

efficiency bulletin

April 4, 2017

Efficiency Bulletin: 17-12

Reducing Burden through Empowering First-Line Supervisors

Supervisors are often required to perform low-value activities and administrative duties that detract from their availability to coach and mentor field activities and influence desired behaviors. Supervisors should be empowered to set priorities and make decisions that best support the needs of the station and their staff.

This efficiency bulletin addresses expansion of supervisor autonomy in the areas listed below:

- Morning and pre-job briefing scope and content
- Worker qualification verification methods
- Work preparation and walk-down methods
- Work package revision methods
- Industrial safety decisions

Addressees: Chief nuclear officers, NEI APCs and INPO APCs

Issue: WM-E-26 Reducing Burden and Empowering First-Line Supervisors

Summary of Efficiency Opportunity

- Desired end-state—Supervisors spend minimal time engaged in low-value activities and administrative duties. Additionally, supervisors have greater decision-making autonomy relative to job preparation, implementation and oversight. Supervisors apply a graded approach (based on job complexity and risk) to determine appropriate levels of engagement and oversight. This approach ensures that critical activities receive the highest levels of oversight.
- Value proposition (vision of excellence)—Removing the low-value of several programs and processes will increase supervisor availability to engage the workforce, influence desired behaviors and expectations, and improve work activity efficiencies. Improvements in the oversight of workforce behaviors and alignment ensure critical activities receive the highest levels of oversight and support the industry's goal of advancing safety and reliability.

Color Code: Green

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This bulletin and additional information about nuclear energy are available at nei.org.

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- Why it is important?—Improving supervisor efficiencies in conducting oversight activities supports:
 - Greater opportunity to coach and mentor workers in the field.
 - Greater focus/oversight applied to complex and higher risk activities to enhance safe and reliable plant operation.
 - Improved supervisor empowerment to make simple decisions without extensive administrative controls.
- Industry Benchmarking values—Weekly schedule completion and safety-system outage performance are maintained at current levels of performance. Human Performance Site and Department Clock Resets are maintained at low levels. Critical and non-critical maintenance backlogs are reduced or maintained at current industry performance levels.
- The measure of effectiveness: The increased time available for workers and supervisors to perform work in the field should improve work efficiency and worker behaviors, resulting in increased plant reliability and fewer human performance events.

Background

- This bulletin streamlines worker and supervisor administrative and process burden that restricts time for field activities. Maximum benefit is obtained when this efficiency opportunity is implemented in conjunction with efficiency bulletins:
 - EB 16-01 “Eliminate Administrative Changes to Preventive Maintenance Work Orders”
 - EB 16-02 “Implement Graded Approach to Walkdowns”
 - EB 16-13 “Perform Self-Briefs for Low Radiological Risk Activities”
 - EB 16-31 “Pre-Approval Criteria for Work Execution” and
 - EB 17-05 “Simplified and Enhanced Management Observation Techniques.”
- The intent of this efficiency bulletin is to streamline the following activities:
 - Shop or daily briefings which have been lengthened by the addition of required topics to discuss rather than allowing supervisors and managers the flexibility to identify appropriate times to address selected topics. In many cases, these discussions often involve reading verbatim sections of station or other documents on the topic at hand. This prolongs the briefing, often adds little value, and contributes to workers losing focus during the discussion.
 - Pre-job briefings that sometimes require supervisors and workers to complete lengthy checklists.
 - Daily qualification and procedure revision verification by workers and supervisors are required by many stations. In some cases, workers are required to document procedure revision checks for all procedures included in their work package even for administrative or information use procedures.
 - Work activity walkdowns which are sometimes required for activities regardless of the activity's importance or frequency.
 - Minor administrative changes to noncritical work package instructions that may have required planner involvement when a supervisory field revision (pen and ink change) would suffice.
 - A job hazard safety analysis worksheet which some stations require for all work activities.

Key to Color Codes:

Red: NSIAC initiative – full participation required for viability

Blue: Action expected at all sites, but is not needed for broad industry viability

Green: Utility discretion to implement, consistent with its business environment

Relevant Standards

- Performance Objectives and Criteria (INPO) LF.1, Criteria 22, "Leaders demonstrate ownership for organizational decisions and align the workforce to ensure successful outcomes of decisions."
- Performance Objectives and Criteria (INPO) NP.1, Criteria 4, "Nuclear professionals have high ownership for the preparation and safe execution of assigned work activities."
- INPO 15-005 – Leadership and Team Effectiveness Attributes

Guidance

- INPO – Industry Cumulative Impact Short-Term Actions, November 2013. This document provides guidance that addresses three different areas where supervisors can improve efficiency: Streamlining briefings, simplifying work approvals and reducing additional administrative requirements.
- Attachment 1: Industry Benchmarking Contacts

Recommended Industry Actions

The following actions should be considered to expand supervisor autonomy and improve oversight:

- 1) Improve shift/morning briefing efficiency by providing supervisors the authority to tailor their scope and content. Beginning of shift/morning briefings should be streamlined to cover relevant safety information for executing the day's activities. For example, necessary briefing elements could include plant status, protected train and equipment, any special evolutions or activities within the department or across the station, and applicable operating experience, nuclear or industrial safety information. Other briefing discussion topics would be at the discretion of the supervisor.
- 2) Improve pre-job briefing efficiency by allowing supervisors more flexibility in choosing the level and personnel involved in pre-job briefings.
 - a) Simplify the pre-job briefing process so important or critical elements of the pre-job checklist are discussed. Additionally, consider excluding frequently performed tasks with minimal risk to industrial safety or station reliability from formal briefing requirements. This selective approach to pre-job briefings will allow supervisor flexibility in choosing the appropriate level of brief that is commensurate with the level of work complexity and risk.
 - b) Operating experience should be discussed during the pre-job briefing if it has a direct relationship to the task being briefed.
 - c) Provide supervisors the authority to eliminate shop briefings and control room briefings for pre-approved work activities that have limited control room impact or plant impact in accordance with EB 16-31 "Pre-Approval Criteria for Work Execution," and ensure self-briefings are performed for low radiological risk activities as defined in EB 16-13 "Perform Self-Briefs for Low Radiological Risk Activities."
- 3) Reduce frequent/recurring low-value administrative tasks, such as daily qualification status and procedure revision verification. Supervisors should hold workers accountable for these requirements.
- 4) Provide supervisors with the authority to decide which work activities require walkdowns. Supervisors should apply a graded approach to decide if a full, partial, or no walkdown is required based on the plant risk, job complexity and worker proficiency. Refer to EB 16-02 "Implement Graded Approach to Walkdowns" for additional guidance.

- 5) Provide supervisors with the authority to correct work instructions without planner involvement. Work package instruction changes for non-safety related equipment that do not alter the work scope can be made by the supervisor without planner review and approval. Refer to EB 16-01 "Eliminate Administrative Changes to Preventive Maintenance Work Orders" for additional guidance.
- 6) Provide supervisors with the authority to decide when and how much time workers need to prepare for work activities. Low-risk, non-complex work activities that require minimal coordination with other work groups, are within the workers' knowledge and experience, and require minimum preparation can be assigned on the day of execution. Conversely, those activities with greater risk or task complexity that challenge worker proficiency/experience may require several days of preparation.
- 7) Provide supervisors with the authority to reduce the complexity and documentation required for Job Hazard Safety Analyses (JHSA) for frequently performed tasks that pose minimal industrial safety risk and have no historical record of injuries or near-miss events.
 - a) Consider developing and maintaining a file of previously developed JHSAs associated with frequently performed and low-risk activities versus having to develop new analysis each time the task is performed.
 - b) Alternatively, use a graded approach for JHSA based on the work area and tasks needed to perform a work activity.

Change Management Considerations

Industry Activities

- Industry webinar to provide background for initiative and provide an open forum to clarify expectations and ask questions. Webinar information can be found at <https://web.inpo.org/Pages/Nuclear-Promise-Issues.aspx>.
- Discuss at regional Operations, Maintenance, Work Control, Chemistry, Radiation Protection, Human Performance, Training and Engineering meetings and routine industry conference calls.

Company Actions

- Develop an effective communication and change management plan to ensure workers understand the drivers behind these changes and expected outcomes from the changes. The change management plan should communicate the intent, desired outcome and purpose of the initiative. This will help ensure those implementing these changes understand the intent and can provide feedback to station leadership if the intent is not being met.
- Perform an assessment of current process requirements against those described above and implement necessary procedure and process changes. This assessment should also baseline the amount of time workers and supervisors spend in the field. Progress against baseline values should be periodically assessed and action taken if desired results are not achieved.
- Evaluate the cultural or behavioral changes required to implement these efficiencies. These may require management monitoring and mentoring, and/or training to implement these changes.
- Consult supervisors and workers to identify what additional items can be streamlined or eliminated.
- Ensure external and internal nuclear oversight and other groups that monitor station performance understand these changes in expectations so that their feedback to workers does not conflict with the intended actions.

Guidelines

Implementation of this bulletin will likely reduce administrative and process controls that were historically established to address weaknesses in management and leadership behaviors. This efficiency bulletin therefore

requires stronger supervisor and work accountability for proper task completion in lieu of these rules and processes. Station leaders should ensure that management and leadership behavior weaknesses no longer exist prior to altering administrative and process controls.

Upon implementation, station leaders should also monitor the following to identify and correct subtle signs of decline in supervisor effectiveness:

- Ensure weekly schedule completion is maintained at current levels of performance and safety-system outage performance does not degrade.
- Ensure Human Performance Site and Department Clock Resets are maintained at low levels.
- Ensure critical and non-critical maintenance backlogs are reduced or maintained at current industry performance levels.
- Ensure there is increased time spent in the field by workers and supervisors as a result of these changes. Worker observations should be critical and prompt feedback provided to address performance gaps.

Report Your Site's Results

Please report your company's implementation of this improvement opportunity, including the date of completion. Send this information along with your company point of contact to EfficiencyBulletin@NEI.org.

Industry Contacts

- Industry champion for this issue: Jim Domitrovich, 217-521-3421, Jim.Domitrovich@exeloncorp.com
- EPRI Contact: Rick Pepin, 704-595-2889, rpepin@epri.com
- INPO Contact: Paul DiRito, 770-644-8472, diritopj@INPO.org
- NEI Contact: Jim Riley, 202-739-8137, jhr@nei.org
- On the web: www.nei.org/bulletin1712

Industry Approval:

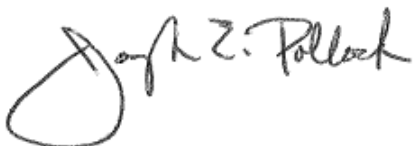
Dennis Koehl, Industry Lead



David P. Igyarto, Institute for Nuclear Power Operations



Joseph E. Pollock, Nuclear Energy Institute



Attachment 1: Industry Benchmarking Contacts

Below are best practices and benchmarking contacts for the recommended industry actions contained within this efficiency bulletin. In addition, it is recommended that if additional human performance error reduction or administrative requirements are put in place as immediate corrective actions for station events, then sunset clauses are established to ensure these needed corrective measures do not result in long term administrative burden for station/utility personnel when the current standard, if implemented correctly and consistently, would have prevented the event.

Morning and Pre-job Briefing Scope and Content

Utility: Exelon

A daily shift briefing template is used to standardize shop briefings to approximately a ten-minute duration and generate a plan-of-the-day for First-Line Supervisors (FLS). Topics covered include plant status, safety issues, protected equipment and other general information. Site alignment meetings are also held on a weekly basis for all departments to consistently roll-out station or fleet mandates or topics.

A graded approach is used for pre-job briefings. A tool was developed to assist FLS in determining the level of pre-job briefing to perform. The level of briefing is identified at T-5, often using canned briefing material as applicable. Lead workers are used to perform these briefings.

Contact: Jim Domitrovich, 217-521-3421, Jim.Domitrovich@exeloncorp.com

Worker Qualification Verification Methods

Utility: First Energy

Various methods are used at FENOC to check qualifications depending on the work group. Daily qualification checks are not required when other methods are in place to ensure unqualified work is not performed. Engineering personnel check their qualifications once per week, Maintenance personnel check their qualifications prior to performing assigned work. Operations, Radiation Protection and Chemistry use eSoms to take their assigned shift and eSoms automatically check the qualification status and do not permit them to take the shift if they are not qualified.

Contact: Tony Mueller, 440-465-8080, amuellerjr@firstenergycorp.com

Procedure Revision Verification Methods

Utility: Duke

The Duke fleet procedure use and adherence procedure (AD-HU-ALL-0004) has the following requirements:

- Working copy procedures shall be verified within 24 hours of the initial actions in the procedure being taken, including verifying the procedure is the current revision.

- If a working copy procedure remains in use, then verify the procedure every 14 calendar days (or sooner) from the date on procedure or the last verification date, including verifying the procedure is the correct revision.

This practice ensures up to date procedures are being used in the field based on the requirement that procedure revisions are communicated to the impacted organizations when they are implemented.

Contact: Dwight Hargett, 704-875-4032, Dwight.Hargett@duke-energy.com

Work Preparation Methods

Station: Vogtle

Organizational changes and efficiency initiatives have improved maintenance work preparation performance. These initiatives have improved craft worker engagement and ownership, work preparation and readiness, and have resulted in a sharp decline in corrective, deficient and fire protection backlogs.

Contact: Chris Childress, 706-848-3422, cjchildr@southernco.com

Work Walkdown Methods

Station: South Texas Project

Maintenance craft use software to view assigned work at T-6, and supervisors expect the craft to review work assigned to them at T-1 and prepare for this work using a graded approach. Weekly walkdowns are performed as “fill in” work instead of being resource hours on the schedule. This has resulted in increased craft ownership for assigned work, schedule completion improvement, reduction in jobs starting late, and reduction in challenges to work execution at T-0.

Contact: Brandon Jenewein, 361-972-7431, bjjenewein@stpegs.com

Work Preparation and Walkdown Methods

Utility: Exelon

Exelon uses “E-6 boards” to assign tasks to individuals or crews six weeks prior to the work execution week. This allows these individuals to know their work assignments well in advance in order to prepare during schedule downtime without direct FLS involvement.

A graded approach is applied for walkdowns, with the following levels assigned:

- Level A: A walkdown is required unless manager discretion determines it does not need to be performed.
- Level B: Criteria is established for which activities a walkdown should be performed, with FLS discretion to deviate from this criteria.
- Level C: A walkdown is not required.

Contact: Jim Domitrovich, 217-521-3421, Jim.Domitrovich@exeloncorp.com

Work Package Revision Methods

Utility: Exelon

Exelon uses institutionalized guidance for performing minor administrative changes to noncritical work package instructions by a first line supervisor (FLS). This guidance is provided to aid the lead worker or FLS in determining whether they can make a work package change or return the work package to planning for changes. Examples of changes that the lead worker or FLS can implement include the following:

- Correcting typographical errors in work instructions.
- Making units of measure conversions (i.e., inch pounds to foot pounds).
- Package changes for administrative revisions to procedures and drawings which have no effect on the scope of the work.
- A change in the sequence of the work steps unless specified by the work instructions to be performed in the order listed.
- Designate as “not performed” steps, which are obviously not necessary to properly complete the work.
- Make additions that clarify or subdivide work instructions.
- Obtaining voltage values at points in different locations of the circuit than originally identified if the value being measured will remain the same. This could be for ALARA concerns from plant conditions after the package was developed.
- Making minor revisions that accomplish the intent of the step. For example, de-energizing a panel by turning off a switch specified in the package to be on the skid when in fact the switch is located on the wall near the skid.

Contact: Jim Domitrovich, 217-521-3421, Jim.Domitrovich@exeloncorp.com

Industrial Safety Decisions

Utility: Exelon

Not all work at Exelon requires a Job Hazard Analysis (JHA's), but instead a graded approach is used for performing a JHA. A JHA is conducted for potentially hazardous, high risk or complex activities. A JHA is considered for newly established, modified or infrequently performed jobs. In addition, standard JHA have been developed and incorporated in routine procedures.

Contact: Jim Domitrovich, 217-521-3421, Jim.Domitrovich@exeloncorp.com