or the hazard falls outside of project scope, Superintendent or Delegate shall immediately notify affected workers, post appropriate warning signs, implement necessary interim control measures, notify the Construction Observer of the action taken.

Opportunities to improve supervisory methods include these basic training objectives:

- Defining clear roles and responsibilities
- Tracking progress/status of task adequately
- Determining appropriate level of in-task supervision prior to task
- Ensuring direct supervisory involvement in task does not interfere with overview role
- Emphasizing schedule balanced with sound methods and performing the work well and thoughtfully
- Properly communicating job performance, and self-checking standards
- Considering concurrent tasks assigned to worker
- Assessing frequent job or task "shuffling" for risk
- Considering worker's ingrained work patterns, previous tasks, and need to use higher-order skills when making assignments
- Interacting with personnel frequently enough to detect work habit/attitude changes
- Providing feedback on positive performance

The question is, are you developing new supervisors for times when there is a high work demand and attrition?

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