



NWI Consulting, LLC



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# Human Performance Improvement

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## NWI Offers Human Performance Job Performance Measures (JPMs): “Hands-On Training”

With the topic of Human Performance proving as such a critical platform in today's workforce, NWI consulting has created several learning tools that can be customized to individual industries and locations. Our Human Performance tool-kit includes technical laboratory instructor guides that will guide an instructor on using the tools to; 1) effectively deliver laboratory exercises (e.g., laboratory-style training at locations containing plant equipment mock-ups for different work activities sometimes referred to as dynamic learning activities), 2) coach students not proficient in tool usage, 3) evaluate candidates for mastery in the use of the tools, and 4) evaluate candidates for an understanding of when to use the tools. In short, the Human Performance tool kit includes JPMs

(job performance measures) checklists that specifically guide the student and evaluator through each HU tool step (including specific site-tailored management expectations) yielding consistent performance outcomes. The results include student demonstration and proficiency evaluation for certification on top industry standard Human Performance error prevention techniques. NWI can dove-tail these techniques into a computer (CBT) or web-based training (WBT) program for refresher training opportunities and individualized certification efforts. NWI clients have significantly different mockups and equipment and therefore JPMs need



**Have you ever felt that tackling HU issues is like climbing Mt. Everest?**

to fit the actual equipment available to avoid costly additions. These HU JPMs can be designed to fit exactly to the specific equipment needs or may be flexibly applied to existing mockup facilities or at plant locations. The end result is that your employees and contract personnel can use these HU tools to the same standards, regardless of the equipment available.

## HU Tools Work Hand-In-Hand With Existing Mockups

Dynamic Learning Activities (DLA) are used help determine how effectively your workforce use their skills and knowledge while performing tasks or activities in a simulated or actual plant environment. Dynamic Learning Activities are setup to duplicate actual plant or work

environments and can be used to detect latent organizational weaknesses while improving work processes and procedures. DLAs strategically provide opportunities to evaluate conscious and unconscious application of skills, knowledge and standards. Identification and

resolution of unsatisfactory performance provides valuable feedback for improving work processes and procedures.

Establishing, communicating and reinforcing clear management expectations for safe and event free behaviors in work settings or training are the strat-

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### Special points of interest:

- CV vs. Peer Check: What are the differences?
- HU Tools Work Hand-In-Hand With Existing Mockups
- Error prevention tools prevent events





## Human Performance JPMs Continued....

NWI takes time to analyze, observe, and interact with managers, supervisors, and the general workforce in order to create individualized programs for your professional trainers and human performance specialists to use as tools to establish an environment of excellence and event-free operations within the power plant. NWI prides in the ability to produce programs, train instructors, and even train your workforce all within a timely, accurate, and accountable environment.. Human Performance standard industry practices/training (INPO) are used as the basis for sound

results. All it takes is your site procedures, policies, programs, directives along with a subject matter expert from your facility and access to the corrective action data, are necessary for use in developing internal and external operating experience for your site specific scenarios. INPOs applicable documents and NWIs extensive experience in this area are all that is needed to custom fit your sites' management expectations into results-

oriented action! A standardized format can be created for use at your site to ensure the consistency you require between stations. This is especially valuable during outages when contractors need to conform to your site's standards while preventing costly events. Specific evaluation criteria for student certification (e.g., Pass vs. Fail criteria) are established as part of the package! Ask NWI for a proposal to enhance your sites HU program today .



**FACT: HU tools prevents events**

*"Individuals often confuse peer-checking with concurrent verification, and vice versa."*

## CV vs. Peer Check: What are the differences?

(Excerpts from INPO AP-931 and continued on page 3)

The process of concurrent verification (CV) helps users maintain *positive control* of alterations of risk-important equipment when the risk of a mistake could lead to harmful consequences to plant, person, or environment. CV supports the alteration, confirmation, and documentation of the equipment's condition

consistent with the guiding document. Because of the importance of establishing the correct equipment condition, the procedure or work package serves as a record of the verification indicated by each person's signature or initials. This signifies that the equipment is, indeed, in the condition specified in the procedure step.

Although the primary intent of verification is to confirm the final condition of the equipment, CV is usually reserved for an action of a critical nature. Consequently, an error made during the action could result in a plant event or safety challenge.

## HU Tools Work Hand-In-Hand Existing Mockups

( Continued from Front Page)

egy for using these HU tools in a DLA-type environment. Supervisors can demonstrate and promote the consistent use of error prevention tools in training and work settings, becoming role models to coach and mentor their workers. To teach these HU tools, super-

visors, through the use of DLAs not only demonstrate proficiency but retain an in-depth understanding that helps to model these expectations in the field. Workers demonstrate the proper use of HU error prevention tools in training and work settings while identifying ways to improve these HU

error prevention tools. The DLA has four parts: facilitator/observer pre-performance review, pre-activity briefing with the participants, the task or activity , and post-activity critique/evaluation. During the post-activity critique, strengths and areas for improvement are discussed. Dynamic Learning Activities are terminated if an unsafe condition develops. All individuals involved in the Dy-



**Plan for success! Use error prevention tools.**

# CV vs. Peer Check: What are the differences?

(Continued from Page 2)

If used rigorously, CV provides a means to prevent an error in the act of establishing the new equipment or component condition. This aspect of CV is very similar to peer-checking, which aims to prevent error in the performance of a particular action. Activities or manipulations, which involve risk to nuclear or personnel safety, the environment, or generation, require positive control. Individuals often confuse peer-checking with concurrent verification, and vice versa. Although both techniques help the performer avoid error for a specific action, the primary focus of CV is status control of the equipment, while the primary focus of PC is the performer's action. Peer-checking focuses more on the correct *act* than the *result* of that act. Peer-checking is an informal technique

to help the performer avoid a mistake working with equipment or other products of human performance. On the other hand, carefully written procedures or work packages and other guiding documents typically specify CV (formal) at vital points in the sequence of activities. This is done to avoid placing a risk-important component in a status that would immediately and irreversibly harm people, the plant, or the environment. This is why CV is documented with the signatures or initials of the performer and verifier in the guiding document.

Because of their informality, peer-checks can be applied by workers at any time to any work situation and performed

by anyone familiar with the task and qualified in the peer-checking technique. In some cases management establishes specific

actions or classes of actions requiring mandatory peer-checking, while prejob briefings and other work planning activities identify additional error-prevention methods for tasks needing additional control.



"Peer-checking is an informal technique to help the performer avoid a mistake working with equipment or other product of human performance."

## 12 Human Performance Tools...

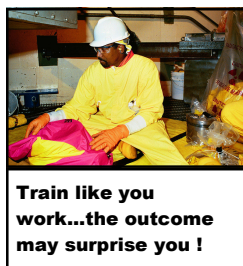
- Self-Checking (STAR)
- Peer Check
- Concurrent Verification
- Independent Verification
- Job Site Huddles
- Pre-Job Briefs & Post-Job Critiques
- Safety Spot Checks
- Questioning Attitude
- Flagging
- Three-Part Communication
- Procedure Use / Placekeeping
- Stop When Unsure

## HU Tools Work Hand-In-Hand Existing Mockups

(Continued from Page 2)

Dynamic Learning Activity (observers, facilitators, instructors or participants) typically intervene to prevent unsafe acts/conditions prior to action taken by participants.

Learning comes from the interaction and collaboration during the Dynamic Learning Activity and during the post-activity critique. HU tools can be introduced as an integrated



part of the DLA. An example of one of the HU tools may be Self-Check. This critical element, Self-Check

(STAR), is where an individual is required to perform the intended action without losing

physical or visual contact. This action must take place as described in order for the individual to demonstrate that critical element of proper self-checking techniques. Critical elements must be successfully completed if a participant is to be certified in the HU tool. Remediation takes place for unsuccessful candidates prior to returning to the workplace.





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NWI Consulting, LLC takes pride in providing quality consulting services and adding value to the nuclear industry. To receive more information on NWI Consulting and the services we offer, please contact:

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#### **BILL LINDSEY, MA, educ.**



Bill Lindsey, most recently assigned as a senior evaluator at INPO completed accreditation evaluations for about one third of the US nuclear sites, provided training assistance to the industry, and conducted training for new training managers.

#### **BILL McNeill**



Bill McNeill is a power plant professional with 28 years of technical, supervisory experience in the areas of training, radiation protection and industrial safety. He is an Occupational Safety and Health Administration (OSHA) authorized outreach trainer.

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Steve Pettinger is a power plant professional with 24 years of technical, supervisory and managerial experience in the areas of operations, training and computer applications.

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Terry Schmidt is a power plant professional with 26 years of technical, supervisory and managerial experience in the areas of training and instrument maintenance and control.

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Frank Tsakeres is a nuclear engineering and power plant professional with over 30 years of diversified technical and managerial experience in the areas of training, operations, maintenance, radiation protection, chemistry and emergency preparedness. In his corporate, plant, and consulting work, he has interfaced with numerous regulatory agencies and private industry leaders.

#### **+ New Team Additions +**

NWI welcomes Karen Pettinger to the NWI Consulting team! Karen joins us from numerous years at Byron Nuclear Station where she specialized in the areas of training and chemistry. Karen is an instructional technologist with over 28 years of power plant experience (both in the line and training organizations). Welcome Karen!

NWI also welcomes Steve Lawson to the NWI Consulting team! Steve joins us from numerous years at Exelon's Quad Cities Nuclear Station with expertise in the areas of operations, engineering, project management and outage planning. Steve was an Operations Shift Manager with over 25 years of power plant experience. Welcome Steve!

#### **Thank You Clients...**

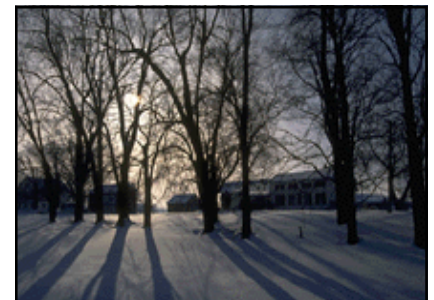
We wish to express special thanks to the following clients for making NWI a preferred consulting company;

- AEP's D.C. Cook Nuclear Power Plant
- Constellation's Nine Mile Nuclear Power Station
- Exelon's Three Mile Island, Dresden, LaSalle and Quad Cities Nuclear Stations and Reactor Services
- FPL's Seabrook, St. Lucie & Turkey Point Stations
- NMC's Monticello Nuclear Generating Station
- PSEG's Salem and Hope Creek Nuclear Generating Stations

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