
Approved by:

Work Control Procedure ¹

President, Westinghouse Savannah River Company

Purpose

The purpose of this procedure is to establish core requirements for the Work Management Process. Refer to the Overview Section of this procedure for methods to implement the described Work Flow Process.

Scope

The Work Flow Process described is mandatory for all organizations. The scope of this procedure includes implementation of approved modifications, fabrications, projects, and maintenance (preventive, predictive, and corrective) activities performed by maintenance, construction and vendor/subcontract personnel, that impact facilities, buildings, systems, equipment, components and operations at the Savannah River Site (SRS).

This procedure specifically excludes:

- ? plant/system evolutions that are the responsibility of operations (e.g., valve lineups)
- ? vehicle and fleet maintenance (e.g., automobile and truck repairs)
- ? office equipment repair (e.g., personal computers, copiers, radios and pagers)
- ? computer network service requests
- ? activities in support of research and development (R&D) which are directed and overseen by R&D personnel
- ? Greenfield work
- ? special one-time tests conducted on operating systems (such tests meet the requirements of Procedure Manual 1Q, Procedure 11.1, "Test Control"),
- ? start-up tests (such tests meet the requirements of Procedure Manual 5E, *Startup Tests*)
- ? portable/mobile equipment not connected to facility systems
- ? fabrication performed in shops that will not be installed in a process facility
- ? software changes to Process Control Systems
- ? measure and test equipment (M&TE)

Terms and Definitions

A complete listing of terms and definitions is found in the 1Y, "Glossary".

Throughout this procedure, the term operations function may be, depending on the facility, a custodian that is not actually in an operations department.

Responsibilities

The responsibilities below are written at the management level and support the core requirements of an Equipment Management Program. They are listed in order of hierarchy to show functional responsibility, beginning with the owner of the overall Equipment Management Program. One person may fulfill several responsibilities. Detailed responsibilities written for the execution level are contained in the procedure and attachments.

Facility Manager/Facility Custodian or Designee

The facility manager/custodian or designee (i.e., operations manager, shift operations manager (SOM), shift manager, etc.) is responsible for:

- ? owning the Integrated Schedule, including setting priorities for all facility activities
- ? owning the Equipment Management Program for all assigned equipment
- ? ensuring that all work groups meet the requirements of this procedure and holding them accountable
- ? ensuring proper release of equipment and work areas for equipment maintenance
- ? managing the schedule change control process to ensure maximum utilization of resources
- ? attending post work critiques to facilitate continuous improvement of the process

Operations Representative to the Work Management Center

The operations representative or designee is responsible for:

- ? monitoring schedule execution change control approval
- ? screening/reviewing incoming work requests for facility impact
- ? releasing work with facility manager concurrence
- ? performing post work acceptance/completion
- ? keeping facility manager cognizant of all work impacts
- ? returning to service with facility manager concurrence

Division Maintenance Manager

The division maintenance manager is responsible for:

- ? organizing assigned maintenance assets to support the concepts of the Equipment Management Program
- ? maintaining appropriate performance metrics to measure the Equipment Management Program
- ? developing and maintaining division Quick Fix and Minor Maintenance Lists as well as the change control process (See Attachment A)

Facility Maintenance Manager or Senior Maintenance Function

The facility maintenance manager or senior maintenance function is responsible for:

- ? being the primary point of contact for the facility manager in executing maintenance activities
- ? enforcing the schedule based on operations priorities
- ? overseeing/supporting work performed in the facility by outside maintenance type workgroups/subcontractors
- ? maintaining cognizance of all facility maintenance activities and status

Work Management Center (WMC)/Single Point of Contact (SPOC) Function

The WMC/SPOC is responsible for:

- ? overseeing the work management center function
- ? performing screening to determine method of performing maintenance
- ? serving as focal point for all maintenance activities
- ? providing workspace for supporting work groups to facilitate work package review and work coordination
- ? providing administrative control of work packages throughout the work package life cycle
- ? supporting current work week execution/schedule compliance
- ? assisting external work groups in accomplishing assigned tasks

Work Window Manager (WWM)/Work Window Coordinator (WWC) Function

The WWM/WWC is responsible for:

- ? ensuring that work packages are ready to work (task ready) prior to the execution week
- ? ensuring the resources are available to support all scheduled work
- ? ensuring availability of parts, tools, materials, equipment and permits prior to work lock-in week
- ? resolving obstacles to schedule execution
- ? driving the schedule during execution week
- ? integrating efforts of internal and external work groups
- ? preparing and conducting the work week critique

Planning Function

Planning Function is responsible for:

- ? developing the details and documentation necessary to accomplish the task
- ? identifying hazards and appropriate controls applicable to the work scope
- ? assisting with screening work requests for duplicates
- ? screening existing work orders to assist in planning
- ? assigning routing and providing interface with reviewers (e.g., Industrial Hygiene (IH), fire protection, safety)
- ? defining parts and material based on technical specifications established by engineering or consistent with current technical baseline
- ? performing Davis-Bacon screening for work orders (must be Davis-Bacon trained)

Lead Planner/Planner and/or Discipline Scheduler

The Lead Planner/Planner and/or Discipline Schedule Function is responsible for:

- ? determining the Optimum Performance Window (OPW) in coordination with operations
- ? building task level schedules for work activities as appropriate
- ? integrating maintenance tasks on the facility integrated schedule
- ? assisting outside work groups in integrating their work into the facility integrated schedule
- ? providing planners with priorities

Work Control Function

The work control function is responsible for their portion of the work planning process including:

- ? scoping list development and distribution
- ? developing work package

Implementing Work Group

The Implementing Work Group is responsible for:

- ? pre-approving and post work review of work packages
- ? assisting in the planning process, as required
- ? identifying hazards and appropriate controls applicable to the work scope
- ? executing work safely
- ? documenting of work during execution
- ? completing the work order documentation once work order scope is complete including all PassPort Work Management System fields and work history

Fix-It-Now (FIN) Function

The FIN Function, defined as personnel assigned either part-time or full-time to do work according to the Expedited Work Criteria, is responsible for:

- ? working tasks within expedited work criteria
- ? assisting in investigation when necessary for indeterminate work
- ? providing additional information to planning as appropriate

Initiator Function

The Initiator is responsible for:

- ? gathering accurate, detailed data and notifying the facility manager/shift operations manager and the WMC of field observed conditions requiring work
- ? contacting the shift manager for emergency or facility impacting items immediately
- ? initiating a work request in PassPort (preferred method) or by contacting the Facility Work Management Center

Cognizant Quality Function (CQF)

The CQF is responsible for:

- ? assisting Planning as necessary with incorporation of inspections into the work order/work instructions
- ? pre-approving and post work review of appropriate work orders for design modifications, work requiring independent inspections or work associated with startup operations.

Engineering Function

Engineering is responsible for:

- ? setting-up of equipment preventive maintenance (PM) records
- ? initiating work requests for implementing approved design modifications
- ? assisting in development of work instructions as required
- ? establishing/entering/maintaining the Master Equipment List (MEL) data
- ? reviewing pre and post work, of work packages as required
- ? tracking/trending of equipment data

Environmental Coordinator Function

The environmental coordinator is responsible for pre-approving work that affects environmental permit compliance requirements for environmentally permitted systems/equipment. This includes work packages that initiate a new process, change an existing process or activities that would fall outside the scope of maintaining normal operations.

Facility Waste Coordinator/Generator Certification Official (GCO) Function

The facility waste coordinator/GCO is responsible for pre-approving work order(s) that will generate any mixed or hazardous waste, require a new satellite accumulation area or a new staging area, generate excessive amounts of radioactive waste, or require special waste disposal methods.

Fire Protection Coordinator Function

The Fire Protection Coordinator is responsible for pre-approving any work order(s) that will impact fire Systems, Structures and Components (SSCs), introduces an ignition source, or increases combustible materials loading in the facility.

Industrial Hygiene (IH) Function

IH is responsible for pre-approving work packages involving hazardous material, confined space entry, excavations, maintenance or servicing of laser devices, and other hazards identified in Procedure Manuals 4Q and 8Q.

Pressure Equipment Protection Division Coordinator

The Pressure Equipment Protection Division Coordinator is responsible for determining pre and post work requirements for any work orders that will impact American Society of Mechanical Engineers (ASME) pressure vessels and relief valves, except for like-for-like relief valve replacements.

Radiological Control Operations (RCO) Function

RCO is responsible for:

- ? planning radiological aspects of the work
- ? generating a Radiological Work Permit (RWP) if one is required

- ? providing assistance for radiological instructions, hold points and other RadCon issues, technical work documents
- ? determining the need for an as low as reasonably achievable (ALARA) review/pre-job briefing
- ? assisting in containment requirement determinations
- ? ensuring all radiological issues/hazards are covered by the radiological work permit (RWP) or standing radiation work permit (SRWP) and the work package

Safety Engineer Function

The safety engineer is responsible for approving work packages as appropriate in accordance with employee safety documents and manuals.

Subcontract Technical Representative (STR) Function

The STR is responsible for ensuring subcontracted work is performed in accordance with Procedure Manual 11B, *Subcontract Management Manual*, and facility specific requirements, and is responsible for applicable PassPort updates.

Welding Independent Examination Function

The welding independent examination function is responsible for pre-approving work packages involving welding that require independent examinations.

Asset Management

Asset Management is responsible for providing assistance in complying with requirements of Procedure Manual 3B for work orders dealing with the removal of equipment or the “retiring in-place of equipment/systems”.

Procedure

The procedure section is divided into 5 subsections:

- I. Overview
- II. Work Flow Summary
- III. Work Methods
- IV. Work Process

I. Overview

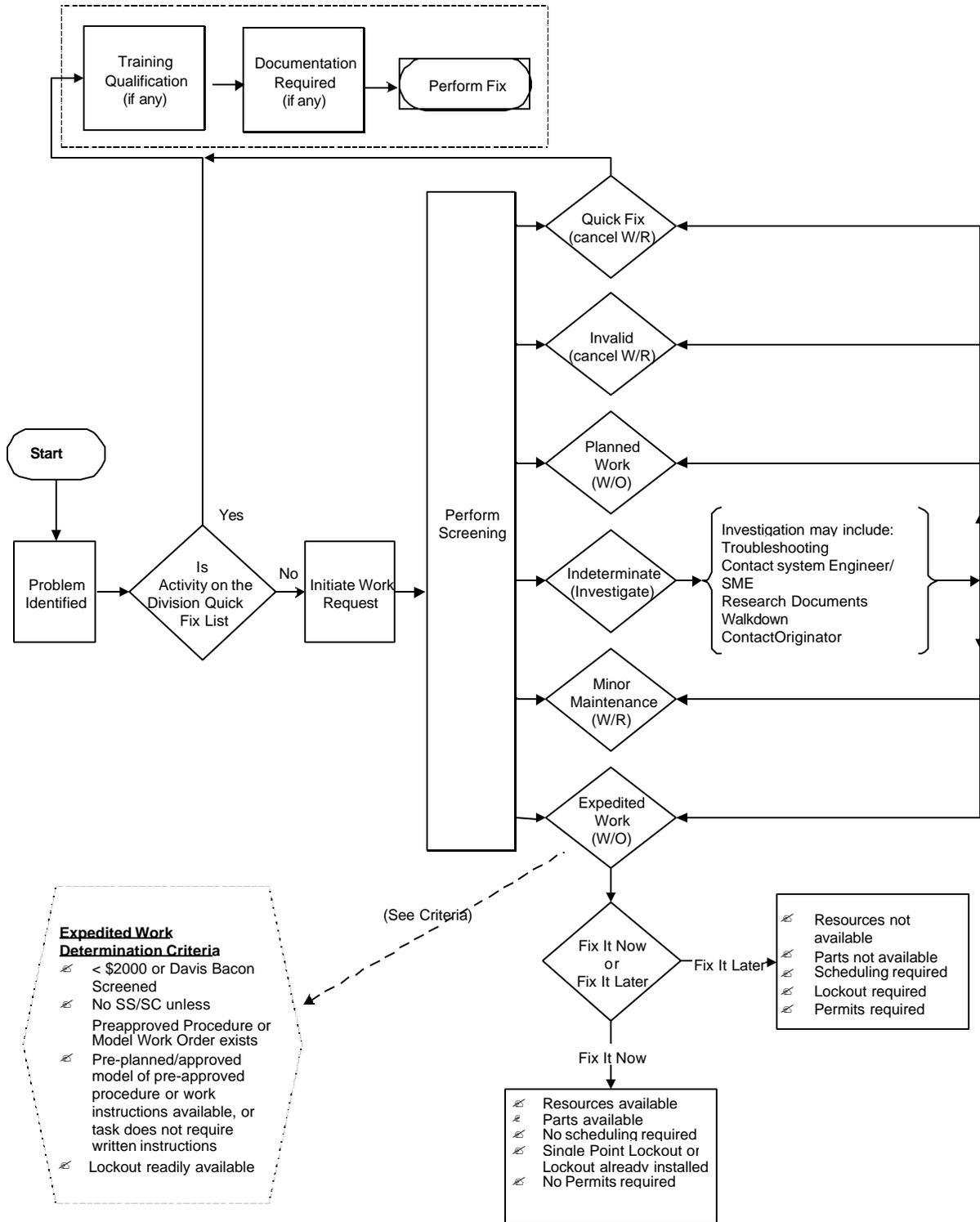
This procedure is written as a high level view of the required Work Flow Process. One method for meeting the Work Flow Process is described in the attachments, and the attachments may be implemented directly by any division/organization to comply with the requirements.

For those divisions/organizations which implement the above described Work Flow Process in a different manner than that described in the attachments, a Program Exception is submitted to the Site Maintenance Program Manager for approval. The Program Exception is a document that describes how a facility differs from a specific attachment, but meets the requirements (pages 6 - 10). Program Exception documentation will be maintained by the division facility maintenance manager and by the Site Maintenance Program Group.

For those divisions/organizations who implement a Work Flow Process different from that described in this procedure (pages 6 - 10), a Deviation is submitted following Procedure Manual 1Y, Procedure 20.01, "Division Specific Addenda".

Also, attached are six appendices that are to be used as additional information for work package development, review, and approval with various situations.

II. Work Flow Summary



III. Initiation and Screening Process

Problem Identification (Anyone)

Anyone may identify an item requiring corrective action.

Quick Fix (Anyone)

1. Determine Quick Fix Applicability (See Division Quick Fix List).
2. If the activity is on division maintained Quick Fix List, go to Attachment A.
3. If the activity is not on division maintained Quick Fix List, initiate a Work Request, or submit a change request to the Division Quick Fix List.

Work Request Initiation (Anyone)

The preferred method to initiate a work request is electronically in PassPort (alternate method may be eye-to-eye or verbal).

Screening (WMC function)

NOTE: Screening determines the validity of work requests and optimal method of work performance. Proper screening in determination of work methods is the key to ensuring the most efficient and cost effective use of resources.

1. Following initiation of a work request, the WMC function screens the request for:
 - ? duplicate requests
 - ? similar work, or work that can be grouped together
 - ? sufficient information provided on the request
 - ? operational Impacts
2. Reject /cancel work request for out of scope work
3. Go to applicable Procedure Attachment once a work method is determined.
4. If the proper work method cannot be determined, investigate.
5. Once work performance method is determined, based on investigation, proceed to applicable Work Method Attachment.

IV. Work Methods

Minor Maintenance

If activity is listed on the Division Minor Maintenance List, do not convert work request to a work order. Perform work from the work request, in accordance with Attachment D, Minor Maintenance Performance.

Expedited Work

If the work activity falls within the following criteria, it is considered “unplanned” Expedited work. (Refer to Attachment E, Expedited Work)

- ? <\$2000 or Davis Bacon Screened.
- ? No Safety Significant (SS)/Safety Class (SC) unless Pre-approved Procedure or Model Work Order exists.

- ? Pre-planned/approved Model of Pre-approved Procedure or Work Instructions available or task does not require written instructions.
- ? Lockout readily available.

Expedited work is divided into two categories depending on the following criteria:

- ? Fix-It-Now (FIN)
 - 1) If the job is within expedited scope, determine if it can be performed now using the following criteria:
 - ? resource availability.
 - ? parts availability.
 - ? no scheduling required.
 - ? single point lockout or lockout is available.
 - ? special permits (if required).
 - 2) The WMC/First Line Manager (FLM) creates an expedited work order (may be expedited after field work is complete).
 - 3) Work is performed and documented.
 - 4) Work order is completed.
- ? Fix-It-Later (FIL)

NOTE: Fix-It-Later is considered backlog and will be managed as such.

- 1) If the job is within expedited scope, determine if must be performed later using the following criteria:
 - ? resource availability.
 - ? parts availability.
 - ? scheduling required.
 - ? lockout not available.
 - ? special permits required.
- 2) The WMC/FLM creates an expedited work order.
- 3) Work is coordinated and scheduled appropriately.
- 4) Work is performed and documented.
- 5) Work order is completed.

Planned Work (Planning Function/Lead Planner/Planner or Disciplined Scheduler Function)

NOTE: Work which cannot be performed as Quick Fix (Attachment A), Minor Maintenance (Attachment D) or Expedited (Attachment E) is categorized as Planned Work (Attachment F).

1. The scheduling function determines an Optimum Performance Window (OPW) for the work request and obtains Operations agreement.
2. Scheduling/Planning function performs preliminary Davis-Bacon screening.
3. Planning function converts Work Request to Work Order.
4. Planning function uses the OPW to prioritize preparation of the work order into a work package.
5. Planner develops a detailed scope of work in accordance with Attachment B.

V. Work Process

A. Work Order Review / Approval (Planning/Approver Function)

Work order is routed to the applicable groups for review and approval. (See Attachment G).

B. Work Scheduling (Planning Function/Lead Planner/Planner or Disciplined Scheduler Function)

1. Scheduling develops and provides an approved integrated schedule. (See Attachment H).
2. In addition, Scheduling provides status of scheduled activities and reschedules activities when revisions are required.
3. Scheduling provides feedback on schedule effectiveness

C. Work Performance (Work Group Function)

1. Work is released by Operations or custodian. (See Attachment I).
2. Work and associated Post Maintenance Tests (PMT) are performed.
3. Work progress and history are entered.
4. After all tasks are complete, the Work Group Lead will review the work order for completion and route the work order for final acceptance.

D. Work Closure

1. Operations/custodian evaluates work package for acceptance. (See Attachment J).
2. Operations/custodian performs any additional PMT requirements they require.
3. Operations/custodian completes/accepts the work order and initiates routing for any additional post work reviews

E. Administrative

Work Order Processing can be performed during PassPort Work Management System unavailability. (See Attachment K.)

Records

Records generated as a result of implementing this procedure are processed in accordance with Procedure Manual 1B, MRP 3.31, "Records Management".

- ? Hard copies of work order documentation are to be processed through Document Control and Records Management.
- ? Working copies of commercial grade dedication records are to be retained with the work package.

References

- ? Atlas-WM0.0, PassPort/Work Management
- ? ASME B31.3, *Process Piping*
- ? DOE Order 4330.4B, *Maintenance Management Program*
- ? Engineering Standard 15060 and Engineering Guide 15060
- ? Procedure Manual 1B, *Management Requirements and Procedures*
 - ? MRP 3.31, "Records Management"
 - ? MRP 4.14, "Lessons Learned Program"
 - ? MRP 5.19, "Suspect Parts Identification Program"
- ? Procedure Manual 3B, *Asset Management Manual*
- ? Procedure Manual 7B, Procedure 1.1, "Purchase Requisitioning"
- ? Procedure Manual 1Q, *Quality Assurance Manual*, QAP, 6-1, "Document Control"
- ? Procedure Manual 2Q, *Fire Protection Manual*
- ? Procedure Manual 3Q, ECM 5.1, "National Environmental Policy Act (NEPA) Implementation and the Environmental Evaluation Checklist"

- ? Procedure Manual 4Q, *Industrial Hygiene Manual*
- ? Procedure Manual 5Q, *Radiological Control Manual*
- ? Procedure Manual 5Q1.1, *Safety and Health (S&H) Radiation. and Contamination Control*
- ? Procedure Manual 7Q, *Security Manual*
- ? Procedure Manual 8Q, *Employee Safety Manual*
 - ? Procedure 32, "Hazardous Energy Control (Lockout/Tagout)"
 - ? Procedure 35, "Work Clearance and Authorization"
 - ? Procedure 51, "Final Acceptance Inspection of New, Altered, or Discontinued Facilities or Equipment"
- ? Procedure Manual 18Q, *Safe Electrical Practices and Procedures*
- ? Procedure Manual 1S, *SRS Waste Acceptance Criteria Manual*
- ? Procedure Manual 2S, *Conduct of Operations Manual*
- ? Procedure Manual 1Y, *Conduct of Maintenance*
 - ? Procedure 5.01, "Types of Maintenance"
 - ? Procedure 5.02, "Preventive Maintenance Program"
 - ? Procedure 8.04, "Maintenance of ASME B31.3 Piping Systems"
 - ? Procedure 9.01, "Post Maintenance Testing"
- ? Procedure Manual D2, *Nondestructive Examination Manual*
- ? Procedure Manual E7, *Conduct of Engineering and Technical Support*
 - ? Procedure 2.05, "Plant Modification Traveler"
 - ? Procedure 2.37, "Design Change Form"
 - ? Procedure 2.38, "Design Change Package"
 - ? Procedure 3.46, "Replacement Item Evaluation/Commercial Grade Item Dedication"
- ? Procedure Manual Y1-7, *Pressure Equipment Registration, Inspection and Testing*
- ? Procedure Manual Y12, *Welding Control Manual*
- ? Procedure Manual Y16, *SRS Procedures Manual for Welding and Other Joining Processes*
- ? WSRC-IM-90-59, *Pressure Relief Valve Repair Quality Control Manual*
- ? WSRC-IM-90-138, *SRS Waste Disposal Procedure Manual*
- ? WSRC-IM-93-74, *R-Stamp Quality Control Manual for Pressure Vessel Repair*

Forms

OSR 19-119	Work Management System Preventive Maintenance (PM) Record
OSR 20-22	SRS Final Acceptance
OSR 20-103	Work Clearance Permit
OSR 20-168	Fire Safety Review Checklist
OSR 39-83	Maintenance Instructions Cover Page
OSR 39-86	1Y Conduct of Maintenance, Table of Contents
OSR 39-87	Work Package Review/Approval
OSR 39-89	Work Package Revision Initiation
OSR 39-90	Work Package Preparation Checklist
OSR 39-91	Post Maintenance Testing Plan
OSR 39-93	Work History Sheet
OSR 39-96	Bill of Materials
OSR 39-97	Tag: Site Condition

Requirements Control System

1. DOE Order 4330.4B, *Maintenance Management Program*

Attachments

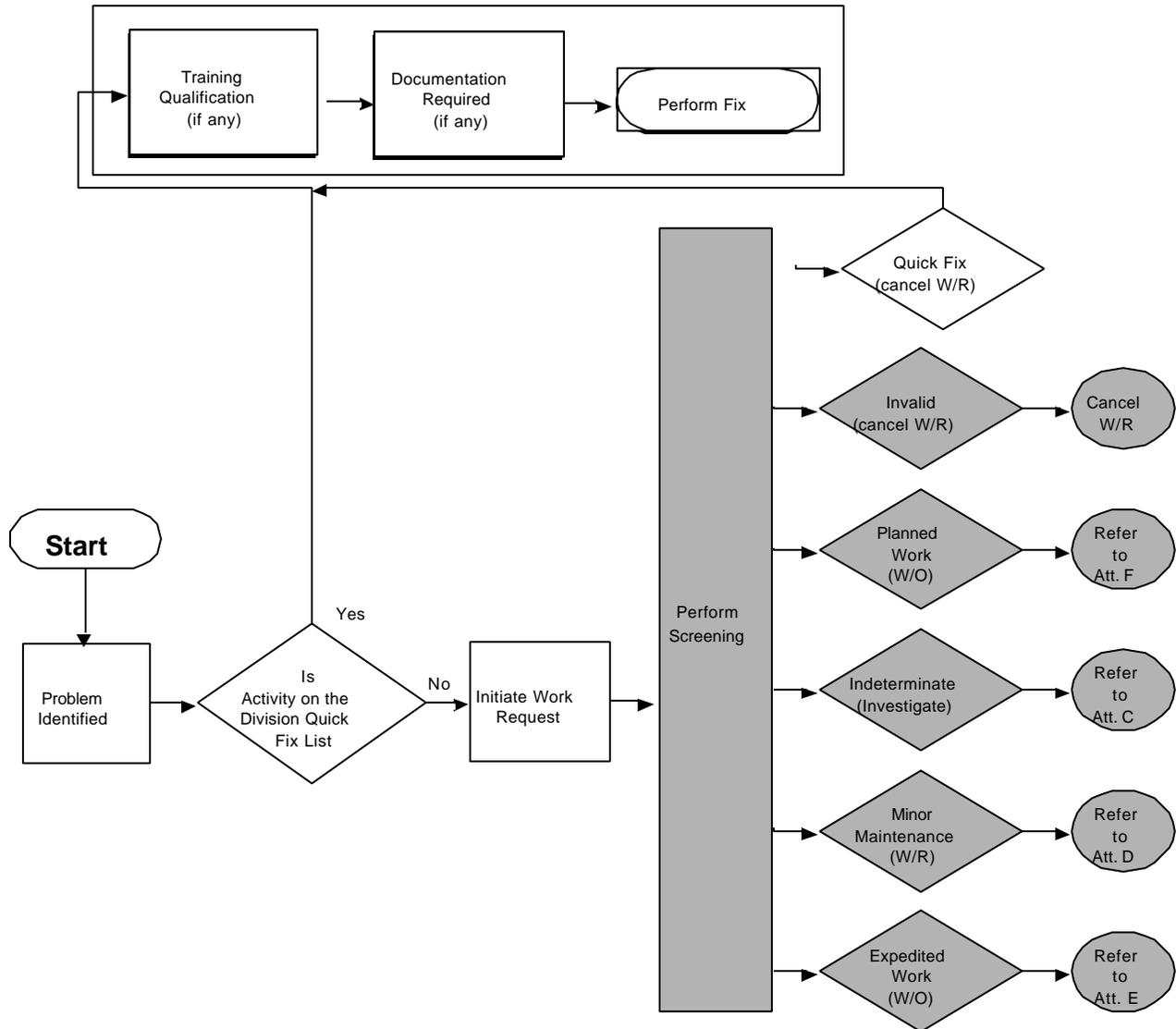
- Attachment A.** Quick Fix
- Attachment B.** Work Request Initiation

Attachment C.	Work Request Investigation
Attachment D.	Minor Maintenance Performance
Attachment E.	Expedited Work
Attachment F.	Planned Work
Attachment G.	Work Order Review/Approval
Attachment H.	Work Scheduling
Attachment I.	Work Performance
Attachment J.	Work Acceptance/Completion
Attachment K.	Work Order Processing during System Unavailability

Appendices

Appendix A.	Priority System
Appendix B.	Support Group Work Order Processing
Appendix C.	Work Order Administrative Controls
Appendix D.	Special Work Order Packages
Appendix E.	Work Orders with Radiological Hazards
Appendix F.	Radiological Work Order Preparation Flowchart

Attachment A. Quick Fix (The steps that follow the attachment define the unshaded portions of the flow chart.)

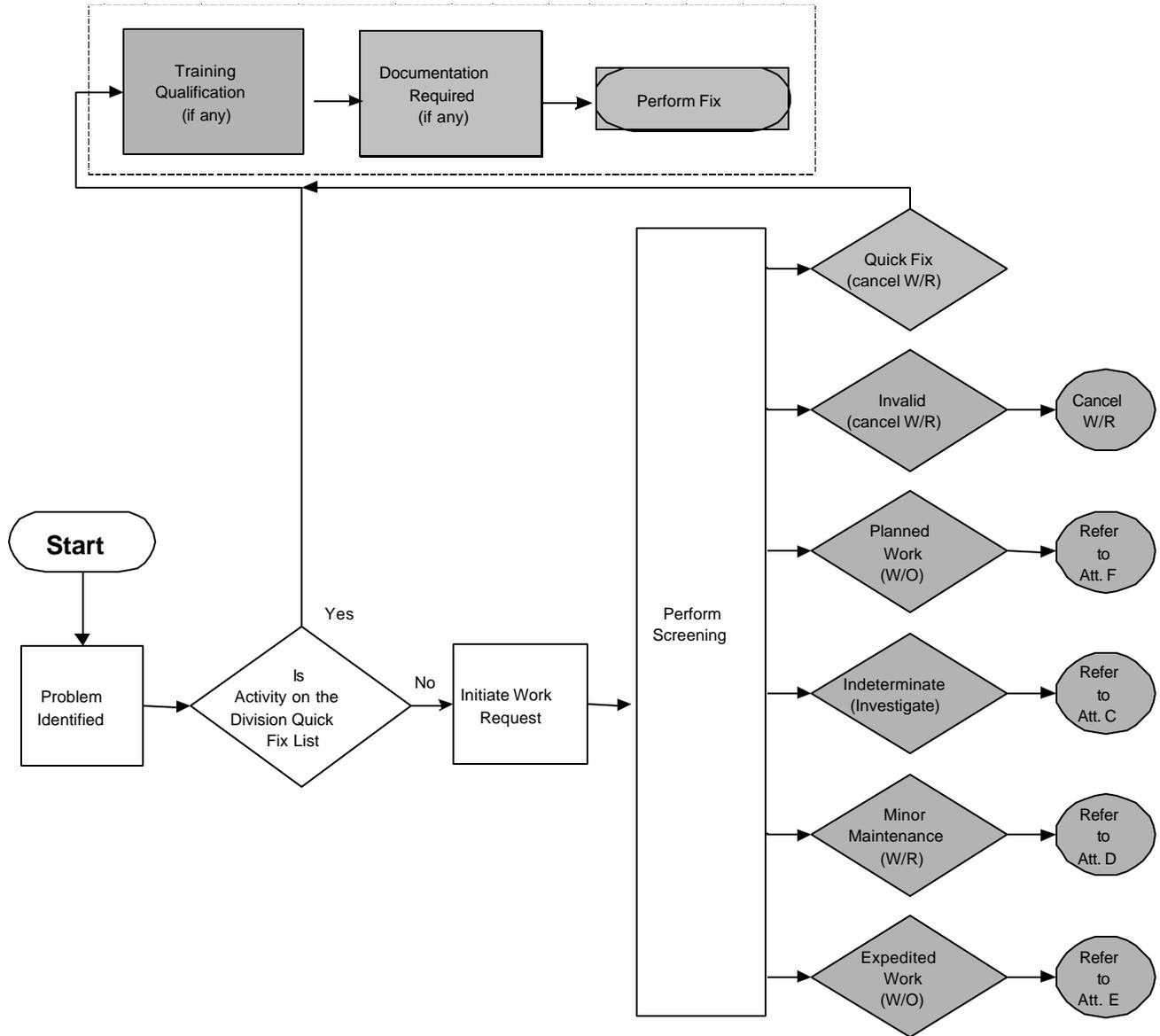


1. Determine if the activity is on the Division Quick List.
2. Determine if you are qualified and/or if documentation is required.
3. Perform Quick Fix

The division maintenance manager is responsible for development, maintenance and change control of the Division Quick Fix List. The core items that are applicable to all divisions will be standard on each Division's Quick Fix List. If an item needing corrective action is not on the Quick Fix List, a Change Request should be submitted to the appropriate Division Maintenance Manager.

If the person identifying the problem does not meet the training requirements per the Division Quick Fix List, another qualified individual may perform the job.

Attachment B. Work Request Initiation (Page 1 of 2) [The steps that follow the attachment define the unshaded portions of the flow chart.]



1. Initiation

Anyone may identify field observed conditions requiring work. Initiation of a work request may be accomplished by initiating a work request in PassPort (preferred method), or by contacting the Facility Work Management Center (FWMC). The FWMC should input verbally initiated Work Request information into PassPort as soon as practical to reduce the risk of losing information.

The initiator should also attach a condition tag to identify the deficient condition and enter the tag information in PassPort Work Management System on Panel 010, (or provide condition tag number to FWMC).

Attachment B. Work Request Initiation (Page 2 of 2)

Each facility maintains a condition tag log. The log may be a report derived from PassPort data.

Requests should be entered with the proper Component Location Identifier (CLI) when appropriate. If a CLI is not assigned, Configuration Management/Engineering should create an equipment record and define the CLI for the equipment.

Work requests that require modifications are only to be processed after a design package is developed and approved.

For PassPort on-screen-specific instructions, refer to PassPort "Atlas Co-Pilot".

2. Work Request Screening (WMC Function)

The WMC periodically searches PassPort for newly originated work request(s). A screening will be performed for each Work Request to:

- ? search for duplicate Work Request(s),
- ? ensure the Work Request has adequate information for further processing (e.g., CLI and Safety Class, etc.),
- ? evaluate operations impact of identified deficiency (LCO, etc.), and
- ? conduct appropriate hazard screening

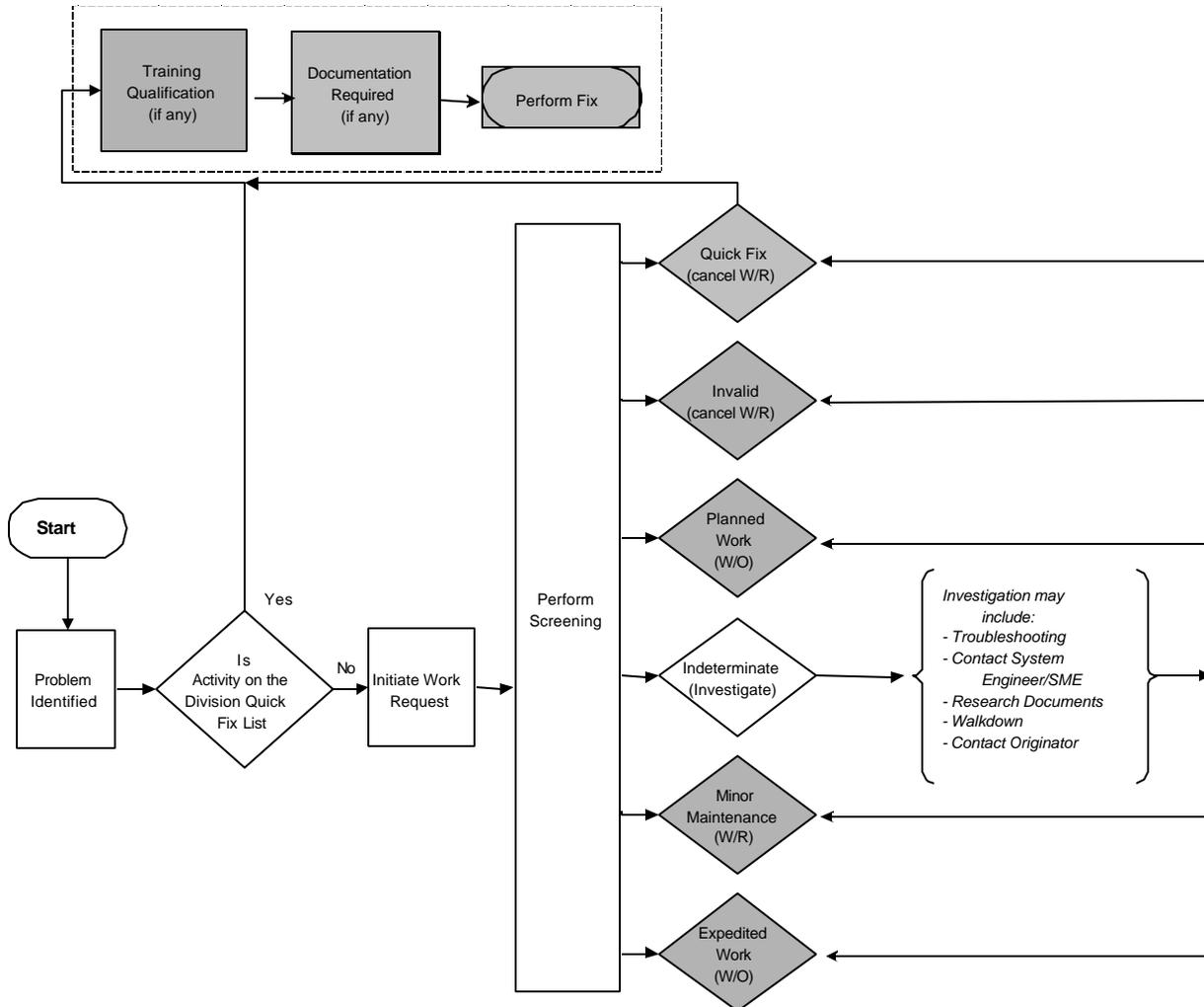
Invalid Work Request(s) will be cancelled and electronically returned to the PassPort initiator. Disposition valid Work Request(s) as follows:

Screening Criteria

- ? Quick Fix (See Attachment A) - Activity Listed on Division Quick Fix List.
- ? Indeterminate (See Attachment C) - Work Scope cannot be determined. Investigation required.
- ? Planned Work (See Attachment F)
 - ? Complex Work
 - ? Modifications
 - ? Additions
- ? Minor Maintenance (See Attachment D) - Included on Division Minor Maintenance List.
- ? Expedited Work (See Attachment E)
 - ? <\$2000 or DBA screened.
 - ? No SS or SC unless pre-approved procedure or model work order exists.
 - ? Pre-planned/approved model or pre-approved procedure or work instructions available, or no written work instructions required.
 - ? Lockout readily available.

A Davis-Bacon screening will be performed if the work is Expedited work and could require more than \$2000 to accomplish. The Davis-Bacon screening will be a part of the expedited work order when complete.

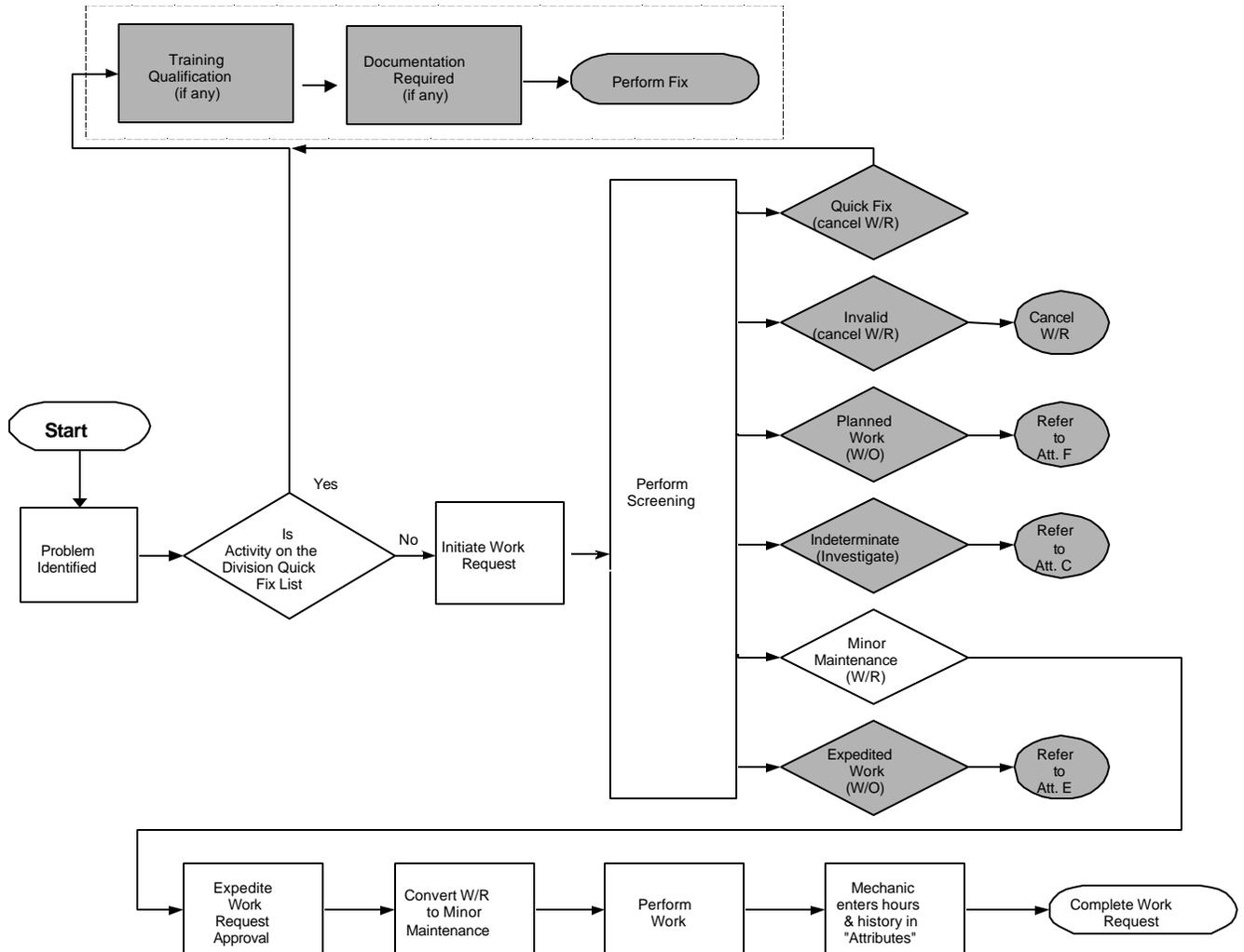
Attachment C. Work Request Investigation (WMC Function) [The steps that follow the attachment define the unshaded portions of the flow chart.]



1. If the scope of activity cannot readily be determined as Planned or Unplanned work, investigation is required. The following investigation methods may be used:
 - ? Troubleshooting
 - ? Contact System Engineer or SME
 - ? Research Documents
 - ? Walkdown
 - ? Contact Originator

2. Once investigation is complete, the work request type is determined as:
 - ? Invalid
 - ? Quick Fix
 - ? Planned Work
 - ? Minor Maintenance
 - ? Expedited Work (Unplanned)

Attachment D. Minor Maintenance Performance (The steps that follow the attachment define the unshaded portions of the flow chart)

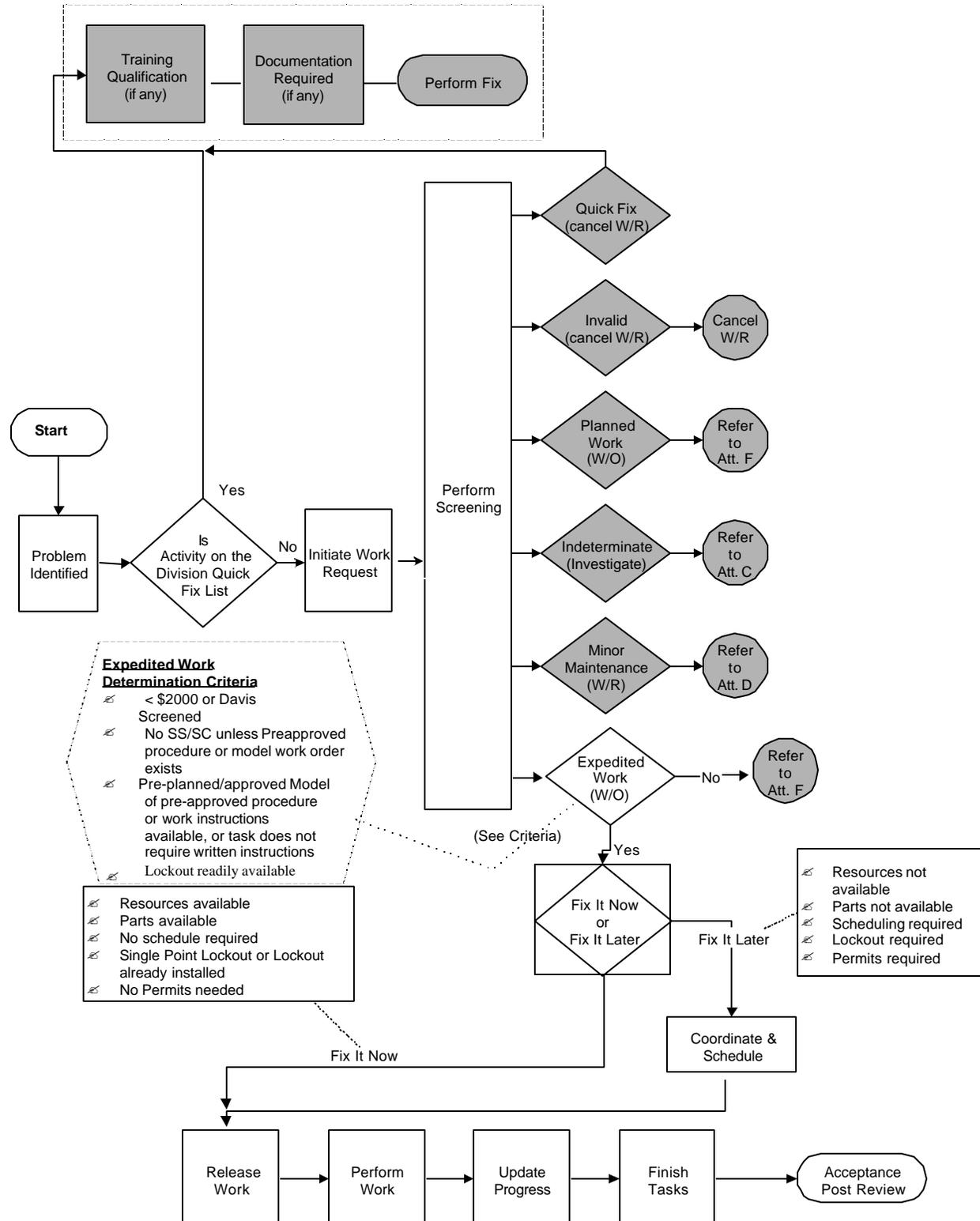


Work that is to be documented as "Minor Maintenance" scope may be processed within PassPort as follows:

1. Expedite work request approval using option 10 of panel M010.
2. Convert the work request to Minor Maintenance by selecting "Open Minor Maintenance" using option 7 of panel M010.
3. Perform the Minor Maintenance work.
4. Once maintenance is completed, the mechanic enters hours using the "Attributes" hot button on the M010 panel. This is accomplished by selecting the "Attribute Name" of "Minor Maintenance", entering the number of hours to complete the task in the "Attribute Value" column, and selecting "HR" (Hours) in the "UOM" (Unit of Measure) column.
5. Enter history by selecting the "Additional Description" hot button on the M010 panel and entering the history in the free text field.
6. Once the hours and appropriate history are entered, the mechanic completes the "Minor Maintenance" work request by selecting option 8 of panel M010.

The Division Maintenance Manager is responsible for development, maintenance, and change control of the Division Minor Maintenance list. It is the responsibility of each division to ensure only activities from the Minor Maintenance list are completed using the Minor Maintenance functionality in PassPort. This includes Minor Maintenance performed by support groups.

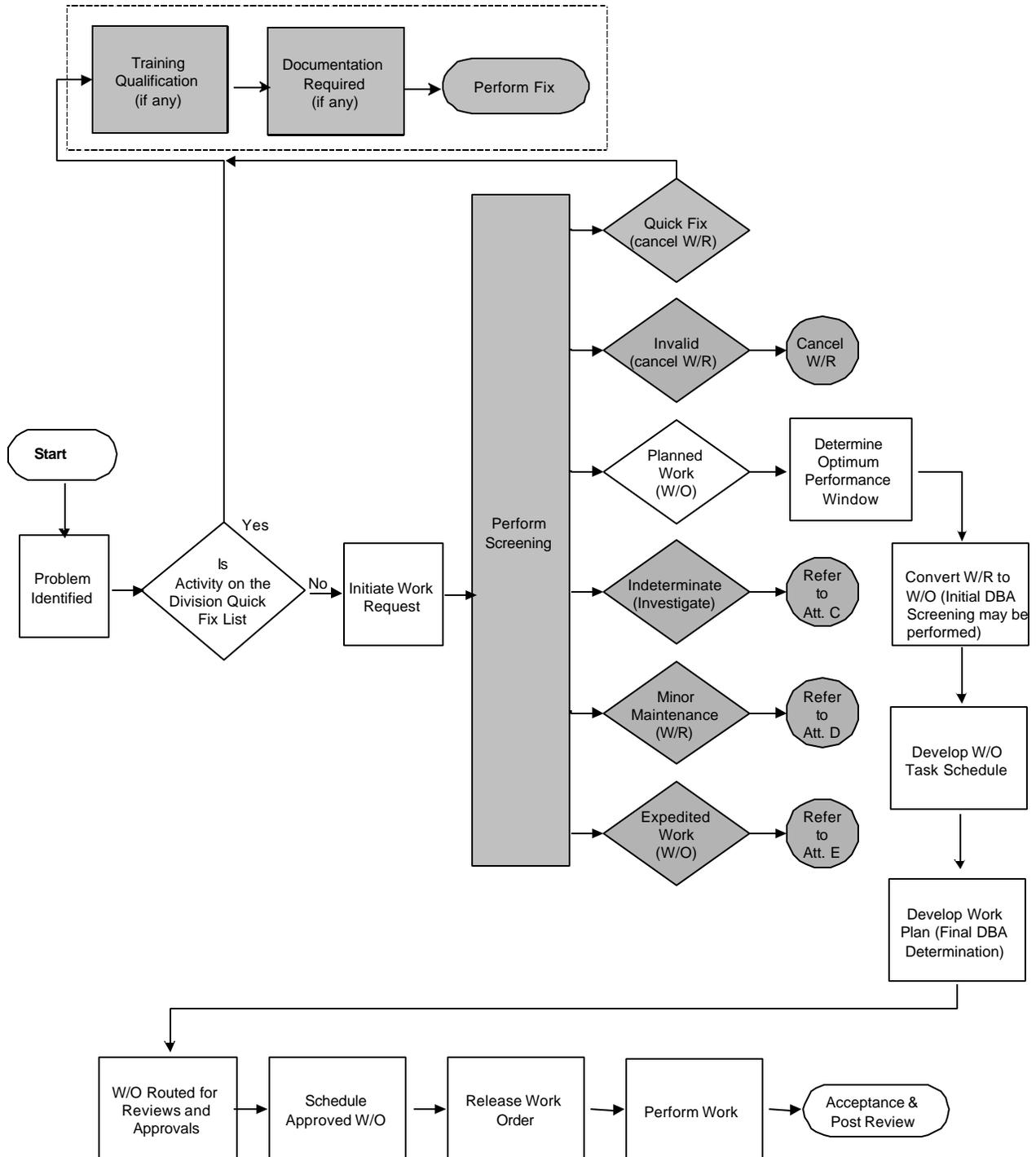
Attachment E. Expedited Work (Page 1 of 2) [The steps that follow the attachment define the unshaded portions of the flow chart]



Attachment E. Expedited Work (Page 2 of 2)

1. Upon determination that a work request is to be expedited, the work request is converted to an expedited work order. The mechanic is not expected to return from the field to obtain an Expedited Work Order. The Expedited Work Order may be developed before or after the Expedited Work scope work is completed.
2. Determine whether the work will be Fix-It-Now or Fix-It-Later. Criteria for Fix-It-Now and Fix-It Later are listed in chart above.
3. If it is determined the expedited work order is within the Fix-It-Now criteria:
 - a. The WMC function prints the expedited work order, if needed and gives the package to the work group.
 - b. The work group:
 1. enacts the WCP compensatory measures,
 2. obtains parts, material, resources and tools, and
 3. implements and document task performance.
 - c. If during execution of work it becomes apparent that the task scope has changed, the work group:
 1. places equipment in safe condition,
 2. documents the details of work performed on the expedited work order (including man hours + parts cost) in PassPort, and
 3. notifies the WMC to have the work order forwarded to planning (refer to Attachment F).
 - d. When the task is complete, proceed to Attachment I, section 4 of this procedure to document performance of work. Identify applicable post maintenance testing.
 - e. If it is determined the expedited work order is within the Fix-It-Later criteria, then when the restraint is lifted (parts available, lockout installed, etc.) follow steps 3.a through 3.d above. Fix-It-Later must be managed as work backlog.

Attachment F. Planned Work (Page 1 of 5) [The steps that follow the attachment define the unshaded portions of the flow chart.]



Attachment F. Planned Work (Page 2 of 5)

1. Determine Work Request Optimum Performance Window (OPW) date - the WMC Lead Planner/Planner/Scheduling Function will evaluate the work request against operational needs and provide an OPW date.
2. Convert Work Request - the Lead Planner/Planner and/or the discipline Scheduler will convert the work request(s) to work order(s) through:
 - ? selecting the appropriate WR's and assembling them into a work order,
 - ? prioritizing the W/O per Appendix A,
 - ? providing an initial estimate of labor hours in PassPort,
 - ? determining/select the W/O type, and
 - ? assigning the work order to a specific planner.
3. Develop Work Order Task Schedule (see Attachment H)
4. Develop Work Plan
 - a. The planner screens for previously performed tasks and model work orders that contain information or documentation that can be utilized for task planning and identification of hazards.
 - b. The planner reviews available walk-down data captured during WR initiation.
 - c. Add additional tasks to the W/O, as appropriate, required to perform the scope of work. Ensure job type task is correct per Procedure Manual 1Y, Procedure 5.01.
 - d. Determine work order package contents based on the following matrix:

Work Package Contents Matrix			
ITEM	SC/SS	PS/GS	PM
Post Maintenance Test Requirements (1Y Procedure 9.01)	A	A	A
Procedure/Detailed Scope of Work Task List	1,3	A, 3	A, 3
Bill of Material, Commercial Grade Dedication (CGD) Packages (E7, 3.46)	A	A	A
Reference/Supporting Documents	A, 3,5	A, 3,5	A, 3,5
Condition Tag copy	A, 4	A, 4	A, 4
Work Clearance Permit (WCP)	2	2	2

Matrix Key:

A = If applicable

1. Maintenance Instructions, procedure, or detailed scope of work if not skill-of-craft.
2. As required by Manual 8Q, Procedure 35.
3. Available electronically in PassPort, not necessary to include hard copy in package.
4. Condition Tag copy may be discarded once the condition tags' data is entered in PassPort Work Management System.
5. Reference documents will be limited to those directly related to performing the work package in the field.

- e. The following information describes the method and considerations for development of maintenance instructions and permits. The planner incorporates maintenance instructions and permits as appropriate into the work order.

Typically, work performed on SC and SS SSCs, including pressure vessels or relief devices, will involve the use of instructions/procedures to ensure the adequacy of work performed and to document actions taken.

Work that is classified as PS (Production Support), or GS (General Services) is to be planned using the administrative controls for SC if the work impacts:

- ? seismic supports,
- ? work that has the potential to affect equipment classified as SC, or
- ? work performed on pressure vessels or relief devices.

RCO will assist the planner, as needed to determine if radiological hazards exists and what action steps, or hold points for RadCon controls are required for the instructions.

Attachment F. Planned Work (Page 3 of 5)

4e. (cont.)

Repair or alteration of ASME pressure vessels requires maintenance instructions and the notification of the Division PEPC coordinator to determine pre and post work review requirements.

Except for like-for-like relief valve replacements, all relief valve work requires maintenance instructions and the notification of the Division PEPC coordinator to determine pre- and post-work review requirements.

? R-stamp Quality Control Manual for Pressure Vessel Repair (WSRC-IM-93-74)

? Pressure Relief Valve Repair Quality Control Manual (WSRC-IM-90-59)

- f. The following provides a list of items that the planner should consider when planning work. These considerations are provided as an aid and are not meant to be all-inclusive.

Support documents:

- ? Industrial Hygiene (Procedure Manual 4Q)
- ? Safety (Procedure Manual 8Q)
- ? Safe Electrical Practices and Procedures (Procedure Manual 18Q)
- ? Technical Specification Requirements
- ? Fire Protection Requirements (Procedure Manual 2Q). Use form OSR 20-168 "Fire Protection Checklist" as required by Procedure Manual 2Q
- ? Lessons Learned Program (Procedure Manual 1B, MRP 4.14)
- ? Security Requirements (Procedure Manual 7Q)
- ? Savannah River Site Radiological Controls (Procedure Attachment H/I, Procedure Manual 5Q and 5Q, 1.1)
- ? Pressure Equipment Registration, Inspection, and Testing (Procedure Manual Y1-7)
- ? Domestic Water Requirements (Procedure Manual WSRC-IM-90-138)
- ? Environmental Requirements (Procedure Manual 3Q)
- ? Waste Certification Procedure (Procedure Manual 1S)
- ? Procedure Manual 1Y, Procedure 9.01, Post Maintenance Testing
- ? Procedure Manual E7, Conduct of Engineering and Technical Support Manual, Procedure 3.46, Replacement Item Evaluation/Commercial Grade Dedication
- ? National Board Inspection Code (NBIC) R-stamp program quality manual

Removal of interference item considerations:

- ? precautions or notifications to address impact on adjacent systems, equipment or components,
- ? removal and reinstallation instructions, and
- ? inclusion of design requirements.

If material is necessary a work order Bill of Material (BOM) is required for all work packages (other than shop stock and consumables). Guidelines for processing work order materials are as follows:

- ? generate a BOM using the Field Material Tracking System (FMTS).
- ? place work order number on the BOM in FMTS.
- ? provide need date for materials on BOM.
- ? reference the BOM in each work package (Panel M100, Tab 8, "Contracts/Expenses").
- ? for SS & SC work packages, additions and changes to a BOM (other than quantity), require a revision to the work package.

- g. Other planning considerations include:

- ? initiation of a lockout request per Procedure Manual 8Q, Procedure 32, Hazardous Energy Control, as applicable
- ? any supplemental documentation/compensatory measures as specified on the WCP
- ? electronic search of the Lessons Learned (LL) database: [ShRINE/Lessons Learned/Search Page]
- ? identification of lubrication requirements, if applicable
- ? identification of M&TE requirements, as applicable
- ? assurance that hazardous material waste requirements are defined

Attachment F. Planned Work (Page 4 of 5)

4g. (cont.):

- ? reference or inclusion of requirements, procedures, instructions, and acceptance criteria for activities such as welding (Procedure Manual Y12 and Y16 for details), heat treatment, painting, leak sealing, nondestructive examination, inspection, sterilization/flushing, etc.
 - ? inclusion of hold and witness points as required
 - ? for ASME B31.3 code related pipe activities, reference and include appropriate requirements, acceptance criteria, examinations and owner inspections as defined in Engineering Standards 15060 and Eng. Guide 15060, and 1Y, 8.04. The planner will determine when inspection is required and add a signature block to the work instructions for inspection.
 - ? work instructions for work performed effecting ASME pressure vessels must include a Division PEPC Coordinator to determine pre and post work review requirements
 - ? for work packages that would initiate a new process, change an existing process, and for those activities that fall outside the scope of maintaining normal operations and could potentially result in an environmental impact, an Environmental Evaluation Checklist per Procedure Manual 3Q, ECM 5.1 may be required. If required, include in the Work Order package
 - ? identification of post maintenance testing requirements and acceptance criteria in accordance with Procedure Manual 1Y, Procedure 9.01, Post Maintenance Testing
 - ? special training, procedures, or mockups for complex activity needs
 - ? facility/organizational notification needs and requirements
 - ? cross order details
 - ? lay up plans for equipment being repaired
 - ? abandoned equipment constraints and requirements
 - ? review past work histories for known hazards and compensatory measures
- h. Engineering provides technical assistance in work order planning. This assistance includes but is not limited to:
- ? inspection, test requirements, and acceptance criteria
 - ? requirements for holding parts for evaluation
 - ? traceability requirements for parts and materials
 - ? technical information for the development of Work Instructions and procedures
 - ? proper part applicability
 - ? validation of design acceptability for parts and materials
 - ? development of instructions and parts list for modification, proper part applicability (RIE, CGD)
- i. The CQF and RCO provide inspection-planning assistance.
- j. For work orders dealing with the removal of equipment or the “retiring in-place of equipment/systems”, Asset Management provides assistance in complying with Procedure Manual 3B requirements.
- k. The PEPC Division Coordinator provides technical assistance regarding repair of ASME pressure vessels or relief devices.
5. Identification of Parts, Resources and Tools:
- a. Identify all parts in FMTS and special tools in PassPort.
 - b. Identify resources for the implementing work group and all support groups.
- This may be identified on the Task Profile by resource type unique to the implementing group and the support group. The planner will provide estimates that will be validated by the appropriate reviewer to assist in resource loading schedules.
6. Davis-Bacon Determination
- a. Only personnel trained to perform Davis-Bacon determination determine Davis-Bacon.
 - b. If the scope of work is sufficient to perform a Davis-Bacon screening, then the screening may be performed to determine whether the work is covered or non-covered prior to performing the cost estimate.
 - c. The Davis-Bacon determination must be made at the Work Order level and not at the task level.
7. Route for Work Order Review and Approval – see Attachment G.

Attachment F. Planned Work (Page 5 of 5)

8. Schedule Approved Work Order - The WWM/Scheduler will finalize the work order crew assignments by using the Scheduling Crews for Work Panel (M205).
9. Work Release - Obtain work release in accordance with Attachment I
10. Perform Work – see Attachment I
11. Work Acceptance – see Attachment J

Attachment G. Work Order Review/Approval (Page 1 of 3)

PassPort work order approval constitutes approval for all documents, forms, and information routed with the order. Separate hard copy signature is not required. Planners and WMC Managers have authority to expedite work order approval when processing pre-approved model work orders. Planner considers the affect on the Davis-Bacon determination when incorporating reviewer comments.

1. Work Order Routing

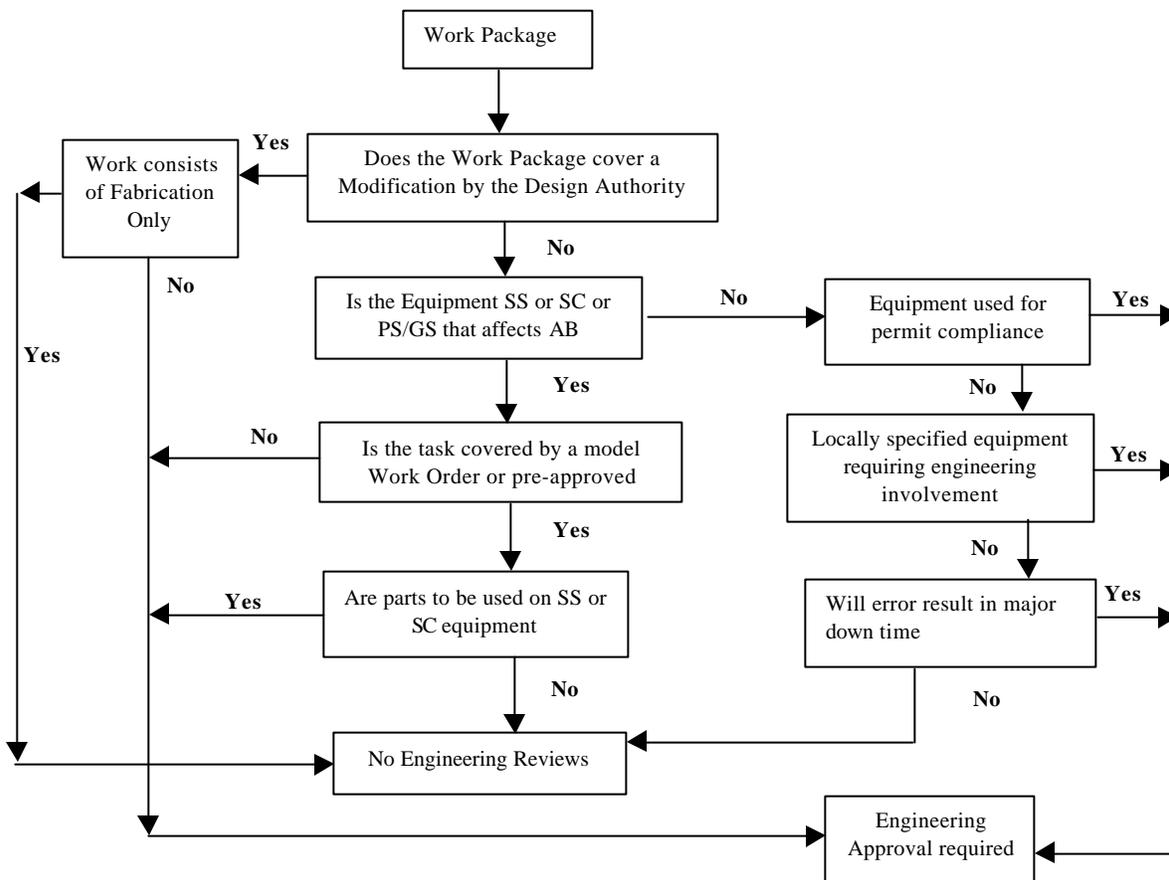
- a. If the work is to be subcontracted, the planner routes all pertinent information to the applicable organization (i.e., the Construction WMC or the STR for the applicable subcontract organization).
- b. If the work is not subcontracted, the planned work order is routed for review/approval with the applicable permits, material requests and tool/equipment request initiated by the planner (parts, materials, and equipment will be ordered via FMTS and approved by the reviewer). Each work order task is approved by the responsible organization(s). If more than one approval is required the work order will be routed sequentially according to the route list order.
- c. Additions and deletions of organizations to the original route list content are controlled by the WMC, the Lead Planner or the original Planner of the package.
- d. The comments may be recorded in the Action Notes of the work order route list.

2. Routing Considerations

Refer to Responsibility Section of this procedure for review responsibilities.

3. Decision Tree

Determine Requirement for Engineering Approval of Work Package - PS and/or GS classified work with the potential to affect the Authorization Basis will be planned to incorporate the Unreviewed Safety Question (USQ) process.



Attachment G. Work Order Review/Approval (Page 2 of 3)

4. Work Order Pre-Approvals

PM work packages are approved via OSR 19-119, and the applicable model work order per procedure 1Y, 5.02. Initial instructions to support the performance of the PM must be routed for approval. Subsequent approvals are not required unless the instructions/permits are revised.

Pre-Work Approval Matrix	SC/SS	PS/GS	Modification
Engineering	10*	10*	**
CQF	*	11*	*
Implementing Work Group/Designee	+	+	+
RCO	1*	1*	1*
Fire Protection Coordinator	2*	2*	2*
Industrial Hygiene	3*	3*	3*
Facility Operations	4*	4*	4*
Other Work Groups	5*	5*	5*
Facility Waste Coordinator	6*	6*	6*
Environmental Coordinator	7*	7*	7*
Welding Independent Examination Organization	8*	8*	8*
Safety Engineer	13	13	13
Utility Owner	12*	12*	12*
HVAC Coordinator or Engineer	9*	9*	9*
PEPC Division Coordinator	14	14	14

Matrix Key:

- 1 = RCO approval is required for all work that presents a radiological hazard.
- 2 = Fire Protection Coordinator approval is required if the work to be performed impacts fire safety systems or introduces an ignition source.
- 3 = Industrial Hygiene approval is required for packages involving hazardous material, confined space entry, excavations, maintenance or servicing of laser devices, and other hazards identified in Procedure Manuals 4Q and 8Q.
- 4 = Facility Shift Operations Manager /Designee approval is required if the work to be performed will cause an LCO or if Operations must start, stop, align or perform extensive activities within the maintenance instructions. Facility Operations approval of the work package is not required on pre-approved PMs.
- 5 = Other Work Groups, approval is required if they have personnel who will perform work in addition to the primary Work Group.
- 6 = Facility Waste Coordinator (FWC) approval is required if the work to be performed will generate any mixed or hazardous waste as defined by the Savannah River Site Environmental Compliance Manual Procedure Manual 3Q or require a new satellite accumulation area or a new staging area. FWC approval required if excessive amounts of radioactive waste (greater than one B25 box) are generated or if special waste disposal methods are required.
- 7 = Environmental Coordinator approval is required if the work to be performed will affect permitted environmental systems (for example: National Pollution Discharge Elimination System (NPDES); changes waste water characteristics or sources) and permitted outfall sampling equipment.
- 8 = Welding Independent Examination Organization approval is required if the work to be performed involves welding and requires independent examinations.
- 9 = HVAC Coordinator approval is required if the work to be performed involves process ventilation and air balance.
- 10 = Determine approval requirements using Engineering Review Decision Tree (Attachment G).
- 11 = The responsible CQF approval is required if the work to be performed requires independent inspections or is for startup operations.
- 12 = Utility owner approval is required for work near overhead power lines.
- 13 = As required by Procedure Manual 8Q.
- 14 = PEPC Coordinator approval is required if the work performed affects ASME Section I, IV, VII, X pressure vessels.
- * = Approval is not required if the work is being performed to applicable documents that have been pre-approved, e.g., pre-approved procedures, pre-approved model work orders, and pre-approved PMs.
- ** = Approval is not required for GS modifications as excluded in Procedure Manual E7, Procedure 2.05.
- + = Approval not required on Pre-approved PMs or on Expedited Work Orders.

Attachment G. Work Order Review/Approval (Page 3 of 3)

5. Work Order Post Reviews/Approvals

Post-Work Approval Matrix	SC/SS	PS/GS	Modification
Engineering	I	I	A
CQF	I	I	I
Work Management Center or Facility Manager/Designee	A	A	A

Matrix Key:

A = Approval required.

I = Information copy (routed in PassPort Work Management System). Provide any comments to the WMC for resolution. If no comments, no action is required.

6. Bypassing a Reviewer on the Route List –

- a. A reviewer may be bypassed as follows:
 - ? a reviewer may bypass himself to allow someone in the same organization to review and approve.
 - ? the WMC Manager, Work Control Manager, Planner of the Work Order or Shift Planner during off shifts may bypass any reviewer or grant permission to bypass a reviewer. This action/permission should not violate review requirements of this procedure. (If permission is given, denote who gave permission in the comments.)
- b. For all bypass actions, clarification must be given as to who was bypassed and why. If per telephone conversation, enter “per telecon” and by whom.

Attachment H. Work Scheduling (Page 1 of 3)

This attachment describes two distinct scheduling efforts: the Maintenance WorkWeek Rolling Schedule, and the Facility Integrated Schedule.

Work Week Rolling Schedule Process/Philosophy

The key for success of the Rolling Week Schedule is holding persons, groups, or departments accountable for meeting, supporting and maintaining the commitments associated with weeks in the Rolling Week Schedule Process. While a minimum 8-week rolling workweek window process is desired, it is understood that not all organizations are able to achieve an 8-week window depending on the nature of their work and the size of their backlog. However, all organizations are to comply with the concept. Section 2e. of this attachment is an example of an 8-week rolling window process.

Job Responsibilities and Expectations

This section contains specific and implied responsibilities for the following:

- ? Task Planning Function,
- ? Operations Representative in the WMC/WMC Manager,
- ? WWM/WWC, and
- ? WMC/SPOC

Task Planning Function

The expectation is that jobs will be broken down and scheduled at the task level, to ensure that no pieces of the work activity are omitted. Specific responsibilities include, but are not limited to the following activities:

- ? create initial task level schedule of breakdown of work activities
- ? identify potential problems with the schedule and recommend solutions
- ? develop Resource Loaded Schedules
- ? interface with integrated schedule. Provide details of task level scheduled activities
- ? define maintenance and support resource requirements to assist in the creation of resource loaded schedules
- ? make task crew assignments.

WWM/WWC

The WWM/WWC is responsible for the successful completion of all work activities within their assigned scheduling windows, generally consisting of a single upcoming week out of a rolling schedule. Their responsibilities include, but are not limited to the following:

- ? assist in the creation of initial "task level schedules" for work activities
- ? identify potential problems with the schedule and recommended solutions
- ? assist in the creation of resource loaded schedules
- ? monitor restraints and make corrections as required
- ? coordinate scheduled work for outside support groups within responsible facility
- ? interface with facility schedule. Provide details of scheduled activities as required.
- ? resolve obstacles to schedule execution
- ? work closely with Operations to ensure that schedule priorities are clearly understood in the WMC
- ? ensure all items are task ready prior to lock-in meeting
- ? ensure that the activities scheduled for work during their window on the rolling schedule are ready to work prior to the execution week
- ? Coordinate and resolve work schedule interface problems, including review of all schedule change requests; nullifying/rejecting change requests as appropriate and notifying originator of reason for action
- ? manage compliance with the schedule and have overall responsibility for the schedule for their week. No one can change or deviate from the schedule without the WWM's/WWC's involvement
- ? ensure that no one deviates from the schedule without approval of the Change Control Authority
- ? chair the Work Window Critique meeting at T+1 and provide performance documentation report.

Attachment H. Work Scheduling (Page 2 of 3)

WMC/SPOC

The WMC/SPOC is responsible for the successful implementation and integration of the 8-week rolling schedule.

Optimum Performance Window (OPW) Scheduling

As part of the task level breakdown of maintenance jobs, an OPW will be negotiated with Operations with the objective of scheduling work based on outage, planning as far in advance as possible, and need for equipment availability.

Lock-In Meeting

The WWM/WWC will conduct a lock-in meeting to confirm all affected groups can support the T-2 schedule as planned. The meeting should be no later than the T-1 lock-in day prior to the schedule execution window. All groups affected by the schedule need to have representation at this meeting to make commitments for their respective groups/divisions or teams. Attendees should receive a tentative schedule at least two days prior to this meeting for review and comments. A majority of problems/changes required may be identified and resolved prior to this meeting. The agenda for this meeting will include planning and execution activities, identifying problems and issues inhibiting the schedule, and the review of changes enacted and pending since the proposed schedule was published. Attendees to this meeting are held responsible for communicating any commitments or changes to all their respective groups/divisions/teams.

8-Week Rolling Window Process

All meetings identified during the below listed work weeks are generally held concurrently.

The following actions are performed during the rolling schedule function to ensure planning; scheduling and coordination are conducted as far in advance as possible. The following example is a typical guide for scheduling work. It is understood that not all organizations are able to achieve an 8-week window depending on the nature of their work and the size of their backlog. However, all organizations are to comply with the concept.

1) **T-7**

Work Control develops an "Initial Scoping List" of all work orders not currently on a T-week schedule. The Work Control Manager forwards the scrubbed list to all facility groups (Operations, Maintenance, Engineering, RadCon, etc.) All organizations will review the list in preparation for the T-6 Scoping Meeting.

2) **T-6**

Work Control conducts a scoping meeting to review the list generated in T-7. All applicable organizations participate. A full scope of work to employ the available resources will be selected and scheduled.

3) **T-5**

Work Control distributes the Scoping List to the Planning/Scheduling for development of a maintenance resource loaded detailed schedule for each maintenance crew.

4) **T-4**

- ? Crew Schedules are issued to maintenance organizations for review and concurrence.
- ? Maintenance identifies resource adjustment requirements.
- ? Work Control incorporates maintenance input.

5) **T-3**

- ? WWM/WWC assumes responsibility for T-3 schedule.
- ? WWM/WWC issues T-3 schedule to Operations, Technical, RCO, Procurement, etc., in preparation for T-3 schedule review.
- ? WWM/WWC conducts T-3 schedule review.

Attachment H. Work Scheduling (Page 3 of 3)

6) T-2

- ? WWM/WWC issues to Operations, RCO, Procurement, etc., the T-2 proposed schedule in preparation for lock-in meeting.
- ? WWM/WWC conducts lock-in meeting, resolves issues and gains total commitment.
- ? All work orders with holds are removed from schedule or analyzed for ability to clear the holds prior to T-0.
- ? Final comments are incorporated.
- ? Final lock-in schedule is issued, and the formal change control process is effective.

7) T-1

- ? WWM/WWC addresses all emergent and coordination issues that might affect work performance during the Execution WorkWeek and ensures the change control process is followed.
- ? Work crews and support groups perform final preparations to support the Execution Workweek.
- ? Crews/Organizations become familiar with final schedule activity work scope, and address any final restraints.

8) T-0 Execution workweek

- ? WWM/WWC manages compliance to locked-in schedule, and enforces the change control process.
- ? Work crews perform locked-in activities and communicate immediately with the WWM/WWC for delayed or stopped activities
- ? WWM/WWC monitors Emergent Add-on work.

9) T+1

- ? WWM/WWC conducts a critique of previous week's work and develops a performance documentation report including but not limited to:
 - ? Safety Items
 - ? Major Scheduled Activities
 - ? Major Unscheduled Activities
 - ? Emergent Issues added to the Work Week Schedule
 - ? Add-on work
 - ? Successes
 - ? General Comments
 - ? Performance Indicators
- ? Facility Management personnel (Ops, Maintenance, RadCon, QA, etc.) attend critique to identify and assist in resolution of programmatic issues impacting schedule performance.

Integrated Work Scheduling (IWS)

The 8-week rolling schedule discussed above is only the maintenance portion of an integrated schedule. It must be combined with all other facility activities to ensure resources are available for all support tasks. The desired method is upload from PassPort to Primavera (P3) and download from Primavera (P3) back to PassPort after the integration has occurred.

Attachment I. Work Performance (Page 1 of 2)

Release Prerequisites

1. The WWM/WWC reviews work order packages to ensure task readiness and verify all requirements, including permits and materials, have been satisfied. The WWM/WWC will verify that the resources are scheduled and the task is included in the locked-in schedule. Once task readiness is verified, the WWM/WWC ensures the status of the task is set to READY in PassPort.
2. The WMC prints the work order packages for tasks scheduled to be worked. Work order packages should be printed prior to the scheduled performance date/time.
3. The work group obtains a copy of the work package. Controlled documents must be verified for latest revision prior to use (see 1Q, QAP 6-1, for other document control requirements).
4. A pre-job briefing is performed for all work. Level of detail, formality, and documentation are at the discretion of the FLM/Designee unless otherwise specified.
5. Implement permits and/or compensatory measures prior to release.

Releasing Work

6. The WMC Operations Representative provides or obtain work release, per 8Q, 35.
7. Once the work has been released, and prior to starting work, the FLM/Mechanic sets the task status to WORKING.

Performing Work

8. At least one person assigned to the task must be qualified per divisional qualification requirements.
9. If unexpected job hazards are encountered, work must be stopped until the hazard is mitigated.
10. Ensure the following actions are taken if work is interrupted during performance of the work order:
 - ? place the equipment in a safe condition
 - ? notify the WWM/WWC and SOM
 - ? complete general area housekeeping requirements
 - ? cover and protect system and equipment
 - ? document the interruption in the work history and to any procedure or maintenance instruction being utilized
 - ? prior to resuming work verify that the work location, lockouts and permits still support implementation of the activity
11. Identify, mark and retain failed components for evaluation when required by the work package/ procedure or as requested by engineering/equipment owner. If the original work order estimate for labor and materials was less than \$2000 and during performance of the work this estimate exceeds \$2000, contact the WMC for the required Davis-Bacon screening.

Documenting Work Progress

12. Maintenance history, documenting the work progress and labor hours used during the shift, is entered in PassPort at the end of each shift.
13. The oncoming shift reviews information in a. above to ensure clear understanding of work status.
14. Complete required step initialing, readings or other data fields as they are performed in order to facilitate tracking work progress and ensure accomplishment.
15. Upon finishing the work, remove the Condition Tag unless otherwise instructed by operations.
16. Ensure the appropriate work history section of PassPort is updated as the job progresses. Work history data to be entered into PassPort Work Management System should include:
 - ? details of the work performed
 - ? special equipment and tools used
 - ? procedures or drawings needed
 - ? parts and materials installed (include make and model; add manufacturer if not listed in the detail on the BOM)
 - ? post maintenance testing accomplished

Attachment I. Work Performance (Page 2 of 2)

- ? feedback to the planners of information that can be used to improve future work packages, and any other information that may be useful at a later date
 - ? any job hazards encountered
17. Complete weld maps/sketches as required by weld procedures when included in the work package.
 18. Return unused parts and materials to their proper location.
 19. Record actual labor hours worked in the PassPort Work Management System.
 20. Document Delay Codes, Rework Codes, and Failure Codes in PassPort, as appropriate.
 21. Generate a work request to address any deficiencies found during performance work that were not within scope of assigned task(s). The importance of documenting work progress cannot be over emphasized. It is the key to smooth turnover and resource allocation when a job is not completed within a single shift. It provides valuable information for work planning and for trending of equipment performance. It also helps identify opportunities to improve work practices and increase maintenance efficiency.

Performing Post Maintenance Tests (PMT)

22. Perform required Post Maintenance Testing – A Attribute, in accordance with Manual 1Y, Proc. 9.01.

Setting Work Order Tasks to Finished

23. The organization having primary responsibility for each task in a work order ensures PassPort is updated with all information relative to finishing that task. This review ensures that the following items have been addressed:
 - ? work scope is complete and work site properly restored
 - ? all applicable permits are completed and/or released
 - ? applicable data fields in PassPort and other work related documents are complete
 - ? equipment/component history entries are complete
 - ? labor hours are documented in PassPort
 - ? maintenance performed (A-attribute) PMT is complete and evaluated for acceptance
 - ? acceptable results are achieved or suitable justification is provided
 - ? once satisfied that the task(s) are properly finished and documented, the Work Group Supervisor/Designee routes/submits the electronic work order to OPS for completion (work acceptance). Hard copies of the work packages are returned to the facility WMC.
 - ? for subcontract work groups performing work within a facility, the subcontract work group will finish their work order task, set the work order task(s) to "finished" and input work order history and associated hours at a PassPort terminal in the facility's WMC. The facility WMC ensures the work order is routed/submitted to operations for completion.
 - ? for subcontract work groups performing facility work outside of the facility (e.g., in a support group's shop) the subcontract work group will "finish" the task, notify the facility WMC and forward any hardcopy work packages to the facility WMC. The facility WMC will "complete" the W/O and route for post job review/approval per Attachment G.

Requirements for recording history, labor and finishing tasks in PassPort apply to all work order activities, whether expedited or planned and scheduled. If a task is subcontracted, the applicable STR assumes responsibilities associated with the implementing Work Group Supervisor/Designee for applicable updates to PassPort Work Management System. All hard copy documents used in performance of work must be available for review during work acceptance by operations and returned to the WMC for retention.

Attachment J. Work Acceptance/Completion

Customer Turnover/Work Acceptance

The following actions are required for operations work acceptance:

1. Operations will ensure PMT has been performed in accordance with Manual 1Y Procedure 9.01.
2. If the PMT fails, Operations will ensure a condition tag is placed on deficient equipment, route the work order to the FLM for disposition and return hard copy of the work package to the WMC. The mechanic (or operations) will enter history detailing failure.
3. If rework is not specifically defined in the existing task (pre-authorized) the planner will revise the work order by adding and planning an additional task to define the scope of rework activities. The planner clearly identifies the task as rework in the task title. The planner will enter an "X" in the Rework flag block on Task Detail "sub-panel" and include a brief reason for the rework. Upon finishing the task the mechanic will access the M233 panel (Tab 3 under M230) and enter the appropriate Rework Code, Rework Hours and Crew #.
4. Upon notification that all work order tasks are finished, operations evaluates the work package for acceptance. At this time operations ensures all condition tags are removed and that removal is documented in PassPort. Tag removal is documented on the Task Completion panel (M301) panel in PassPort.
5. Operations accepts responsibility for the SSC from maintenance by setting the work order to complete in PassPort Work Management System.
6. Operations may now return equipment to service per Manual 2S.

Post Work Order Completion Activities.

7. The WMC or designee will route work packages for post job reviews in accordance with Attachment G.
8. The WMC will file hard copies of work packages, as required.

In some cases the work to be performed will necessitate returning the equipment to service as a part of the work instructions. In such cases, the work package must clearly outline the criteria and specific steps for returning the equipment to service. Once the work order scope is finished the mechanic will set all tasks to "finished" in PassPort per Attachment I. Operations will then set the Work Order to "complete" in PassPort per Attachment J.

Attachment K. Work Order Processing during PassPort Work Management System Unavailability (Page 1 of 2)

NOTE: Hard copies of blank forms should be kept in each facility WMC in the event of System/Network unavailability.

Work Initiation

If work orders are required while PassPort Work Management System is unavailable:

1. The requestor or WMC completes the necessary fields on the blank “Work Order Package” and, when installed by initiator, annotates the Condition Tag number and location.
2. The following fields on “Work Order Package Header” block are to be populated as a minimum:
 - ? Facility
 - ? Unit
 - ? W/O Type
 - ? Planner
 - ? W/O Title
 - ? W/O Task Title
 - ? Written to
 - ? Date
3. Assign a tracking and number to each manually generated WO.
4. The following fields on the “Work Order Package Work Order Task Written to” blocks are to be populated as a minimum:
 - ? Facility,
 - ? Unit,
 - ? Area,
 - ? Sys/CIs (Functional Classification of the equipment),
 - ? Equipment (if work is against equipment),
 - ? Component (if work is against equipment),
 - ? Job Type,
 - ? Cost Center, and
 - ? Percentage.
5. The following fields on the “Work Order Package Major Failure/Action Taken” block are to be populated as a minimum:
 - ? Major Failure
 - ? Deficiency Tag Location (if required)
 - ? Deficiency Tag Number (if required)

Planning

6. Planning prepares required documents as shown in the Work Package Matrix (Section 5 of this attachment). Input from various sources may be required such as CQF, CTF, Pressure Equipment Protection Division Coordinator and RadCon. These items are intended to be used only to the extent necessary to continue work during a PassPort outage.

Execution

7. Once the necessary approvals are obtained, the package is released for fieldwork. Procedures and maintenance instructions are to be completed in accordance with existing guidance.
8. When completing the Work Order Package, the following fields in the “Major Failure/Action Taken” block are to be populated as a minimum:
 - ? Condition Tag Removed, and
 - ? The fields in the “Work Completion Signatures” block are to be completed as required.

Attachment K. Work Order Processing during PassPort Work Management System Unavailability
 (Page 2 of 2)

Closure

9. Perform PMT as required by the PMT plan and obtain acceptance for work. Documents are then returned to the WMC for processing and shipping to retention. Once PassPort is available the work order information is entered into PassPort by WMC.

PassPort Unavailability Work Package Matrix

Item	Report/OSR	Any SC/SS	Any PS/GS	Expedited Work	PM
Blank PassPort Work Order Package	P211	Y	Y	Y	Y
Table of Contents	39-86	Y	Y	A	N
Revision Sheet	39-89	I	I	I	A
Review/Approval Sheet	39-87	Y	Y	Y	
Work Package Preparation Sheet	39-90	A	A	A	N
Maintenance Instruction	39-83 pg. 2&3	2	N	A	A
Post Maintenance Test Plan (1Y 9.01)	39-91	A	A	A	A
Work History Sheet	39-93	Y	Y	A	A
Bill of Material (1Y, 11.01), CGD Packages (E7, 3.46)	39-96	A	A	A	A
Reference/Supporting Documents		A	A	A	A
Condition Tag Copy or Number	39-97 26-19003	A	A	A	A
WCP	20-103	3	3	3	3

Matrix Key:

- Y= Always Required
- A= If Applicable
- N= Not Required
- I= If Package is revised
- 2=MI's, Procedure or detailed SOW if not Skill of the Craft
- 3=As Required by 8Q, 35

APPENDICES

Appendix A. Priority System

Priority codes are to be assigned to identify the urgency of a work order based on the following matrix:

Priority	Description	Response
E Emergency	Requires immediate maintenance action to: ? Prevent or mitigate consequences of an accident. ? Prevent release of radioactive material to the environment. ? Protect human life and/or property. ? Prevent or mitigate environmental excursions. ? Restore ability of operator to obtain critical operating information or functions. Resulting emergency procurement actions require approval as outlined in Manual 7B, Procedure 1.1, Purchase Requisitioning.	? Begin work immediately. ? Provide special coverage as needed. ? Planning and completion of work order performed as soon as possible. ? Once the emergency situation is stabilized work must cease and all applicable documentation brought up to date. ? Planning activities and approvals must be completed before proceeding with restoration of the SSC.
1 Urgent	? Work required to satisfy LCO of 72 hours or less. ? Work on SSCs with high potential for near term significant impact on health and safety of site personnel or general public, environment, or plant reliability. Resulting emergency procurement actions require approval as outlined in Manual 7B, Procedure 1.1, Purchase Requisitioning.	? Begin work order planning immediately and complete prior to start of work. ? Begin work as soon as possible after planning and approval (unless work on hold for parts, Replacement Item Evaluation (RIE), permits, etc.).
2 Primary	? Work required to satisfy LCO of greater than 72 hours. ? Work on SSCs with high probability of impacting the plant's ability to maintain a system/function operable.	? Begin planning within 24 hours ? Begin work as soon as possible after planning and approval.
3A Routine	? Work to support facility mission. ? No imminent impact on reliability or safety. ? Deteriorating conditions could upgrade the priority.	? Perform planning and work as manpower and schedule allows.
3B Routine	? Work to support facility mission. ? No imminent impact on reliability or safety. ? Deteriorating conditions would not impact the priority.	? Perform planning and work as manpower and schedule allows.
4 Non-Priority	? Not required for facility mission or safety. (Example; shop upkeep/maintenance/improvements)	? Perform planning and work as manpower and time permits.
5A Outage/PMP	? Work required/needed to be accomplished during a scheduled system/process shutdown, outage, or planned maintenance period (PMP). Adjust priorities as the schedule progresses.	? As dictated by schedule.
5B Outage/PMP	? Work highly preferred to be completed during a scheduled system/process shutdown, outage, or planned maintenance period. Adjust priorities as the schedule progresses.	? As dictated by schedule.
5C Outage/PMP	? Optional work to be accomplished during a scheduled system/process shutdown, outage, or planned maintenance period, time and resources permitting. Adjust priorities as the schedule progresses.	? As dictated by schedule.
6/6S Management Priority	? Allows Management to expedite fieldwork normally assigned a lower priority. ? Must be approved by Level 3 Management or higher. ? Justification must be documented on work order.	? Begin work as determined by management, but not prior to completion of work planning.

	? Need date for work completion should be provided. SSCs classified as Non-SC/SS Defense in Depth has a Priority 6 for corrective maintenance. 6S applies to work involving personnel safety.	
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Appendix B. Support Group Work Order Processing

This appendix provides additional information for cross ordering tasks to work groups outside of the control of the cognizant Facility WMC (FWMC). The requirements for work orders are followed as defined in the main body of the procedure unless superseded or added to by this attachment. Work should not be performed, nor charges (costs) incurred by the Support WMC (SWMC) without approval from the FWMCs.

1. Once the work order/cross order information required procedure section III. Initiation and Screening Process, .has been entered into PassPort Work Management System, the FWMC notifies the SWMC, as needed, to assist in the performance of the detailed screening. If the SWMC represents the primary service group performing the task, they perform the walk-down and be responsible for any subsequent planning that is necessary to accomplish a task.
2. If the Work request routed from the FWMC is within FIN scope the SWMC approves the work request, creates a Work Order by assembling tasks, selects Work type as "FI", completes the planning required for FIN scope work, then expedites approval for the Work Order.
3. Work order comment resolution is coordinated by the SWMC Planning organization. In addition to the approvals for a work order task required per Attachment G, subcontract Planning obtains approval of the FWMC or designee for tasks performed in the FWMC's area of responsibility.
4. The SWMC balances resources to meet the customer organization's needs. To assist in this process, the SWMC Scheduling Function supplies the FWMC Scheduling Function work order specific scheduling information necessary to make OPW and IWS determinations. The FWMC's scheduling organization supplies customer SWMCs with a copy of finalized work order schedules within the FWMC facilities.
5. The implementing Work Group must obtain authorization from the FWMC or the Facility Shift Operations Manager /Custodian or Designee prior to performance of work.
6. If equipment must be transported to a SWMC work group's shops to be worked, the organization removing the equipment must prepare it for transport and attach a T&T tag which denotes the work order number.
7. For work performed in the implementing work group's shop, the implementing services work group executes work in accordance with the work order and return the equipment to the designated facility (if applicable). Documentation is routed to FWMC planner or WMC for work order completion and routing for approval. If the equipment is being reworked for use as a spare, the work order needs to specify shipping instructions for delivery to the local or site warehouse. All supporting documentation, such as the Extra Machinery Transfer form, any additional in-storage maintenance requirements are to go with the equipment. The work order that was used to remove the equipment should be closed prior to shipment by the SWMC.
8. For work performed in the FWMC facilities, the implementing service work group will enter labor and history into PassPort and set the task to "finished". The implementing service work group will provide the hard copy of the completed work package to Operations to accept the work
9. Facility work groups receiving equipment maintained by a service work group are responsible for reviewing the documentation and performance of visual inspections of the equipment prior to installation. Documentation received with equipment is incorporated or referenced by the facility work group into installation work order documentation.
1. The FWMC will obtain post work reviews/approvals required per Attachment J for a work order task. All documentation for cross-ordered tasks is forwarded to the FWMC for record storage.

Appendix C. Work Order Administrative Controls (Page 1 of 2)

This appendix defines the administrative controls to support changes of approved work.

A. Minor Changes

Minor Changes consists of one or more of the following and does not fit the definition of major change:

- ? editorial changes
- ? addition of clarification text or documents
- ? addition or correction of work order forms
- ? quantity changes to BOMs

Minor changes to work order documents are processed by:

- ? drawing a single line through deletions
- ? N/A steps and provide proper justification
- ? adding forms or corrected forms to the work order
- ? initialing and dating all changes

B. Major Changes

Major changes consists of one or more of the following:

- ? changes in physical work boundaries
- ? conflicts with a source document requirement (i.e., deletion of tests, inspection, or verification where the action step will be performed)
- ? changes to actions that change the intent (operational, technical, design and quality control requirements) of approved work package instructions procedures or description of work
- ? substitution of materials/parts
- ? changes to acceptance criteria
- ? changes in testing, inspection or verification requirements
- ? point at which a document becomes unclear due to multiple minor changes to the work package
- ? increased safety risk to personnel
- ? elimination of any required review or approval

Major Changes to a work order document are processed by:

- a. forwarding revisions (made in the field or the work order) to the Work Management Center
- b. making the necessary changes to the appropriate documents. If pen and ink is used, identify the changes, with either a vertical line out to the side or by enclosing them in a cloud (all changes are identified with this revision number to make it clear what was approved).
- c. obtaining the required approval signatures for field changes adjacent to the “pen and ink” change prior to reissuing the package to the work group. In PassPort, revisions are processed by adding a task or creating an entirely new work order. The work order must be electronically re-routed to obtain required approvals in accordance with step 2 below.
- d. ensuring lockouts and permits are still adequate for the work order change. If not adequate, request a change to the affected documents
- e. ensuring approved parts are on hand and staged if parts are required by the revision.

C. Work Order Revision Approval

1. Obtain Engineering approval if the content of the revision impacts Engineering elements of the package/instructions as determined by the WMC or Work Group Supervisor/Designee.
2. Obtain CQF approval if content of the revision impacts Quality elements of the package/instructions as determined by the WMC or Work Group Supervisor/Designee.
3. Obtain Radiological Control/RCO approval if:
 - ? the proposed changes do not match the original work description of the established RWP
 - ? the changes add, remove or modify RadCon steps or hold points
 - ? the change presents a radiological hazard (e.g., excavation in a potential radiological hazardous area)

Appendix C. Work Order Administrative Controls (Page 2 of 2)

- ss4. Obtain Fire Protection Coordinator approval if the changes involve impairment to a Fire Protection Component or System not identified in the original scope of work or procedure.
- 5. Obtain other affected organizations approval, as appropriate.

D. Authorization to Continue Work

If physical work boundaries or hazards change, a new, authorized WCP must be obtained prior to continuing work.

Appendix D. Special Work Order Packages (Page 1 of 2)

This appendix provides additional instructions on preparing special work order packages. The requirements for initiation, approval, preparation, review and closure of work orders is followed as defined in the body of this procedure unless superseded or added to by this attachment. Special work order packages include Emergency Work Orders packages, Plant Modification Work Order/Temporary Modification Work Order packages, and Fixed Price Subcontract Work packages.

Emergency Work Orders (Priority E)

This section applies to all activities that are categorized Priority E as defined by Appendix A. This section establishes the method in which maintenance actions may be taken to mitigate an emergency event and completion of appropriate Work Control documentation. With operation's direction perform the following:

WMC

1. Obtain Shift Manager's permission, provide scope of work and dispatch FIN team or other maintenance personnel to begin work without a work order package in order to prevent injury to personnel, damage to equipment or to maintain an acceptable margin of safety.
2. Document the emergency deviation in the shift log.
3. Issue a work request in accordance with this procedure as soon as practical, normally within 12 hours, of declaring the emergency.
4. Denote the work request as Priority E indicating a condition that presents imminent danger to the health or safety of personnel, the environment, security, or operation of a facility.
5. Notify the CQF/CTF to witness work, where applicable.

Implementing Work Group

6. Begin work at WMC's direction. Complete only those repairs required to mitigate emergency event.
7. Record activities performed for inclusion into work order (s).

NOTE: Work may proceed without presence of any additional personnel. If other responsible departments are readily available to accompany the implementing work group, they may do so.

8. Request Planner, or appropriate additional personnel, to be present to record actual work performed.

Quality Assurance/Engineering

9. Witness emergency work if applicable and time permits.

Work Control Personnel

The following steps should be completed in a timely manner.

10. Generate all documentation required while the work is being performed or after the fact.
11. Following stabilization of the emergency condition, obtain all normally required documentation and approvals before proceeding.
12. Ensure all documentation for actions taken prior to stabilization of the emergency is completed.

Plant Modification Work Order/Temporary Modification Work Order

NOTE: The following items apply to the development of a work order package for implementation of an approved Design Change Package/Design Change Form from Engineering.

Appendix D. Special Work Order Packages (Page 2 of 2)

Engineering

13. Provide the following to Work Control for planning/work order development:
- ? work request initiated in PassPort Work Management System with all required fields complete
 - ? functional/acceptance requirements
 - ? Plant Modification Traveler (not required to be included in the work order)
 - ? Design Change Package (DCP)/Design Change Form (DCF) and Quality Assessment Reports with any applicable hold points identified (not required to be included in the work order)
 - ? DCP/DCF implementation forms as required per Procedure Manual E7, Procedures 2.37 and 2.38 (appropriately completed and signed)
 - ? detailed work instructions for implementation of the design change,
 - ? list of all required parts/materials along with any required RIE/CGDs

Work Control Personnel

14. Ensure the following are addressed in work order:
- ? procedure changes required as a result of modification or temporary modification
 - ? functional/acceptance requirements are included as specified by Engineering
 - ? form OSR 20-22 as required per Manual 8Q, Procedure 51
 - ? items listed in the "Special Consideration for Installation" section of the DCF/DCP are addressed
 - ? Quality Assessment Report requirements
 - ? field walk-down and validation of work instructions and parts/materials list

Implementing Work Group

15. Sign DCP/DCF Implementation Form to signify physical completion of work described on DCP/DCF per Procedure Manual E7, Procedure 2.38, "Design Change Package", and have WMC forward signed copy to Engineering.

All support personnel, such as RadCon, should be scheduled in the 8-Week Rolling Schedule. The support groups must be contacted and dispatched to support maintenance personnel in completion of their work.

Appendix E. Work Orders with Radiological Hazards

This appendix provides guidance for the development of work orders relative to the inclusion of specific control measures for work involving radiological hazards. (Refer to Appendix F.) The guidelines provided by this appendix are applicable to all work orders that involve working with, or around, radiological materials.

Pre-work Review and Approval RCO

For work in areas containing radiological hazards, RCO takes the following actions:

1. Review the work order and the affected facility conditions to determine whether work can be done under an established Standing Radiation Work Permit (SRWP) or if a Job Specific Radiation Work Permit (RWP) is needed.
2. Generate an RWP if one is required and provide assistance for radiological instructions, Hold Points and other RadCon issues.
3. Determine the need for an ALARA review/pre-job briefing based on the criteria established in Manual 5Q, 1.1.
4. Assist in determining containment requirements.
5. Ensure all radiological issues are covered by the SRWP or RWP and the Work Package.
6. Work Control personnel take the following actions:
 - ? ensure sufficient level of detail is incorporated in work order instructions (Radiological instructions, Hold Points, etc.) to control work within guidelines specified in RWP
 - ? initiate procurement of special tools/contamination equipment and arrange for development of mockups, if applicable

Work Preparation

7. The Implementing Work Group takes the following actions:
 - ? hold a pre job briefing as specified in the RWP
 - ? conduct and document ALARA review/pre-job briefing as required by Procedure Manual 5Q

Post Work Review RCO

8. The Implementing Work Group takes the following actions:
 - ? review the work order package to ensure that radiological control requirements have been satisfied and documentation is included in the work order package
 - ? determine the need for and initiate a post-job ALARA review per Procedure Manual 5Q
 - ? conduct and document a post job ALARA review as required
9. The Work Group obtains post-work approvals (Attachment G).

Appendix F. Radiological Work Order Preparation Flowchart

