EFCOG BEST PRACTICE #33

Effective Use of Time Outs – A Best Practice Summary (SRS)

(3/21/05)

Facility: Westinghouse Savannah River Company

Point of Contact: Rod Hutto 803-952-9816, rod.hutto@srs.gov

Brief Description of Best Practice:

When changing or unexpected conditions occur during the course of work execution, including routine operations, or when workers do not understand how to perform an activity, time outs and stop work actions provide an opportunity to assess the situation and determine if it impacts the hazards associated with the work. Sharing information about time outs and stop work events reinforces management's expectations for and support of this important task-level safety technique and highlights the positive effects of time outs as well as the various types of situations in which time outs may be used, including quality assurance activities.

Why the Best Practice was used:

Although all requirements and job plans are developed with the participation of knowledgeable personnel and may even include mockups or dry runs, employees sometimes encounter situations in which the rules or plans either cannot be performed at all or cannot be performed safely. Time outs and/or stop work actions provide employees with a process to identify and evaluate a given situation, with assistance as necessary, to determine how to safely proceed with the work.

What are the benefits of the Best Practice:

Initiation of either a time out or stop work is used to clarify requirements and instructions as well as to address situations in which the rules or plans either cannot be performed at all or cannot be performed safely. Use of time outs and stop work is promulgated to all site subcontractors and their suppliers such that anyone performing work at the site may use this technique.

What problems/issues were associated with the Best Practice:

Use of time outs and stop work must be paired with adequate oversight, supervision and attention to detail for safe work execution.

How the success of the Best Practice was measured:

The following examples highlight the value of time outs and stop work actions when conditions warrant them and as a process for iterative application of the ISM steps.

Description of process experience using the Best Practice:

EFCOG BEST PRACTICE #33

Effective Use of Time Outs – A Best Practice Summary (SRS)

(3/21/05)

A two-hour timeout was called in a bagless process area when a convenience can could not be opened using normal methods. Operations were temporarily suspended until the potential hazards that could be encountered using an alternative opening method were adequately addressed. The can was then opened safely.

Construction personnel working on the Modular Caustic Side Solvent Extraction Unit project called a timeout when they recognized the soldering they were about to perform could potentially damage seals or fittings on an adjacent valve that was being used as a lockout point. A failure of the valve would have compromised the safety boundaries of the lockout. The lockout was revised to relocate the isolation point to an upstream valve, and work resume safely.

Team members called a time out when a line break inside a glovebag resulted in more liquid than expected. Team members determined that the wet tap had become plugged or trash had built up in the line to create blockage. As a result, the team determined that all line breaks performed would have a drain and poly bottle attached to the glovebag.

Workers called a timeout during TRU repackaging work when they observed that the streamers on the door louvers for the truck well airlock indicated inadequate airflow. Smoke tests were performed and the airflow issue was corrected.

An Outside Facilities team called a timeout when they noted that a portable pump was generating more noise than previous generators. The team contacted Industrial Hygiene to perform a noise survey, and the procedure was revised to require hearing protection within 12 feet of the generator when it is running.

A timeout was called after a QA Inspector performed a material verification on a rotometer package that previously had been approved for installation and discovered potential mechanical issues. This action avoided the improper installation of equipment.

A Material Characterization Team called a timeout when contamination in excess of expected levels was detected near the room exhaust. Operations were suspended while the possible source of the contamination was discussed. Decontamination efforts were performed before resuming work in the area.

A deactivation team called a timeout while X-raying dissolver equipment on the sixth level of FB Line when they discovered that a ladder was needed to complete the work. Since there was no discussion of ladder or possible hazards associated with ladder usage during the pre-job briefing, it was determined that there would be a scope change if a ladder were used. A decision was made to only perform the work that did not require a ladder. The additional work was rescheduled for a later date.

A deactivation team called a timeout when condensation was found in the high pressure

breathing air system. All personnel on the system exited the area and Industrial Hygiene was contacted for moisture analysis. Normal work was resumed after the system was drained.

A timeout was called during repackaging activities after a rigger noticed the wooden floor of an inner container had rotted. The repackaging team attempted to slide the inner container over a skid plate to provide additional strength during transport. A second timeout was called when total failure of the inner container occurred during placement on the skid plate. The team then developed a alternative method to remove the failed inner container and its contents.

During startup of an evaporator, the feed pump showed abnormal current readings as the flow control valve position changed. The conductivity probe for the feed pump riser also alarmed during attempts to flush the prime line. A timeout was taken to visually inspect the feed pump riser, determine if the conductivity probe was in the proper location, and revise the conductivity probe alarm response procedure to allow evaporator restart, without taking an unnecessary risk of damaging the feed pump.

While relocating a tank riser mining tool, personnel realized the containment sleeving arrangement could be improved to allow workers to be positioned further from the tool during removal. A timeout was called to revise the work planning documents and modify the sleeving. In addition, personnel recognized the potential to cause a cooling water monitor alarm during the work activities and took a timeout to coordinate with Canyon personnel to prevent an unexpected alarm.

Operation personnel were preparing to install a repair plug in a canister using a procedure that specified a small paint brush with a lanyard attached be used to apply a thin film of fluid inside the canister throat. However, the paint brush in the Melt Cell did not have a lanyard and the personnel determined that the potential existed for the paint brush to drop inside the canister, where it could not be retrieved. A timeout was called to obtain the correct paint brush with lanyard for the job.

During set up to begin cold chemical preparations inside a hot cell, a lab technician noticed water dripping inside the cell from above the window. She stopped work and notified her manager since the source of the water was unknown. It was determined that condensate was dripping from the vent in the ceiling of the cell.

When higher-than-normal radiation rates required recycling overheads from an evaporator back to the feed tank to flush the system, engineering called a timeout to evaluate the quantity of liquid that could be added safely to the feed tank without adversely impacting tank chemistry because the evolution was expected to result in greater than normal recycle quantities.

RadCon personnel called a timeout during a pre-job survey before cleaning a valve house when they detected unexpected contamination associated with a mud dauber nest. The nest

was removed, insecticide applied and the area decontaminated before work was allowed to continue.

While performing a HEPA efficiency test, the Maintenance HEPA testing crew took a timeout when they received readings implying the crew was not getting the challenge aerosol into the HEPA ventilation system. The crew notified supervision.

Workers called a timeout while removing plastic from a tank HEPA filter containment system after surveys revealed transferable contamination on the hut floor and HEPA filter door. The contamination levels exceeded the RWP suspension limits for the job. Personnel also questioned the integrity of the HEPA filter enclosure when they observed that the bolts securing the door appeared to be loose. The HEPA housing door fasteners and system operability were verified, the area was decontaminated, and a surveillance schedule was implemented.

ISM Core Function and Guiding Principle to Which the Best Practice Relates
Core Function 1: Define Scope of Work
Core Function 2: Analysis of Hazards
Core Function 3: Develop and Implement Hazard Controls