



One Team. One Culture.

Administrative Procedure

PRC-PRO-WKM-12115

Work Management

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Work Management

Published Date: 10/05/17

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TABLE OF CONTENTS

1.0	INTRODUCTION	3
1.1	Purpose.....	3
1.2	Scope	3
1.3	Applicability	3
1.4	Implementation	4
2.0	RESPONSIBILITIES.....	4
2.1	Project Technical Services Operations Program	4
2.2	Facility/Project.....	5
2.2.1	Work Control Manager.....	5
2.2.2	Responsible Manager (RM).....	5
2.2.3	Release Authority (RA).....	6
2.2.4	Scheduler	6
2.2.5	Work Planner	7
2.2.6	Field Work Supervisor (FWS).....	7
2.2.7	Subject Matter Expert (SME).....	8
3.0	PROCESS.....	9
3.1	Identify and Request Work	9
3.1.1	Work Request	9
3.1.2	Validate Work Request	9
3.2	Planning the Work.....	10
3.2.1	Scope Definition.....	10
3.2.2	Hazard Identification, Analysis and Control Development.....	10
3.2.3	Work Document Development.....	10
3.2.4	Work Document Approval.....	13
3.2.5	Pre-Work Review	14
3.3	Work Scheduling.....	14
3.3.1	Prepare Scheduling Communication Tools (POW/POD/DRS)	14
3.3.2	Plan-of-the-Week Meeting.....	15
3.3.3	Plan-of-the-Day Meeting.....	15
3.3.4	Daily Release Sheet	15
3.4	Work Release	15
3.4.1	Work Release Activities	15
3.4.2	Partially Release	16
3.4.3	No Release Required	16
3.5	Work Performance.....	17
3.5.1	Pre-Job Briefing	17
3.5.2	Performing Work	17
3.5.3	Suspending Work Documents	18
3.6	Work Document Change Process	18
3.6.1	Types of Change.....	18
3.6.2	Incorporation of Change	19
3.7	Work Acceptance.....	20
3.7.1	Post Maintenance Testing and Work Acceptance	20
3.8	Work Document Closeout.....	21
3.8.1	Closeout and Follow-up Actions	21

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

3.9	Cancelling Work Documents	21
	3.9.1 Closing Uncompleted Work Documents.....	21
4.0	FORMS	22
5.0	RECORD IDENTIFICATION	23
6.0	SOURCES	24
6.1	Requirements.....	24
6.2	References.....	25
6.3	Commitments.....	25
	Documentation of Review, Concurrence or Approval.....	30

List of Tables

Table A - Disciplines ALWAYS or Nearly Always Required	31
Table B - Disciplines Involved Based On Work Scope and Hazards	32

List of Appendixes

Appendix A - Glossary	26
Appendix B - Identification of the Work Planning Team/Reviewers	30
Appendix C - Identification of the Post Work Review Disciplines	41
Appendix D - Temporary Changes	43

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

1.0 INTRODUCTION

1.1 Purpose

This procedure details the roles, responsibilities, and processes used to implement the CH2M HILL Plateau Remediation Company (CHPRC) work management process incorporating the principles of Integrated Safety Management (ISM) and Environmental Management System (EMS) at the activity level through the development and use of technical Work Documents (WD).

1.2 Scope

This Level 2 management control procedure describes the overall work management process performed by CHPRC.

Work planning and execution requirements for contracted work are developed per the CHPRC Procurement process. Directed Services is work performed by Other Hanford Prime Contractors (OHC) and will be developed and controlled in accordance with the Memorandums of Agreement (MOA), including activities in Hanford Site Services and Interface Requirements Matrix, as described in PRC-PRO-AC-40468, *Acquiring Products or Services from Other Hanford Prime Contractors*. All Hanford Prime Contractors' Work Management programs have been verified by the U.S. Department of Energy (DOE) as compliant with the Integrated Safety Management System (ISMS).

1.3 Applicability

This procedure does not apply to work packages developed per PRC-PRO-MN-19304, *Periodic Maintenance Process*, except for Pre-Work Review, Work Release and Work Acceptance.

This procedure applies to the following persons:

- CHPRC personnel, staff augmentation subcontracted personnel, and persons working as 'Loaned Labor' from any source
- CHPRC subcontractors performing work on-site as directed by their contract for work planning and execution activities
- Non-CHPRC DOE Prime Contractor personnel performing work at CHPRC facilities or on behalf of CHPRC to the extent directed by the mutually agreed MOA

Work performed on-site at a CHPRC facility is subject to work release and work acceptance. This document does not apply to off-site fabrication services or off-site contracted activities.

Work Management**Published Date: 10/05/17****Effective Date: 10/05/17****1.4 Implementation**

- This procedure is effective on 09/28/2017 for new work documents and those in the planning phase not yet submitted for review and approval
- Work documents developed per this procedure or PRC-PRO-MN-19304 that are in the review and approval phase or further in the work management process may proceed as planned per earlier revisions. Changes to them will be performed in accordance with this revision
- Work documents developed per RCC-PRO-WKM-53352 (PAS-2-1.1) will be administered as follows;
 - Periodic Maintenance and Surveillance (PM/S) activities will be updated to conform to requirements of PRC-PRO-MN-19304 prior to the next due date of each activity.
 - Technical procedures will be administered per PRC-PRO-MS-589.
 - Job Hazard Analyses developed for technical work documents that are in the review and approval phase or further in the work management or procedure processes may be used as is unless revisions are required to accomplish the work. New Job Hazard Analysis (JHA) and changes to existing JHAs will be administered per PRC-PRO-WKM-079.
 - Work documents other than PM/S activities and craft work packages that are in the review and approval phase or further in the work management process may proceed as planned with changes administered per PRC-PRO-WKM-12115. The Work Management Program Technical Authority or Functional Manager may grant concurrence for extensions to other (e.g., craft or routine) work documents on a case-by-case basis.

2.0 RESPONSIBILITIES

Training and qualification requirements are contained in PRC-STD-TQ-40380, *Work Management Training Program Description*.

2.1 Project Technical Services Operations Program

The Project Technical Services Operations Program is responsible for the development, maintenance, and assessment of the CHPRC Work Management program to include:

- Assigns the Work Control Technical Authority (TA) who serves as the Program Subject Matter Expert (SME)
- Develops and maintains the work control procedures and training
- Analyzes lessons learned for programmatic opportunities for improvement
- Distributes lessons learned and feedback to Work Control Managers

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

- Develops performance indicators to monitor the health of the work management process
- Assesses the Work Management Process in accordance with PRC-MP-QA-40092, *CHPRC Assessment Program Plan*, and tracked within the Integrated Evaluation Plan (IEP)
- Conducts Work Control Managers Meetings on a frequency determined by the Program SME to discuss lessons learned, program updates and obtain feedback from the projects
- Measures and trends Work Control and Planning (WP&C) performance that reflects CHPRC as a whole, and those that compare performance of the projects. The Metrics used to trend the ongoing performance of the Work Management program are selected by the Executive Safety Review Board (ESRB). The metrics are analyzed to detect any changes in performance or additional areas that may need monitoring

2.2 Facility/Project

The Facility/Project has the responsibility of implementing the requirements of this procedure and staffing the following positions:

2.2.1 Work Control Manager

An individual, trained and qualified, who is responsible for the implementation of work management at the project level. Duties include:

- Serves as Work Control SME for Facility/Project
- Oversees training and mentoring of Work Control Staff
- Oversees the work management process, such as work scheduling, planning, WD changes and close-out, records retention, and maintaining databases that support work management (e.g., Job Control System [JCS], Automated Job Hazard Analysis [AJHA])
- Tracks work package closure and authorizes extensions
- Distributes lessons learned and feedback to Facility/Project personnel
- Reviews and approves program changes to include training, website and procedures
- Reviews the JCS backlog, and suspended and inactive work packages every six months and provides the results to the Facility/Project Manager

2.2.2 Responsible Manager (RM)

An individual accountable and responsible for the implementation of the work management process for a specific scope of work created per PRC-PRO-WKM-12115. The RM provides continuity of purpose and understanding throughout work planning and field work. Duties include:

- Defines the scope of work
- Ensures the work scope bounds the work instructions

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

- Champions efforts to move forward during work planning and performance of work by resolving conflicts, ensuring resources are available to support planning, engaging management when appropriate, and serving as an advocate for those who participate in the process
- Ensures hazard controls that are in the JHA or AJHA have been tailored to the activity and are implemented
- Ensures work is screened against Davis-Bacon Act requirements
- Ensures the appropriate reviews are obtained and documented
- Reviews and approves work packages and changes to work packages

2.2.3 Release Authority (RA)

An individual assigned by management to release and maintain cognizance for work performed within project facilities or designated footprint. Duties include:

- Reviews work instructions and technical changes for overall facility/project activities signifying that required facility controls (Limiting Condition for Operation [LCO] entry/exit, Documented Safety Analysis [DSA], Specific Administrative Controls [SAC], functional operating requirements, etc.) and return-to-service requirements have been identified and can be implemented
- Evaluates impacts to configuration control, safety basis elements, emergency preparedness response and compatibility of concurrent work
- Performs pre-work review of work documents, except where delegates are authorized
- Releases work documents
- Evaluates proposed work and documents permission to perform the work on the Daily Release Sheet (DRS)
- Verifies retest and recovery steps have been completed for the work performed and adequately prove equipment operability
- Formally accepts equipment/systems after work is complete

2.2.4 Scheduler

An individual at the direction of facility/project that develops and distributes the Plan-of-the-Week (POW)/Plan-of-the-Day (POD), allocates resources, and prepares the DRS.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

2.2.5 Work Planner

An individual trained and qualified to generate work instructions and assemble necessary elements into work packages. The Work Planner has a major responsibility for coordination of work package development to achieve a product that accurately reflects the input of the work planning team. Duties include:

- Serves as the primary interface with the RM in work package scoping, development, planning, and identification of the SMEs who will participate on the planning team
- Writes instructions for work scopes that include work on Systems, Structures or Components (SSC) that are credited in a DSA (safety significant, important to safety, safety class); documents that include a Limiting Condition for Operation (LCO) entry/exit steps; and Hold Points, work for temporary modifications, or intrusive trouble shooting
- Facilitates work site walk down(s), planning meetings, hazard analysis and other required activities of the Planning Team
- Reviews applicable work history, process knowledge, and lessons learned for incorporation into work scope, hazard identification and work instructions
- Screens work instructions against PRC-CHRT-WKM-53060, *Hazard Review Board* (HRB), criteria
- Obtains selected reviews, concurrences, and approvals of the work instructions
- Assists the field work teams in processing changes to work instructions
- Performs non-PM/S work package closeout

2.2.6 Field Work Supervisor (FWS)

An individual trained and qualified to supervise work teams and ensure the safe and compliant performance of field work. Duties include:

- Ensures that the Work Document (WD) workability review is conducted for HRB WDs
- Ensures that the WD is work released before performing work
- Ensures that the supporting documents are current
- Conducts pre-job briefings and post-job reviews as required by PRC-PRO-WKM-14047, *Pre-Job Briefings and Post-Job Reviews*
- Ensures that workers are trained, qualified and medically cleared prior to performing work
- Ensures compliance with WDs, including working within scope, documentation of work, and feedback during execution
- Submits feedback to capture information for process improvement
- Ensures the work package is complete and accurate upon completion of field work

Work Management**Published Date: 10/05/17****Effective Date: 10/05/17****2.2.7 Subject Matter Expert (SME)**

An individual who, by virtue of education, training and/or experience, is a recognized authority on a particular subject, topic, or system, and has been assigned by management to represent a specific area of expertise in the work management process. Duties include:

- Participates in the work site walk downs, roundtables, hazard identification, hazard analysis, and hazard control selection
- Provides technical input for the work planning process
- Specifies inspections, acceptance criteria, and hold and witness points
- Reviews work instructions to ensure they can be safely/compliantly performed
- Reviews and concurs with the work instructions and affected changes
- Ensures that appropriate hazard controls have been incorporated and are tailored for the specific work activity
- Assures all hazards and controls within their discipline are appropriate for the task and not in conflict with other mitigating actions

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

3.0 PROCESS

This section states the requirements for implementing the Work Management (WKM) process. Additional information is available on the Work Management web page.

Key terms are defined in Appendix A, *Glossary*.

3.1 Identify and Request Work

Requests to perform work are reviewed by the facility/project to identify impacts to the facility, equipment, or systems.

3.1.1 Work Request

- a. Employees may request a new work activity by submitting a work request in JCS.
- b. IF the work activity is to be performed by OHC or via a subcontract, THEN REFER TO the Procurement website.

3.1.2 Validate Work Request

- a. Work requests will be screened for:
 - Impact to the facility/project
 - Funding and authorization
 - Adequate scope (problem description and acceptance criteria)
 - Priority for planning and field work (See Work Control webpage)
 - Duplicative work
 - Ability to use Repetitive Use Work Documents (RUWD)
- b. Screen the work scope per PRC-PRO-IR-070, *Plant Forces Work Review (Davis-Bacon Act Compliance)*.
- c. Work requests that are accepted are routed for work instruction development.
- d. Work requests that are rejected will be returned to the requestor with reason for rejection.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

3.2 Planning the Work

WDs that require planned instructions will have a Planning Team assigned.

The Planning Team is required to develop work instructions necessary to complete work activities safely and efficiently, including integration of specific hazard controls, and to identify and integrate into the instructions applicable technical and administrative requirements (e.g., Environment, Safety, and Health [ES&H], Quality Assurance [QA], Security, Emergency Management).

3.2.1 Scope Definition

- a. A well-defined scope of work is needed to allow for development of work instructions and performance of hazard analysis. The scope of work should include the following items:
 - Clear and concise description of the activity
 - Location of the activity
 - Unique identifier (i.e., component ID, location within building)
 - DSA, Systems, Structures, or Components (SSC), Technical Safety Requirements (TSR), Environmental (ENV) impacts
 - Desired end state
- b. The work scope may change during the iterative process of planning the work, identifying hazards, developing controls and implementing controls. The scope statement bounds the work instructions.

3.2.2 Hazard Identification, Analysis and Control Development

- a. Hazards are analyzed per the process in PRC-PRO-WKM-079, *Job Hazard Analysis*.
- b. Beyond skill-based work will be screened for the HRB per PRC-CHRT-WKM-53060.
- c. WDs that trigger any of the HRB criteria must have a workability review performed and documented on Site Form A-6005-953, *Work Package Workability Review Checklist for Field Work Team*.

3.2.3 Work Document Development

- a. There are two styles of WDs, short-form and long-form. Simple activities (8 action steps or fewer) may use the short-form style, and instructions requiring more than 8 action steps require the use of the long-form style.
 - 1) Short-Form WDs may be written by any member of the planning team, unless the content requires a qualified Planner (see 3.2.3.d).
 - 2) Long-Form WDs require use of the Work Instructions Template and be written or concurred with by a qualified Planner.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

- b. RUWDs are written for activities that are intended to be performed multiple times within identified boundaries, include controls sufficient for the intended activities, and are written to be compliantly and safely used within those assumptions. RUWDs are released using the Partial Release. The Work Control Manager may select the effective closure date, and grant extensions when warranted. Two versions exist: all RUWDs must meet the criteria in step 1) below; those RUWDs for “supervisory direction” must also meet the criteria in step 2) below:
- 1) Standard RUWDs:
 - There is a bounding scope statement
 - The identified boundaries and controls are written to be clearly and safely used as many times as needed for the identified life time of the work document
 - Work instructions may be long or short form, any hazard level, and must be released using the Partial Release when work is ongoing
 - 2) Supervisory Instruction RUWDs:
 - The mechanism for which the FWS may provide supervisory instruction to perform the work identified in the RUWD
 - Work that meets all criteria below can be controlled and bounded as a RUWD:
 - Is Skill Based Work
 - Meets the criteria for No Release Required (NRR)
- c. Work instructions will be written based on the following hierarchy of hazard controls:
- 1) Elimination or substitution of the hazards where feasible and appropriate
 - 2) Engineering controls where feasible and appropriate
 - 3) Work practices and administrative controls that limit worker exposures
 - 4) Personal protective equipment (PPE)
- d. A qualified Planner is required to develop or concur with work instructions (long-form or short-form) for any of the following conditions:
- 1) The activity constitutes a modification or a temporary change (TC).
 - a) See Appendices A and D for using TCs.
 - 2) The instructions include a Hold Point or LCO entry/exit steps.
 - 3) Implements actions for Environmental Permit Conditions or other Environmental Compliance requirements.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

- 4) Implements actions for SACs.
 - 5) The activity requires the development of instructions involving or affecting Safety Class (SC) SSCs or Safety Significant (SS) SSCs, Systems, Structures, or Components (SSC).
 - 6) The proposed work activity requires instructions for troubleshooting or investigation that is intrusive (breaches systems, removes multiple leads, etc.).
- e. The Planning Team is established based on the work scope. Criteria for selection of the team members are provided in Appendix B. The planning team is responsible for gathering information required to plan and execute the work scope. Field walk downs should be performed to support WD development.
 - f. Work instructions, including data sheets, attachments, etc., must meet the requirements of PRC-STD-MS-40241 for formatting, content, and hazard controls found in the section titled Writing Methodology.
 - g. Radiological work is screened per the Radiological Hazard Screening process in PRC-PRO-RP-40109, *Radiological Work Planning*.
 - h. Facility design changes (modifications) will be developed per PRC-PRO-EN-2001, *Facility Modification Package Process*, or PRC-PRO-EN-20050, *Engineering Configuration Management*. A Modification Impact Review (MIR) is performed in JCS or with the Site Form A-6004-963, *CHPRC Modification Impact Review*, for all facility modifications.
 - i. Determine if any work materials require special handling or storage conditions.
 - j. Review lessons learned for similar work activities for reference material during planning and for inclusion in the WD.
 - k. Determine if the appropriate use type for the work instructions using the definitions in PRC-PRO-MS-589 and mark the footer of the instructions accordingly (continuous, reference or info use).
 - l. The DA/TA will establish post maintenance testing (PMT) for maintenance or modification activities to verify completion of the work and operability of SSCs. The PMT will consider the following:
 - 1) Work performed
 - 2) System status following maintenance/modification
 - 3) Design function of the SSC
 - 4) Acceptance criteria for proof of operability
 - 5) Restoration of the SSC following testing

Work Management**Published Date: 10/05/17****Effective Date: 10/05/17**

- m. When the final work instructions have been developed the reviewers are selected by the RM based on the criteria provided in Appendix B. The reviewers are responsible to review and concur with the work instructions to ensure:
- Instructions are compliant with applicable codes, requirements, and procedures
 - Instructions include appropriate controls to protect the worker, facility, public, environment, and are tailored for the specific work activity
 - The level of detail is appropriate for the workers to perform the work safely and compliantly as written
 - Instructions maintain the design criteria for SSCs included in the work scope

3.2.4 Work Document Approval

- a. The RM is responsible to verify the final work instructions comply with the following criteria:
- The work scope bounds the work instructions
 - The work instructions are simple, to the point, and level of detail is commensurate with the skill of the workers
 - The instructions are identified with a procedure use type as Continuous Use, Reference Use, or Information Use in the footer, complying with definitions in PRC-PRO-MS-589. Hazard controls documented on the JHA or AJHA have been tailored to the activity and implemented within the work instructions
 - Flagging and special markings to assist the Field Work Team have been incorporated where appropriate
 - The appropriate reviews were obtained and are documented, including SME decision documentation on the JCS Planning and Approval tabs

Work Management**Published Date: 10/05/17****Effective Date: 10/05/17****3.2.5 Pre-Work Review**

- a. Pre-work review should ensure documents included in the work package are current and approved for use, such as:
 - Procedures
 - Engineering documents
 - Work Permits (e.g., permits dealing with Hot Work, Hanford Fire Marshal, Excavation, Radiological Work, Beryllium Work Permit [BWP], Environmental)
 - Forms
 - HRB screening, meeting minutes
 - Lock and Tag is prepared
 - RA or facility/project delegate to ensure readiness is confirmed prior to scheduling work with regard to system availability, work environment, personnel, documents, tools, measuring and testing equipment (M&TE), and materials

3.3 Work Scheduling**3.3.1 Prepare Scheduling Communication Tools (POW/POD/DRS)**

- a. Facility activity level work is scheduled via the Plan-of-the-Week (POW) and Plan-of-the-Day (POD) and released on the DRS. While any activity that requires craft resources will be scheduled, the following activities shall be listed on the POW/POD/DRS:
 - Field work to be performed per approved work packages with JCS work status SCH-XXX, or WRK-XXX : Work Control or Operations Manager must concur for other statuses
 - Non-routine operational activities
 - Planning and hazard analysis meetings
 - Drills
 - Subcontractor and OHC work activities
- b. For each activity the following information will be identified on the POW/POD:
 - WD number
 - Job title or short job description
 - FWS or Point-of-Contact for the job (routine work may be assigned to an organization or position rather than a specific person)
 - Resources necessary for the job

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

3.3.2 Plan-of-the-Week Meeting

- a. The POW meeting will be held on a weekly basis.

3.3.3 Plan-of-the-Day Meeting

- a. The POD meeting will be held on a daily basis.

3.3.4 Daily Release Sheet

- a. The DRS is a list of interfacing work being performed concurrently, and is also used to release field work activities for a given day. It is developed based on the POD. The DRS may be a separate document from the POD or may be part of the POD. The following items are the minimum required to be on the DRS:
 - WD number
 - Job title or short description of the job
 - Lockout/Tagout (LOTO) info (indicating if LOTO is required for the work)
 - FWS or Point of Contact for the job
 - Documentation of release by activity

3.4 Work Release**3.4.1 Work Release Activities**

- a. WDs that were developed outside of the project may require additional project-specific reviews to ensure the work can be performed safely and compliantly at the project. Review of these WDs (OHC, sub-contractor, and cross-project) shall focus on facility or project hazards, and operational considerations, such as DSA elements, unreviewed safety question (USQ) review, and known worker safety issues at the work location. The facility/project review may be documented on:
 - Existing JCS WD
 - Wrap-around JCS WD
 - *CHPRC WRCSOF/OHC Route-Approval Sheet (Site Form A-6006-282)*

OR

 - OHC, sub-contractor, or cross-project WD

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

- b. The RA will review work activities and document release on the DRS and on one of the following:
- WD (CHPRC or OHC)
 - *CHPRC Work Release for Construction/Service Organizations form (WRCSOF) (Site Form A-6004-967)*
- OR
- *S&GRP Well Drilling Pre-Job Briefing and Work Release(Site Form A-6005-420) (permitted only for Soil and Groundwater Remediation Project Well Drilling)*
- c. The following criteria must be met for release of an activity:
- MIR inputs requiring submission before release have been submitted (initial release only)
 - The current facility conditions allow for safe performance of the work activity
 - The work activity is compatible with other work being performed for the day
 - Any associated LCOs are known and their impacts understood
 - RUWD is within the effective date
 - Building Emergency Director (BED) is on duty if work activity could cause an event that would reach an Emergency Action Level (EAL)
- d. Work may be released for the following durations:
- Hazard Category 2 or 3 nuclear facilities ≤ 24 hours
 - Other facilities/projects ≤ 45 days

3.4.2 Partially Release

- a. A WD may be partially released. The released portions (sections/steps) of the WD must provide boundaries within which the work will be performed. RUWDs shall be released using the partial release to match the instructions authorized by the RA to the date released.

3.4.3 No Release Required

- a. Work activities may be designated as NRR if it meets all of the following criteria:
- Work does not involve activities that triggered an HRB Review Meeting
 - Work activities will not impact facility or equipment operation outside of normal operating procedures

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

- No retest or acceptance testing of the work by Operations is required
- The RA concurs that formal release is not required (e.g., Shop work, Drills, Operational and radiological routines and surveillances, Site services, and Basic services performed in landlord facilities)

3.5 Work Performance

3.5.1 Pre-Job Briefing

- a. Pre-job briefings will be conducted per PRC-PRO-WKM-14047.

3.5.2 Performing Work

- a. FWS will check in with the appropriate facility or project personnel (RA or designated Point of Contact) each day prior to beginning work and the FWS will ensure all work performed under their direction is released.
- b. FWS will ensure work team is trained and qualified.
- c. When the work team is being supervised by a CHPRC employee and includes workers for whom CHPRC is not the responsible company (loaned labor), the borrowed workers will follow all CHPRC policies and procedures and work to a CHPRC WD.
- d. Work teams from OHCs performing managed tasks (e.g., Refrigeration Services, Fire Systems Maintenance, Hanford Fire Department Testing, and Vent & Balance) on CHPRC property are supervised by their company and will conduct work according to their companies' policies and procedures. The work shall be reviewed, released and accepted by CHPRC to ensure OHCs do not violate CHPRC policies and procedures, including Conduct of Operations.
- e. Work is performed within controls; the work group is responsible for executing the activity in accordance with the WD. The work group does not proceed and does not allow others to proceed when safety or compliance is uncertain. Stop work authority is defined and available to all personnel and implemented per DOE-0343.
- f. During the course of the work, the FWS routinely ensures work is being safely and compliantly executed in accordance with the WD and solicits feedback from the workers.
- g. The FWS is responsible to maintain the work record to track work status, issues arising during the work, significant activities, feedback and issues needing follow-up (e.g., data sheets, engineering drawings, training documents, procedures, hazard analysis)
- h. The FWS is required to be at the work site during the performance of any hold point steps.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

- i. A working copy of the WD may be used to support field work. The working copy is to be clearly identified as a working copy and tracked within the work record of the WD or on a *Working Copy Log for Work Document* (Site Form A-6005-908). A log is required when there are three or more active working copies.
- j. The FWS is responsible to ensure that the WD represents a complete and accurate record of the work performed. (e.g., data entered, blanks N/A'd, valid signatures).

3.5.3 Suspending Work Documents

- a. The purpose of suspending a work package is to officially withdraw/revoke the work release (full or partial) when packages are not able to be performed safely or compliantly as written, when there is uncertainty of path forward, or when the work will not proceed for greater than two work weeks.
- b. Working copies must be controlled to prevent use during suspension. (e.g., destroy working copy, place copy of suspension sheet with working copy)
- c. Review the MIR and determine if any MIR actions must be stopped or reversed (e.g., procedure changes, spare parts inventory, training, labeling).

3.6 Work Document Change Process

3.6.1 Types of Change

- a. Changes made to the work instructions (statement of scope through restoration/end state) must follow this process. Administrative fields of the JCS work document (i.e., classifier codes, charge code information, resource codes and numbers, position or organization names or titles) do not require approvals and are not subject to this section. Supporting documents are changed per the governing process by which they were developed.
- b. The RM will review the scope of change to determine if any changes in hazards or controls are required and select the affected disciplines per Appendix B for review of the change. Addition of any beyond skill-based hazard controls requires screening for HRB per PRC-CHRT-WKM-53060.
- c. Editorial change criteria are stated in PRC-PRO-NS-062, *Unreviewed Safety Question Process*, Appendix C, CHPRC Categorical Exclusions, GCX-2. In addition, for work documents, editorial changes may be used to correct grammatical, typographical, or spelling errors that:
 - Do not direct personnel actions
 - Do not change the meaning, overall scope, or purpose of the existing document or drawing

Work Management**Published Date: 10/05/17****Effective Date: 10/05/17**

- Do not change a TSR or its bases, or other described operational controls or restrictions
 - Do not change the hazard analysis
- d. Changes that do not meet the Editorial criteria are considered to be Technical changes.
- e. WDs that are changed must be evaluated for the following:
- Evaluate the change for impacts to worker training and medical monitoring requirements.
 - Working copies of WDs must be changed or destroyed when affected by a change.

3.6.2 Incorporation of Change

Select option a or b to incorporate changes.

- a. Prepare and Incorporate Pen and Ink changes:
- 1) Document the change and reason for the change in the work record with concurrence by the selected reviewers, USQ Categorical Exclusion (CX) documentation and RM approval.
 - 2) Change the work document by
 - a) Drawing a single line through the text and legibly inserting the new text using permanent ink.
- OR
- b) Using track changes to make changes to the Word file and replace the affected page(s).
 - 3) Both methods require the changes to be initialed and dated in the margin at the location of the changes.
- b. Prepare and incorporate a Work Change Notice (WCN):
- 1) Update the electronic file (embedded Word file) and add the WCN number to the header.
 - a) Incorporate any previous pen and ink changes, signed steps and new changes into the electronic file.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

- b) Ensure changes in the text are clearly identified (e.g., red font, change bar).
 - c) Include which pages of the hard copy will be replaced in the Change Instructions field.
- 2) Document concurrence and approval of the changes in JCS.
 - 3) Mark superseded pages with a diagonal line through the page with WCN - #, remove them and retain in the WD.
 - If updates to the Word file change the page numbers, then replace all pages from the first page where changes were made through the end of the hard copy.
 - If the updates do not change the page numbers, only the affected pages are required to be replaced in the hard copy work document, even though the header has been updated on the entire file.
- c. Changes to WDs must be communicated to the field work team prior to working to the changed instructions.

3.7 Work Acceptance

3.7.1 Post Maintenance Testing and Work Acceptance

- a. For modifications the RA verifies items marked on the MIR as “Required Before Retest” have been completed and the Facility Modification Package (FMP)/ Engineering Change Request (ECR) has been signed by the DA as complete, for the work being accepted.
- b. The successful completion of the Post Maintenance Test or Retest ensures that the equipment functions properly, the maintenance was effective, and that no new problems were introduced.
- c. If the Post Maintenance Test cannot be successfully performed as written, then evaluate the acceptance criteria, process a change to the WD to resolve the issue or initiate a work request to address the issue.
- d. The RA accepts the work after verifying the activity was performed correctly; the acceptance criteria was met; the systems and equipment affected by the work operate correctly and are restored to normal or desired operational status.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

3.8 Work Document Closeout**3.8.1 Closeout and Follow-up Actions**

- a. Perform Post-Work Review in accordance with PRC-PRO-WKM-14047 and document any feedback in the work record.
- b. Route the WD for any additional reviews per Appendix C.
- c. Prepare the WD for record retention as follows:
 - Record M&TE used in JCS
 - Transcribe signatures and data from the WD to JCS
 - Review package for completeness, legibility and accuracy
 - Required actions from MIR have been completed
- d. Notify each actionee of issues needing follow-up (e.g., data sheets, engineering drawings, training documents, procedures, hazard analysis).
- e. WD closure should be completed within 30 days of Work Acceptance. The Work Control Manager may grant extensions if the work package will not be closed within 30 days, and determine if additional actions are necessary to complete the closure reviews in a timely manner.

3.9 Cancelling Work Documents**3.9.1 Closing Uncompleted Work Documents**

- a. WDs where field work has been performed must be processed through the work change and closure process.
- b. Impacts of cancellation shall be evaluated (e.g., compensatory actions, engineering documents, procedures, training, spare parts, facility operations) and initiate actions to mitigate impacts and notify initiator of work request.
- c. Document justification for cancellation in JCS work record.

Work Management**Published Date: 10/05/17****Effective Date: 10/05/17****4.0 FORMS**

Forms listed here are generated by the work management procedures. Additional forms are referred to throughout the procedure that are generated through the administrative processes of other CHPRC programs and are required during the development of work instructions.

A-6003-003, *CHPRC Signature/Initial/Stamp Verification*

A-6004-496, *Signature Continuation Sheet*

A-6004-654, *CHPRC Radiological Hazard Screening Form*

A-6004-963, *CHPRC Modification Impact Review*

A-6004-967, *CHPRC Work Release for Construction/Service Organizations*

A-6005-115, *JCS Suspension Sheet*

A-6005-337, *Partial Release Sheet*

A-6005-420, *S&GRP Well Drilling Pre-Job Briefing and Work Release*

A-6005-908, *Working Copy Log for Work Document*

A-6005-953, *Work Package Workability Review Checklist for Field Work Team*

A-6006-282, *WRCSOF/OHC Route-Approval Sheet*

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

5.0 RECORD IDENTIFICATION

All work management records are generated, received, processed, and maintained in accordance with PRC-PRO-IRM-10588, *Records Management Processes*. OCRWM records are managed per PRC-PRO-QA-19579, *OCRWM Records Management*.

IDMS retention is the same for all WD. As such it is conservative enough to meet the requirements for WDs that deal with radiological or environmental work, and is in compliance with the RIDS for those types of records.

Records Capture Table

Name of Record	Submittal Responsibility	Retention Responsibility	OCRWM Retention Schedule (If OCRWM Related)
<p>Work Package - inclusions as listed on the JCS References for the respective WD. This includes radiological forms, WPE Coversheet, or any forms or other documentation required during field work, except forms listed in this table for which the originals must be retained by the stated organization.</p>	<p>Facility/Project Designated Personnel</p>	<p>WDs must be retained in accordance with RIDS. OCRWM work packages are transmitted to R&CM-RIM Services Project Hanford for scanning into IDMS and retirement to OCRWM Records Holding. The IDMS electronic record will become Hanford's record copy and the hard copy (paper) will be the OCRWM record. Remaining WDs are sent to IDMS to be scanned into the Electronic Record Repository. All WDs retained in IDMS are held in either the General or Sensitive folder for work packages.</p>	<p>Lifetime</p>

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Name of Record	Submittal Responsibility	Retention Responsibility	OCRWM Retention Schedule (If OCRWM Related)
Documentation of work release when other than the JCS WD: <ul style="list-style-type: none"> • <i>CHPRC Work Release for Construction/Service Organizations (WRCSOF) A-6004-967,</i> • <i>SGRP Well Drilling Pre-Job Briefing and Work Release (permitted only for SGRP Well Drilling) A-6005-420.</i> 	Facility/Project Designated Personnel	Retained in the work package. Per RIDS, sent to Imaging to be scanned into the IDMS Electronic Record Repository	Lifetime
Daily Release Sheets(DRS)	Facility/Project Designated Personnel	Per RIDS, sent to Imaging Operations to be scanned into the IDMS Electronic Record Repository.	Lifetime

6.0 SOURCES

6.1 Requirements

10 CFR 830, Subpart A, *General Definitions and Provisions*
 10 CFR 851, *Worker Safety and Health Program*
 10 CFR 1021, *National Environmental Policy Act Implementing Procedures*
 CRD O 210.2A, *DOE Corporate Operating Experience Program*
 CRD O 226.1B (Supp), *Implementation of Department of Energy Oversight Policy*
 DOE O 414.1D, *Quality Assurance*
 CRD O 430.1B, Change 1, *Real Property Asset Management*
 CRD O 433.1B (Supp), *Maintenance Management Program for DOE Nuclear Facilities*
 CRD O 436.1 (Supp), "Departmental Sustainability"
 CHPRC-00073, *CH2M HILL Plateau Remediation Company Radiological Control Manual*
 ISO 14001: 2004, *International Organization for Standardization (E) International Standard, Environmental Management*
 DOE/RL-96-68, *Hanford Analytical Services Quality Assurance Requirements Document*
 PRC-MP-MN-40443, *Nuclear Maintenance Management Program (NMMP) Description Document*
 RRD-005 Rev 3, *Worker Safety*

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Memorandum of Agreement for the Performance and Payment of Services between Mission Support Alliance, LLC, and CH2M HILL Plateau Remediation Company

6.2 References

DOE-0336, *Hanford Site Lockout/Tagout*
DOE-0343, *Stop Work*
DOE-0346, *Hanford Site Fall Protection Program (HSFPP)*
DOE-0360, *Hanford Site Confined Space Procedure (HSCSP)*,
DOE-RL-92-36, *Hanford Site Hoisting and Rigging Manual*
DOE/RL-2001-36, *Hanford Sitewide Transportation Safety Document*
PRC-MP-SH-32219, *CHPRC Worker Safety and Health Program Description*
PRC-PRO-AC-40468, *Acquiring Products or Services from Other Hanford Prime Contractors*
PRC-PRO-AC-52750, *Control of Materials Stored in the Field*
PRC-PRO-EN-2001, *Facility Modification Package Process*
PRC-PRO-EN-20050, *Engineering Configuration Management*
PRC-PRO-EN-286, *Testing of Equipment and Systems*
PRC-PRO-IR-070, *Plant Forces Work Review (Davis-Bacon Act Compliance)*
PRC-PRO-IRM-10588, *Records Management Processes*
PRC-PRO-MN-19304, *Periodic Maintenance Process*
PRC-PRO-NS-062, *Unreviewed Safety Question Process*
PRC-PRO-QA-283, *Control of Inspections*
PRC-PRO-QA-19579, *OCRWM Records Management*
PRC-PRO-RP-40109, *Radiological Work Planning*
PRC-PRO-WKM-079, *Job Hazard Analysis*
PRC-PRO-WKM-14047, *Pre-Job Briefings and Post-Job Reviews*
PRC-CHRT-WKM-53060, *Hazard Review Board*
PRC-STD-FP-40404, *Fire Protection Program*
PRC-STD-MS-40241, *CH2M HILL Plateau Remediation Company Procedures Standards*
PRC-STD-TQ-40380, *Work Management Training Program Description*

6.3 Commitments

- CR-2016-1579 CA#2, CHPRC did not provide use-type designator requirements for PRC-PRO-WKM-12115 work instructions.
- CR-2017-1426 CA#1, PRC-PRO-WKM-12115 does not give clear direction on the readiness of work packages prior to being scheduled on the POW/POD.
- CR-2017-1240 CA#11, C01: W-130 Project work activities were not planned adequately commensurate with the risk to the worker and project

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix A - Glossary

<i>Term</i>	<i>Definition</i>
Acceptance Criteria	Specified limits placed on the performance, results, or other characteristics of an item, process, or service defined in codes, standards, or other requirement documents. (From NQA-1-2008) See PRC-PRO-EN-286, <i>Testing of Equipment and Systems</i> , and PRC-PRO-QA-283, <i>Control of Inspections</i> , for more details.
Activity	<p>Any job, activity, or sub-activity performed where hazards are present or are introduced by the work or the work environment (regardless of who is performing the work or the organization with which they are affiliated). The hazards involved could be potentially adverse to worker health and safety, the public, the environment, or safeguards or security.</p> <p>ISMS is to be implemented at the activity level. It is this concept that is being conveyed by the use of these terms (i.e., activity, job, task).</p>
Approval	A formal process performed by the RM to ensure that the WD has been reviewed and is a workable document.
Concurrence	Official endorsement by a discipline of the subject and content of a WD. Review and concurrence is indicated by dated signature(s). Reviewers are selected by the RM based on the criteria listed in Appendix B. Projects and facilities may impose additional review or approval requirements.
Daily Release Sheet (DRS)	<p>The DRS is a composite listing of interfacing work that will take place on that day. It includes work documents that are required to be released for field work, NRR work documents, and routine work conducted per procedures.</p> <p>Conduct of Operations (ConOps) requires that designated managers authorize in writing the work control documents for all activities, and Operators and Supervisors are aware of all activities affecting equipment. The DRS fulfills the documentation requirements at CHPRC. The term for this process is Work Release.</p>
Field Work	<p>Field Work is defined as a work activity performed on site within the scope of the CHPRC excluding administrative office activities, routine janitorial activities or vendor deliveries that DO NOT directly support CHPRC work scope (e.g., vending machines). It does include work performed to technical procedures.</p> <p>Field work includes repair, replacement or alteration of physical assets or property including rental and other portable powered equipment performed in CHPRC controlled nuclear and non-nuclear facilities and equipment, shop fabrication, environmental restoration (ER), D&D or D4 work, and well drilling, maintenance and sampling.</p>

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix A - (Cont.)

<i>Term</i>	<i>Definition</i>
Flagging	Flagging places characters in the margin to the left of a work step to identify significance of that step to the field work team. Flags must be used to highlight Hold Points and Critical Steps, and may also be used for LCO Entry/Exit steps, when specific oversight is required to be in the field during performance of the step, or for other items of similar importance. The flag serves to remind the field work team about actions or attention to be paid at the step.
Job Control System (JCS)	The Computerized Maintenance Management System (CMMS) used to support a work control process. The tool typically tracks work packages, periodic maintenance activities, work scheduling, component data bases and generates reports. CHPRC uses the JCS for this function.
Modification Impact Review (MIR)	Used as a means of ensuring each modification to a project or facility is carefully reviewed for any changes, training, spare parts, or other changes required resulting from the modification. The MIR provides a mechanism to ensure that the processes and programs that interface with the equipment that was modified are in a state or condition to support full use of the equipment when the physical changes have been completed, whether the SSC involved are configuration-managed (CM) or not. The MIR may also be used to track the effects of complex non-modification work on related processes and programs. The JCS MIR or the Site Form (A-6004-963) is used to document results of the review and track items to closure.
Per Telecom (PTC)	Concurrence obtained through messages via electronic media (e.g., telephone, email, or other electronic devices). See Appendix B for instructions on how to document PTC review or approval.
Planning Team	A team composed of the FWS, Workers, and SMEs assigned to the development of work instructions for a specific activity. It is preferred that the work team and the planning team be composed of the same individuals whenever possible.
Post-Work Review	A review of the post-work testing, acceptance, and work documentation conducted at the completion of work activities, aimed at improving the effectiveness of the activity. A post-work review often includes an interactive discussion with the group that performed the work. Lessons learned and operating experience for continuous improvement are derived from this review.
Procedure Use Type	Procedure Use Type is defined in PRC-PRO-MS-589. For work packages, acceptable use type choices are Continuous Use, Reference Use, or Information Use. If the work document has not been identified, the field work team must assume the instructions are Continuous Use.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix A - (Cont.)

<i>Term</i>	<i>Definition</i>
Routine	The proposed activity to be performed is a repetitive activity/task where the performers have demonstrated proficiency
Shop Work	The performance of fabrication, calibration, PM, or repair in the craft shops that support the facility.
Supervisory Instruction RUWD	A Repetitive Use Work Document (RUWD) that meets the criteria specified in this procedure. Work is performed per instructions from the FWS. These RUWDs are not required to be carried into the field.
Temporary Change (TC)	A TC is an alteration to a SSC driven by a situation that is urgent to the facility or project because of potential damage or a situation that will be detrimental because of weather or other unavoidable condition. A TC may also be used to perform testing in accordance with PRC-PRO-EN-286. Appendix D states the criteria and process for TCs.
Work Acceptance	A determination that the work: 1) was accomplished successfully, 2) did not introduce or cause other deficiencies or problems, and 3) met applicable design, safety, and interface criteria, 4) SSC was restored to its intended functionality and has been retested to confirm both functional and administrative (DSA, ENV permit, etc.) operability.
Work Document (WD)	A document that records, at a minimum, the scope of an activity, the Responsible Manager (RM), and the hazards and controls associated with the activity. This is the work document that is used in the field to execute activity-level work. This may include technical procedures, test plans, and work instructions for use by contractor personnel to perform activities, such as R&D, D&D, construction, operations, and maintenance.
Work Instruction	Specifies the actual work that will be conducted in the field including the work scope, prerequisites, performance instructions, and restoration/end state steps.
Work Record	The section of the WD where narrative entries are made. These entries may include documentation of changes, Notice of Discrepancies (NOD), issues or problems during the work, feedback, and any other information pertinent to the work history.
Work Release	A formal process performed by an individual in authority who is the designated point of release responsible for all work and site conditions in a facility or area. The process needs to evaluate workability for the specific activity, just prior to executing the activity, and confirm the compatibility of all ongoing work activities.
Work Team	A team comprised of the FWS, Workers, and SMEs assigned to perform the work activity per the approved work instructions. It is preferred that the planning team and the work team be comprised of the same individuals whenever possible.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix A - (Cont.)

<i>Term</i>	<i>Definition</i>
Workability Review	A formal process to document the validation and verification of high risk work activities to ensure the work can be performed as written.
Wrap-Around Work Package	Work instructions used to add facility or project-specific requirements for approved work instructions prepared outside of the organization that is responsible for the work location. The wrap-around package serves as a means of collecting additional reviews required by CHPRC that were not obtained by the work instruction preparer, and it also serves as a means of using a JCS WD number to track the work for scheduling, work release, and various reports. The wrap-around package could also provide instructions to set-up for work by an outside organization, refer to that contractor's instructions for the work, and then recover from the work.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - Identification of the Work Planning Team/Reviewers

The information in this appendix applies to all original work instructions and all changes to them. The appendix serves two purposes:

- Identify those functional areas that should participate in the planning
- Identify the functional areas that should review or approve the instructions in their final form

Documentation of Review, Concurrence or Approval

To comply with Records requirements to document signatures and initials that authenticate and validate Records use one of the following formats:

- Signature or initials are accompanied by the typed or printed name of the individual
- Signature is generated electronically in the work control software (menu choices: approved, per telecom, reviewed or transcribed)
- An example of the signature and printed name are recorded on a Signature Log in the work package or procedure.
 - Acceptable signature log forms: *CHPRC Signature/Initial/Stamp Verification* (Site Form A-6003-003), *Pre-Job Briefing Checklist* (A-6004-952), *Signature Continuation Sheet* (Site Form A-6004-496)
- Per telecom (PTC)
 - a. Print the name of the person granting the concurrence, noting date, "PTC," and then print and sign the name of person documenting concurrence.
 - b. Use the JCS signature menu and select the "per Telecom" option with the name of the person granting concurrence. The JCS printout will reflect the signature was obtained per telecom.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - (Cont.)

Table A - Disciplines ALWAYS or Nearly Always Required

Review Discipline	JCS Code	WHEN REQUIRED
Field Work Supervisor	FWS	<p>Always for original work instructions.</p> <p>Always for technical changes to work instructions.</p>
Qualified Planner	PLNR	<p>Always for work instructions that are required to be prepared by a qualified planner.</p> <p>Always for WCNs or use of MS WORD strikeout changes to work instructions.</p>
Release Authority	RA	<p>Always – for original work instructions.</p> <p>Always – for technical changes to work instructions.</p> <p>NOTE: <i>if the work package was not suspended to process the change, the RA normally signs after the RM to indicate continuing release of the WD after its approved change.</i></p>
Responsible Manager Facility/Project Designee	RM	<p>Always – for original work instructions, or wrap-around instructions (<i>PRC and OHC</i>).</p> <p>Always – for editorial and technical changes to work instructions. Review the note for RA for technical changes.</p>

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - (Cont.)

Table B - Disciplines Involved Based On Work Scope and Hazards

Review Discipline	JCS Code	WHEN REQUIRED
Competent Person (Designated Competent Persons are listed on the OS&IH website)	CP-ASB	<ul style="list-style-type: none"> Asbestos (NOTE: A certified industrial hygienist or licensed engineer who is also qualified as a project designer shall evaluate alternate asbestos control methods.)
	CP-CADM	<ul style="list-style-type: none"> Cadmium
	CP-CRANE	<ul style="list-style-type: none"> Crane Inspector
	CP-CSL	<ul style="list-style-type: none"> Concrete Slab Lift
	CP-SAFE	<ul style="list-style-type: none"> Construction Job Site Safety Inspections
	CP-DEM	<ul style="list-style-type: none"> Demolition
	CP-EXCVN	<ul style="list-style-type: none"> Excavation
	CP-EXP	<ul style="list-style-type: none"> Explosives
	CP-FALL	<ul style="list-style-type: none"> Fall Protection (if beyond skill-based)
	CP-HEAR	<ul style="list-style-type: none"> Hearing Protection (if beyond skill-based)
	CP-LAD	<ul style="list-style-type: none"> Ladders (if beyond skill-based)
	CP-PB	<ul style="list-style-type: none"> Lead
	CP-SCAF	<ul style="list-style-type: none"> Scaffold (if beyond skill-based)
	CP-STEEL	<ul style="list-style-type: none"> Steel Erection
CP-WELD	<ul style="list-style-type: none"> Welding 	
Criticality Safety	CS	<p>Work affecting operations or activities for any of the following:</p> <ul style="list-style-type: none"> Involves storage and handling greater than 15 grams of fissionable material, Affects an area containing greater than 15 grams of fissionable materials, Involves facility changes or activities that may impact equipment used to process or store fissionable materials, Involves facility changes or activities that may impact the criticality alarm system or its coverage.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - (Cont.)

Review Discipline	JCS Code	WHEN REQUIRED
<p>Design Authority/ Systems Engineer</p> <p>Also see Engineering, and FEM, Facility Engineering Manager</p>	DA	<p>Corrective maintenance activities performed on SSCs under their responsibility.</p> <p>Modifications, process modifications, Temporary Power Installations, periodic maintenance, or corrective maintenance performed on any Configuration Managed Structure, System or Component (CM SSC).</p> <p>Work on ASME-coded pressure systems and pressure-sensing or pressure-relief devices per PRC-STD-EN-52736, Design, Inspection, Testing and Repair of ASME-Coded Pressure Systems and Pressure Relief Devices.</p> <p>Specific acceptance testing criteria or instructions are required to verify SSC design operability IAW PRC-PRO-EN-286.</p> <p>When a like-for-like replacement is proposed.</p> <p>When the CGD process will be used for installing parts.</p> <p>When materials, tools or equipment require special handling per PRC-PRO-AC-52750 while in possession of the field work team.</p> <p>Work instructions will direct operating systems or components in a manner not addressed or contrary to approved operating procedures.</p> <p>Changes to transportation packaging, maintenance or surveillance programs/procedures, and layup plans.</p> <p>When planning work that has the potential to be within 20 feet of energized overhead lines, to ensure the activity is properly evaluated per DOE-0359.</p> <p>When energized electrical work will be performed.</p> <p>When the work activity includes the potential for blind penetrations (electrical or mechanical).</p>
Electric Utilities	EU	Work affecting the electric distribution system greater than 600V.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - (Cont.)

Review Discipline	JCS Code	WHEN REQUIRED
Emergency Preparedness	P	<p>Work that affects emergency notification systems, or disrupts egress paths or staging areas.</p> <p>Work that will take place in remote locations, off-road, or outside of facility footprints and away from normally occupied buildings.</p>
Engineering (also see DA/SE, Technical Authority, FEM)	Various	<p>Activities where engineering support is needed (e.g., WPE, engineered items, analysis).</p> <p>When technical changes are needed to a WPE Coversheet or other engineering document</p>

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - (Cont.)

Review Discipline	JCS Code	WHEN REQUIRED
Environmental Protection Environmental Compliance Officer (ECO), or NEPA Trained Individual (NTI), when authorized by the ECO	E	<p>NOTE: <i>Environmental review shall be performed by the ECO unless the work is considered routine and the ECO has authorized a NEPA-Trained Individual (NTI) to conduct environmental screening and document the results. Activities listed here are not considered routine and thus require review by an ECO (not NTI) to ensure implementation of environmental controls.</i></p> <p>All work where the work activity involves implementation of environmental controls or requires limitations/concurrence of the work scope. Environmental review applies for original work instructions and technical changes to them for work:</p> <ul style="list-style-type: none"> • Performed under CERCLA authority • Requiring an environmental permit or other authorization • Involving modifications, repair, or maintenance of a facility or structure that has an environmental permit or license • Requiring implementation of controls to prevent or minimize release of hazardous substances or regulated materials • Requiring procurement of environmentally preferred products • Requiring cultural and/or ecological reviews and/or the implementation of controls related to those reviews • Implementing regulatory requirements associated with environmental regulation, agreement or permit/license (PCB management, Asbestos, UIC, USTs, RCRA Treatment/storage, Liquid discharge, environmental sampling, etc.); or • Requiring an excavation permit • Items that may result in generation of liquid effluents, air emissions, or require work on regulated features of a permitted or licensed air emission unit
Facility Chemical Coordinator	FCC	When new chemicals will be brought on-site as part of a work package.
Facility Engineering Manager (see also DA and Engineering)	FEM	Work that constitutes a temporary power installation. (Ops Manager is also required to approve this type of work.)

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - (Cont.)

Review Discipline	JCS Code	WHEN REQUIRED
Deputy Fire Marshal (DFM)	DFM	<p>Work requiring Hanford Fire Marshal permits per PRC-PRO-FP-40422, <i>Fire Marshall Interface</i>.</p> <p>Work affecting building occupancy classification, or impacting Life Safety Code characteristics, per PRC-STD-FP-40404, <i>Fire Protection Program</i>.</p> <p><i>(Note: if a situation arises where the HFM (FM) is required to concur with the instructions, the DFM will ensure the FM is involved.)</i></p>
Fire Protection Engineer (FPE)	FPE	<p>Inspection, testing, or maintenance performed by the Hanford Fire Department or Fire Systems Maintenance.</p> <p>Work affecting fire protection systems or processes, including those that are credited in the DSA.</p> <p>All modifications that will directly impact fire and life safety components, including but not limited to, fire alarm systems, structural items credited in the fire code, Life Safety Code, fire protection elements listed in DSA, fire sprinkler systems, fire barriers (including walls, doors, and other openings), egress, emergency lighting, exit lighting, exit doors, and pathways.</p> <p>Work involving pyrophoric components.</p>
Hazard Review Board (HRB) Chairperson	HRB	<p>Work instruction changes that impact the HRB screening criteria originally identified, or trigger criteria that were not identified for the original screening.</p> <p>NOTE: <i>Work packages screened positive for HRB must include the HRB Meeting Record, A-6004-513, signed by the Chairperson. HRB Chairperson concurrence is not required on the work package approval tab for the original instructions.</i></p>

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - (Cont.)

Review Discipline	JCS Code	WHEN REQUIRED
Hoisting and Rigging	HRTA HRE/ OSR	Work involving hoisting and rigging activities defined as "critical lift", by the Hanford Site Hoisting and Rigging Manual (DOE-RL-92-36).
Industrial Hygiene	I IH	<p>Work determined to be beyond skill-based:</p> <ul style="list-style-type: none"> with the potential to contain hazardous energy, hazardous substances, or other occupational/industrial hazards (other than radiological hazards) that may result in injury, illness, impairment, or affect the well-being of workers work that may need current evaluation during the activity for hazards such as heat stress that are difficult to quantify during planning <p>NOTE: <i>In most cases, S and IH should both be consulted for beyond skill-based work.</i></p>
Nuclear Safety/ Safety Analysis	N	<p>NOTE: <i>Nuclear Safety review and USQ review are separate functions, each with its own criteria. A USQ review is always required for work at Haz Cat 1, 2, or 3 facilities.</i></p> <p>Work affecting SC, SS and defense-in-depth systems or involving TSR controls.</p> <p>Work activities in Less than Hazard Category 3 facilities that have been identified in a Final Hazard Categorization evaluation as having the potential to change the form or distribution of material to place the facility into Hazard Category 3. (management of change [MOC] review PRC-PRO-NS-8366)</p>
Occupational Safety	S	<p>Work where there is an issue in protecting the safety, health and welfare of the workers when beyond skill-based work will be performed.</p> <p>NOTE: <i>In most cases, S and IH should both be consulted for beyond skill-based work.</i></p>
Operations Manager	OM	Work that constitutes a temporary change or temporary power installation to a facility. (Facility Engineering Manager (FEM) is also required)

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - (Cont.)

Review Discipline	JCS Code	WHEN REQUIRED
PTS Project Delivery Cross-Project SME reviewers	PTS-IH PTS-QP PTS-S PTS-TA1 PTS-TA2	For Project Technical Services (PTS) Project Delivery cross-project work activities where the planned work package is prepared by one project/organization and is performed by or at a different project/organization. Consult the cross- project point of contact for recommendation of affected organizations reviewers. RM has final determination.
Quality Assurance	Q	<p>Corrective Maintenance or Modification of SC/SS systems' primary functions.</p> <p>Work affecting or per regulatory permits.</p> <p>Work where one or more QA/QC Hold, Inspection, or Verification Points (welding, leak testing, etc.) are identified per PRC-PRO-QA-283.</p> <p>Work where the DA has specified inspection points in the work instructions; QA shall confirm adequacy of that inspection for its intended purpose.</p> <p>Where CGD steps must be performed as part of the work activity (not required if CGD is completed prior to installation of the materials)</p> <p>Work where materials that need special handling will be under the control of the FWS and instructions are needed for that purpose per PRC-PRO-AC-52750</p> <p>Work on Type A or higher packaging (transportation and packaging) other than routine preventive maintenance.</p>
Radiological Control Organizations	R	<p>Work that meets the definition of radiological work per CHPRC-00073 glossary.</p> <p>Any changes to work scope, tools/methods, or work steps refer to PRC-PRO-RP-40109, <i>Radiological Work Planning</i>.</p>
Safeguards and Security	SAS	Work related to control and accountability of special nuclear materials (SNM), including measurement, transfer, and inventory.
Sewer Systems	SW	Work affecting the site-wide sewer system.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - (Cont.)

Review Discipline	JCS Code	WHEN REQUIRED
Subcontractor Representative	SUB	Work being performed by a subcontractor when the work instructions involve subcontractor personnel, especially when the WI impact operating systems or involve tie-in with existing facility systems, such as utilities, emergency preparedness communications, or facility structural elements.
Technical Authority	TA	Work scope that impacts the area of responsibility of the assigned TA. (See DA and Engineering Support for comparison.) Activities that include PM/S decisions for which the TA is not also the DA/SE
Technical Specialist or Vendor Rep	OTHER OTHER-1	When the work scope involves a technical specialist or vendor in a field unusual to CHPRC work scopes.
Waste Services	WS	Work that will generate, package, and/or handle all waste types and transportation of hazardous or mixed waste both onsite and offsite, when additional controls need to be taken from the WPC and incorporated directly into a work document work instruction or new/modified procedure.
Transportation Safety/Transportation Authorizations	TS	NOTE: <i>Transportation Safety review and Transportation USQ (USQt) review are separate functions, each with its own criteria. The TS approval does not negate or fulfill the need for a USQt.</i> A transportation safety review is required for all packaging and shipping activities authorized under the Hanford Site TSD (PSSD, OTRS, SARP, and SPA). Also included are changes to external tie downs and internal securements. A transportation safety review is required for activities that change packaging activities including activities that are considered near term (container loading) with the intention to ship in the future under the TSD.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix B - (Cont.)

Review Discipline	JCS Code	WHEN REQUIRED
USQ Screener/ Evaluator (Nuclear Safety)	USQ	<p>NOTE: Nuclear Safety review and USQ review are separate functions, each with its own criteria. A USQ review is always required for work at Haz Cat 2, or 3 facilities.</p> <p>USQ review and concurrence is required if the work instructions or changes to the instructions meet any of these bullets:</p> <p>Work at hazard category 2 or 3 nuclear facilities</p> <p>Work adjacent to a hazard category 2 or 3 nuclear facility</p>
USQ Screener/ Evaluator (Transportation USQ) See also: Transportation Safety/Transportation Authorizations (TS)	TP	<p>NOTE: A Transportation Safety technical review and USQ review are separate functions, each with its own criteria. The completed USQ does not negate or fulfill the need for a TS review.</p> <p>TP USQ review and concurrence is required if the work instructions meet any of these bullets:</p> <ul style="list-style-type: none"> • USQ review for work involving transportation or packaging of hazardous material that will travel on public roads, or transported on-site in accordance with DOE/RL-2001-36, Hanford Sitewide Transportation Safety Document • Work involving on-site transportation of hazardous/radioactive materials/waste as authorized by DOE/RL-2001-36 • Work involving transportation to an offsite facility and using road closures in accordance with the TSD
Water Purveyor/ Water Compliance	WP WTRCMPL	Work that breaches potable water, affects the operation of back-flow preventers, or performed within the well head protection area.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix C - Identification of the Post Work Review Disciplines

Review Discipline	JCS Code	WHEN REQUIRED
Design Authority/ Systems Engineer DA/SE	DA	Modification work packages for CM SSCs. When a CGD Package was included in the work package. When M&TE calibrations are discovered to be in error.
Environmental Protection	E	When the work: <ul style="list-style-type: none"> Involved demolition activities Documents a discrete sub-action or completion of a CERCLA response action Documents completion of work to implement regulatory requirements associated with environmental regulation, agreement, or permit/license. Involved changes or modifications to permitted, licensed or regulated units e.g., emission units, components or processes; treatment, storage or disposal facilities; wastewater treatment facilities and discharge points.
Quality Assurance	Q	Work involved the construction, fabrication, modification or installation of Quality Level - 1 or Quality Level - 2 installations, equipment, or components. Including transportation packaging. Work included one or more QA/QC Inspection Points, (QA/QC Hold Point, Verification Point, or Witness Point) per PRC-PRO-QA-283.
Qualified Planner	PLNR	Always for planner-developed work instructions.

Work Management

Published Date: 10/05/17

Effective Date: 10/05/17

Appendix C - (Cont.)

Review Discipline	JCS Code	WHEN REQUIRED
Radiological Control Organizations	R	<p>Refer to the <i>CHPRC Radiological Hazard Screening Form</i> (RHSF), Site Form A-6004-654, for hazard designation.</p> <ul style="list-style-type: none"> • All High Radiological Hazard Work. • For any hazard category of radiological work, if any of the following conditions are encountered: <ul style="list-style-type: none"> ○ RWP Voided during work performance ○ Infrequent or first time evolution radiological work ○ Actual dose for a task is +/- 25% of the pre-job estimate when the estimates are at least 1,000 person-mrem TED and/or 100 mrem TED per person for the task. ○ Task resulted in a reportable radiological occurrence ○ Radiological Stop Work authority used ○ Identification of significant lesson learned Management Request (e.g. positive feedback)

Work Management

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Appendix D - Temporary Changes

A temporary change (TC) is an alteration to an SSC or to a process that that is driven by the urgency of maintaining SSC or process integrity under adverse conditions that are beyond the control of the Project. A TC may also be used to perform testing in accordance with PRC-PRO-EN-286. Examples of conditions justifying a TC include:

- Freezing ambient temperatures and flow is impossible
- Critical process component failure when no like-for-like spares are available
- Critical parameters cannot be maintained without action (e.g., flow, trace heating)
- Personnel safety is in jeopardy because of unforeseen conditions (e.g., lead shielding is vital to ameliorate dose for personnel safety, but a structural analysis has not been performed at the mounting location)
- Testing being performed per PRC-PRO-EN-286 may require temporary changes in order to conduct the approved testing.
- Minor modifications that do not affect hazardous energy control boundaries.

1.0 A TC Meets The Following Criteria:

1.1 The TC has the concurrence of the Operations Manager and Project Chief Engineer or Facility Engineering Manager in concept before the work instructions are developed and in its final form before it is enacted.

1.2 A TC is not permitted at Hazard Category 2 or 3 facilities.

1.3 The TC is controlled by a JCS work package.

1.4 A modification Impact Review will be completed to confirm impacts of the TC do not include extensive personnel training, procedure development, or drawing changes for the TC to be effective.

- The SSC will only be operated using an approved JCS work package that specifies how to operate the SSC, how to respond to abnormal conditions, and how the rest of the plant/facility will be affected during implementation of the TC.
 - If no changes to operations or abnormal condition responses, this information should be recorded in the JCS work record
- The JCS work package includes instructions to return the affected SSC back to its original configuration or permanent change and to adequately perform acceptance testing prior to declaring the SSC to be under normal operation.
- The work instructions provide a signature for the DA to confirm that the original design configuration has been restored.
- The duration of the temporary change is specified in the JCS Work Package and may be no longer than 90 days.

Work Management**Published Date: 10/05/17****Effective Date: 10/05/17****Appendix D - (Cont.)**

- The work instructions must be approved by:
 - Operations Manager (OM)
 - Facility Engineering Manager (FEM)
- 1.5 Work Control Manager shall ensure that JCS Work Packages with TCs will not be closed or suspended until the SSC is returned to its normal configuration.
- The WD must remain on the DRS and POW/POD until closed to maintain visibility.
 - With project management permission, TCs may be entered on the Operations Manager turnover sheet for tracking while active instead of the POD/POW/DRS.
- 1.6 The change is limited to 90 days, at which time it must be enacted as a modification per PRC-PRO-EN-2001, *Facility Modification Package Process*, or PRC-PRO-EN-20050, *Engineering Configuration Management*,
- OR
- Extension may be permitted with the written concurrence Work Record entry) of the OM, FEM and Work Control Manager.
- 2.0 Considerations and warnings regarding the use of a TC:
- If the desired change would require extensive personnel training, procedure development and drawing changes, then it must be enacted as a design change per PRC-PRO-EN-2001, or PRC-PRO-EN-20050.
 - Temporary changes required to support acceptance testing activities are performed and controlled in accordance with PRC-PRO-EN-286, *Testing of Equipment and Systems*. See also, Appendix B.
 - Temporary Changes (TC) have the potential to impact facility configuration drawings used for hazardous energy control determination.
 - If the activity is of the nature that procedures, drawings and personnel training are required to safely and correctly support it, then a TC is not the appropriate mechanism; review PRC-PRO-EN-2001, PRC-PRO-EN-20050, and PRC-PRO-EN-286, *Testing of Equipment and Systems*, for applicability to the desired scope.