

September 15, 2010

“Near Catastrophic Event” At Watts Bar Proves the Need for Stronger Human Performance Tool Use

What Happened & Why Is It Significant:

Watts Bar Operations personnel were tagging-out electrical equipment in Unit 2. **The tag-out process is designed to ensure worker’s safety and make certain that electrical equipment is de-energized prior to conducting maintenance or testing.**

Prior to starting planned maintenance work electricians conducting “live-dead-live” checks on the tagged-out equipment determined that equipment did in fact have electrical voltage present. A walk down of the actual tagged-out equipment identified that two of the breakers were improperly tagged in the “**ON**” (energized) position. The intended position for the breakers was to be the “**OFF**” (de-energized) position. The live-dead-live check is a human performance defense that, **when properly done**, ensures no one works on energized equipment.

This event needs get everyone’s attention and serve as a sober reminder of just how critical proper use of human performance tools and defenses are in the workplace.

How Did It Happen & Why Are You Telling Me:

An investigation into the event has determined that the operators involved in placing the tags did not recognize that the electrical breakers in question were mounted upside down in the cabinet nor did they perform **STAR** to verify their actions were correct even though the breakers were mounted upside down. The **ON** and **OFF** position indications are clearly labeled on the breaker. The operators placed the tags on the breakers in the ON position rather than the OFF position. Another significant breakdown occurred when a “concurrent verification” performed by a second operator failed to identify the human error. It should be noted that independent verification is the correct verification process to be used and the use of **STAR** would have caught the issue during the implementation of the clearance.

The event was significant enough that all work was stopped and a walk-down was conducted to determine if any other deficiencies existed on tagged equipment. A prompt incident investigation was started and the workers involved are restricted from performing tag-outs. A QHEAT is in progress since this was a human performance event and all Watts Bar Operations personnel were briefed on this event and the critical importance of performing proper verification and self checking.

Just yesterday a similar site-wide communication was issued about an inadvertent operation of a 120-volt electrical breaker due to a human performance error. That event resulted in vital equipment going out of service. In yesterday’s communication we talked about the critical role that human performance tools and safe behaviors have on performance, these include:

- Being an “**engaged**” and “**thinking**” organization, team and employee
- Always, regardless of task, maintain a “**healthy uneasiness**” to avoid overconfidence and complacency.
- Make it your life’s mission to identify, prior to the start of a task, what things could go wrong, what problems could be encountered and what defenses must be in place to avoid human errors, which can lead to an operational event like this.

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Human Performance Tools are Not Optional!

A site-wide stand-down is planned to discuss the event and the missing safe behaviors and human performance errors. A Problem Evaluation Report has been written and entered into the CAP process. The initial cause appears to be inattention to detail by operator by not using the human performance tools and improper verification of breaker position. The supervisor failed to execute their responsibilities: the unique arrangement of the breakers was known but was not communicated to the workers.

How Could This Incident Have Been Prevented:

The **ENGAGEMENT** of supervisors to ensure workers are adequately equipped to perform tasks and to ensure workers **THINK** about what they are doing is absolutely mandatory. Workers must consider each and every task as a potential for error or injury and enter the workplace with a keen respect for the consequences of their actions.

Had the workers used Touch STAR, this event would not have occurred.

Had the supervisor provided information regarding the unique arrangement of the breaker, this event might not have occurred.

What Can The NGP Fleet Learn From This Event:

There is clearly an opportunity to learn from this event and ensure electrical equipment is properly tagged prior to performing this type of evolution correctly. The breaker position while different is visible and as such requires going slowly and using proper verification techniques. The event demonstrates the critical importance of using our human performance tools to protect ourselves, our friends, our co-workers, as well as the plant. It also demonstrates why you never assume equipment is safe to work on just because it is “tagged out.”





