

<b>CH2M HILL Hanford Group, Inc.</b>	<b>Manual</b>	<b>Operations</b>
<b>TANK FARM CONTRACTOR WORK CONTROL</b>	<b>Document</b>	<b>TFC-OPS-MAINT-C-01, REV N</b>
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[Ownership matrix](#)

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## **1.0 PURPOSE AND SCOPE**

### **1.1 Scope**

(7.1.1, 7.1.3, 7.1.5, 7.1.6)

This procedure defines work management from initiation of a work request through work order closeout.

This procedure applies to all Tank Farm Contractor (TFC) personnel who schedule, plan, approve, release, perform operations acceptance or post review using work orders. It does not address operator rounds, radiological surveillances, administrative building maintenance or operational activities specified in technical procedures.

Routine maintenance, as defined in [TFC-ENG-SB-C-03](#), is excluded from the USQ process. The USQ process is applicable to work orders directing activities that do not meet the definition of routine maintenance.

### **1.2 Computerized History and Maintenance Planning Software (CHAMPS)**

Computerized History and Maintenance Planning Software (CHAMPS) is the work management system (WMS) software used at CH2M HILL to process work orders.

## **2.0 IMPLEMENTATION**

This procedure is effective on the date shown in the header.

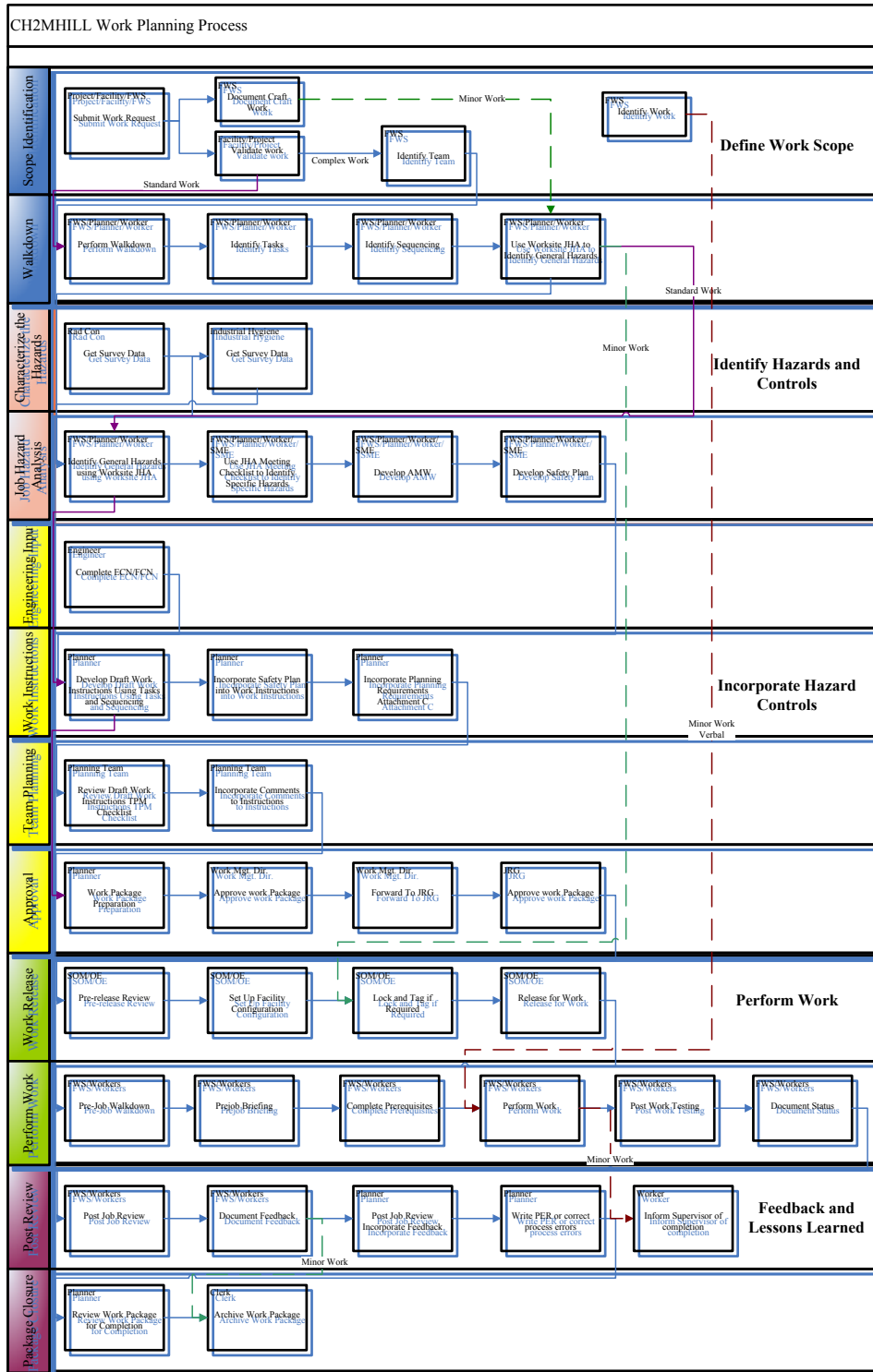
## **3.0 RESPONSIBILITIES**

Responsibilities are contained within Section 4.0.

4.0 PROCEDURE

The basic process for work control is described in Figure 1.

Figure 1. Work Control Process.



## 4.1 Chapter 1 – Identification of Work

### 4.1.1 Define Scope of Work

- |           |  |
|-----------|--|
| Initiator | <ol style="list-style-type: none"> <li>1. Use the work request module of CHAMPS. Enter a detailed description of the problem and observed symptoms and conditions, including the suspected cause. Save the request.<br/>Or</li> <li>a. Generate new preventive maintenance by due list or task on demand<br/>Or</li> <li>b. For construction forces non tie-in work, process a TFC Work Release for Construction/Service Organizations form (WRC SOF) (<a href="#">A-6003-532</a>) as determined by the Notice of Intent (see <a href="#">TFC-PRJ-CM-C-07.</a>)</li> </ol> |
|-----------|--|

### 4.1.2 Selection of Work

- |  |   |
|--|---|
| Facility Manager/<br>Operations/<br>or<br>designee | <ol style="list-style-type: none"> <li>1. Validate the work by populating the required fields in CHAMPS.</li> <li>2. If the request is not valid, reject the identified new work and notify the originator if the work is not valid.</li> <li>3. Provide Scheduling and the lead planner a work order number and a need date based on its priority (<a href="#">Attachment A</a>). (7.1.7)</li> </ol> |
|--|---|

## 4.2 Troubleshooting

Troubleshooting requires a plan to ensure that the workers are working within appropriate boundaries specified by the operations organization to keep from upsetting an operation or changing configuration of the facility without operations understanding and agreement. Engineering supports the process by evaluating the issue to clarify any technical requirements and provide necessary retests prior to placing the equipment into operation.

- |  |  |
|--|--|
| Maintenance/<br>Operations/<br>Construction Lead | <ol style="list-style-type: none"> <li>1. Develop a work instruction with the following attributes: <ul style="list-style-type: none"> <li>• The scope and boundaries of the troubleshooting activity</li> <li>• Adequate information as to what actions are to be taken to accomplish the troubleshooting</li> <li>• Unless troubleshooting is routine maintenance (see definition from <a href="#">TFC-ENG-SB-C-03</a>), the plan must go through the USQ process prior to proceeding</li> <li>• Approval and Operational release to perform the troubleshooting in accordance with this procedure.</li> </ul> </li> </ol> |
|--|--|

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- Provisions for documenting actions taken and parts disassembled or replaced during troubleshooting. The work record may be used, if necessary.

- Shift Manager
2. Once Troubleshooting is completed and actions are documented:
    - a. Ensure a work request is generated for the needed repairs and or retest in accordance with this procedure
    - OR
    - b. Return the equipment to an OPERABLE state.

### 4.3 Emergency Work

Emergency work is performed only when Operations management, with concurrence of ESH&Q Vice President, deems it necessary to immediately recover from unsafe conditions; stop or mitigate deteriorating conditions of a structure, system, or component; or reestablish the safety envelope; and/or avoid imminent violation of safety or environmental requirements where potential exists for immediate significant harm to the environment, workers, or the public.

- Operations Vice President
1. Obtain concurrence from ESH&Q Vice President that a condition warranting invocation of emergency work exists.
  2. Declare the emergency work item and notify the Shift Manager and Facility Manager.
  3. Station a Senior Supervisory Watch to:
    - Provide Operations oversight to the activity
    - Ensure work crews are working using appropriate command and control strategies (line of authority is clear, parallel activities are in not in conflict with each other, etc.)
    - Ensure work activities are within approved scope
    - Provide bounding perspective in the field on how normal processes are applied to the emergency work activity (e.g., use of Lock & Tag, standing operating procedures, etc.)
- Facility/Shift Manager
4. Assign a Field Work Supervisor (FWS) to perform the emergency work activity.
- Operations Vice President
5. Brief the FWS, SSW, and Facility Manager on the following topics:
    - The scope of work
    - Specific limitations or restrictions
    - Roles and responsibilities
    - Communications expectations
    - The need for deliberate speed

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- The expectations for performing this work within the requirements and controls necessary for safe completion.
- Facility/Shift Manager 6. Coordinate the necessary resources to support Operations.
- NOTE: The intent is to begin and complete work expeditiously, with all necessary groups providing the technical guidance and support as required to ensure that the work is conducted safely and efficiently. This is to include appropriate management representatives from support organizations such as Safety, Environmental, Health, Radiological Controls, Quality, and Engineering to provide Subject Matter Expert support in implementation and field verification of expectations.
- Operations Engineer 7. Maintain a record of information to capture all actions taken, including materials used, measuring and test equipment (M&TE), and procedures. (This information is to be used when the formal order is assembled.)
- Applicable Radiological Control Program Organization 8. Develop radiological controls for the emergency work in accordance with TFC-ESHQ-RP\_RWP-C-04 after extent and magnitude of radiological conditions have been determined.
- NOTE: A formal Radiological Work Permit (RWP) need not be generated for emergency work.
- Facility/Shift Manager 9. Ensure that necessary personnel meet to develop a plan.
10. Approve field work to be performed.
- Field Work Supervisor 11. Perform pre-job briefing following the intent of [TFC-OPS-MAINT-C-02](#).
- Field Work Supervisor and Workers 12. Perform field work and provide the planning lead with any documentation of the field work performed.
- Work Planner 13. Generate a work order to document completed work.

#### 4.4 Chapter 3 - Work Planning (7.1.7)

Work planning includes identification of scope, tasks, hazards, controls, requirements, and instructions or direction. In each of the cases below, work may be very simple but have significant hazards or the work may be very complex with simple hazards. It is possible that the radiological risk may be identified as medium or high for minor work and drive the need for an ALARA Management Worksheet (AMW) or Joint Review Group approval. It is also possible that a complex work activity will be of low radiological risk or not have a radiological risk.

All work in areas that are posted and controlled for radiological conditions, shall be reviewed and approved by Radiological Controls.

Use of an ALARA Management Worksheet (AMW) or Joint Review Group approval may be needed for work as determined in [TFC-ESHQ-RP\\_RWP-C-03](#).

#### 4.4.1 Minor Work

1. The supervisor relies on the workers skill and knowledge of the General Hazards Analysis (see TFC-ESHQ-S\_SAF-C-02) or of previously performed Worksite Hazards Analysis, and the workers understanding of the correct controls for the hazards associated with these simple tasks.
  - a. Minor work requiring routine repetitive tasks or work orders may be accomplished with or without a work site hazard analysis each time the work is performed.
  - b. Minor work may be performed using standing work orders or by development of a minor work order.
  - c. Examples of minor work requiring no worksite hazard analysis include:
    - Housekeeping activities in areas frequently visited.
    - General administrative activities
    - Shop work within the skill set for that particular craft.
    - Routine surveillances for which the person is qualified to perform
    - Technical procedures that need no further direction.
  - d. Examples of minor work requiring completion of a Worksite Hazard Analysis would be:
    - Non routine surveillances
    - Work in or around construction areas
    - Field work within the skill set of the crafts involved
    - Other work not considered standard or complex.

#### 2. Standing Work Orders

- |  |   |
|--|---|
| Planner                                  | 1. Develop a standing work order that defines the general scope of work for each craft type.  |
| Field Work Supervisor                    | 2. Discuss work with the craft to ensure you are both clear on the scope of the work and the hazards involved. (Walk it down if needed)   |
| Field Work Supervisor/Worker             | 3. If work will take place in areas that are posted and controlled for radiological conditions, coordinate with radiological controls to ensure the appropriate RWP is assigned and documented on the work order. |
|  | 4. Document the scope in the work record.   |
|  | 5. Discuss the work with the Operations organization in charge of release.  |
| Shift Operations/<br>Operations Engineer | 6. Document release on the release sheet.   |

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|---------------------------------|--|
| Field Work<br>Supervisor/Worker | 7. Perform pre-job briefing.   |
| Worker                          | 8. Perform the work.   |
| Field Work<br>Supervisor/Worker | 9. Record activities completed on the work record.                                 |
|                                 | 10. Attach the original signed Bill of Materials to the work order, if applicable. |
| Work Control<br>Manager         | 11. Close out standing work orders at least every calendar year.                   |

### 3. Minor Work Orders

- |                                  |   |
|----------------------------------|---|
| Field Work<br>Supervisor/Planner | 1. Determine the scope of work and develop a minor work order.  |
|                                  | 2. If work will take place in areas that are posted and controlled for radiological conditions coordinate with radiological control to ensure the appropriate RWP is assigned and documented on the work order. |
| Field Work<br>Supervisor/Worker  | 3. Using the Worksite Hazard Analysis form ( <a href="#">A-6004-101</a> ), walkdown the work.   |
| Field Work<br>Supervisor         | 4. Ensure that work and hazard controls are understood and within the capability of the craft assigned with simple instructions.  |
|                                  | 5. Approve the work order.  |
| Field Work<br>Supervisor/Worker  | 6. Follow applicable sections of this procedure for release, performance, and close out of the work order.  |

#### 4.4.2 Standard Work Process

Standard work is defined as work that requires sequencing of work steps, coordination of resources, or work steps to mitigate risk beyond the unaided ability of the workers and the field work supervisor.

This category of work is used when the work requires entry into a Limiting Condition for Operation (LCO), TSR action statement, or if documentation is required to show compliance to a regulatory requirement.

- |   |   |
|---|---|
| Planner/Field Work<br>Field Work<br>Supervisor/Worker | 1. Perform a walkdown using the Worksite Hazard Analysis to determine the tasks and hazards associated with the work. |
| Planner   | 2. Perform a job hazard analysis (JHA) in accordance with <a href="#">TFC-ESHQ-S_SAF-C-02</a> .                       |

- |                          |    |  |
|--------------------------|----|--|
|                          | 3. | Use the information from the Job Hazard Analysis, AMW and RWP, if applicable, and the Work Order Planning Checklist ( <a href="#">A-6003-707</a> ) to develop the work instructions. |
|                          | 4. | Use subject matter experts and <a href="#">Attachment B</a> as a guide in development of instructions.   |
| Planner                  | 5. | Assemble work orders using Figure 2 as a guide.  |
| Field Work<br>Supervisor | 6. | Approve the work order.  |
| Planner/Scheduler        | 7. | See Section 4.6 for operational review prior to release.   |

#### 4.4.3 Complex Work Process

Complex work requires sequencing of steps and coordination of resources and/or steps to mitigate risk, requiring subject matter experts, and worker involvement. Work in this category will typically take a team approach to resolve.

- |  |    |   |
|--|----|---|
| Planner/Field Work<br>Field Work<br>Supervisor/Worker/<br>Subject Matter<br>Expert | 1. | Perform a walkdown using the Worksite Hazard Analysis to determine the tasks and hazards associated with the work.  |
| Planning Team  | 2. | Perform a job hazard analysis (JHA) in accordance with <a href="#">TFC-ESHQ-S SAF-C-02</a> .  |
| Planner  | 3. | Use the information from the safety plan, AMW/RWP, and the Work Order Planning Checklist ( <a href="#">A-6003-707</a> ), along with lessons learned from the planning resource center, to develop the work instructions using subject matter experts and Attachment B as a guide.   |
| Planning Team  | 4. | Conduct the team planning meeting for complex work using the Team Review Meeting Checklist ( <a href="#">A-6003-746</a> ). <ul style="list-style-type: none"> <li>• Ensure attendance at each meeting has at least one worker from each discipline that is assigned to perform the work, a field work supervisor, and the appropriate subject matter experts.</li> <li>• Field work supervisor may excuse individuals from the meeting if the individuals indicate they feel it is unnecessary and the work planner and field work supervisor agree.</li> </ul> |
| Planner  | 5. | Incorporate comments into work instructions.  |
|  | 6. | Assemble work orders using Figure 2 as a guide.   |

- |                      |   |
|----------------------|---|
|                      | 7. Provide the work order to the Work Control Manager for approval.   |
| Work Control Manager | 8. Approve the work when confident that it is properly planned.   |
|                      | 9. Determine if it needs to go to the Joint Review Group for approval. If Joint Review Group approval is required, return to the planner to schedule Joint Review Group review. |
| Planner              | 10. See Section 4.6 for operational review prior to release.  |

#### 4.5 Chapter 4 - Preventive Maintenance Program

1. A new or revised preventive maintenance identification (PM Id) is developed for new equipment or PMs altered by configuration changes. This work should follow the steps outlined in Section 4.4.2 for planning of the work order.
2. A repetitive PM is one that has received the required review and approvals and was performed without any issues in the field the last time the PM was completed (the passing or failure of the PM is irrelevant for this purpose). The reviews and approvals for follow-on repetitive PMs are not required.

##### 4.5.1 Preventive Maintenance Identification Documents

- |            |  |
|------------|--|
| PM Planner | 1. Review the PM Ids and verify the appropriate documents (procedures, JHA, RWP, etc.) are attached in the PM Id.  |
|            | NOTE: Linking of procedures should be to the IDMS website only to ensure the latest version of the procedure is used each time the PM is performed. Do not link to documents that are not on the web (e.g., shared drives, hard drives, etc.). |
|            | 2. Confirm that the description field or the procedure has a list of any materials and (M&TE) needed to perform the PM.  |
|            | 3. Ensure that trade resources are entered in the PM Id "edit task" trades screen (trade IDs, hours, workers) needed to perform the PM.  |

##### 4.5.2 Determining the Preventive Maintenance

- |            |   |
|------------|---|
| PM Planner | 1. Run a PM due list with a desired out date and based on frequency and route code. |
|            | 2. Run a PM overdue report.   |

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|--|--|
| PM Planner and Facility Operations and Engineering Manager | <ol style="list-style-type: none"> <li>3. Review the PM due lists and the overdue report with Operations and Engineering management to determine the PMs that should be performed.               <ol style="list-style-type: none"> <li>a. Review the PM due lists and PM overdue report to verify that the PMs on the list are either:                   <ul style="list-style-type: none"> <li>• Going to be performed by their due date, or</li> <li>• Have been evaluated by Operations management and are allowed to enter their grace period.</li> </ul> </li> <li>b. If a PM will exceed the grace period prior to its performance, engineering should evaluate whether the grace period can be extended with a waiver to the periodicity.</li> </ol> </li> </ol> |
| Engineering Manager  | <ol style="list-style-type: none"> <li>4. Evaluate the PMs that require a waiver to the periodicity using <a href="#">TFC-ENG-FACSUP-C-02</a> and attach the evaluation to the PM Id.</li> </ol>   |
| Facility Operations Manager/Shift Manager                  | <ol style="list-style-type: none"> <li>5. If PM will not be performed and will not be extended or waived, notify Shift Operations that the equipment will not be available or will not be relied on to perform its intended function.               <p style="margin-left: 20px;">If the PM entering a grace period is for TSR or environmental requirements:</p> <ol style="list-style-type: none"> <li>a. The shift manager will make a log entry.</li> <li>b. Facility manager will ensure a PER is written to document the issue.</li> </ol> </li> </ol>   |
| PM Planner   | <ol style="list-style-type: none"> <li>6. Using the due list and the overdue lists, determine the PMs that will require work orders to be generated.</li> </ol>  |

#### 4.5.3 Development and packaging of PM Work Orders

- |            |   |
|------------|---|
| PM Planner | <ol style="list-style-type: none"> <li>1. Review the original scope and intent of the PM and verify that no changes to the scope and intent are needed for this performance. If there are changes to scope, intent, or risk, use the standard work category (see Section 4.4.2.) These changes should be noted in the work record (feedback/comments) of the new/revised PM work order.</li> <li>2. The PM work flow should normally be selected in the Work Flow field of the PM Id.               <p style="margin-left: 20px;">NOTE: The standard work flow should be used for first time performances of new PMs.</p> </li> <li>3. Using the generate work order function of CHAMPS or task on demand, generate the work orders using the appropriate work flow.</li> </ol> |
|------------|---|

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4. Enter the required fields in each of the work orders generated.
5. Package the PMs using one of the following methods.
  - a. If the facility wants a printed work order for release, place the following in a package, as a minimum:
    - Printout of the work order
    - Technical procedure or data sheet, as applicable.

NOTE: There may be other documents needed in the field but documents that are used for the planning are not required in the PM folder.
  - b. If the facility will release the work without a printed copy of the work orders, the FWS will print what is needed for CHAMPS when the work is ready to be performed.
6. Approve PM work order.
7. Move the state of the work order to Ready for Work (RFW).
8. Release the work in accordance with Section 4.6.

Applicable Shift  
Manager/Operations  
Engineer

#### 4.6 Chapter 5 - Work Order Release (7.1.3)

- |   |  |
|---|--|
| Operations Engineer/<br>Shift Operations<br>Manager | <ol style="list-style-type: none"> <li>1. Perform pre-work release review of work order using the Work Release Checklist for OE (<a href="#">A-6003-677</a>) as follows:           <ol style="list-style-type: none"> <li>a. Initiate a CH2M HILL Lockout/Tagout Authorization form (<a href="#">A-6002-312</a>) for any required lockouts/tagouts.</li> </ol> <p>NOTE 1: The work planner may perform review of preventive maintenance work orders if no lock and tag is involved and there are no major configuration change steps not already listed in a pre-approved procedure.</p> <p>NOTE 2: For the 222-S Laboratory only, the work planner signs for the review of all preventive maintenance work orders (including those with lock and tag requirements.)</p> </li> </ol> |
| Radiological Control                                | <ol style="list-style-type: none"> <li>2. Review any radiological work to ensure appropriate radiological documents are assigned.</li> </ol>   |
| Scheduler   | <ol style="list-style-type: none"> <li>3. Develop a daily schedule/release sheet that reflects the work to be performed.</li> </ol>  |

Work Planner/Work  
Planning Clerk

4. Ensure that the documents in a work order are the current revision.

Scheduler

5. Provide the work release station with daily release sheets and the corresponding work orders.

Applicable Shift  
Manager

6. Review the work orders and use the Work Release Checklist to complete release review.
7. Initial the work release sheet to approve release for the day and change the state of the work order to working in CHAMPS.
8. During the day, add any emergent work by performing the following.
- a. Check that the facility can support the work (Configuration/Operations).
  - b. Check that radiological control has agreed with the RWP assignment.
  - c. Add emergent work to the work release sheet.
  - d. Change the state of the work to working in CHAMPS.
9. Provide copies of the daily release sheet to the applicable work release stations.
10. If a partial work release is required, complete the following.
- a. Write “see partial release” in the work record.
  - b. Approve partial release of work and/or work order step.
  - c. Indicate what work is authorized on the work record. Update the work order step status (state and flow), as necessary.

NOTE: If a necessary permit is not included in the work order, the work order may be partially released up to the point where the permit is required.

Scheduler

11. Ensure the cause for not releasing work has been identified and corrected prior to rescheduling work at the plan of the day/plan of the week meetings.

**4.7 Chapter 6 – Field Work Execution**

(7.1.2, 7.1.3)

**4.7.1 Getting Started**Field Work  
Supervisor

1. Ensure a walkdown is conducted using the work instructions and Worksite Hazard Analysis with as many of the work crew as possible who will be performing the job.

Senior Supervisory  
Watch

2. Evaluate complex work to be performed and specify in the work instruction or by a work record entry what work instruction steps are to be monitored by a senior supervisory watch. (7.1.5)

NOTE: For radiological high risk work, the work instruction steps assigned to be monitored by a senior supervisory watch are assigned by the Joint Review Group in accordance with [TFC-ESHQ-RP\\_ADM-C-11](#).

3. Attend the pre-job briefing for the work instruction steps to be monitored. (7.1.5)

Field Work  
Supervisor

4. If the work is ongoing from the previous shift, contact the previous field work supervisor and perform a turnover of the work. The turnover should consist, at a minimum, of the following.
  - a. Ensure work is released
  - b. Review the work record and discuss work status.
  - c. Discuss the starting point for the oncoming shift.
  - d. Ensure the prerequisites are still met for the oncoming shift.
  - e. Discuss any anomalies or issues with the work.
5. If the work was suspended or not worked for other reasons during the previous shift:
  - a. Review the work record and determine the appropriate starting point.
  - b. Ensure the prerequisites are still met or determine what is needed and coordinate them with Shift Operations, as necessary.
  - c. If the status of the work is unclear, contact the previous field work supervisor for clarification.
  - d. When practicable, contact the previous field work supervisor and discuss the job and any anomalies or issues he/she was having.
6. Ensure the work order is released.
7. Conduct a pre-job briefing in accordance with [TFC-OPS-MAINT-C-02](#). (7.1.2, 7.1.3)

8. Acknowledge that it is understood that work will not proceed on the specified work instruction steps until a senior supervisory watch is present. (7.1.5)

NOTE: Whenever possible, the senior supervisory watch who attends the pre-job briefing shall also observe the performance of the field work. When this is not practical, an alternate senior supervisory watch may be assigned, provided a turnover is given.

Field Work  
Supervisor

9. Prior to performing work on equipment:
- a. Notify the applicable shift manager immediately prior to placing equipment out of service.
  - b. Notify the applicable shift manager of any alarms that will be initiated.

Worker/Field Work  
Supervisor

10. Ensure blanks are legibly filled in with information or N/A, and sign and date.
11. Using Attachment D as a guide, perform work in accordance with the work instructions and document results on the work record.
12. For complex work, conduct intermediate post job reviews at the end of the shift or the end of the day and before personnel leave.

Document the answers to the following questions in the work record to help in preparation for the next day/shift.

NOTE: The answers will also be used in the eventual final, formal post job review.

- Was the job done safely?
- Were there any injuries?
- Was the equipment (procedures, tools, personal protective equipment, monitoring equipment, etc.) adequate?
- Was the job prepared adequately?
- Did the job go as planned?
- Are there any suggestions?

#### **4.7.2 Finishing the Job**

Field Work  
Supervisor

1. Ensure post-maintenance testing is performed in accordance with the work instructions.
2. Review the work order and ensure:
- Documents are accurate and complete
  - Documents are appropriately signed and dated
  - Documents are legible
  - Correct forms are in the work order.

3. Return excess materials or parts not used to the material coordinator in accordance with [TFC-BSM-CP\\_CPR-C-18](#).

#### 4.8 Chapter 7 – Work Order Post Job Review and Closeout

(7.1.2, 7.1.3, 7.1.4)

##### 4.8.1 Field Work Complete and Operational Acceptance

Field Work  
Supervisor

1. When the job in the field is complete sign work complete in CHAMPS within five working days (7.1.2), and when there is feedback and/or lessons learned document it in the work record.

NOTE: If the work order contains procedures that have review signatures required following the field work, the field work supervisors may still document completion of the work order.

2. Identify in CHAMPS the responsible field work supervisor and date completed for each of the work order steps.
  - a. Document whether the work was completed satisfactorily and the percentage of work completed.
  - b. If less than 100% completed, note the discrepancy in the work record.
3. If necessary, initiate a new work request to repair or replace failed components.
  - a. If failure was part of preventive maintenance contact the PM planner.
  - b. Note new work requests in the work record.
4. Forward the work order to Operations for acceptance.

Operations Engineer/  
Applicable Shift  
Manager

5. Using the Operations Work Package (WP) Acceptance Checklist ([A-6003-676](#)), complete the following: (not applicable to the 222-S Laboratory):
  - a. Verify completion of applicable information and signatures.
  - b. Ensure data is within tolerances listed in the procedure or in the work instruction steps. Notify the senior shift manager if data is outside of the tolerances.
  - c. Ensure maintenance and operational testing is satisfactory, if applicable.
  - d. Ensure work is completed
  - e. If the work is acceptable, check Operations acceptance in CHAMPS.

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- f. If the work is NOT acceptable, complete the following:
  - 1) Make a work record entry.
  - 2) Resolve issue(s) or return the work order to the planner or the field work supervisor for resolution.
- g. If the work included a modification, ensure that the Engineering Change Notice (ECN) is signed for Modification Work Complete by Engineering (not required for project ECNs) or that Engineering has signed the exception for ECN completion in the work instructions.
- h. Verify applicable information and signatures are complete.

NOTE: If the work order contains procedures that have review signatures required following the field work, Operations may sign for operational post review, signifying their acceptance.

#### 4.8.2 Work Planner Post Review Procedure

- |                                    |   |
|------------------------------------|---|
| Work Planner/Field Work Supervisor | <ul style="list-style-type: none"> <li>1. As applicable, schedule the post-job ALARA review to complete as soon as possible, not to exceed 30 calendar days from field work complete.</li> <li>2. Conduct the post job ALARA review as discussed in <a href="#">TFC-ESHQ-RP_RWP-C-03</a>.</li> </ul>  |
| Work Planner                       | <ul style="list-style-type: none"> <li>3. Provide feedback relating to how the work was planned, hazard controls that could have been better to the manager of work control.</li> <li>4. Review the work record for feedback comments and ensure open issues identified on the work record feedback are resolved and corrective actions are documented in the work record.</li> <li>5. Ensure all performance documents that need to be included are in the work order.</li> <li>6. Ensure ECNs or Facility Modification Packages (MPs) (222-S Laboratory only) associated with the work order have been signed by the system engineer.</li> <li>7. Send copies of PM work orders that have been redlined in the field to Engineering for incorporation of changes. See <a href="#">TFC-ENG-FAC SUP-C-23</a>.)</li> <li>8. Notify the Procedures group of any notes or comments affecting any procedures used during performance of the work.</li> <li>9. When applicable, update the PM system and establish the next due date.</li> </ul> |

10. Update the work order documents, as required.
11. Review the work order for:
  - Accuracy and completion
  - Appropriate signatures and dates
  - Legibility
  - Correct forms inserted.
12. Take appropriate action to make corrections to discrepancies noted during the post work review.
13. Attach a copy of the completed post job ALARA review to the work order.
14. Provide feedback to appropriate personnel for noted errors in the work order executions.
15. Ensure resolution and closure of items identified during the post job review have been discussed with the field work supervisor, or write a PER for tracking of longer term actions.
16. If necessary, initiate a PER in accordance with [TFC-ESHQ-Q C-C-01](#) and document in the work record.
17. If contained in the work package, remove the Work Order Planning Checklist, Operations Acceptance Checklist, and Operations Release checklist from the work order and discard.

#### 4.8.3 Work Order Closure

- |   |  |
|---|--|
| Work Planner/Work Planning Clerk                      | 1. Update the work order.  |
| Work Planner/Work Planning Clerk                      | 2. Scan in any printed and/or hand written materials that have values filled in and attach them to the work order.   |
| Facility Manager/Construction Manager                 | 3. When WRCSOF activities are complete, forward to the Work Planning clerk to archive.   |
| Work Planning Program Office                          | 4. Place feedback in the Work Planning tool box on the Production Planning & Control <a href="#">Work Planning web page</a> (not applicable to the 222-S Laboratory).  |
| Work Planner/Work Planning Clerk                      | 5. Advance the work order state to “closed.”   |
| Work Planner/Work Planning Clerk/Construction Manager | 6. Remove all reference documents (procedures and drawings that have unique numbering and revision data) identified in the work order that do not contain unique information (i.e., collected data, signatures.) |

Work Planning 7. Archive the work order in accordance with [TFC-BSM-IRM\\_DC-C-02](#).

#### 4.9 Chapter 8 – Work Order Changes (7.1.3)

##### 4.9.1 (Pen and Ink) Change Method

- |   |  |
|---|--|
| Field Work<br>Supervisor/<br>Operations Engineer/<br>Work Planner | <ol style="list-style-type: none"> <li>1. If work cannot be written legibly, go to Section 4.9.2.</li> <li>2. If work can be written legibly, enter the change information in the work instructions.</li> <li>3. Unless the work order is for routine maintenance (see definition from <a href="#">TFC-ENG-SB-C-03</a>), any changes must go back through the USQ process prior to proceeding.</li> <li>4. Write the change number (sequential number) and initial and date next to the changed area on the work instructions.</li> <li>5. Summarize the change on the work record, including page, work instruction step or paragraph reference, and a description of the change.</li> <li>6. Obtain approvals for the change from Field Work Supervisor and applicable Subject Matter Experts.           <ol style="list-style-type: none"> <li>a. For changes by telephone, document the name of the approver, the date, your name and signature on the work record.</li> </ol> </li> <li>7. If work was radiological high risk, obtain a new JRG review in accordance with <a href="#">TFC-ESHQ-RP_ADM-C-11</a>.</li> <li>8. Contact the shift manager or the Facility Operations manager (222-S Laboratory only) for concurrence with the changes.</li> </ol> |
| Shift Manager/<br>Facility Operations<br>Manager                  | <ol style="list-style-type: none"> <li>9. Review the release requirements and release the changed work order, if necessary.</li> </ol>   |
| Field Work<br>Supervisor  | <ol style="list-style-type: none"> <li>10. Before work is resumed, perform a pre-job brief with workers on changes to the work order.</li> </ol>   |

##### 4.9.2 Work Change Notice Method

- |   |   |
|---|---|
| Field Work<br>Supervisor/<br>Operations<br>Engineer/Work<br>Planner | <ol style="list-style-type: none"> <li>1. Enter the reasons for the change and change summary information in the work record of the work order.</li> <li>2. If pen and ink changes were previously made, incorporate them into the Work Change Notice (WCN).</li> </ol> |
|---|---|

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3. Create a new CHAMPS “step” to contain the WCN.
  - a. Modify the work order through the creation of new or revised work instruction steps.
  - b. Supersede the work instruction step(s) being replaced.
4. Ensure the existing documents and controls are still valid. Make changes to reflect the work instruction step, if necessary.
  - a. The field work supervisor will determine if new hazards need to be reviewed by subject matter experts.
  - b. If work is for a modification, consult Engineering, as appropriate.
  - c. Unless the work order is for routine maintenance (see definition from [TFC-ENG-SB-C-03](#)), any changes must go back through the USQ process prior to proceeding.
5. Obtain approvals for the change from Field Work Supervisor and applicable Subject Matter Experts.
  - a. For changes by telephone, document the name of the approver, the date, your name and signature on the work record.
6. If work was radiological high risk, obtain a new Joint Review Group review in accordance with [TFC-ESHQ-RP\\_ADM-C-11](#).
7. Go to Section 4.6 for operational release.

#### 4.9.3 Field Changes to PM Data in Work Orders

- |                              |  |
|------------------------------|--|
| Worker/Field Work Supervisor | 1. To make changes to preventive maintenance data, refer to <a href="#">TFC-ENG-FAC SUP-C-23</a> . |
|------------------------------|--|

#### 4.9.4 Work Stoppage (Suspension)

- |   |   |
|---|---|
| Field Work Supervisor/<br>Operations Representative | <ol style="list-style-type: none"> <li>1. Perform the following in CHAMPS if work cannot be continued.           <ol style="list-style-type: none"> <li>a. If changes are required, return the work order to “Rework in Planning;” otherwise, return it to “Ready for Work.”</li> <li>b. Document the reason for suspension in the work record.</li> <li>c. Update the work flow status in CHAMPS.</li> </ol> </li> <li>2. If a system, portion of a system, or component contained within a work order, lockout/tagout boundary must be returned to service, perform a work order change in accordance with Section 4.9.2, if needed.</li> </ol> |
|---|---|

#### **4.9.5 Work Cancellation**

Work Planning cancels work orders that are no longer required. The steps are as follows:

- |   |  |
|---|--|
| Facility Manager/<br>Shift Manager or<br>Work Planner for<br>Preventive<br>Maintenance Orders | 1. Determine that the work order needs to be canceled. Provide a reason for the cancellation to Work Planning for record purposes.   |
| Work Planner/Work<br>Planning Clerk   | 2. To cancel a work order that has been worked, perform a work order change in accordance with Section 4.9.2.<br><br>3. If the work order has not been worked a work order change is not required.<br><br>4. Change state to “canceled” in CHAMPS.<br><br>5. Enter into the work record the name of the facility manager/operations manager and the reason the work order is no longer needed.<br><br>6. Provide the Bill of Material number to Material Services indicating the work has been canceled.<br><br>7. Notify Engineering to stop work and cancel any applicable ECNs, USQs, commercial grade items, etc.<br><br>8. Notify Scheduling that the work order has been canceled and recommend removal from the schedule.<br><br>9. Change location to “no hard copy retained,” and change work order to “cancelled.” |

#### **4.10 Chapter 9 – CHAMPS Administration**

##### **4.10.1 Daily Release Sheet/Status**

- |   |   |
|---|---|
| Work Planning<br>Clerk/222-S<br>Laboratory Facility<br>Operations Manager/<br>Field Work<br>Supervisor/<br>Maintenance<br>Scheduler | 1. Verify work order status is released for work.<br><br>NOTE: The scheduler/work-week coordinator provides scheduled “ready to work” orders to be retrieved.<br><br>2. Check the work order for current procedures and forms being used.<br><br>3. Develop a work order listing for the day’s release.<br><br>4. Deliver the work orders to Operations for work release. |
|---|---|

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## 5.0 DEFINITIONS

No terms or phrases unique to this procedure are used.

## 6.0 RECORDS

The following record is generated during the performance of this procedure:

- Work order.

A work order becomes an in process record document at the time it is released to work in the field. From this point, the work order must be retained in secured storage when not in actual use. All personnel should ensure hard copies of work orders that have had any work performed are placed in file/desk drawers when the work order is not being used. It becomes a record document when it is accepted by operations and is required to be retained for 75 years. For work orders developed in CHAMPS, the electronic copy in the system will eventually be the record copy. If printed copies are used, they will serve as the record during the transition to electronic records in CHAMPS.

The facility Work Planning organization is responsible for record retention and retirement in accordance with [TFC-BSM-IRM\\_DC-C-02](#).

## 7.0 SOURCES

### 7.1 Requirements

1. DOE 5480.19, "Conduct of Operations Requirements for DOE Facilities." (S/RID)
2. RPP-13033, "Tank Farms Documented Safety Analysis," Chapter 10, "Initial Testing, In-Service Surveillance, and Maintenance."
3. RPP-MP-003, "Integrated Environment, Safety, and Health Management System Description for the Tank Farm Contractor."
4. TFC-ENG-SB-C-03, "Unreviewed Safety Question Process."
5. TFC-PLN-02, "Quality Assurance Program Description."
6. TFC-PLN-29, "Maintenance Implementation Plan." (S/RID)
7. 10 CFR 851, "Worker Safety and Health Program."

### 7.2 References

1. ATS-310: Administration, Section 11.16, "Procedure Writing/Formatting Guide - Operating, Alarm Response, Emergency Response, and Maintenance Procedures."
2. HNF-5183, "Tank Farm Radiological Control Manual (TFRCM)."
3. HNF-IP-1266, "Tank Farms Operations Administrative Controls."

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4. HNF-PRO-2001, "Facility Modification Package Process."
5. HNF-SD-WM-TSR-006, "Tank Farms Technical Safety Requirements."
6. RPP-16922, "Environmental Specification Requirements."
7. RPP-ENV-32855, "NEPA Checklist."
8. RPP-ENV-32857, "Washington State Environmental Policy Act (SEPA) Checklist."
9. RPP-ENV-32858, "Cultural and Ecological Review Checklist."
10. TFC-BSM-CP\_CPR-C-18, "Material Receipt, Storage, Issuance, Return, and Excess Control."
11. TFC-BSM-FPM\_PR-C-01, "Property Management."
12. TFC-BSM-FPM\_PR-C-03, "Work Control - General Purpose Facilities."
13. TFC-BSM-HR\_EM-C-05, "Plant Forces Work Review (Davis-Bacon Act Compliance)."
14. TFC-ENG-DESIGN-C-06, "Engineering Change Control."
15. TFC-ENG-DESIGN-C-09, "Engineering Drawings."
16. TFC-ENG-DESIGN-C-15, "Commercial Grade Item Upgrade Dedication."
17. TFC-ENG-FACSUP-C-23, "Equipment Identification and Data Management."
18. TFC-ENG-SB-C-03, "Unreviewed Safety Question Process."
19. TFC-ENG-STD-08, "Post Maintenance Testing."
20. TFC-ESHQ-Q\_ADM-C-02, "Nonconforming Item Reporting and Control."
21. TFC-ESHQ-Q\_INSP-C-01, "Control of Inspections."
22. TFC-ESHQ-RP\_ADM-C-11, "Joint Review Group."
23. TFC-ESHQ-RP\_RWP-C-01, "Radiological Risk Screening."
24. TFC-ESHQ-RP\_RWP-C-03, "ALARA Work Planning."
25. TFC-ESHQ-RP\_RWP-C-04, "Radiological Work Permits."
26. TFC-ESHQ-S\_SAF-C-02, "Job Hazard Analysis."
27. TFC-ESHQ-S-STD-03, "Electrical Safety."
28. TFC-OPS-MAINT-C-02, "Pre-Job Briefing."

29. TFC-OPS-MAINT-C-10, "Pre-Calibration and Staging."
30. TFC-OPS-OPER-C-11, "Equipment Temporary Modifications and Bypasses."
31. TFC-OPS-OPER-C-13, "Technical Procedure Control and Use."
32. TFC-OPS-WM-C-10, "Contaminated Equipment Management Practices."
33. TFC-PLN-33, "Waste Management Basis."
34. TFC-PRJ-CM-C-07, "Construction Notice of Intent."

**Figure 2. Work Order Layout.**

Work Document/ Instructions  Worksite Hazard Analysis/JSA(construction)  Lockout/Tagout Authorization  1L	Work Record  Pre-Job Briefing Checklist  Pre-Job Briefing/Attendance Roster  1R
Pre-Approved Procedures/Data Sheets  Critical lift procedure  Work Change Notices  2L	RWP  Glove Bag/Containment Checklist  Other Permits (Excavation, Hotwork, etc.)  2R
Applicable ECNs  Bill of Material  Certified Vendor Information  3L	Dome Load Evaluation/ route maps  Material Safety Data Sheets  Waste Planning Checklist  3R
Retest procedures such as PMs  ATP/OTP  4L	Drawings  Other support documents*  4R

Key:

AMW: ALARA Management Worksheet  
 ATP Acceptance Test Procedure:  
 CGI: Commercial Grade Item  
 ECN: Engineering Change Notice

JSA: Job Safety Analysis  
 MSDS: Material Safety Data Sheet  
 OTP: Operational Test Procedure  
 RWP: Radiological Work Permit

\* Planning support documents such as the AMW, USQs, Safety plan, CGI Dedication Forms, flam gas evaluations and rosters from the various planning meetings are to be scanned into CHAMPS for the record but are not required to be included in the work package.

**ATTACHMENT A – PRIORITIES****SAFETY (7.1.7)**

- 1.1 Imminent Safety Hazard
- 1.2 Non-Imminent Safety Issues

**AUTHORIZATION BASIS/ENVIRONMENTAL/REGULATORY**

- 2.1 Authorization Basis/TSR Compliance
- 2.2 Environmental Compliance
- 2.3 Regulatory Compliance

**SCHEDULE OBJECTIVES ON CRITICAL PATH**

- 3.1 Critical Path Activities

**CONDUCT OF OPERATIONS/BALANCE OF PLANT**

- 4.1 Improvement in conduct of operations
- 4.2 Balance of plant corrective maintenance or upgrades

## **ATTACHMENT B – WORK INSTRUCTION WRITER’S GUIDE**

### **1.0 WORK INSTRUCTION FORMAT**

Use the work instruction template to develop work instructions.

NOTE: Judicious use of standard limitations, precautions, and prerequisites should be used in work instructions. If they are standard enough to always be included, then one should question their need. If everyone knows a requirement and is trained to it, they may not need it in the work instructions.

### **2.0 SINGLE ACTION WORK STEPS**

Work instruction steps must be complete, concise, correct, and clear. Work instructions begin with an action, such as repair, perform, ensure, construct, etc.

1. Vague phrases: Avoid the use of vague phrases in the detailed work instructions, e.g., when appropriate, as required, when applicable, etc. These phrases require the field team to interpret the work planner’s meaning when the work instructions were developed. Such interpretations may result in outcomes that are different than those intended by the work planner or planning team.
2. Vague Actions: Do not use “per field work supervisor” or per “instrument technician” type statements in the work instructions.
3. Vectoring: The practice of referring the reader to different locations for instructions and requirements. Vectoring can cause the reader to lose track of where they are in the work order and miss work instruction steps. To the extent possible, vectoring should be avoided and work instructions written to include all work instruction steps necessary for the worker to perform.
4. Use sentences that direct the user to do one thing at a time.
5. Write work steps to contain a single action. This action can typically be expressed by one action verb, one object, and supporting information.
  - a. Select the proper verb to specify the action.
  - b. Begin the sentence with the verb.
  - c. State the object of the verb and the supporting information.

#### **EXAMPLE:**

**INSTALL** glove bag on riser 1-B.

If it is not inherently clear who performs the step, identify the responsible craft within the affected step.

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## **ATTACHMENT B – WORK INSTRUCTION WRITER’S GUIDE (cont.)**

### **3.0 SEQUENCING OF WORK STEPS**

Sequence action steps to match the order in which they must be performed. If any work instruction steps can be worked out of sequence, concurrently, or simultaneously, ensure the out-of-sequence work instruction steps are identified with a note immediately preceding the first step(s) that may be worked out of sequence.

The note must clearly state which work instruction steps can be worked out of sequence, concurrently, or simultaneously.

Out-of-sequence steps must be completed prior to proceeding to work instruction steps that require sequential performance, such as hold points.

If an action must be performed at a particular geographical location, ensure the information is identified in a note or in a figure.

If a work step requires that data be taken, provide instruction for recording the information.

Provide signature and date sign off for work steps requiring independent verification.

### **4.0 USE OF NOTES**

Notes are used to clarify information or provide necessary definitions and do not contain action statements.

“NOTE” typed in all capitals, followed by a space, a hyphen, an indent, and text indicates a note. Align the left margin of the word with the number preceding and/or following it, depending upon which step the note references. Do not divide a note with a page break or place a note on a different page than its associated step.

Notes generally precede the step to which they refer.

In special cases where the note lets the user know what should have happened by performing the step, notes may follow associated steps.

#### **EXAMPLE:**

4.3.6      PRESS ENTER twice to open the selected valve.

NOTE - The computer screen should now indicate the valve has opened by turning the valve red.

**ATTACHMENT B – WORK INSTRUCTION WRITER’S GUIDE (cont.)****5.0 USE OF WARNINGS AND CAUTIONS**

A Warning statement identifies a hazard to personnel or to the environment.

**EXAMPLE:****WARNING**

**Contact with the sampled liquid could cause skin contamination and uncontrolled exposure to contaminated materials.**

A Caution statement identifies a hazard to equipment, facilities, process, or product.

**EXAMPLE:****CAUTION**

**Failure to close Valve V-100 could result in over pressurization and subsequent failure of Filter F-100.**

**6.0 USE OF CONDITIONAL STATEMENTS**

The decision to perform an action step is based on the occurrence of a condition or a combination of conditions. Permissible terms to establish the conditional logic within an action step are:

- IF
- AFTER
- WHEN
- AND
- OR

The conditional logic established applies only to the single step containing the logic terms and any sub-steps of that work step. The requirement to perform subsequent steps is not affected by the outcome of the logic unless the user is directed to branch to another work step in the work instruction.

- a. In all cases, the condition(s) is described first and is followed by the action.
- b. Minimize the use of conditional steps.
- c. IF statements are normally used to identify a possible condition. The word “then” is implied and may be omitted.

Include articles (a, an, the) when referring to a general item; omit the article when referring to specific items (for example, “**OPEN** the valve,” “**OPEN** valve PR-4”).

**ATTACHMENT B – WORK INSTRUCTION WRITER’S GUIDE (cont.)****7.0 REFERENCING PROCEDURES**

Do not reference a section of a procedure in the work instructions. If direction is provided to use a procedure for some portion of the work, ensure that the entire procedure is meant to be used.

If the entire procedure is not needed or not intended to be used by the workers, copy and paste or rewrite the steps in the procedure into the work instruction steps in a manner that allows the worker to follow the instructions. Reference to the procedure should not be made.

**8.0 USE OF UNITS**

Use units in the work instructions that match those of the measuring and test equipment (M&TE) available to the worker. Do not give metric units unless the source device reads in metric. Eliminate sources for potential conversion and calculation errors.

- a. Use limits and tolerances consistent with the readable accuracy of instrumentation.
- b. Specify ranges of acceptable values rather than single target values to prevent the need for mental arithmetic.
  - Open-ended ranges can be expressed as “less than (<),” “greater than (>),” “less than or equal to (#),” “greater than or equal to (≥).”
  - Use bound ranges stated with both endpoints and/or a midpoint plus or minus ( $\nabla$ ) an amount, rather than a midpoint plus or minus a percentage (e.g., 48 - 52 psi or 50  $\nabla$  2 psi vice 50  $\nabla$  4%). This helps eliminate calculation errors.
  - The target value may be specified with the bounded range following in parenthesis (e.g., 800 (790 – 810) mV).

State the full nomenclature for a piece of equipment only the first time that piece of equipment is cited on a particular page of a procedure. Use a shortened form of the name in a consistent manner for further citations on the same page. To avoid confusion, do not use the same shortened nomenclature for different equipment items.

**9.0 HOLD POINTS**

If hold points are required in the work instructions, place the hold point identification at the work instruction step or in an attachment to clearly correspond to the hold point step.

- Use the format in this attachment to identify the hold points in the work instructions. Place the initial hold point identification at the work instruction step and, if needed, subsequent/repeatable hold points on an attachment that clearly corresponds to the initial hold point step.



## ATTACHMENT C – FORMS AND PERMITS, CROSS REFERENCE TABLE

(7.1.7)

This table provides a cross-reference from forms/permits to the manuals that control their use and provides the forms/permits and instructions for preparation.

Permit or Form	Form Number	Document No.	Site Form
ALARA Management Worksheet (AMW)	<a href="#">A-6003-904</a>	<a href="#">TFC-ESHQ-RP_RWP-C-03</a>	YES
Asbestos Work Permit	<a href="#">A-6003-870</a> (See AHERA Coordinator)	<a href="#">TFC-ESHQ-IH-STD-05</a>	NO
CH2M - Bill of Material	<a href="#">A-6002-729</a>	<a href="#">TFC-BSM-CP_CPR-C-18</a>	YES
Commercial Grade Item Upgrade Dedication Form	<a href="#">A-6002-544</a>	<a href="#">TFC-ENG-DESIGN-C-15</a>	YES
Confined Space Entry Permit	<a href="#">A-6000-895</a>	<a href="#">TFC-ESHQ-S_IH-C-04</a>	YES
Energized Electrical Work Permit	<a href="#">A-6003-873</a>	<a href="#">TFC-ESHQ-S-STD-03</a>	YES
Hanford Site Excavation Permit	<a href="#">A-7400-373</a>	<a href="#">TFC-ESHQ-S_IS-C-03</a>	YES
Tank Farm Contractor Hotwork Permit	<a href="#">A-6003-692</a>	<a href="#">TFC-ESHQ-FP-C-01</a>	YES
Lifted/Landed Lead Record	<a href="#">A-6001-159</a>	<a href="#">TFC-OPS-MAINT-C-01</a>	YES
Hanford Fire Marshal Permit Request form	N/A	<a href="#">TFC-ESHQ-FP-STD-10</a>	NO
Operations Work Package (WP) Acceptance Checklist	<a href="#">A-6003-676</a>	<a href="#">TFC-OPS-MAINT-C-01</a>	YES
Work Release Checklist for OE's	<a href="#">A-6003-677</a>	<a href="#">TFC-OPS-MAINT-C-01</a>	YES
Work Order Planning Checklist	<a href="#">A-6003-707</a>	<a href="#">TFC-OPS-MAINT-C-01</a>	YES
Work Order Review and Approval Checklist	<a href="#">A-6003-728</a>	<a href="#">TFC-OPS-MAINT-C-01</a>	YES
Dome Load Assessment and Route Map	N/A	<a href="#">HNF-IP-1266</a>	NO
Attendance Roster	<a href="#">A-6003-211</a>	<a href="#">TFC-OPS-MAINT-C-01</a>	YES
RPP Work Record	<a href="#">A-6003-243</a>	<a href="#">TFC-OPS-MAINT-C-01</a>	YES
Authorized Worker Single Point Lockout/Tagout	<a href="#">A-6003-013</a>	<a href="#">TFC-OPS-OPER-C-05</a>	YES
CH2M HILL Lockout/Tagout Authorization	<a href="#">A-6002-312</a>	<a href="#">TFC-OPS-OPER-C-05</a>	YES
Plant Forces Work Review	<a href="#">A-6003-813</a>	<a href="#">TFC-BSM-HR_EM-C-05</a>	YES

## ATTACHMENT C – FORMS AND PERMITS, CROSS REFERENCE TABLE (cont.)

Permit or Form	Form Number	Document No.	Site Form
CH2M HILL ALARA Review Form	<a href="#">A-6002-919</a>	<a href="#">TFC-ESHQ-RP_RWP-C-03</a>	YES
Pre-Job Briefing	<a href="#">A-6002-893</a>	<a href="#">TFC-OPS-MAINT-C-02</a>	YES
Radiological Work Permit	<a href="#">A-6003-902</a>	<a href="#">TFC-ESHQ-RP_RWP-C-04</a>	YES
Worksite Hazard Analysis	<a href="#">A-6004-101</a>	<a href="#">TFC-ESHQ-S_SAF-C-02</a>	YES
Safety Plan	<a href="#">A-6004-102</a>	<a href="#">TFC-ESHQ-S_SAF-C-02</a>	YES
TFC Work Release for Construction/Service Organizations	<a href="#">A-6003-532</a>	<a href="#">TFC-OPS-MAINT-C-01</a>	YES
Performance and Functional Requirements/Evaluation for Special Tools or Test Equipment	<a href="#">A-6003-129</a>	<a href="#">TFC-OPS-MAINT-C-01</a>	YES
Waste Planning Checklist - CH2M HILL	<a href="#">A-6002-848</a>	<a href="#">TFC-OPS-WM-C-01</a>	YES
Team Review Meeting Checklist	<a href="#">A-6003-746</a>		
Radiological Screening Form	<a href="#">A-6003-910</a>		YES

**ATTACHMENT D – FIELD WORK SUPERVISOR REQUIREMENTS**

This section provides requirements for field work supervisors to consider during the conduct of field work. Individual work instruction steps are performed as directed by the field work supervisor. All actions should follow the principles established in the Operations subsection of the [Operations Manual](#). This attachment covers specific items that have caused issues in the past.

1. While conducting work instruction steps:
    - If unexpected conditions or out-of-tolerance readings on as-found equipment occur during field work, complete the following:
    - Unless the procedure allows continuation, stop and immediately contact the field work supervisor
    - Document the details for unusual circumstance in the proper section of the work record, date, and sign entry
    - Contact the applicable shift manager for TSR issues and the facility manager for non-TSR issues.
    - Perform work instruction steps in the order that they are written unless the work order specifies that sequencing is negotiable
    - Perform all of the “out of sequence” or “in parallel” work instruction steps before performing the listed first step.
    - If performing work order pen and ink changes where the requirement for a change is not clear, request assistance from management of the appropriate organization
    - If it becomes necessary to re-perform work instruction steps, the field work supervisor may do so, provided all conditions, prerequisites, and controls necessary to enter the work instruction step sequence are met, and the work instruction step performance limitations (e.g., step-by-step performance) are adhered to. Document the re-performance on the work record. If work instruction steps involve prior signatures, a work change is required in accordance with Section 4.9.2.
    - If work is halted, ensure applicable prerequisites are met prior to recommencing work.
- CAUTION:** If hold points are used in the work order, work will not proceed to the next step unless the work order is structured in sections that are standalone and contain instructions that allow the work order to be released and worked by section.
- Signatures will be recorded on the technical work document

**ATTACHMENT D – FIELD WORK SUPERVISOR REQUIREMENTS (cont.)**

- If the person conducting the hold point action is not in a position to sign the record copy of the work instruction, complete the following:
  - Take a report from the person actually conducting the hold point action
  - Initial and date the hold point
- Another qualified health physics or quality assurance team member may sign for the hold point action if they have direct knowledge that the hold point action has been completed.
- If field conditions preclude taking a copy of the technical work document to the job location, a copy of the technical work document may be used for the initial field recording of the hold point signatures
  - If a copy of the technical work document is used, hold point signatures and dates should be transcribed to the technical work document when the field activity is complete, or by the end of the shift, whichever comes first
  - Copies of technical work documents shall be retained until hold point information is transcribed on the record document
  - Field work supervisors with overall responsibility for the job activity are responsible to ensure accurate and timely transfer of hold point signatures and special annotations from the copy of the technical work document to the record document, and control of copies until information is accurately and completely transcribed to the record document.
- If a hold point needs to be removed from a technical document, the following actions will be taken:
  - For a hold point within a procedure, a Procedure Change Authorization (PCA) will be processed and review and approval obtained from the appropriate organization in accordance with [TFC-OPS-OPER-C-13](#).
- For a hold point within a work order, a work order change will be processed and review and approval obtained from the appropriate organization in accordance with Section 4.9.2 of this procedure.
- If a hold point cannot be performed as planned, and the work has NOT progressed past the hold point work instruction step, place the work area in a safe condition and if the problem cannot be resolved and the work resumed within one shift, stop the work in accordance with Section 4.7.5 (Work Stoppage (Suspension)).

**ATTACHMENT D – FIELD WORK SUPERVISOR REQUIREMENTS (cont.)**

2. If a hold point action or signature is not performed as planned, and work has progressed past the hold point work instruction step:
- Stop work immediately
  - Place the work area in a safe condition
  - Inform the following:
    - Respective director
    - Respective facility management
    - Responsible manager for the organization requiring the hold point. For example, notify the Quality Assurance manager for a missed quality assurance hold point
    - Document on the work record the missed hold point and actions taken
    - Contact the senior shift manager so that he/she may evaluate the need for event investigation team activation
    - Write a PER describing the problem
    - Identify those actions that need to be completed before resuming work and make corrective action assignments
    - After the corrective actions are complete, obtain approval to resume the work activity from facility management and management of the organization responsible for the hold point.
3. If the work is performing a functional test:
- Do not perform corrective maintenance or adjustments that could affect the results of the test prior to the test (this is “preconditioning”)
  - Perform the functional test to conclusion or until a problem prevents completion of the procedure
  - Document the functional test results and, if applicable, identify what failed on the work record
  - If the functional test fails the initial attempt, notify the Shift Operations Senior Shift Manager and the responsible engineer
  - If permission is received from Shift Operations, and if permitted in the procedure, perform specified adjustments or maintenance
    - Document on the work record any adjustments or maintenance that was performed.
  - If the adjustments and maintenance performed corrected the cause of the functional test failure, the functional test may be re-performed:
    - Make a new copy of the test or procedure
    - Ensure all test prerequisite conditions and precautions are met
    - Perform the functional test and document test results on the work record
    - If the functional test fails again, notify Shift Operations senior shift manager and the engineer and initiate a work request to correct the problem.