

DOCUMENT CHANGE FORM (DCF)

⑦ DCF #: DCF-004

① DCF Originator: D. B. Branch, Jr /s/ 1/5/
 Print Sign Date
 Organization: Kaiser-Hill Nuclear Operations
 Phone/Pager/Location: X 3602 ; B 111 ; F 5535
and Site Conduct of Operations
Program Mgr

② Responsible Manager: D. B. Branch, Jr /s/ 1/5/
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③ Assigned SME: D. B. Branch, Jr /s/ 1/5/
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⑧ Prescreen/SES/USQD Number: USQD-RFP-00.0938-MA
3/9/00
 Independent Safety Review: SORC 00-06 3/9/00

④ Site Conduct of Operations Manual
 Document Title
MAN-066-COOP Rev 0
 Existing Document Number and Revision
DCF-004
 New Document Number and Revision (if Applicable)

⑤ Type of Document
 Policy Directive Manual Technical Standard
 Procedure Instruction Job Aid Other _____

⑥ Type of Modification
 New One Time Use Only Change Editorial
 Revision Intent Non-Intent
 Cancellation

⑨ Effective Date: 04/13/00 Expiration Date: N/A

⑩ Item	⑪ Page	⑫ Step	⑬ Proposed Modification
1.	2	NA	Updates LOEP
2.	3, 4	NA	Updates table of contents
3	9, 10	as indicated	updates reference and organizational change
4	14, 40, 46 55, 63	as indicated	updated references

⑩ Item Justification
 DCF-004 makes changes to accommodate the Site Organization Structure change effective 3/20/00; updates references which have changed; change the overtime and total hours worked requirements; corrects typo errors; streamline some processes administratively; and strengthens requirements

⑮ Reviewing Organization	⑮ Name of Reviewer	⑮ Date	⑮ Reviewing Organization	⑮ Name of Reviewer	⑮ Date
SSSO + I	J. Cable	3/8/00	SSOC	Mary Rodriguez	3/16/2000
Nuclear Ops	NA (Author of DCF)	NA 3/15/00	Closure Proj.	Kevin Daniels	3/16/2000
General Counsel	Dea McCart	3/10/00	RmRS	Fred Hughes	3/16/2000
RFCS	Stan Brustke	3/15/00	SSOC	G. Spranger	3/16/2000
RmRS	Ron Garner				
WSI	Jeff Churchill	3/20/00			

⑮ Approval Authority: Daniel B. Branch, Jr /s/ 3/20/2000
 Print Sign Date

ADMIN RECORD

PADC-1998-00601

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④ Site Conduct of Operations Manual

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Item	Page	Step	Proposed Modification
5	82, 83, 87, 98, 107, 123, 124, 124A, 124B	As indicated	Updated references on pages indicated
6	11, 12, 13, 21, 43, 50, 78, 81, 92, 93, 102, 111, 168	As indicated	Updated to reflect new organizational structure changes effective 3/20/00.
7	16	As indicated	Adds Emergency Program Implementation as a responsibility
8	17	As indicated	Corrects TYPO
9	19	As indicated	Adds BERO Procedures implementation as a responsibility

Item

Justification

for use of procedure and IWCP work packages. The change also permits the use of night orders.

The following pages were changed to reflect Site Organization structure change effective 3/20/00: 10, 11, 12, 13, 21, 43, 50, 78, 81, 92, 93, 102, 111, 168

The following pages were changed to reflect reference changes: 9, 10, 14, 40, 46, 55, 63, 82, 83, 87, 98, 107, 123 - 124B

The following pages were changed editorially to reflect changes indicated in ⑬: 3, 4, 16, 17, 19, 31, 33, 34, 35-37, 39, 45, 47, 48, 49, 51, 52, 53, 57-59, 60-62, 64, 73, 2, 75, 79-79B, 92, 106, 108-112, 160, and 161-162.

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SITE DOCUMENTS
REQUIREMENTS
MANUAL

APPENDIX 1
08/30/98

MAN-001-SDRM
REVISION 2
PAGE 40

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⑩ Item	⑪ Page	⑫ Step	⑬ Proposed Modification
10	31	As indicated	Typo corrected; added SAFETY to JTB emphasis
11	33	As indicated	Added item 21 to shortened PEBs
12	34	As indicated	Replaced Companies with subcontractors
13	35	As indicated	Added heat stress and cold stress to hazards discussion
14	37	As indicated	changed checklists to Appendices 4 and 5
15	39	As indicated	Adds requirement for Fact Finding Meetings to be promptly conducted.
16	45	As indicated	changed chronological to narrative (consistency)
17	47	As indicated	Added requirement to have procedures / IWCP WPs present and used since Use categories are being deleted in SDRM
18	48	As indicated	Deleted ref. to Use Categories; added Night Orders
19	49	As indicated	Updated ref to IWCP Chpt 6 via 7.

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⑩ Item	⑪ Page	⑫ Step	⑬ Proposed Modification
20	51	As indicated	Deleted SDRM
21	52, 53	As indicated	Streamlined administrative steps
22	57, 58, 59	As indicated	Updated references
23	60-62	As indicated	Streamlined administrative steps and added Night orders
24	64	As indicated	Added Night orders
25	73	As indicated	Typo corrected
26	75	As indicated	Added BLUE Ink as permissible in logs and round sheets
27	79-79B	As indicated	Added new Site Overtime and TOTAL hours worked requirements
28	92	As indicated	Deleted Imc Rep notification
29	106	As indicated	Added initiation of a Fact Finding meeting; and deleted Imc Representative
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④ Site Conducting Operations Manual

⑤ MAN-066-COOP Rev 0

Document Title

Existing Document Number and Revision

⑩ ⑪ ⑫ ⑬

Item	Page	Step	Proposed Modification
30	108, 109, 110, 111, 112	As indicated	Changed to KH Project Manager as approval authority, Streamlined administrative steps, and reflected filing requirements by Project Managers
31	160	As indicated	Added plan to enter DATE
32	161/162	As indicated	Added Operability impact, and updated references

⑭

Item

Justification

LIST OF EFFECTIVE PAGES

<u>Page</u>	<u>Effective Date</u>	<u>Pages</u>	<u>Effective Date</u>
1	09/15/98	80	08/25/99
2-4	04/13/00	81-83	04/13/00
5-8	09/15/98	84-86	09/15/98
9-14	04/13/00	87	04/13/00
15	08/18/99	88-91	09/15/98
16-17	04/13/00	92-93	04/13/00
18	09/15/98	94	08/18/99
19	04/13/00	95-97	09/15/98
20	09/15/98	98	04/13/00
21	04/13/00	99-101	09/15/98
22	09/15/98	102	04/13/00
23	08/18/99	103-104	09/15/98
24-30	09/15/98	105	08/18/99
31	04/13/00	106-112	04/13/00
32	08/18/99	113-122	09/15/98
33-35	04/13/00	123-124B	04/13/00
36	09/15/98	125-129	09/15/98
37	04/13/00	130	12/17/99
38	09/15/98	131-132	08/18/99
39-40	04/13/00	133-159	09/15/98
41-42	09/15/98	160-162	04/13/00
43	04/13/00	163-167	09/15/98
44	09/15/98	168	04/13/00
45-53	04/13/00	169-176	09/15/98
54	08/18/99	177-179	08/18/99
55	04/13/00	180	09/15/98
56	09/15/98	181-182	08/18/99
57-64	04/13/00	183	09/15/98
65-72	09/15/98	184-186	08/18/99
73	04/13/00	187-196	09/15/98
74	09/15/98	197	08/18/99
75	04/13/00	198	09/15/98
76-77	09/15/98		
78-79B	04/13/00		

The following changes are active for this document:

DCF-001	08/18/99
DCF-002	08/25/99
DCF-003	12/17/99
DCF-004	04/13/00

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C. Conduct of Operations Background

Conduct of Operations has been implemented previously using the graded approach in RFETS operations and support organizations. Those organizations use a Matrix of Applicability (Rocky Flats Graded Approach Matrix of Applicability) to indicate compliance. The matrix identifies applicability to the organization of each Guideline of DOE Order 5480.19, and lists those directives which implement the Guidelines. The matrix satisfies the requirement of the DOE Order to assess and document applicability. Using the Applicability Matrices, and assessing compliance in their organizations against the Graded Approach criteria, RFETS managers have documented implementation of Conduct of Operations requirements several times since 1991. DOE-RFFO approval of the 1996 submission of Matrices of Applicability, and Implementation Plans was received by Kaiser-Hill Company, L.L.C. (Kaiser-Hill) on July 29, 1996.

A "crosswalk" matrix showing the crosswalk between the former Conduct of Operations Manual and this revision is included in Appendix 33. It lists the DOE Order Guidelines, identifies the sections of the Manual formerly applicable, and identifies the applicable sections of the new Manual. By using this crosswalk matrix and the previously approved Matrix of Applicability, a manager can make the comparison in order to ascertain how Order Guidelines were met in the former Manual, and are met in this revision.

Maintaining adequate Conduct of Operations in facilities and organizations at RFETS is not a static achievement. Continuing training and positive reinforcement by management are required to reap the benefits in safety and efficiency that derive from Conduct of Operations, and to promote continuing improvement. In addition, Reference (1), the plan for the consolidation and closure of RFETS facilities requires many facilities to change mission and operating status periodically. Some are removing major quantities of radioactive and hazardous materials, are ceasing ongoing operations, and will undertake Decontamination and Decommissioning (D&D). Facility changes may require managers to submit revisions to the Applicability Matrices for their organizations, often to reduce requirements as hazards decrease or as Authorization Basis (AB) requirements change.

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Historically, the Conduct of Operations Manual and other Site program requirements were developed in parallel in the early 1990s. One result is that some requirements of DOE Order 5480.19 were addressed in documents other than the Conduct of Operations Manual, such as Lockout/Tagout initially in the Health and Safety Practices (HSP) Manual and later in Reference (27), and procedure requirements contained in Reference (2). Also, the Manual included subjects not addressed in the Order. The Plan-of-the-Day (POD) and Pre-evolution Briefings are examples. The Manual has also contained requirements such as Compliance Tracking, and Termination of Operations Process and AB Management, appropriate for nuclear facilities, but not required by DOE Order 5480.19. For these reasons, the sections of the Manual do not match the topics of the chapters of the Order subject for subject. As before, individual managers will continue to implement Conduct of Operations requirements through Operations Orders and procedures appropriate to their needs. The Manual is designed for implementation on-the-floor as far as possible without additional implementing documents except where specified. Other contractor specific Conduct of Operations Manuals are neither required nor desired.

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In addition to the above, this revision incorporates operational formality concepts from other documents, and Integrated Safety Management System elements. The Defense Nuclear Facilities Safety Board (DNFSB) Technical Report, Operational Formality of Department of Energy Nuclear Facilities and Activities (Tech 15) addresses the concepts of Safety Culture, Defense in Depth and Framework of Controls, and describes training and qualification, maintenance, surveillance and configuration management needed to support these concepts. Tech 15 describes a strategy of tailoring formality of operations to the needs of the organization (graded approach). Similarly, this revision includes Integrated Safety Management System (ISMS) elements. Safety and Conduct of Operations have close parallels in the culture and practices which foster safe and effective work. ISMS depends on a culture in which workers participate in the identification of hazards, and are encouraged to give constructive feedback in the work planning and execution process. ISMS also depends on well defined controls for accomplishing work. These are elements of Conduct of Operations as well. The POD

and pre-evolution briefing requirements have been enhanced in this revision in order to facilitate implementation of ISMS on the floor. Refer to 1-MAN-016-ISM, Integrated Safety Management System Manual, for additional ISMS information.

Finally, this revision reduces administrative requirements, and recognizes the change in organization to an Integrating Management Contractor. DCF-004 recognizes change to a Site Closure Project Contractor.

Because this Manual sets forth requirements for Site facilities and organizations with different missions and organizational structure, logical interpretations must often be made. For instance, where the Facility Manager's responsibility is described, organizations which do not have Facility Managers interpret the title as, "Facility Manager or equivalent line management." Also, tasks or responsibilities assigned to positions such as Shift Manager (SM) or Shift Technical Advisor (STA) must be assigned to appropriate personnel in organizations not having SM/STA positions or which use different terminology for an equivalent position (such as Configuration Control Authority). Managers of facilities affected by this **SHALL** assign these responsibilities to the appropriate positions using directives such as procedures, Operations Orders, or other documents. Clearly defined responsibilities are essential for contributing to safe operations as facilities undergo complex and often hazardous activities associated with closure.

D. Implementation Requirements

Because there have been numerous organizational, structural, and mission changes affecting operations and support organizations since July 1, 1995, and since there will be continuing change as closure is pursued at RFETS, it is necessary for operations and support organizations to update and submit their Conduct of Operations Matrix of Applicability. Accordingly, operations and support organizations are required to

update and submit (to the Kaiser-Hill Conduct of Operations Program Manager), their Rocky Flats Graded Approach Matrix of Applicability by September 30, 1998. This will also be tasked separately by letter as the Manual is distributed. Achievement of implementation for this revision includes making changes to documents, forms, and records in use which change due to this revision. It is required that facilities and organizations revise their Conduct of Operations related documents, forms, and records to comply with this revision by December 30, 1998. Each company will assess implementation of this revision by December 30, 1998. One exception is that ISMS requirements (pre-evolution briefing, job task briefing, and POD requirements) must be implemented by September 30, 1998.

Project Managers involved in closure activities **Should** include a milestone in Project Plans to require revision/update and submission of the affected Rocky Flats Graded Approach Matrix of Applicability when major organization changes, AB changes, or hazard reductions occur.

E. **Disposition of Records**

A number of quality assurance records are generated and retained as a result of requirements in the Manual. They are retained and subsequently dispositioned in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources. Retention requirements vary, and are included in individual Manual sections.

2. **RESPONSIBILITIES**

A. **Site Closure Project Contractor President**

- maintains responsibility for overall operation of RFETS
- approves RFETS Conduct of Operations policy

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B. Designated Senior Manager

- sponsors the RFETS Conduct of Operations program through the Conduct of Operations Program Manager. The sponsor is designated in the KH-DOE Directives Program Owners List

C. Conduct of Operations Program Manager

- develops and maintains the Site Conduct of Operations Manual, and is the Site Conduct of Operations Program Manager, and Program Owner
- oversees Conduct of Operations implementation at RFETS and reports major status changes to Department of Energy, Rocky Flats Field Office (DOE, RFFO) periodically
- serves as Subject Matter Expert for Conduct of Operations issues at RFETS, and maintains documents required to manage, as Program Manager, the Conduct of Operations Program

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D. Kaiser- Hill Project Managers and Subcontractors

- implement operational practices to comply with RFETS Conduct of Operations requirements and policy
- ensure training on, and implementation of, the Conduct of Operations Manual as it applies to their areas of responsibilities using the Graded Approach
- ensure that operations organizations establish safety, environmental and operating goals

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- ensure development of operations procedures in accordance with the requirements of Section 5.C of this Manual and References (2) and (28)
- ensure that line management periodically monitors and assesses performance, and that personnel are held accountable for performance

E. Line Management

- is responsible for safety. This includes setting the safety culture, providing clear roles and responsibilities, setting expectations for performance, assuring personal competence is commensurate with the individuals' work responsibility, and balancing priorities to ensure safety is top priority
- ensures that assigned personnel are kept informed of activities, evolutions, operations, and events that may affect operations
- communicates performance expectations and standards through training and ongoing personal involvement in daily operations and activities
- promotes open communications to encourage personnel at all levels to provide input and feedback
- includes an assessment of operating performance, where appropriate, in performance appraisals and promotions for operations supervisors
- periodically monitors and assesses performance by frequent direct observation of personnel performing operations activity, holds personnel accountable for performance, and takes action to correct deficiencies

- conducts counseling, training, and when necessary, disciplinary measures, to promote personal accountability
- promotes self-assessment at all levels, and continuous improvement as a matter of routine

F. **Facility Manager (FM)**

Since organizational changes will occur as the Site Closure Project is pursued and major risks/hazards are reduced, the responsibilities indicated for FM, SM, and Shift Technical Advisor (STA) may become the responsibility of another job position/title, or may become unnecessary. It is recognized that Conduct of Operations requirements will change with the mission, and will be discontinued in many facilities when hazardous operations and activities have been concluded. For example, it is expected that SM/STA responsibilities may be combined into one position (Configuration Control Authority) as facility missions and organization structures change. Accordingly, each affected organization **SHALL** promulgate which positions in the organization have the responsibilities indicated in Sections 2.F through 2.H.

The Facility Manager:

- ensures compliance with Authorization Basis (AB) requirements
- ensures that operations are performed in accordance with appropriate procedures
- ensures that procedures are developed and implemented for operational activities
- ensures that operator aids, logs, round sheets, lockout tags, caution tags and information tags are implemented and controlled in accordance with Manual requirements

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- approves the POD, and ensures that the POD is managed in order to achieve effective and productive use of resources
- implements the facility Emergency Preparedness Program per Reference (35)
- maintains authority over tenant organizations working in respective facilities, for scheduling of tasks, and compliance with Conduct of Operations requirements
- attends POD meetings, fact finding meetings, and work planning meetings regularly
- approves operations related documents as required by individual sections of this Manual (Operations Orders, temporary modifications, etc.)
- ensures that positions requiring shift relief and turnover are identified
- ensures that status display requirements are identified and implemented
- ensures that the required quality assurance records are completed and maintained
- ensures, on an ongoing basis, that personnel understand and follow safety requirements and practices

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- approves facility unique procedures, and establishes a method to regularly communicate to operations personnel important information about new and/or revised manuals and procedures used in the facility
- ensures control of facility visitors in accordance with Training Users Manual requirements, and Security Manual requirements

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- authorizes the maximum trainee-to-instructor ratio to be used in facility operations
- proactively seeks ways to improve safety performance
- develops safety, environmental and operating goals for his/her organization, and *promulgates performance indicators for those goals. Goals are used for improving performance of individuals and groups, and to measure effectiveness. Goals in the following areas may be appropriate:*
 - improvement in Authorization Basis compliance
 - reducing injuries and accidents
 - facility availability to do mission work in nuclear facilities
 - minimizing personnel performance errors
 - minimizing overtime
 - minimizing waste where possible
 - minimizing alarms
 - others as established by management
- develops a long-range staffing plan that takes into account planned mission change and personnel losses. The staffing plan may be part of the facility Quality Assurance Plan or applicable facility program plan. Staffing plans may also be required by the Authorization Basis
- ensures good housekeeping practices are followed throughout the facility

- reviews events and provides training as necessary for facility personnel, and ensures that events and occurrences are trended
- for new facilities, develops a Conduct of Operations Implementation Plan and Implementation Matrix to achieve compliance. For existing facilities, revises the Rocky Flats Graded Approach Matrix of Applicability as major mission or facility status changes occur as indicated in Section 1
- develops implementation plans to ensure satisfactory implementation of revisions to the existing Authorization Bases, and satisfactory implementation of new Authorization Bases
- implements a method by which the Facility Authorization Basis is kept up-to-date administratively as documents referenced in the AB change

G. Shift Manager (SM)

- the SM is the operations authority on shift
- maintains control, authority, and responsibility for all activities occurring during the assigned shift
- authorizes commencement of activities scheduled on the POD
- ensures compliance with AB requirements. This includes being the authority for declaring termination and suspension of operations, and AB violations
- categorizes events in the facility, and reports events in accordance with 1-D97-ADM-16.01, Occurrence Reporting Process

- participates in POD meetings as required by the FM
- attends pre-evolution briefings, as required by the FM, to ensure quality of the pre-evolution briefings, and to ensure that hazards and controls are adequately briefed
- periodically monitors performance of personnel conducting work
- ensures that shift relief and turnover is conducted by required personnel
- personally ensures completion of shiftly, daily, and weekly LCO surveillances to ensure on-time accomplishment. Ensures that a status display available to the SM is maintained for this purpose
- implements Reference (38) for facility emergencies, notifies the Shift Superintendent, and performs as Incident Commander for facility emergencies until relieved. Provides information per Reference (39)
- in nuclear facilities where applicable, ensures that status and protection of Special Nuclear Material during routine and emergency situations is in accordance with the requirements of the Safeguards and Accountability Manual - General Requirements, 1-MAN-010-S&A, and the Rocky Flats Nuclear Material Control and Accountability Plan
- notifies the Central Alarm Station if it is necessary to penetrate a security barrier during routine or emergency situations, including maintenance activity, and makes notifications in accordance with 1-MAN-026, Security Manual, in the event of a security incident or a compromise of classified material
- ensures that operational communications are clear and concise. This includes monitoring that use of the Life Safety/Disaster Warning system is not excessive, and is not used inappropriately

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- ensures that facility status is maintained
- ensures that Safety Structures, Systems and Components (Safety SSC) being initially brought into service or being returned to service comply with Section 7.G and Appendix 26 requirements
- ensures that independent verifications are performed where required by the FM
- notifies the FM if any individual bypasses or attempts to overrule his/her operational authority
- delegates authority where appropriate for routine operation of equipment and systems to Stationary Operating Engineers, operations personnel, and evolution supervisors. May personally control complex operations or activities as required by the FM
- performs facility tours at least once each shift. A shift for this purpose is the period for which the SM is assigned, e.g., six (6) hours, eight (8) hours, or (12) twelve hours
- ensures that responses to alarms and off-normal events are appropriate and are documented
- ensures that major activities and events occurring during the shift are documented in the Shift Manager's log. Documentation of granting authorization to perform POD activities is not required
- notifies the FM if scheduled POD activities cannot be conducted, and initiates action with functional managers to shift personnel to other assignments

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- notifies the DOE Facility Representative of occurrences and other items as indicated in later sections of the Manual

H. Shift Technical Advisor (STA)

- is assigned as required by the facility Authorization Basis
- provides technical information and assistance to SMs and on-shift personnel about facility structures, systems and components, and operations
- supports facility management by providing independent evaluation of compliance with Authorization Basis and other operational requirements to the SM and FM on an ongoing basis
- maintains cognizance of ongoing work, and regularly evaluates performance of personnel conducting operations, maintenance, surveillance, and other activities for adequate procedural compliance and adherence to safety requirements
- routinely attends pre-evolution briefings to emphasize safety, hazards awareness, and hazards controls
- reviews maintenance work packages and operations procedures for technical accuracy as assigned by the FM or SM
- tours the facility at least once during the assigned shift
- assists the SM and/or Incident Commander during emergencies by providing technical information about operations, and helps with event cause determination and determination of actions to mitigate the event

- if an unsafe condition or practice occurs or is thought about to occur, stops the activity and directs equipment be placed in a safe and stable condition, and informs the SM

I. First Line Supervisors and Managers

- regularly communicate expectations for workers consistent with the mission, and facility safety, environmental, and operating goals
- in the assigned area of responsibility, perform assessments to determine performance relative to expectations and requirements
- provide regular feedback to subordinates in order to improve performance
- ensure optimum effectiveness, productivity, and safety of workers by monitoring work frequently, touring work areas, and addressing safety issues and other problems including distractions and fitness for work. Monitor use of correct personal protective equipment at work sites on a regular basis
- monitor work progress regularly, and take action to reassign personnel when work is interrupted in order to maximize use of available resources. Maintain readiness to reassign personnel on short notice

J. Operations and Support Personnel

Operations personnel conduct operations or other work activities in the facility to which they are assigned full time. Stationary Operating Engineers (SOEs) who work in multiple facilities are operations personnel. Support personnel conduct surveillances and other work activities in facilities on a part time or rotating basis, and are not assigned to the facility, or are technical or engineering personnel supporting operations or other work

- notify the FM if scheduled POD activities cannot be conducted, and initiates action with functional managers to shift personnel to other assignments
- maintain the master copy of the POD

Personnel desiring activities to be scheduled **Should** submit a completed Evolution Request Form or equivalent request with sufficient lead time for inclusion of the evolution on the POD. (See Appendix 3, Evolution Request Form).

Personnel requesting non-routinely conducted activities to be placed on the POD **Should** attend the POD meeting to provide information about the activities.

C. **Pre-evolution Briefings (PEBs) and Job Task Briefings (JTBs)**

Pre-evolution Briefings (PEBs) and Job Task Briefings (JTBs) apply Sitewide and are performed to ensure that personnel preparing to conduct operations and other work understand what is to be performed, understand the hazards and controls, and have an opportunity to ask questions or raise concerns. The PEB is more formal and is done for non-routine work, deactivation, decommissioning, destruction work, and all JH-98 drum movements. It is also required for all new work involving lockout/tagout. It is a forum for accomplishing ISMS safety functions at the floor level. The PEB provides for feedback as well as for reviewing the scope of work, reviewing hazards recognition and the controls to do the work safely. It is also a point in the work process to confirm that the required prerequisites are in place. A JTB is less formal than a PEB, is conducted by the foreman with the workers involved, and serves as one method by which the ISMS process is implemented on-the-floor for noncomplex, routine, and low hazard work activities. A PEB is documented; a JTB does not have to be documented. All PEBs and JTBs emphasize safety, procedural compliance, and stop work authority.

(1) Evolutions Requiring a PEB

The following evolutions, as applicable to the scheduled work, **SHALL** be evaluated at the POD for having PEBs conducted consistent with Paragraph C. above:

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- radioactive decontamination
- maintenance on systems which contain radioactivity
- startup of all new process or mission program activities
- conducting mission program activity
- experiments and tests
- non-routinely conducted work requiring special personnel protective equipment
- shipment, transfer, or inventory of fissile materials, including movement of drums containing radioactive material
- maintenance work packages which involve Safety Structures, Systems, and Components (Safety SSC), involve welding or cutting, confined space work, or work on energized electrical equipment
- construction work
- demolition and facility decommissioning work, and system deactivation
- non-routine work with chemicals
- non-routine work with hazardous substances
- infrequently conducted operations, surveillances, maintenance, and preventive maintenance activities that operate equipment or systems, or have hazards associated with conducting the activity, or involve multiple trades and multiple subcontractor personnel who have not worked together frequently

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- LCO surveillances conducted monthly or less frequently
- recovery actions/reentry actions when recovering from an upset condition
- other items as required by the facility Authorization Basis
- other items for which a PEB is scheduled on the POD

For regularly occurring operations (e.g., nearly daily) which have become routine (Caustic Waste Treatment, Salt Stabilization, Dry Repack, etc.), the FM may elect to do one comprehensive PEB at the start of the week and then do shortened PEBs the remainder of the week. The shortened PEBs concentrate on hazards, controls, and recent problems or issues. Documentation requirements are the same, except only Parts A, B, C, 6, 8, 9, 17, 21, 23, 26, 28, 29, 34, and 35 of Appendix 4 need to be covered.

The SM or other designated manager **Should** attend PEBs for complex evolutions. This **Should** be decided at the POD meetings. The Evolution Supervisor conducts the PEB.

(2) Preparation for the PEB

The Evolution Supervisor prepares for the PEB as follows:

- takes action as necessary to elicit information from subject matter experts (SMEs) and workers to obtain the benefit of the Enhanced Work Planning process which planned the evolution, and reviews lessons learned for similar work
- schedules the PEB on the POD, and coordinates with the SM to identify and evaluate the impact of the evolution on the Authorization Basis, on other activities in the facility ongoing concurrently, and to evaluate ongoing activity impact on the planned evolution

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- identifies resource support needed for the evolution (RCT, NMC, security, etc.), and identifies the number of trainees to be involved
- verifies that procedures to be used for the activity are current
- conducts a walkdown prior to the evolution if not previously accomplished through dry-runs and evolution training
- conducts the PEB as close as practicable to the start of the evolution, notifying participants of the PEB and evolution start time in advance
- if practical, conducts the PEB at or near the actual evolution site
- ensures that RWPs and other work permits will be in place, and that 4-B19-NSM 03.12, Nuclear Material Safety Limits and Criticality Safety Operating Limits Validation, if required, is scheduled and that the results will be reported to the Evolution Supervisor prior to activity start
- ensures that appropriate personnel involved in the evolution have their copy of procedures prior to the PEB
- ensures that all personnel performing the evolution, personnel who may be affected by the evolution, and all trainees involved attend the PEB. This is especially important when multiple disciplines or subcontractors are involved. The Evolution Supervisor may brief selected individuals separately if necessary
- uses Appendix 5, Hazardous Material Release Prevention/Preparedness Checklist, if applicable, in order to:

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- identify hazards, and hazardous materials associated with the evolution. This identification includes nearby hazardous materials, and other activities which may be impacted by the evolution
- identify potential "failure points" in the evolution that could result in the release of hazardous material. Failure points may include valves, test equipment connection points, gauges, hoses, tubing, movement of hazardous materials, etc.
- identify controls for prevention/minimization of release, and for controlling hazards. Controls include physical barriers and administrative controls
- identify hazardous work situations (such as elevated work, working on electrical equipment, confined space entry, working in heat stress or cold stress conditions, etc.) and appropriate safety precautions to minimize risk
- determine the pre-planned response to be taken in the event that an unplanned release or other emergency occurs

The Evolution Supervisor may assign Subject Matter Experts to cover their areas. For example, an Industrial Hygienist to discuss hazardous materials, and the Criticality Safety Officer (CSO) or a Criticality Engineer to discuss the criticality safety analyses and nuclear hazards, etc.

(3) Conducting the PEB

The Evolution Supervisor conducts the PEB according to the following guidelines:

- ensures that security and training escorts are assigned and instructed on their responsibilities
- discusses limitations on trainees operating equipment/taking rounds and making log entries unless directly supervised by the qualified OJT instructor

- ensures that a sufficiently comprehensive briefing of the evolution is conducted, and that applicable items from Appendix 4, *Pre-evolution Briefing Record*, and from Appendix 5 are discussed. Hazards, controls, RWPs, and potential upset conditions **SHALL** receive emphasis. The Evolution Supervisor is responsible to decide which briefing check-off list items are covered and which are not applicable
- briefs the evolution to be conducted in sufficient detail to ensure all participants understand the evolution and their role. Covers work packages or procedures to the depth necessary to accomplish this
- briefs changes to the procedures or work packages relevant to the activity which occurred since the activity was last conducted
- ensures understanding of the evolution by participants by asking open ended questions regarding their roles and responsibilities, and actions to take if problems or upset conditions occur
- documents the briefing using Appendix 4, and forwards the completed Appendix 4 to the Evolution Supervisor's supervisor for filing, unless it is retained in a work package
- repeats the PEB when any of the following occur:
 - shift change for multi-shift evolutions
 - personnel changes considered significant by the Evolution Supervisor or SM
 - evolution is stopped for more than forty-eight (48) hours
 - the scope of the evolution changes
 - intent changes are made to the procedures being used for the evolution

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Appendices 4 and 5 are retained for a year. After a year, they are dispositioned in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources.

(4) Job Task Briefings

A JTB is a process in which the foreman interfaces with the workers as they are assigned work activities which do not require a PEB. The purpose of the JTB is to have the foreman discuss with the workers the hazards (industrial and others), the controls, and the correct tools/equipment, and techniques to be used for the work. The JTB is not documented. The expectation is that JTBs be conducted for all Site work activities which involve hazards, that the foreman be satisfied that the hazards are recognized, and that proper controls will be applied by the individual workers. Questions **Should** be asked to confirm that these are understood. JTBs are not required for office work, housekeeping, tours, inspections, and other work activities which clearly do not normally have industrial or other hazards associated with them. JTBs would be appropriate, for example, for moving heavy equipment that is not routine for the workers involved, and for lifting heavy items by individuals. JTBs are also held for additional activities as required by the FM or other responsible manager. Managers **Should** periodically observe JTBs to ensure their quality.

D. **Work Stations and Control Rooms**

Work stations are established as necessary for operations and support personnel having on-shift responsibilities, and are equipped with, or have access to, necessary reference material including manuals, procedures, drawings, communication equipment and office equipment. Access to control rooms which monitor equipment or systems is limited to persons with a need to be in the area. Control room boundaries **SHALL** be clearly marked, and permission to enter **Should** be granted by the responsible control room watchstander (such as Process Control Room Operator, SOE, etc.) or the supervisor. A professional and business-like atmosphere conducive to safe and efficient operation is to be maintained.

(1) Requirements

Operators who monitor equipment and system status are required to tour their areas of responsibility periodically and early enough in the shift to become aware of equipment status and unusual conditions. Tours **Should** be thorough and of all accessible areas for which responsible, and be conducted at least once a shift. During a tour, operating equipment **Should** be inspected, and a thorough inspection of the areas for safety and housekeeping conditions **Should** be conducted.

Supervisors/SM **SHALL** take action to preclude activities that may interfere with personnel conducting operations.

The SM **SHALL** maintain an up-to-date list of selected personnel by name, title, pager, and work and home telephone numbers for notification and recall purposes.

Operators **SHALL** be attentive and responsive to operating parameters. Those responsible for facility or process control panels **SHALL** be alert and attentive to the panel indications and alarms. They are to be monitored frequently and prompt action taken to determine the cause of, and to correct abnormalities.

Work distractions **SHALL** be prevented in order to maintain a professional work environment. Magazines, newspapers, radios, games, and other distractive items and activities not related to the job or facility operation are prohibited.

Training materials, technical manuals, procedures, operator aids, or other materials that relate to operator responsibilities may be used at work stations as long as the operator's primary responsibilities are not compromised.

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Housekeeping **Should** be performed as an integral part of routine work.

Operators, support personnel, and other personnel **Should** take appropriate action to correct and/or report deficiencies when found. Appropriate log or round sheet entries are made, and Integrated Work Control Program (IWCP) corrective action initiated as necessary.

E. **Abnormal Events and Emergencies**

In the case of abnormal events, one primary concern is operation of the facility within the Authorization Basis. Personnel take appropriate emergency actions if there is an immediate threat to health, the facility, or the environment and report actions taken to the SM at the earliest possible time. In an emergency, operators may take whatever action is necessary to place the facility in a safe condition, and to protect equipment, personnel and public safety, and the environment.

If an abnormal condition is not an emergency, or if personnel on scene cannot take corrective actions, the condition **SHALL** be immediately reported to the SM, who will coordinate control of the condition.

Circumstances, such as occurrences, concerns, conditions, or events which could have a negative impact on safety **SHALL** receive an appropriate response including identification, notification, categorization, investigation, evaluation, tracking, trending, and corrective action. Occurrences are administered, and fact finding meetings are promptly conducted, in accordance with Reference (6) requirements.

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F. **Temporary Modification Control**

Temporary Modifications (TM) are changes thought to be of a temporary nature (less than six months) to systems, structures, and components which are minor in scope and

planned to be in place for a short period. They include electrical jumpers, lifted leads, pulled circuit boards, disabled annunciators/alarms, mechanical jumpers/bypasses, temporary set-point changes, installation or removal of blank flanges, disabled relief or safety valves, installation or removal of filters or strainers, plugging of floor and other drains, temporary pipe supports, and items of a similar nature. Although planned to be temporary, TMs may stay in place indefinitely if considered appropriate by management based on such considerations as facility life, cost, or need. TMs can therefore remain in place as long as the safety evaluation screens conducted when extending them do not indicate otherwise.

Individuals desiring to make a temporary modification initiate the process by filling out an IWCP form and processing it for work package development and review, and safety evaluation screen in accordance with the requirements of the Integrated Work Control Program Manual. TMs which are part of design packages are prepared according to 1-V51-COEM-DES-210, Site Engineering Process Procedure and the Site Engineering Requirements Manual (SERM), MAN-027-SERM. Accordingly, the IWCP/design package is processed, and the affected facility contacted to initiate the TM administrative process. TMs are administered by the affected facility. The requesting individual initiates action by completing the Temporary Modification Request Form, Appendix 6. The Facility Engineering Manager determines the expiration date. Temporary changes resulting from a step in a surveillance procedure, and which are returned to normal in the surveillance procedure, are excluded from the requirements of this section. Similarly, changes which occur as a step in an operating procedure that are returned to normal in the operating procedure, are excluded from the requirements of this section.

After the top half of Temporary Modification Request Form is filled out, the TM is safety evaluation screened, reviewed by the SM, concurred in by the Facility Engineering Manager, and approved by the FM. The FM determines if training or procedure changes are necessary based on the type of the TM. Appendix 8 is a TM Tag Sheet and instructions for preparation of a TM Tag Sheet and TM tag. Appendix 10 shows a TM tag.

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training entry requirements or being escorted. They **Should** provide for this in POD preplanning, by covering the requirements at pre-evolution briefings, and by having visitors check-in with the SM upon entry. All managers **SHALL** ensure that employees for whom they are responsible meet facility entry requirements or have escorts if they are assigned work in facilities having access requirements. This includes Contractor Technical Representatives (CTRs) being responsible for subcontractor personnel working at the Site who require access to facilities. See the Training Users Manual for additional information on access training requirements, visitor training requirements, and escort for training requirements. See the RFETS Security Manual for information on access security requirements.

(1) Accountability Badges

Accountability badges are used to provide nuclear facility management with a method to identify personnel in the facility at any given time. By having a badge for every individual accessing the facility as an accountability system, managers can readily ascertain if the personnel exited in an emergency. This can eliminate the need for emergency response personnel conducting unnecessary searches.

The contractor and each subcontractor on Site **SHALL** provide their personnel who access nuclear facilities with accountability badges which display the employees name, employee identification number, and company name.

Each nuclear facility **SHALL** have an accountability process which:

- provides a readily accessible location for personnel to place accountability badges before entering the facility
- conducts drills periodically which includes demonstrating accountability

(2) Access Requirements

There are standard training requirements listed in the Training Users Manual for unescorted access to facilities which handle nuclear materials. Since there are changes periodically, the Training Users Manual must be consulted for the current requirements.

If a FM determines unique entry requirements based on hazards in his/her facility, the FM **SHALL** post those requirements, and **SHALL** communicate those requirements to personnel assigned to the facility, and to outside support personnel who perform work in the facility and their managers, so that workers can arrive for work meeting the requirements for entry.

The FM **Should** ensure that building indoctrination is offered often enough to accommodate the needs of personnel Sitewide who routinely access the facility.

The FM **SHALL** establish a process in the facility so that visitors (as defined in the TUM) are checked for access training status, and escorted when necessary.

All RFETS managers and CTRs **SHALL** ensure that the workers for whom they are responsible meet the access requirements they need. Managers sending personnel to facilities where entry requirements are not met **Should** provide the escorts.

B. Shift Relief and Turnover

For continuously operating facilities with multiple shifts, shift operating personnel retain full responsibility for their responsibilities until properly relieved. Relief is not conducted until shift relief and turnover activities have been completed. A typical shift relief and turnover checklist is provided in Appendix 11. The checklist may be modified to accommodate turnover information appropriate to organizations or groups as necessary to conduct a thorough and complete relief. The checklist is to provide space for recording issues discussed during turnover. The FM **SHALL** identify positions requiring shift relief and turnover, the content of shift relief and turnover checklists, and filing and

review requirements. This **Should** be done in a procedure or Administrative Operations Order governing facility shift relief and turnover. Shift relief and turnover **Should** occur in the area of the work station. The need for entire crew shift briefings will be provided by the FM when circumstances dictate.

(1) Conduct of Shift Relief and Turnover

Off-going shift personnel **SHALL** not turn over responsibilities to oncoming personnel if it appears that those oncoming are not capable of performing requirements of the shift. If an individual is identified who may be unfit for duty, the incumbent watch stander **SHALL** notify the SM or their supervisor to take appropriate actions, including referral to Occupational Health in order to determine the fitness of personnel to assume responsibilities.

The SM documents actions taken resulting in removal of an employee from duties in the SM log.

Personnel in the identified positions **SHALL** utilize a shift relief and turnover checklist to effect relief.

Completion of turnover **SHALL** be documented in the narrative log for the position to signify transfer of responsibilities. This entry is made by the individual going off shift. Acceptance of shift responsibilities may include taking custody of, and responsibility for security keys, radios, and other equipment.

Watchstanders **SHALL** refer to status displays and supporting documents such as logs, round sheets, POD, Shift, Operations, and Standing Orders, appropriate for a thorough shift relief and turnover.

Prior to initiation of shift relief and turnover, oncoming shift operations personnel **SHALL** review logs, round sheets, status, and other items specified by the FM back to when they were last on shift, or for five days (whichever is shorter), in order to become

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knowledgeable of current equipment and facility status. This also applies when there is no shift to relieve.

Before, during, or shortly after shift turnover, the oncoming shift operations personnel **SHALL** perform a tour of assigned areas to observe equipment status and conditions.

Unscheduled temporary reliefs occurring during the shift do not require use of a checklist. Operators in the identified positions **SHALL** discuss the elements of shift relief and turnover necessary to ensure that the relief is fully knowledgeable of conditions, and enter the relief in the log.

When operations are completed at the end of the shift and a follow-on shift will not be staffed, off-going shift personnel make close-out entries in applicable logs and round sheets.

When SM shift relief and turnover has been completed, the oncoming SM communicates the SM acceptance of duties and pertinent shift information to facility personnel.

Shift relief and turnover checklists are retained for one year in locations determined by the FM. After a year, they are dispositioned in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources.

C. Procedures

Adherence to the Kaiser-Hill Procedural Compliance Policy represents a firm commitment to disciplined and safe operations at the Site. The purpose of operating procedures (technical procedures as defined in Reference (2)) is to provide direction for operating systems and equipment during normal and postulated abnormal and emergency conditions. Procedures are developed with sufficient detail to enable performance of the required function without direct supervision, and are written with sufficient detail depending on the complexity of the task, the experience and training of the operators, frequency of performance, and

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consequences of error.

Operations procedures **SHALL** provide for component alignment checklists for start-up. They **SHALL** also, where applicable, specify component positioning to accomplish both short-term and long-term shutdown. Component positioning to start-up a system for the first time or following an extended shutdown for maintenance may be accomplished by a component lineup and verification. In this case, personnel conduct the two independent of each other. When performing a lineup to start-up a system, the normal practice is to have the first individual position the components as specified in the alignment checklist, unless the SM has directed otherwise due to operational considerations. The second individual (if used) verifies that the components are correctly aligned. Both initial the alignment checklists and the SM reviews the checklist when completed. In the case where the SM directs that items not be positioned during the lineup, their position is verified instead. Verification is discussed in Section 7.H, and verification techniques are in Appendix 30. Alignment checklist retention requirements are in Section 7.A.(3).

(1) Use of Procedures

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All procedures are to be performed as written. When operations, maintenance or other work is being conducted, the procedure or IWCP Work Package **SHALL** be present and **SHALL** be followed. This applies to all work including surveillance, maintenance and operations where procedures govern the conduct of work.

Employees are required to use and comply with applicable procedures.

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The FM ensures that procedures are prepared, approved, and used for operations, surveillances, tests, alarm response and emergencies within assigned facilities.

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The FM implements procedures in the facility as required by Reference (2).

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Managers responsible for controlling the use of procedures **SHALL** ensure the procedures are controlled to preclude the use of outdated copies by complying with PRO-815-DM-01, Developing, Maintaining and Controlling Documents

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FMs **SHALL** have an administrative process established (such as an Operations Order or procedure) which will provide for conveying information to facility personnel about manual and procedure changes, and new manuals and procedures used in the facility, and for determining and conducting necessary training.

When procedures require accomplishment of steps in a specific order, they **SHALL** be completed in a step-by-step manner. For any procedure where following in a step-by-step manner may not be necessary, the procedure **Should** clearly indicate the steps or sections where this is the case.

If a procedure step cannot or should not be performed as written, or if following the procedure will create an unsafe or noncompliant condition, the performing individual **SHALL** stop, place the system or component in a stable and safe condition, and immediately inform the evolution supervisor and the SM.

Procedures are to be revised in a timely manner if they are found deficient.

Operators may take whatever action is necessary during emergency conditions to place the facility in a safe condition, and to protect equipment, personnel, and public safety without first administering a procedure change.

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D. **Standing, Operations, Shift, and Night Orders**

This section establishes Standing Orders, Operations Orders, Shift Orders and Night Orders. Shift Orders, Night Orders, and Operations Orders satisfy the DOE Order 5480.19 requirement to provide timely information and instructions to operators.

Standing Orders are documents which provide guidance or direction applicable Sitewide when rapid dissemination is considered necessary by senior management. Standing Orders are not intended to provide technical direction for operation of specific systems.

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Standing Orders may be in effect for up through three years. They are to be reviewed annually by the responsible manager or designee to determine if still applicable and current.

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Operations Orders are either administrative or technical. Administrative Operations Orders may be effective for twenty-four (24) months, and contain information about operations, administrative matters, work priorities, and matters of a similar nature. Administrative Operations Orders which contain information intended to be permanent **Should** be incorporated into administrative procedures or instructions. Technical Operations Orders may direct manipulation of systems or prescribe requirements which affect technical matters. They receive the same reviews as procedures and are developed meeting the Integrated Work Control Program Manual, Chapter 6 requirements. Technical Operations Orders may be effective for thirty-six (36) months and are to be reviewed annually by the Facility Manager or designee to determine if still applicable and current. Interim Technical Operations Orders can be effective for sixty (60) days. Technical Operations Orders are not considered appropriate for conducting operational activities of a sustained nature. Instead, procedures and IWCP work packages are to be used, as applicable. They may not be used to modify or revise existing procedures.

Shift Orders may be effective for thirty (30) days and are similar to Administrative Operations Orders in that they address the same kinds of topics, but they serve as a means for operations management to quickly communicate short-term information and administrative instructions to operations personnel.

When promulgating Shift Orders and Operations Orders, the FM is responsible to provide for training or required reading for affected personnel.

Since Standing Orders, Operations Orders and Shift Orders are widely available, they **Should** be reviewed for classification prior to promulgation, if appropriate.

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(1) Standing Orders

Standing Orders are prepared using the format of Appendix 12.

Standing Orders are approved by the Kaiser-Hill President, the Kaiser-Hill Executive Vice President or the Kaiser-Hill Support Organization Directors as appropriate for the subject.

The Site Conduct of Operations Program Manager designates a Principal Standing Order Administrator (PSOA). This individual normally will be an employee of the Site Conduct of Operations Program Manager. The PSOA identifies copyholders for Standing Orders. The Shift Superintendent will be one of the copyholders for Standing Orders.

When the need for promulgating a Standing Order has been identified, the Responsible Manager writes the Standing Order.

Standing Orders which specify how technical requirements are met, affect activity or work in nuclear facilities, involve Site work that could affect a nuclear facility, or involve worker safety, public safety, or the environment may require Independent Safety Review. Accordingly, the Responsible Manager consults 1-52000-ADM-02.01, Operations Review Requirements to determine if the Standing Order requires Independent Safety Review. If review is required, review evidence is maintained by the PSOA in the history file.

The Responsible Manager responsibilities are to:

- review the draft with the General Counsel for concurrence
- consult 1-52000-ADM-02.01 as indicated above if necessary

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- determine which organizations/individuals need to review the Standing Order prior to issue
- obtain the approval signature
- assign an effective date that accounts for distribution, training, and implementation if necessary
- determine training and/or implementation actions if necessary
- assign an expiration date up through thirty-six (36) months from the effective date
- provide the approved Standing Order to the PSOA for processing and distribution through Document Control
- oversee distribution to the Shift Superintendent and affected organizations, and through Document Control in a time frame relevant to its urgency
- initiate extensions and revisions if necessary. Revisions are prepared following the same steps for new ones

The PSOA **SHALL**:

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- maintain a Standing Orders Manual and Standing Orders History File (this is in addition to the file maintained in Document Control)
- provide Standing Order sequential numbers

- file the master copy of Standing Orders in the Standing Orders Manual, and a copy in the two history files

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- ensure distribution of the Standing Order through Document Control

When a Standing Order is to be canceled, the PSOA **SHALL**:

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- obtain Responsible Manager concurrence to cancel the Standing Order
- update the Table of Contents in the Standing Orders Manual to reflect the cancellation and date of the cancellation
- provide a revised Table of Contents of the Standing Orders Manual to Document Control for distribution
- place the master copy of the canceled Standing Order in the two Standing Orders History Files. The PSOA marks it with a diagonal line and the word CANCELED, and signs and dates the canceled Standing Order

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For Standing Orders requiring revision or extension, the PSOA **SHALL**:

- revise the Standing Orders Manual Table of Contents to reflect the revision or extension, and the date
- provide the revised Table of Contents and the revised or extended Standing Order to Document Control for distribution

- update the history files

The PSOA **SHALL** review Standing Orders monthly to identify those Standing Orders which will soon expire, and have the Responsible Managers determine if expiration, cancellation, or extension is appropriate.

(2) Operations Orders

The Facility Manager **SHALL**:

- designate a Shift Order Administrator (SOA) to maintain the organization's Standing Orders Manual, and to administer the Shift and Operations Orders Manual and the Operations Orders and Shift Orders History Files, and designate copyholders
- designate qualified staff member(s) to review proposed Interim Operations Orders if reviewed by staff other than qualified SM and STA, or the Engineering Manager for the facility
- evaluate the need for an Operations Order using Appendix 13 and designate the type, and have it prepared using the Appendix 14 format, and the requirements of the IWCP Program Manual, Chapter 6
- review 1-52000-ADM-02.01, Operations Review Requirements, to determine if Independent Safety Review is required. Submit for review if required
- complete Appendix 13 to determine if an Operations Order is Administrative, Technical, or Interim Technical
- have Technical Operations Orders in nuclear facilities be USQ Safety Evaluation screened
- resolve review comment

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- for Operations Orders intended to be a temporary document pending replacement by procedure, check the Convert-to-Procedure box on the Operations Order; otherwise, mark N/A in the Date and Assigned Manager sections
- based on the Appendix 13 evaluation, for Operations Orders determined to be Technical, check the Technical box in the Category section on the Operations Order, and determine if the need for the Order is urgent enough that it be implemented before the review cycle is completed
- for Operations Orders determined to be Administrative, check the Administrative box in the Category section on the Operations Order
- list the groups required to read the Operations Order in the Required Reading line provided
- approve Operations Orders by signing/dating in the "Approved by" section
- review Technical Operations Orders annually to determine if still applicable and current. A designee may be assigned this action

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NOTE

Situations requiring urgent action through an Interim Technical Operations Order to mediate concerns, such as safety, criticality, safeguards, or security, require coordination with the appropriate disciplines

- for Technical Operations Orders urgently needed:
 - mark yes in the Interim Operations Order box in the Categorization section
 - check the Interim box in the Category section on the Operations Order

- assign a qualified member of the facility to review the Order as indicated above. If procedural steps are part of the Operations Order, the review includes validation that it can be performed as written
- ensure that coordination is established with representatives of disciplines in accordance with Appendix 13, who are responsible for the areas that address the subject matter affected by the Interim Technical Operations Order

The Qualified Staff Member **SHALL**:

- review the Operations Order for technical content and for possible conflict with existing requirements, and resolve discrepancies if necessary
- conduct a validation if applicable. Validation requirements are in PRO-815-DM-01
- sign Appendix 13

The Facility Manager or Designee **SHALL**:

- review and approve by signing Appendix 13 and the Operations Order (telecon approval may be obtained and the SM may sign for the FM)
- assign an effective date
- enter a date in the Expiration Date blank on the Operations Order
- provide a copy of the Interim Technical Operations Order to the following disciplines within twenty-four (24) hours of issue:
 - for non-nuclear safety related Interim Technical Operations Orders:

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- » Industrial Hygiene and Safety (only required for non-nuclear safety issues)
- » Engineering (technical staff assigned to the affected facility or as assigned by the Facility Engineering Manager)
- for Interim Technical Operations Orders that may affect the Authorization Basis or nuclear systems:
 - » Criticality Safety
 - » Radiological Safety
 - » Nuclear Safety
 - » Safeguards and Security
 - » Engineering (technical staff assigned to the affected facility or as assigned by the Facility Engineering Manager)
- submit the Interim Technical Operations Order for Independent Safety Review the next working day
- for Operations Orders not urgently needed, mark NO in the Interim Operations Order box on the Appendix 13 checklist Categorization section
- determine the organizations to review the order
- assemble the review packages with the contents to include:
 - transmittal notice, including the date for comment return
 - draft of the Operations Order

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- blank Review Comment Sheets
- route the Operations Order to the following disciplines for parallel review and concurrence:
 - for non-nuclear safety related Technical Operations Orders:
 - » Industrial Hygiene and Safety (only required for non-nuclear safety issues)
 - » Engineering (technical staff assigned to the affected facility or as assigned by the Facility Engineering Manager)
 - for Technical Operations Orders that may affect the Authorization Basis or nuclear systems:
 - » Criticality Safety
 - » Radiological Safety
 - » Nuclear Safety
 - » Safeguards and Security
 - » Engineering (technical staff assigned to the affected facility or as assigned by the Facility Engineering Manager)
- based on the checklist evaluation, if additional parallel review is required, route the Order to those additional disciplines for their review

The Operations Order **Should** be reviewed in a timely manner, that is, within five (5) working days from receipt of the draft until return to the Facility Manager.

Telecon approvals may be obtained during the comment resolution process, and recorded on the Review Comment Sheets.

The SOA **SHALL**:

- develop and maintain a Shift and Operations Orders Manual, and Operations Orders and Shift Orders History Files in accordance with PRO-815-DM-01 requirements
- file the master copy of the Operations Order in the Shift and Operations Orders Manual and place a copy in the history file
- issue copies of the Operations Order and the revised Table of Contents to copyholders

When an Operations Order is to be canceled, the SOA **SHALL**:

- provide the master copy to the FM with any supporting documentation relevant to the cancellation, with a diagonal line across the title page labeled CANCELLED, with a space for date and FM signature, and obtain the FM signature
- revise the Shift and Operations Orders Manual Table of Contents to reflect the cancellation and date of the cancellation. This may be done by drawing a line through the entry and signing/dating the line
- distribute a revised Table of Contents to the copyholders of Shift and Operations Orders Manuals. This serves as notification for copyholders to discard the canceled Operations Order
- file the canceled Operations Order in the Operations Order history file

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If an Operations Order requires extension, the SOA:

- reports need for extension to the FM and obtains concurrence to extend
- annotates the extension on the front of the Operations Order, and initials and dates the annotation
- revises the Table of Contents with the new expiration date. This may be done in pen/ink
- distributes copies of the revised Table of Contents and Operations Order to copyholders
- places a copy, annotated with the reason for extension, in the Operations Orders history file

If an Operations Order requires revision, the SOA:

- for intent changes, obtains a rewrite of the Operations Order from the FM. For non-intent or editorial changes, corrections may be made in accordance with Reference (2)
- prepares and issues the revised Operations Order using the guidance above for processing a new Operations Order, including assigning a new expiration date
- revises the Shift and Operations Orders Manual Table of Contents to reflect the revision and revision date
- distributes the revised Table of Contents and the Operations Order revision to the copyholders. This serves as notification for the copyholders to discard the superseded copies

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- places the revised Order in the Operations Orders history file

The SOA **SHALL** review the Shift and Operations Orders Manual monthly to identify those Operations Orders that are due to expire in the following month, and submit Orders about to expire to the FM to review for extension or cancellation

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(3) Shift Orders and Night Orders

The FM, SM, or other manager responsibilities are to:

- prepare the Shift Order using the format in Appendix 15, Shift Order Format. The sequential number is obtained from the SOA
- obtain the FM approval signature (telecon approval of the FM may be obtained and if so, the SM signs for the FM indicating telecon approval)
- assign an effective date and an expiration date. Expiration may be up through thirty days from the effective date
- provide the Shift Order to the SOA for processing and distribution

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The SOA responsibilities are to:

- file the master copy of the Shift Order in the Shift and Operations Orders Manual, file a copy in the history file, and revise the Table of Contents
- issue copies of the Shift Order and the revised Table of Contents to copyholders, and place copies in Required Reading as directed

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When a Shift Order is to be canceled, the SOA **SHALL**:

- obtain FM concurrence to cancel the Shift Order
- revise the Shift and Operations Orders Manual Table of Contents to reflect the cancellation and date of the cancellation. This may be done by drawing a line through the entry and signing/dating the line
- distribute a revised Table of Contents to the copyholders of Shift and Operations Orders Manuals. This serves as notification for copyholders to discard the canceled Shift Order
- place the canceled Shift Order in the history file, and in Required Reading

When a Shift Order requires revision, the SOA **SHALL**:

- obtain a rewrite of the Shift Order from the FM or applicable manager
- prepare and issue the revised Shift Order using the steps above for processing a new Shift Order
- revise the Shift and Operations Orders Manual Table of Contents to reflect the revision and revision date. This may be done in pen/ink
- place a copy in the history file
- distribute the revised Table of Contents and the revised Shift Order to the copyholders. This serves as notification for copyholders to discard the superseded copies
- place copies in Required Reading as directed

When a Shift Order requires extension, it is processed and issued as above under the same order number but with a new revision number and a new expiration date.

The SM **SHALL**:

- review Shift Orders at least monthly to determine the need for cancellation or extension, and notify the SOA to take action if necessary

Night Orders may be used by Facility Managers to communicate short-term information and administrative instructions to facility personnel. A bound logbook or a notebook **Should** be used. The format is decided by the FM. Night Orders are signed and dated by the FM or the Operations Manager. They are normally effective for 24 hours, but can be written to cover weekend and holiday periods. They may be hand written.

(4) Records

The following Quality Assurance Records are generated by this section. These Quality Assurance Records **SHALL** be maintained by the SOA in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources, for two years:

- Operations Order Evaluation Checklists
- Standing Order History Files
- Operations Order History Files
- Shift Order History Files

After 2 years, disposition the records in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources.

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E. Control and Use of Operator Aids

Operator Aids are postings which contain information that will assist personnel in performing their duties. Operator Aids may be pages or sections excerpted from procedures, system drawings, data tables, graphs, or other information. Where standard signs (such as radiological postings and signs provided in the HSP Manual, and Reference (27), or CSOL/NMSL postings) are provided by other systems, they are not included in the Operator Aid controls described in this Section. Operator Aids may be requested by anyone, are authorized by the SM, and maintained current. They may not alter or conflict with approved procedures, and are not to be used in lieu of procedures. The use of Operator Aids **Should** be held to a minimum.

The SM **Should** ensure the following:

- that operator aid postings do not obstruct instruments, panels, or equipment operations, and are securely fastened to the wall, door, or equipment
- that operator aid postings are protected by lamination or a clear plastic cover when possible
- that postings are logged in the Operator Aid Postings Log which includes the sequential log number, posting information, location (list all locations), approval initials/date, and reference documents. A sample Operator Aid Postings Log is included in Appendix 16
- that when postings are removed, the removal is indicated in the Operator Aid Postings Log by drawing a line through the line entry for the posting and that the SM initials/dates the line and enters the words "removed"

The SM responsibilities are to:

- approve postings
- assign a staff individual to review the postings each quarter to confirm that the postings are still needed and are correct. The review is to include that the Operator Aids are still posted in accordance with the Operator Aid Postings Log. Operator Aids no longer needed should be removed
- document that the review was conducted in the Operator Aid Postings Log on the next blank line of the index

F. Communications

Communications need to be reliable in providing accurate transmission of information for conducting operations activities. Operations and support personnel **SHALL** communicate formally and use standardized terminology, including the Phonetic Alphabet, in communications in order to achieve accurate exchange of information or direction. Communications need to be distinct, deliberate, clear, and concise. These communications can be in the form of:

- written, such as
 - procedures
 - Standing, Operations, Shift and Night Orders
- verbal, such as
 - telephone
 - radio
 - life safety/disaster warning (LS/DW) system

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- Equipment status including:
 - operating
 - standby
 - shutdown
 - out-of-service or out-of-commission
- maximum, minimum, normal values, or expected readings of key parameters as appropriate
- a section to write comments for information gathered during the performance of the round. Comments may include items listed in Appendix 19 such as equipment vibration, excessive temperature, unusual noise or smell, and documentation of supervision notification

(3) Requirements for Logs and Round Sheets

The FM **SHALL** determine the logs and round sheets used in the facility. Logs used in the facility include the following where applicable:

- narrative logs
 - Shift Manager
 - Shift Technical Advisor
 - Stationary Operating Engineer
 - Radiological Operations
 - Mission Program Activity Evolution Supervisor if required by project plans
 - others, such as fire watch, IWCP emergency repair and registered refrigeration systems, as required

- administrative logs
 - Lockout/Tagout Permit Log
 - Alarm Deactivation Log
 - Operator Aid Postings Log
 - Temporary Modification Log

The FM **SHALL** maintain an Operations Order or procedure listing the required logs and round sheets for the facility. For nuclear facilities, the logs and round sheets specified in the Authorization Basis are also maintained. The content of round sheets is approved by the FM by approval of the promulgating Operations Order or procedure.

The FM specifies frequency of tours (rounds) associated with each watch position or required round sheet. Regulatory requirements (RCRA), radiological concerns (ALARA), equipment conditions, or AB requirements may influence tour frequency.

Prior to implementing the use of computerized narrative logs, the FM:

- considers the handling and security of the recorded data
- establishes requirements for computerized narrative logkeeping commensurate with the controls applied to manual logkeeping
- provides guidance for log corrections, late entries, supervisory review of log entries, and future changes once approved by supervision

Log keeping requirements are:

- entries are to be recorded promptly
- entries are to be complete and legible

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- entries are to be consecutive
- late entries are to be noted as such
- each day is started on a new page
- entries are prefaced with the time in 24-hour time format
- entries are made in black or blue ink
- if more than two blank lines are left between entries, a diagonal line **Should** be drawn between the entries

Round sheets and rounds requirements are:

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- round sheets are utilized shiftly to document major equipment operating status, and **SHALL** cover a twenty-four (24) hour period
- round sheets in use **SHALL** be of the current revision
- entries are made in black or blue ink
- for round sheets, abnormal readings or out-of-tolerance conditions are circled in red ink. Abnormal conditions are explained in the comments section, including action taken. Abnormal conditions for operable equipment are to be reported to the Shift Manager
- when performing rounds, an inspection of the assigned areas is conducted using Appendix 19 as a guide

Log and round sheet errors are corrected by drawing a single line through the entry and initialing and dating. Correct information is then entered, near the original entry, if possible. Correction fluid, correction tape or erasures are not to be used. When the individual making an original entry is not available, management may correct logs and round sheets by entering the manager's signature, date, and time.

Completed logs and round sheets are retained for one year in a location of determined by the Facility Manager. After a year, disposition in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources.

(4) Log and Round Sheet Reviews

Operators returning from a period of absence review logs and round sheets as indicated in the section on Shift Relief and Turnover.

The SM **SHALL** review SOE and Radiological Operations (if appropriate) logs and round sheets shiftly.

Foremen **Should** review logs and round sheets each work day for the areas under their cognizance. Functional Managers (e.g., Utilities Manager, Operations Manager, Mission Project Team Lead, etc.) **Should** review logs and round sheets for their areas at least weekly. The Facility Manager or designee **Should** review a sample of logs and round sheets weekly.

Log and round sheets are reviewed for unusual, abnormal, or unexpected conditions, and for trends and safety issues.

The reviewer documents the review providing the date, time, signature and title on the log page or round sheet remarks section.

H. **Conduct of Operations Assessment and Lessons Learned**

Assessment of performance is an integral part of making continual improvement. Management establishes performance goals and objectives which encourage continual improvement in performance, assesses performance, and takes action to achieve goals and objectives. First line supervisors and other managers set expectations for workers, assess performance, and provide feedback about performance relative to expectations. All personnel **Should** make self assessment and improvement a part of their routine.

Conduct of Operations assessments (operations assessments) are a part of the assessment program at RFETS. They are Management Assessments described in the Site Integrated Oversight Manual, 1-MAN-013-SIOM. They also contribute to an effective Integrated Safety Management System program in which safety is enhanced through feedback and improvement. Improvements identified and taken as a result of objective assessment shape the scope of future work, may result in improved productivity, and may help shape controls for that work. Similarly, feeding back lessons learned from Site and Complex incidents are important to continuing improvement. Assessments are conducted by supervisors and other managers in order to directly observe operations activities on a frequent basis. They provide the FM and senior management with objective evaluations of operations practices which identify areas needing improvement, deficiencies, and noteworthy practices.

Development of Lessons Learned is in accordance with 1-MAN-017-LLGR-RM, Site Lessons Learned Generic Implications Requirements Manual. These **Should** be distributed widely and used in training so that all employees obtain the benefit of Lessons Learned.

(1) Assessing Conduct of Operations

The FM responsibilities are to:

- designate maintenance, operations, surveillances and other evolutions to be included for assessment, including periodic assessment of pre-evolution briefings and job-task briefings
- assign managers and first line supervisors to conduct the assessments. Staff personnel/salary personnel may also be assigned to conduct operations assessments periodically in order to assist the manager
- develop an annual schedule of assessments
- develop a schedule of operations assessments quarterly
- periodically conduct operations assessments personally
- promulgate noteworthy practices and positive evaluations to encourage continuing improvement
- ensuring corrective action is taken for identified deficiencies

Assigned personnel prepare for assessments by reviewing procedures and requirements related to the activities to be observed in order to understand the criteria against which to judge performance. Guidance and requirements for preparation for, conduct of, documentation of, and maintenance of records for assessments are contained in the Site Integrated Oversight Manual, 1-MAN-013-SIOM.

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6. INSTRUCTIONS - STAFFING AND TRAINING

A. Staff Requirements

Minimum staffing requirements are determined by the FM as required by applicable facility Authorization Bases, and mission activity program plans. Minimum requirements should include sufficient personnel to ensure AB compliance is maintained. A long-range staffing plan that anticipates losses and turnover is to be maintained by the FM.

B. Site Overtime Requirements and Total Hours Worked Limitations

This section applies to all personnel working overtime at the Site including those employed by more than one employer at the Site. It applies to those working for more than one employer in order to place limitations on the total hours worked by an individual. The purpose of having constraints on overtime and total hours worked by an individual is to enhance safety and to promote effective manpower utilization. Lack of sleep and excessive work without adequate rest can lead to inefficiency and accidents caused by fatigue. Management's intention is to preclude individuals from working excessive overtime and excessive hours for multiple employers, and to preclude continuous work for a prolonged period without time off. The requirements and limitations in this section implement management's intention for overtime and total hours worked. The requirements of (1) and (2) below apply whether or not an individual receives compensation for overtime.

(1) Site Overtime Requirements

This section applies to all overtime worked at the Site. Sufficient resources (material and personnel) to accomplish tasks are to be provided so that excessive overtime is not required. When necessary to work overtime, it may be used on a temporary basis within the following guidelines:

- an individual **Shall not** be permitted to work more than 16 hours straight, excluding shift turnover
- an individual **Shall not** be permitted to work more than 16 hours in any 24 hour period, nor more than 24 hours in any 48 hour period, nor more than 72 hours in any 7 day period, excluding shift turnover time

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- a break of at least 8 hours **Shall** be taken between work periods, including turnover time.
- the use of overtime **Shall** be considered on an individual basis, and not for the entire staff on a shift, except that it may be granted to entire work crews involved in construction and D & D activities
- personnel **Shall** have a minimum of one day off after working twenty consecutive days

The Facility Manager or manager designated by contractor management, and equivalent line managers for support organizations, **Shall** approve individual overtime for the purposes of this sub-section. Other Managers may also have to approve overtime for budgetary considerations. Overtime requirements may be contained in Facility Authorization Bases, in which case, those requirements apply.

- Individuals working overtime and their managers are responsible for monitoring the nature and the amount of an individual's overtime in order not to exceed the guidelines of this sub-section without the personal authorization of the Senior Executive (or designee) of the organization to which they are assigned to do work. Exceptions are: Overtime for Protective Force personnel may be authorized by the Shift Captain, and overtime for facility fire watches and Material Surveillance Teams (MST) may be authorized by the Facility Manager

(2) Limitations on Total Hours Worked at the Site

This sub-section applies to individuals who are employed at the Site by more than one employer. It places a limitation on the hours that can be worked by the affected individual in order to promote a safe work environment. The following guidelines apply:

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- an individual **Shall not** be permitted to work more than 16 hours straight, excluding shift turnover
- an individual **Shall not** be permitted to work more than 16 hours in any 24 hour period, nor more than 24 hours in any 48 hour period, nor more than 72 hours in any 7 day period, excluding shift turnover time
- a break of at least 8 hours **Shall** be taken after consecutive work periods for multiple employers, including turnover time
- personnel **Shall** have a minimum of one day off after working twenty consecutive days

Individuals working for more than one employer at the Site and their managers are responsible for monitoring the nature and amount an individual works in multiple employer situations in order not to exceed the guidelines of this sub-section without the personal authorization of the Senior Executive (or designee) of the organization to which they are primarily assigned to do work.

C. Training Requirements

Trained and qualified personnel operate facility equipment or systems, except where supervised trainees operate equipment as part of on-shift training. Training programs include initial and continuing components and are established to develop, enhance, and verify the knowledge and skills of individuals who operate, maintain, provide support, supervise, or manage operations. The Training Users Manual (TUM) establishes requirements for implementing training and qualification programs at RFETS. The Training Implementation Matrix (TIM) required by DOE Order 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities, further defines program requirements in those facilities and identifies positions and tasks which require qualified or certified personnel.

(1) Developing the Facility (Organization) Training Program

The Facility Manager or company staff training organizations responsibilities are to:

- maintain an adequate training staff to administer training and qualification, and develop the necessary training, qualification, and certification programs required to support the facility mission in accordance with the TUM. Nuclear facilities also implement training programmatic attributes specified in their Authorization Basis, and develop and maintain a facility-specific TIM

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- develop training appropriate for each project/task required for the facility mission. In all facilities, the training program is developed in compliance with the TUM. For nuclear facilities whose missions make them subject to DOE Order 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities, the training programs also need to meet the requirements of that Order
- incorporate supervisory and management training into the training programs. This is especially important for first line supervisors

2) Conduct of On-Shift Training

On-shift training (on-the-job training (OJT) for shift and support personnel) is the portion of an individual's qualification program wherein the trainee undergoes hands-on training to gain first hand practical knowledge needed to qualify. It is conducted in the job environment, and involves the trainee operating equipment and systems under the direct, personal supervision of the qualified operator. The qualified operator is also qualified as an on-the-job (OJT) training instructor. Trainees may be assigned non-operational tasks while on shift to assist qualified operators, but they must be directly supervised when operating equipment and recording information in round sheets and logs as indicated below. When trainees are taking part in operations, the number involved is personally controlled by the Evolution Supervisor, who limits trainees to the ratio authorized by the Facility Manager. Consideration should be given to training effectiveness and to the potential for adverse effects on the facility. A maximum limit for the trainee-to-instructor ratio will ensure that the trainee is provided with the most effective instruction and will ensure that the instructor is not distracted by having too many trainees at once. On-shift training requirements are:

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- whenever trainees operate equipment, a qualified (OJT) training instructor directly supervises and observes the trainee and is in position to intervene or assume control, if necessary
- OJT training instructors are required to meet the requirements of the RFETS TUM
- until trainees have demonstrated adequate understanding of an operation, trainees are required to discuss the safety cautions and notes, and procedural steps with the (OJT) training instructor prior to performing the operation
- trainees demonstrate actions to be performed by identifying switches, valves, and breakers that are to be manipulated prior to performing the operation
- when trainees record equipment parameters on round sheets or in logs, the (OJT) training instructor verifies that the recorded information is correct by initialing the entry
- the trainee and (OJT) training instructor discuss any out-of-specification readings and the consequences of allowing the condition to continue
- trainees **SHALL not** make independent decisions or take actions that could affect facility safety
- the Evolution Supervisor observes the maximum trainee-to-instructor ratio limit established for facility operation

(3) Abnormal and Emergency Conditions

Trainee operation of equipment **SHALL** be suspended during unanticipated or abnormal events, accident conditions, or when suspension is necessary to ensure safe and reliable facility operation.

During abnormal or emergency conditions, trainees **Should** provide assistance at the discretion of the qualified operator.

(4) Documentation of On-Shift Training

- on-shift training shall be documented in compliance with the RFETS TUM

D. **Required Reading Program for Operations and Support Organizations**

(1) Program Elements

A required reading file **SHALL** be established to ensure individuals are made aware of information that is:

- important to safe and efficient operation of their work station
- important to facility safety
- an applicable occurrence or Lessons Learned
- a change to a procedure or other document affecting systems or equipment operated by facility operations or support personnel

The required reading file contains:

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- significant procedure changes, and other relevant document changes
- equipment design changes
- applicable DOE, industry, and RFETS occurrences and lessons learned
- information necessary to keep operations personnel aware of current facility activities
- other information determined by the FM/organization manager

A required reading file **Should** be readily available.

Measures **Should** be established to assign required reading for groups of personnel appropriate to the organization, including:

- required dates for completion of reading based on the nature of the material
- an immediate reading designation for documents to be read before assuming responsibility for a shift position

Documentation of required reading **Should** include:

- initialing and dating by the assigned reader
- retaining documentation of required reading for one year

A required reading file periodic review **Should** be performed by the individual designated by the FM or organization manager to:

- verify assigned reading is being completed

- ensure that status displays are maintained current
- ensure that the status displays are used as part of information transfer when SMs, SOEs and others required by the FM perform shift relief and turnover

(3) System Component Lineups

For systems continually in operation, component alignment checklists are not maintained on file unless required by the FM. For systems being regularly started-up and shut-down, the procedure used for the operation provides for start-up prerequisite actions, and component positioning for both start-up and shut-down.

B. Configuration Control

Configuration Control at RFETS is invoked by the Configuration Management Program Manual, MAN-095-CMPM. It provides a process for controlling changes to the configuration of facilities, systems, processes, safety related software, and Site grounds.

C. Compliance Tracking

This section describes the system to be used for tracking and documenting Limiting Conditions for Operation (LCO) surveillances and Authorization Basis (AB) compliance-related compensatory measures associated with Unreviewed Safety Question Determinations (USQD), Engineering Operability Evaluations (EOE), and Justifications for Continued Operations (JCO). Planned Out-of-Tolerance activities are not covered by this section. The system may be used to track compliance with Administrative Control Requirements (ACR) in BIO/BFO.

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Often, when system or equipment deficiencies or out-of-tolerance conditions exist, engineering and nuclear safety documents are prepared to provide information about the operability status of the system/equipment. Compensatory measures are sometimes specified. These compensatory measures are required to be met in order to maintain Authorization Basis compliance. Therefore, tracking to ensure compliance is necessary.

(1) Compliance Tracking System

The FM designates a Compliance Tracking Coordinator (CTC).

The FM designates a qualified individual (SM/STA/CCA/Engineering Manager) to assess the Compliance Tracking System periodically to ensure compliance. This **Should** be accomplished as part of the facility Management Assessment Program.

The CTC responsibilities are to:

- maintain the Compliance Tracking System accurate and up-to-date so the FM and SM can have immediate access to the status of all items tracked. This includes tracking expiration dates of EOE, JCO, USQ, and USQDs, and initiating action with the Engineering Manager, AB Manager, and FM in time to achieve extensions, if necessary
- report status to the SM at a periodicity designated by the FM
- update the Compliance Tracking System when changes are made to LCO surveillance requirements or compensatory measures contained in an EOE, JCO, or USQ, USQD, or when a Compliance Tracking Form is received from the performing organization following satisfactory completion of a surveillance

(2) Scheduling of LCO Surveillances or Compensatory Measures

The CTC **SHALL**:

- the expiration date for the applicable documents and the Technical Operations Order

(4) Performance of Scheduled Surveillances and Compensatory Measures

The performing organization **SHALL**:

- perform LCO surveillances and compensatory measures on time as scheduled on the POD in accordance with current revisions of approved procedures. The individual performing the work has the responsibility to ensure that the procedure being used is current
- report completion of LCO surveillances and compensatory measures to the SM as occurring
- use the Compliance Tracking Form to document the performance of LCO surveillances or compensatory measures
- when problems or deficiencies are encountered, or LCO surveillances or compensatory measures are not completed within the required time interval, or the acceptance criteria are not met, immediately notify the SM

The SM **SHALL**:

- when notified that an LCO surveillance or compensatory measure is not performed within the required time interval, or the acceptance criteria are not met, takes the following actions:
 - declares the system, component, or equipment inoperable if required by the Authorization Basis
 - notifies the FM

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- declares the system, component, or equipment inoperable if required by the Authorization Basis
- notifies the FM
- immediately initiates required/remedial actions
- updates System Status and the SM log
- reviews the event to determine the cause of the out-of-tolerance condition or violation
- reports the event in accordance with 1-D97-ADM-16.01, Occurrence Reporting Process
- notifies the DOE Facility Representative

(5) Documentation and Tracking System Update

The performing organization **SHALL**:

- upon completion of LCO surveillances or compensatory measure actions, complete the Compliance Tracking Form sheet(s) generated during the surveillance/compensatory measure and return the sheet(s) and originals of data to the SM for review

The SM **SHALL**:

- review the Compliance Tracking Form and attached data sheets for completeness, and to determine if deficiencies were identified and documented adequately. Initiate actions if required based on the results of the surveillance/compensatory measure
- sign and return the form to the CTC

The CTC **SHALL**:

- review the form for completeness and sign the Compliance Tracking Form
- update the Compliance Tracking System to reflect the surveillance/compensatory measure performance

(6) Closure of EOE, JCO, and USQ/USQD

The FM or designated manager (Nuclear Safety Manager, Engineering Manager) responsibilities are to:

- determine that a system, component, or equipment is operable in accordance with Section 7.G. of this Manual, or that the conditions which initiated the EOE, JCO, or USQ/USQD no longer exist, and cancel applicable Operations Order
- notify Nuclear Safety and Licensing, and Criticality Safety in writing that applicable EOE, JCO, or USQ/USQDs are no longer required so that the Authorization Basis Document List for the facility can be kept current
- notify the CTC of this in writing and specify discontinuation of performing and tracking applicable surveillances or compensatory measures
- notify the DOE Facility Representative so that the DOE, RFFO Authorization Basis Division can be informed

The CTC **SHALL** update the Compliance Tracking System accordingly, and notify the performing organization of the change.

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(7) Records

Compliance Tracking Forms generated by this procedure are Quality Records.

The CTC:

- maintains the original Compliance Tracking Form and attached data sheets for one year, except shiftly surveillances which are kept for six months. For surveillances conducted less frequently than a year, maintain the previous one on file
- after six months or one year as applicable, dispositions the records in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources

D. Lockout/Tagout (LO/TO), Caution Tag, and Information Tag Requirements

The LO/TO program provides administrative control to protect personnel from injury, protect equipment from damage, ensure operation of items only by authorized personnel in a controlled fashion when necessary, and to maintain integrity of physical boundaries of facility systems. LO/TO is implemented in accordance with 1-15320-HSP-2.08, Lockout/Tagout, or its successor, Chapter 9 of the Occupational Safety & Industrial Hygiene Manual.

Caution Tags are used as a precautionary measure to provide temporary special instruction or to mandate that greater than normal caution should be exercised to operate equipment.

Information Tags are used to provide explanatory information about a component or system. The information is not essential to safe operation and is of less significance than information provided on a Caution Tag.

Both the Caution and Information Tag systems are optional, and are implemented at the discretion of the FM.

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F. Removing Systems and Equipment from Service

Removal of systems and equipment from service is controlled in order to meet nuclear safety requirements, for personnel safety, to avoid unauthorized operation, and to avoid damage to systems and equipment. Systems may be removed from service for a number of reasons including maintenance, testing, calibration, and surveillances. They may be taken out of commission permanently to facilitate facility deactivation and/or shutdown.

The SM responsibilities are to:

- maintain out-of-service (OOS) and out-of-commission (OOC) status
- authorize changing status to OOS or OOC and removal of equipment from service considering the following:
 - mechanical and electrical lineup changes needed to effect the status change
 - impact of systems or equipment on Authorization Basis requirements
 - use of lockout/tagout to provide the appropriate degree of control
 - documenting action taken in the SM log and other appropriate logs, and updating status

Status of OOS and OOC items will be maintained as determined by the FM. Status for this may be annotated on status boards, status computer printouts, or on lists. When permanently shutting-down whole systems, whole modules, whole rooms, etc., only one OOC entry is required for the system/module/room. Facilities may also elect to enter permanent OOC status into the IWCP inactive database to be printed-out when desired.

G. Termination of Operations Process and Authorization Basis Management

When work commenced in 1990 to update the Site's nuclear facilities' Final Safety Analysis Reports (FSAR), initial effort was devoted to revising the Operational Safety Requirements (OSR) in Buildings 559 and 707. Throughout the 1990's, many page changes were made to nuclear facility FSARs, and in the mid-1990's, development of new authorization basis documents commenced. These are Basis for Interim Operations (BIO), and Basis for Operations (BFO) documents and DOE Order 5480.23 compliant FSARs. One result of implementing new OSRs in Buildings 559 and 707 was development of a process in 1991 for operational and administrative actions to take when operations had to be terminated. This process, over time, developed into what was known for several years as COOP-020, Termination of Operations Process. The COOP-020 Termination of Operations Process was specifically written for FSAR requirements and was the sole source of this direction for FSAR facilities. New ABs incorporate termination requirements but some use the term "SUSPEND OPERATIONS" and others use the term "TERMINATE". This revision covers both the 1980's FSARs, and new AB documents, and continues as the sole source of direction for 1980s FSAR facilities. Facilities with BIO/BFO and DOE Order compliant FSARs follow the administrative process in this section, taking the specified actions called-out in the individual AB where applicable. The provisions of the AB documents prevail if a conflict between this section and the AB is determined to exist.

This section includes the process by which affected operations in a nuclear facility are terminated (or suspended) if required by an OOT condition, or if required by an Operational Safety Requirement/Technical Safety Requirement (OSR/TSR) violation. In addition, it includes a section on management of potential unreviewed safety questions. Also included are instructions for determining the operability of System Category (SC) 1/2 Safety Structures, Systems and Components (Safety SSC), or SC-3 Safety SSCs credited in the Authorization Basis. Finally, this section defines Limiting Conditions for Operation (LCO)-affected operations when FSARS non-compliant with DOE Order 5480.23 are still in effect in facilities. Successful implementation of this Section, and Section 7.C., Compliance Tracking, should result in satisfactory Authorization Basis management.

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Designated SC-3 Safety SSC are credited in BIO and BFO documents. When there are deficiencies in these, facility management needs to determine if the deficiency adversely affects system function as depicted in administrative controls or its bases, and to take appropriate action. Determining the appropriate action may involve use of the Technical Concern/Engineering Operability Evaluation process discussed later in this section. Similarly, any support systems, equipment, or system deficiency questions needing technical resolution, may be resolved by the Technical Concern/EOE process.

(3) Justification for Continued Operation

In the event that routine operations beyond those allowed by the remedial/required actions of the Authorization Basis are necessary, a JCO is prepared and processed requesting DOE, RFFO approval to continue operations in accordance with 1-R26-NSM-04.06, Justification for Continued Operation (JCO) Preparation. Remedial/required actions remain implemented until DOE, RFFO approval and facility implementation of the JCO. An approved JCO is implemented using a Technical Operations Order.

(4) Termination or Suspension of Operations

When specified in OSR/TSR as remedial/required action, termination or suspension of operations is accomplished. They are implemented by Technical Operations Order. Termination or suspension of operations is often a remedial/required action when a Safety SSC deficiency causes inoperability, when an LCO is not met, or a surveillance requirement specification is not met. In addition, termination or suspension of operations may be specified by AB documents when an OSR/TSR violation occurs. In general, termination or suspension consists of halting the activities and/or operations protected by the deficient Safety SSC, halting other activities if specified in the AB, and commencing corrective actions.

- for FSAR non-compliant with DOE Order 5480.23 OSR/TSR violations, operations are terminated, the violation reported to DOE formally by Occurrence Report,

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reported to the DOE Facility Representative, fact finding meeting conducted, corrective actions taken, and permission to resume operations is formally requested of the applicable Kaiser-Hill Project Manager

- for BIO/BFO, and DOE Order 5480.23 compliant FSARs, the actions to take for suspensions are indicated in the AB

When action must be taken subsequently to remedy an unsafe or potentially unsafe condition, even in an out-of-tolerance (including terminated/suspended) condition, action is taken to correct the condition in accordance with an approved Technical Operations Order as indicated in Section 7.G.(1) above.

(5) Limiting Conditions for Operations and Surveillance Requirements

Upon discovery of a failure to meet an LCO, the associated remedial/required actions are entered as specified in the applicable Authorization Basis. Compliance with the AB provisions is required during all phases of operations unless specific exemptions are provided in the facility Authorization Basis.

Equipment removed from service or otherwise declared inoperable may be physically operated but credit cannot be taken for meeting AB requirements until declared operable. Conducting maintenance testing, or operating the equipment after maintenance are examples.

When a support system or component is deficient or otherwise not functional, the supported system is not automatically declared inoperable due solely to support system inoperability. For example, in some facilities, the steam system supports ventilation system operability. A steam system deficiency does not automatically render the ventilation system inoperable. Determination of the impact of the support system deficiency on the supported system operability needs to be evaluated by Facility Management using Appendix 25, Technical Concern Assessment Checklist.

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- continues normal operations and makes the appropriate SM Log entry

Submission of a Technical Concern may result in processing an EOE in accordance with PRO-393-SERM-EOE, Engineering Operability Evaluation Report Process. The identification of a Technical Concern and request for an EOE is based on a reasonable expectation that the Technical Concern or EOE will conclude that the affected Safety SSC is operable.

When a reasonable expectation does not exist that the affected Safety SSC will be deemed operable, the Shift Manager:

- declares the item inoperable
- initiates remedial/required actions until a formal determination is made or the deficiency is repaired
- makes the appropriate SM Log entry
- updates status and informs managers and facility personnel

If a timeframe for initiating remedial/required actions is not specified in the Authorization Basis, action is initiated within thirty (30) minutes.

The Engineering Manager (or equivalent manager) reviews and signs the Technical Concern Assessment Checklist and initiates the applicable follow-up action.

A file is maintained for checklists and EOE's in the SM office.

- (8) Termination of LCO-Affected Operations for Facilities with FSARs that are Non-compliant with DOE Order 5480.23

In the case where remedial/required action requires that LCO-affected operations be terminated, the affected area must be identified. Identification can be accomplished by referring to the AB, the System Evaluation Report (SER), or by processing an EOE if the AB and SER are not specific.

When an item is declared inoperable by the Shift Manager that requires termination, or an OSR/TSR OOT condition occurs requiring termination, or an Authorization Basis violation has occurred, then the SM:

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- makes an appropriate SM Log entry, notifies the Facility Manager, and initiates a fact finding meeting
- implements the specified remedial/required actions
- updates facility status and informs facility personnel
- reports the condition to DOE as required by 1-D97-ADM-16.01, Occurrence Reporting Process, and notifies the DOE Facility Representative
- reports the condition to other managers as applicable

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For cases where a timeframe for remedial/required actions is NOT specified in the applicable Authorization Basis document, action is initiated within thirty (30) minutes.

Appendix 27, Material-at-Risk (MAR) is used as a guideline to conservatively define operations allowed in a facility while out of compliance with the Authorization Basis. Facilities whose Authorization Bases (DOE Order 5480.23 compliant) define non-LCO affected operations or prescribe actions for suspension of LCO affected operations **SHALL** follow the prescriptions of the Authorization Basis. For facilities with FSARs not DOE Order 5480.23 compliant, Appendix 27 **SHALL** be used to determine which operations are non-LCO affected.

When required to terminate operations, the SM formally terminates LCO-affected operations by implementing a Technical Operations Order in accordance with Section 5.D., Standing, Operations, and Shift Orders based on the requirements of Appendix 27, Material-at-Risk (MAR) Limits for Non-LCO-affected operations. Non-LCO-affected operations are allowed to continue when documented in the Technical Operations Order.

The Shift Manager **SHALL** determine activities to be continued for the purpose of maintaining a safe facility configuration, weighing public and worker safety risk that may arise from the termination. These activities **SHALL** be identified in the Technical Operations Order. LCO-affected operations may resume upon satisfactory resolution of the OOT condition or declaration of the affected system operable in accordance with the Return to Service and Operability Declaration, Section 7.G.(11).

If routine operations beyond those allowed by the remedial/required actions are deemed necessary before the correction of the deficiency creating the OOT condition, the required actions are:

- request and process a JCO
- continue remedial/required actions during the time of the JCO preparation and DOE, RFFO approval and until implemented

When action must be taken subsequently to remedy an unsafe or potentially unsafe condition, even in an out-of-tolerance (including terminated) condition, action is taken to correct the condition in accordance with an approved Technical Operations Order as indicated in Section 7.G.(1) above..

If a violation of the Authorization Basis resulted, actions required include conducting a Fact Finding meeting to determine cause and corrective actions, correcting the condition which caused the violation, and taking these administrative actions:

- record the following information on Appendix 28, Resumption of LCO-Affected Operations Following an Authorization Basis Violation, to document the request for resumption of operations:
 - date of occurrence
 - applicable occurrence report number(s)
 - description of AB violation
 - immediate actions taken
 - preliminary root cause of the failures leading to the Authorization Basis violation (see MAN-062-CAUSE ANALYSIS, Cause Analysis Requirements Manual)
 - short-term corrective actions that have been taken to prevent recurrence (see 1-97-ADM-16.01, Occurrence Reporting Process)
 - Independent Safety Review of the root cause and implemented short-term corrective actions
- obtain concurrence from the applicable Kaiser-Hill Project Manager to resume operations by providing Appendix 28 and a copy of the Occurrence Notification Report

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The applicable Kaiser-Hill Project Manager or designee responsibilities are to:

- verbally notify the DOE, RFFO Facility Representative of the preliminary root cause of the violation, that the violation has been resolved, and that resumption of operations is being authorized
 - authorize resumption by signing the Appendix 28 and providing a signed copy to the facility
- (9) Administration of BIO/BFO and DOE Order 5480.23 Compliant FSARs TSR Violations

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The actions required in response to BIO/BFO violations are specified in the BIO/BFO documents. If a violation occurs, the Shift Manager will take the required actions specified in the AB and:

- document the time and circumstances in the Shift Manager's Log indicating when/what required actions were taken
- document the termination/suspension in a Technical Operations Order if applicable
- notify on-shift personnel and the Facility Manager, and initiate a fact finding meeting
- notify the DOE Facility Representative
- report the occurrence to DOE officially by filing an Occurrence Report in accordance with 1-D97-ADM-16.01
- update facility status

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When immediate corrective actions have been taken, and the Fact Finding meeting has occurred, Appendix 28 and a copy of the Occurrence Notification Report detailing the violation will be provided by the applicable Kaiser-Hill Project Manager with:

1. short-term and long-term corrective actions to address the violation, identification of root causes, and the restart plan, or
2. a report identifying the root causes for the violation and the corrective actions taken and to be taken to prevent recurrence within ten calendar days, as specified in the BIO/BFO for the type of violation

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In both cases, Appendix 28 will state that Independent Safety Review of the root cause was conducted and short-term corrective actions were accomplished.

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If required by the AB for the facility, the Kaiser-Hill Project Manager will forward Item 1. for DOE approval, and will forward Item 2. to DOE within sixteen calendar days. After DOE approval for Item 1., the Kaiser-Hill Project Manager will notify facility management by letter of DOE approval to restart. If DOE approval is not required by the AB, the Kaiser-Hill Project Manager will approve resumption by signing the Appendix 28 and providing a signed copy to the facility.

(10) Management of Potential Unreviewed Safety Questions

When information is identified which indicates a potential inadequacy of previous safety analyses, or a possible reduction in the margin of safety is identified as defined in the OSR/TSR such that a potential for a positive USQ exists, then the SM **SHALL**:

- document the item in the SM Log
- file the required occurrence report
- take action to place the facility in a safe condition. The safe condition is to be identified by implementing a Technical Operations Order until the Unreviewed Safety Question Determination (USQD) is completed
- notify the DOE Facility Representative and the Facility Manager of the situation
- initiate a request to perform a Safety Evaluation Screen/Unreviewed Safety Question Determination (SES/USQD)

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The FM **SHALL**:

- ensure that the Nuclear Safety Manager provides a preliminary evaluation of the potential USQ to Kaiser-Hill and the DOE/RFFO Assistant Managers of Performance Assessment and Engineering within five working days of discovery
- review and concur with the preliminary evaluation of the potential USQ, and summarize the remedial/required actions taken to place the facility in a safe configuration and the schedule for the completion of the formal USQD
- update the occurrence report as applicable

(11) Return to Service and Operability Declaration

This process is required for Safety SSC and may be used for returning non-Safety SSC to service.

CAUTION

System Return-to-Service and Operability Checklist SHALL be completed before declaring Safety SSC operable after having been inoperable. Applicable remedial/required actions are not exited until the Safety SSC is declared operable

The SM **SHALL**:

- verify satisfactory completion of the necessary work to regain operability such as a Post-Maintenance Test (PMT) in accordance with provisions of the Integrated Work Control Program Manual, or completion of applicable LCO surveillances

- complete the System Return-to-Service and Operability Checklist (Appendix 26)

The FM "noting" return-to-service on Appendix 26 may be obtained verbally in which case the SM signs Appendix 26 for the FM.

(12) Records

The FM maintains the following on file for two years in accordance with 1-V41-RM-001, Records Management guidance for Records Sources:

- Appendix 25, Technical Concern Assessment Checklist
- Appendix 26, System Return to Service and Operability Checklist

After two years, disposition these records in accordance with 1-V41-RM-001 requirements.

Each Kaiser-Hill Project Manager of nuclear facilities establishes files in accordance with 1-V41-RM-001 and maintains the original Appendix 28, Resumption of LCO-Affected Operations following an Authorization Basis Violation required in Paragraphs 8 and 9 associated with violations for two years. After two years, these are dispositioned in accordance with 1-V41-RM-001 requirements.

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H. **Component Lineups and Independent Verification**

Conducting component lineups are fundamental for establishing system status. This section applies to lining-up valves, switches, components, circuit breakers, and equipment necessary for proper operation and Independent Verification.

- if directed by the SM, the device may be reset one time

A protective device is not reset a second time unless the cause of the trip is understood and corrected, and has been authorized by the Shift Manager.

Document actions taken in the SM's Log or the SOE Log as appropriate.

8. REFERENCES

- | | | |
|------|--------------------|---|
| (1) | RCFP-PMP | The Rocky Flats Closure Project (RCFP)
Project Management Plan |
| (2) | MAN-001-SDRM | Site Documents Requirements Manual |
| (3) | 1-MAN-010-S&A | Safeguards and Accountability Manual – General
Requirements |
| (4) | 1-MAN-026 | Kaiser-Hill Security Manual Attachment 1: DOE
Safeguards and Security Definitions Guide |
| (5) | Site SAR V1 | Rocky Flats Environmental Technology Site Safety
Analysis Report, Volume I Site Description and
Characteristics |
| | Site SAR V2 | Rocky Flats Environmental Technology Site Safety
Analysis Report, Volume II Facility Safety Analyses |
| (6) | 1-D97-ADM-16.01 | Occurrence Reporting Process |
| (7) | 1-V51-COEM-DES-210 | Site Engineering Process Procedure |
| (8) | MAN-027-SERM | Site Engineering Requirements Manual |
| (9) | MAN-0063-DC | Document Control Program Manual |
| (10) | 1-MAN-013-SIOM | Site Integrated Oversight Manual |
| (11) | MAN-094-TUM | Training Users Manual |
| (12) | DOE Order 5480.20A | Personnel Selection, Qualification and Training
Requirements for DOE Nuclear Facilities |

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|------|------------------------|--|
| (13) | 1-R26-NSM-04.06 | Justification for Continued Operation (JCO) Preparation |
| (14) | 1-15320-HSP-2.08 | Lockout/Tagout |
| (15) | PRO-664-NSP-USQP | Nuclear Safety Program - Unreviewed Safety Question Process |
| (16) | 1-MAN-016-ISM | Integrated Safety Management Manual |
| (17) | 1-MAN-017-LLGI-RM | Site Lessons Learned Generic Implications Requirements Manual |
| (18) | 1-MAN-018-NSM | Nuclear Safety Manual |
| (19) | 1-V41-RM-001 | Records Management Guidance for Record Sources |
| (20) | PRO-079-WGI-001 | Waste Characterization, Generation and Packaging |
| (21) | PRO-393-SERM-EOE | Engineering Operability Evaluation Report Process |
| (22) | 3-W24-MA-002 | Kaiser-Hill Company, L.L.C. Management Assessment Program |
| (23) | PRO-B19-NSM-03.12 | Administrative Criticality Safety Control Compliance |
| (24) | | Training and Qualification Program (part of the Training Users Manual) |
| (25) | DOE Order 5480.19 | Conduct of Operations Requirements for DOE Facilities |
| (26) | MAN-062-CAUSE ANALYSIS | Cause Analysis Requirements Manual |
| (27) | MAN-072-OS&IH PM | Occupational Safety & Industrial Hygiene Program Manual |
| (28) | MAN-071-IWCP | Integrated Work Control Program Manual |
| (29) | Policy Manual | Kaiser-Hill Company, L.L.C., Policy Manual |
| (30) | SX-164 | Plant System and Component Identification and Labeling |

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|-----------------------|---|
| (31) Tech 15 | Defense Nuclear Facilities Safety Board Technical Report, Operational Formality of Department of Energy Nuclear Facilities and Activities |
| (32) 97-PLAN-MCA-002 | Nuclear Material Control and Accountability Plan |
| (33) MAN-087-AQ02 | Stratospheric Ozone Protection Compliance Manual |
| (34) EPLAN | RFETS Emergency Plan (EPLAN) |
| (35) MAN-020-BEPPM | Building Emergency Preparedness Programs Manual |
| (36) PRO-A35-EP-12.01 | Scheduling and Conducting Building Emergency Drills |
| (37) PRO-A44-EP-06.14 | Emergency Protective Actions |
| (38) BERO Procedures | Building Emergency Response Operations (BERO) Procedures |
| (39) PRO-T56-EP-04.00 | Emergency Classification and Protective Actions |

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APPENDIX 24

Information Tag

Information Tags have the content and format indicated
using blue letters on a white background

TAG NO. _____

INFORMATION

DEVICE DESCRIPTION LOCATION:

INFORMATION:

Approved By _____ Date _____
Installed By: _____ Date _____

DO NOT REMOVE THIS TAG

RF-47897(2/93) *GPO 775-335

INFORMATION

SEE OTHER SIDE

DO NOT REMOVE THIS TAG

APPENDIX 25

Technical Concern Assessment Checklist

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A. Technical Concern No.: _____ Building: _____ Date: _____

B. Description of the Condition or Deficiency: _____

C. Safety SSC Deficiency Review:

NOTE: *If this Technical Concern Assessment Checklist is being used for asking questions or obtaining a clarification of an EOE, N/A is checked for Questions 1 through 3.*

1. Does an identified deficiency affect the performance of the Safety SSC or its capability to meet its intended function:

Yes No N/A

2. Does the deficiency impact the ability of a Safety SSC to successfully meet an LCO or LCO surveillance requirement?

Yes No N/A

3. Is the impact of a deficiency uncertain?

Yes No N/A

If Yes is checked for 1, 2, or 3 above, mark Engineering Operability Evaluation (EOE) initiated under Paragraph E below (*follow-up actions*). If No is checked for Questions 1, 2, and 3, complete D, (*Technical Concern Resolution*) and E (*follow-up actions*).

D. Technical Concern Resolution

Actions taken or resolutions, as appropriate: _____

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Technical Concern Assessment Checklist
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E. Follow-up Actions

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- Impact of "Yes" on operability determined _____
- No Action Required
- EOE or SES/USQD Initiated EOE/SES/USQD #: _____
- JCO Initiated JCO #: _____
- Technical Operations Order
Initiated to implement the Technical Operations
remedial/required action Order #: _____

Person Completing Checklist _____ Date

Facility Manager Checklist Review _____ Date

Engineering Manager (or equivalent manager) Checklist Review _____
Name Date

Comments: _____

APPENDIX 26

System Return-to-Service and Operability Checklist

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System/Equipment/Component: _____

Date: _____ Facility: _____

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1.	If a system was declared inoperable due to an administrative deficiency or a non-termination violation that did not challenge the safety basis as evaluated by: 1-C10-NSM-04.03 or equivalent procedure <ul style="list-style-type: none"> • Verify that the deficiency has been corrected • Skip to Step 8 	_____ Initials	_____ Date
2.	Appropriate work and post-maintenance testing have been completed	_____ Initials	_____ Date
3.	Necessary support systems are in service	_____ Initials	_____ Date
4.	The system or equipment is lined-up and/or configured for operations in accordance with the applicable operating procedure	_____ Initials	_____ Date
5.	For modifications: (Mark N/A and initial if no modifications were performed)		
5.a	The Baseline Document Change Form (BDCF) is complete in accordance with: 1-V5-COEM-210, indicating receipt of the required drawings in the applicable facility	_____ Initials	_____ Date
5.b	The required procedures have been issued or revised, as necessary, and appropriate personnel have been briefed or trained, and SERs updated by the Engineering Manager if required by the modification	_____ Initials	_____ Date
6.	The appropriate component alignment has been completed in accordance with Section 7.H.	_____ Initials	_____ Date
7.	Any remaining deficiencies, NCRs, compensatory measures, remedial/required actions, USQDs, JCOs, EOE's, and ADRs affecting the system are listed below and have been dispositioned _____ _____ _____ _____	_____ Initials	_____ Date

APPENDIX 27

Material-at-Risk (MAR) Limits for Non-LCO Affected Operations

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If multiple limits are presented in the table, the first limit applies to situations where fire is not precluded and the second limit applies to situations where fire is precluded. Criticalities are precluded by the proposed MAR limits. Activities that can lead to explosions must be evaluated on a case-by-case basis as indicated above.

TABLE 27-1
MAR LIMITS

Form	Aged WGPu	HEU	LEU	DU	Am*	Unknown
Confined	9.9g 50g	700g	700g	9.4 MT 47 MT	2.1g 10g	2.1g 10g
Unconfined Non-Combustible	7.1g	700g	700g	4.7 MT	1.0g	1.0g
Unconfined Combustible	0.14g 14g	505g 700g	700g	94 kg 4.7 MT	0.021g 1.0g	0.021g 1.0g
HEPA Filters	14g	700g	700g	9.4 MT	2.1g	2.1g
Radioactive Metal	28g 450g Clad	700g	700g	19 MT <i>unlimited if Clad</i>	4.2g	4.2g
Powder	12g	700g	700g	7.9 MT	1.7g	1.7g
Chips	0.71g	700g	700g	0.47 MT	0.10g	0.10g
Resin	0.62g 5.0g	700g	700g	0.59 MT 4.7 MT	0.13g 1.0g	0.13g 1.0g
Volatile Liquid	0.071g 124g	361g 700g	700g	67 kg 118 MT	0.015g 26g	0.015g 26g
Non-Volatile Liquid	2.5g 124g	700g	700g	2.4 MT 118 MT	0.52g 26g	0.52g 26g
Unknown	0.071g 5.0g	361g 700g	700g	67 kg 4.7 MT	0.015g 1.0g	0.015g 1.0g

MT = Metric Tons

kg = kilograms

g = grams

* This applies to IDCs 405, 406, 407, 408, 409, 410, 427, or any Am enriched IDC that contains less than 9 weight-percent Am. The listed gram value is the sum of all actinides.

APPENDIX 28

Resumption of LCO-Affected Operations Following an Authorization Basis Violation

Contractor/Facility: _____ / _____
Facility Manager: _____
Point of Contact: _____
K-H Approval Individual: _____

Date: _____
Occurrence Report No.: _____
Date of Occurrence: _____

Description of Authorization Basis Violation:

Immediate Action:

Preliminary Root Cause¹:

Short-Term Corrective Actions	Due Date/Status
Long-Term Corrective Actions	Due Date/Status

Recovery Plan:

Signatures:

Facility Manager

Date

Independent Safety Review

Date

Approval to Resume; K-H Approval Individual

Date

¹MAN-062-CAUSE ANALYSIS

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96/96