

Appendix J - Implementation Assessment CRADs

**Criteria Review and Approach Document (CRAD)
for Performing Assessments of
Activity Level Work Planning and Control Implementation Activities**

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1. Define Scope of Work

Objective WPC2-1

The scope of work is described in sufficient detail to allow the work planning process to identify hazards associated with the work and to develop necessary schedules, priorities, and work instructions.

Criteria:

1. The work to be accomplished, condition to be achieved, problem being corrected, and/or expected outcome are clearly documented.
2. The specific tasks necessary to accomplish the scope of work are identified and discernible.
3. Work scope boundaries/limits are clearly identified.
4. Conditions under which the work must be performed are clearly identified.
5. Systems, equipment, structures, components, and documents impacted/affected by the work are identified.
6. Applicable standards and requirements, safety basis information (including TSRs), and design basis information (including manufacturer's recommendations) are identified and used during work planning.
7. Applicable prior work history information, including feedback and lessons learned information from previous or similar work is used during work planning.
8. Acceptance criteria are established for conclusively determining whether the work is accomplished successfully, and has not caused other problems or deficiencies.
9. Work planners understand and appreciate the need to define the work scope completely and accurately so that subsequent planning activities are effective in ensuring worker safety.

Approach

Record Review:

- Review a sample of recent approved WCDs for the implementation of all WPC2-1 Criteria. The sample set should include a wide variety of WCDs representing the work performed by the organization being assessed.

Interviews:

Interview personnel responsible for implementing the work planning and control process to assess their understanding of the procedures and the underlying principles and requirements associated with this Objective. Personnel to interview include:

- Line management (e.g., responsible managers, project managers, facility managers, shift operations managers, shift supervisors, work control managers, etc.)
- Field work supervisors
- Workers
- Planners

- Subject matter experts involved in the process (e.g., safety professionals, radiological controls personnel, system engineers, etc.)

Observations:

Observe meetings and activities that demonstrate implementation of work planning and control processes and evaluate adequacy of implementation. Meetings and activities to observe include:

- Work screening, validation and prioritization
- Plan of the Week/ Plan of the Day meetings
- Planner/Requestor scoping walkdown
- Planning Team meetings and walkdowns

2. Identify and Analyze Hazards

Objective WPC2-2

All hazards that could potentially adversely impact workers, the public, the environment, the facility and its equipment are documented and analyzed for severity/significance.

Criteria:

1. Personnel involved in work planning activities have the appropriate technical and operational backgrounds and expertise given the work to be performed and the hazards associated with the work. Subject Matter Experts (SMEs) and system engineers (SEs) are used where appropriate.
2. Personnel involved in work planning activities have been trained in ISM and the work planning and control process, including the systematic identification and analysis of hazards, and understand how their roles and responsibilities contribute to ensuring the safe and reliable accomplishment of work.
3. The synergy/interaction of a team approach is used where appropriate to systematically identify and analyze the work hazards and their significance.
4. Workers are involved in hazard identification where possible.
5. Walkdowns are used where appropriate to identify hazards associated with both the work tasks and the work environment.
6. Over-reliance on automated JHA tools, permits, generic work documents, etc. is not used as a substitute for thorough hazard evaluation and analysis.
7. Hazard analysis considers "what if" scenarios and error-likely situations to determine if additional protective measures are appropriate.
8. The hazards, and their potential consequences to workers, the public, and the environment, for the scope of work being assessed have been adequately identified, quantified, and documented.
9. Work planning effectively coordinates work activities with those who may impact or be impacted by the work so that the combined effect of ongoing work activities is understood, and adverse or undesirable impacts from work activities are avoided.

Approach

Record Review:

- Review a sample of recent approved WCDs for the implementation of all WPC2-2 Criteria. The sample set should include a wide variety of WCDs representing the work performed by the organization being assessed.

Interviews:

Interview personnel responsible for implementing the work planning and control process to assess their understanding of the procedures and the underlying principles and requirements associated with this Objective. Personnel to interview include:

- Work Control Manager
- Maintenance Manager
- Field work supervisors

- Workers
- Planners
- Subject matter experts involved in the process (e.g., safety professionals, radiological controls personnel, system engineers, etc.)

Observations:

Observe meetings and activities that demonstrate implementation of work planning and control processes and evaluate adequacy of implementation. Meetings and activities to observe include:

- Planning Team meetings and walkdowns/roundtables.

3. Implement Controls

Objective WPC2-3

Controls are implemented that effectively protect against identified hazards.

Criteria:

1. A hierarchy of controls methodology is employed that first seeks to eliminate the hazards, then to reduce the level of hazards, and finally to control the hazards - first through the use of engineered controls, then through administrative controls, and lastly through PPE.
2. Appropriate controls are identified for all hazards associated with the work activity. Unnecessary controls are avoided.
3. Hazard controls are analyzed collectively to ensure selection of an optimum set that do not conflict with each other or introduce additional hazards.
4. The hazards and controls are clearly identified in the WCD.
5. Potential unwanted/undesirable impacts from the conduct of work activities (e.g., anticipated alarms, planned entry into TSR Required Actions, need for additional support, degraded or diminished safety or mission capability) are identified and addressed in the work document.
6. Hazard controls are adequately designed, implemented, and remain in effect as long as the hazards pose a health or safety threat.
7. Senior Management Review Boards are effective in their reviews of selected work.
8. Written work instructions include necessary prerequisites, precautions, limitations, features, controls, warnings, cautions, notes, hold points, independent verifications, notifications, announcements, etc. to ensure worker safety, protection of critical equipment, and continuity of operations.
9. Work instructions clearly define the work scope and boundaries, and are written in a clear, concise, and worker friendly manner with properly sequenced work steps and clearly identified hazard controls.

Approach

Record Review:

- Review a sample of recent approved WCDs for the implementation of all WPC2-3 Criteria. The sample set should include a wide variety of WCDs representing the work performed by the organization being assessed.
- Senior Management Review Board charter/procedure and meeting minutes

Interviews:

Interview personnel responsible for implementing the work planning and control process to assess their understanding of the procedures and the underlying principles and requirements associated with this Objective. Personnel to interview include:

- Work Control Manager
- Maintenance Manager
- Field work supervisors

- Workers
- Planners
- Subject matter experts involved in the process (e.g., safety professionals, radiological controls personnel, system engineers, etc.)
- Senior Management Review Board members

Observations:

Observe meetings and activities that demonstrate implementation of work planning and control processes and evaluate adequacy of implementation. Meetings and activities to observe include:

- Planning Team meetings, walkdowns, and/or roundtables
- Senior Management Review Board Meetings

4. Perform Work Safely Within Controls

Objective WPC2-4

Work is conducted diligently in accordance with approved work instructions and within established controls.

Criteria:

1. Work is formally scheduled and integrated (e.g., Plan-of-the-Day/Week meetings) with a rigor that is consistent with the complexity and hazards of the work and other ongoing work activities, and is formally authorized and released to proceed by the responsible line manager.
2. Readiness to conduct work is confirmed, including verification that field conditions are as expected (i.e., have not changed since planning and hazards analysis activities, de-conflicting other work activities), and that tools, materials, parts, and support is ready and available.
3. Pre-job briefings are conducted to ensure that workers and first line supervisors adequately understand responsibilities, work procedures and instructions, hazards, controls, stop work authority and with opportunity for questions and feedback.
4. Workers are trained and qualified.
5. Workers and work supervisors understand ISM requirements and expectations, and their associated responsibilities, for ensuring that work is performed safely in the field/on the floor. Workers understand what to do if unexpected, unusual/abnormal or threatening conditions are encountered, and how to stop or pause work if necessary.
6. Workers strictly adhere to procedures, take appropriate actions in response to unexpected circumstances or conditions, and adequately document and record observations and actions, including as-found and as-left conditions, unexpected circumstances or conditions encountered (e.g., unplanned alarms, abnormal or unplanned equipment behavior or response, unexpected data or indications/display values, or other discrepancies) and actions taken, opportunities for improvement, and other feedback and lessons-learned information.
7. The acceptability of work products and outcomes is adequately documented and verified (e.g., post-work tests and inspections), and the work is formally accepted by the requestor/owner/user.
8. Work documents are closed out in a timely manner, including updates of affected documents (e.g., Master Equipment Lists, training materials, procedures, drawings, load lists, safety basis and design basis documents).

Approach

Record Review:

- Review a sample of recent approved WCDs for the implementation of all WPC2-4 Criteria. The sample set should include a wide variety of WCDs representing the work performed by the organization being assessed.

Interviews:

Interview personnel responsible for implementing the work planning and control process to assess their understanding of the procedures and the underlying principles and requirements associated with this Objective. Personnel to interview include:

- Work Release Authority
- Field work supervisors
- Workers
- Subject matter experts involved in the process (e.g., safety professionals, radiological controls personnel, system engineers, etc.)
- Subcontractor Technical Representatives, if applicable
- Subcontractor management, first line supervisors, and workers, if applicable

Observations:

Observe meetings and activities that demonstrate implementation of work planning and control processes and evaluate adequacy of implementation. Meetings and activities to observe include:

- Plan of the Week/ Plan of the Day meetings
- Workability walkdowns
- Selected work activities utilizing different types of WCDs
- Pre-Job Briefings
- Post Job Reviews
- Scheduling/integration meetings

5. Feedback and Improvement

Objective WPC2-5

The work planning and control process is routinely critiqued as part of doing work, and opportunities for improvement are adequately documented to allow for effective disposition by the feedback and improvement process.

Criteria:

1. Post-job reviews are conducted to obtain feedback, both good and bad, in order to make process improvements.
2. Feedback and lessons learned information is adequately documented (recorded in logs, databases, etc.), and forwarded to the Organization designated individuals and/or organizations for analysis and disposition.
3. Appropriate action is taken in response to feedback and lessons learned information, the rationale for the action taken is documented, and the action is discussed with the individuals that provided the information for closure.
4. The contractor has established and effectively implemented processes to identify issues, concerns and opportunities for improvement in the work planning and control process.
5. The contractor has implemented comprehensive, structured processes to analyze, track, and trend issues/concerns, and to provide for timely and effective resolution of identified issues/concerns in the work planning and control process.

Approach

Record Review:

- Review a sample of recent approved WCDs for the implementation of all WPC2-5 Criteria. The sample set should include a wide variety of WCDs representing the work performed by the organization being assessed.
- Review documents associated with evaluating the work planning and control process (e.g., assessment schedules, assessment and surveillance reports, performance metric summaries, corrective action tracking and closure documentation, issue tracking system entries, etc.) for the implementation of all WPC2-5 Criteria
- Review the actions taken in response to feedback and lessons learned information for effectiveness in improving activity level work planning and control processes and/or work performance, and if the rationale for the actions is documented and discussed with the individual(s) who provided the information for the implementation of all WPC2-5 Criteria.

Interviews:

Interview personnel responsible for implementing the work planning and control process to assess their understanding of the procedures and the underlying principles and requirements associated with this Objective. Personnel to interview include:

- Line management (e.g., responsible managers, project managers, facility managers, shift operations managers, shift supervisors, work control managers, etc.)
- Field work supervisors
- Workers
- Planners
- Subject matter experts involved in the process (e.g., safety professionals, radiological controls personnel, system engineers, etc.)
- Assurance System program owners (i.e., Assessment Director, Issues Management Lead, ES&H Manager, Lessons Learned Lead, etc.)

Observations:

Observe meetings and activities that demonstrate implementation and assessment of work planning and control processes. Meetings and activities to observe include:

- Plan of the Week/ Plan of the Day meetings
- Planning Team meetings and walkdowns
- Selected work activities utilizing different types of WCDs
- Pre-Job Briefings
- Post Job Reviews
- Work planning and control process assessment activities