PROCEDURE REVIEW & APPROVAL FORM

Procedure Number: 108000000-PR0061					Rev. 14		
Procedure Title: Chestnut Ridge Operations, Maintenance, and Services Work Control Procedure							
Description/Justification of Change							
Update of the Chestnut Ridge OM&S Work Control Procedure							
Section 3 Prerequisites and Requirements							
 Section 3.2 Removed 9.A-1 and added the NScD configuration management policy. Section 4 Procedure 							
 Section 4 1 4 Added a brief explanation for why a non-standard work request should be 							
entered into the work request system. Also added if the request is made directly to the							
screener for the equipment then a work request is not required.							
 Section 4.2.1.5 New section added to identify the need to get approval for a design change. 							
Added the link to Design Change Approver and Field Engineering Change documents.							
 Section 4.2.1.6 Updated to include re-directing to the appropriate support group with link to 							
the ownership document and link to EAM.							
 Section 4.3.1.3 Added wording to verify the work plan or IOP accurately address facility conditions, work scope, bazard controls and work instructions following Stop 5 of the SPMS 							
OM&S Work Control Procedure							
 Section 4.3.1.4 New section added to make sure pre-approved work plans for grades 2 and 3 							
have appropriate work ins	structi	ons fo	llowing	SBMS Work Package Docum	entation		
Requirements.							
 Section 4.4.4 Added DCA 	appi	oved o	drawin	gs with "Released" stamp.			
 Section 4.7.4 Added word 	ling to	o make	e sure	personnel are updating configu	iration management		
Software with Powertree a	as an	examp	DIE. A	aded updating panel schedules	s within panels.		
Section 5 References	as ap	plicabl					
 Updated references to inc 	lude	all link	ed do	cuments.			
Section 6 Definitions							
\circ Job Type Removed link to	9.A-	·3.a wł	nich is	cancelled.			
 Added Design Change, Design 	n Cha	ange A	pprov	er Approval, Design Owner, Ma	aintenance Owner,		
and Operations Owner					- 0		
Does this revisio		pact a	iny of	the following processes/tool	S?		
Process/1001	NA		res	List specific impact and	required action		
ORNL Work Plan System		\square					
Facility Service Center—Service							
Request							
SNS Instance of EAM		\boxtimes					
SNS Work Request Application		\boxtimes					
Experiment Scheduler		\boxtimes					
External Webpage		\boxtimes					
Internal Webpage		\boxtimes					
Other NScD Procedures		\boxtimes					
Other (list):		\square					
Reviewers							

PROCEDURE REVIEW & APPROVAL FORM

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1.0 PURPOSE AND SCOPE

The purpose of this procedure is to establish a consistent approach to plan, execute, and document Neutron Science Directorate (NScD) work on Chestnut Ridge and to implement the Standards Based Management System (SBMS) "<u>Implement Work</u> <u>Control for Operations, Maintenance and Services</u>" (OM&S) procedure.

This procedure addresses identification of needed work, work screening, planning and preparation for work, evaluation of work hazards, development of hazard controls and work plans, review and approval, work execution and testing, and review of completed work records. It applies to OM&S work performed on Chestnut Ridge by NScD employees.

Work not subject to this procedure includes:

- Research work performed following the SBMS "<u>Implement ISM in Research and</u> <u>Development</u>" procedure (i.e., Research Safety Summary (RSS) work).
- Work performed under the SBMS "*Implement ISM for Other Work*" procedure. For example, office work and non-office tours, observations, surveillances, etc. that:
 - Do not affect operation of NScD facilities
 - Have no impact to life safety or high rigor equipment
 - Do not involve minors
 - Do not require job-specific permitting for personnel safety or require exposure prevention plans (e.g., beryllium).
- With the exception of the Water Mist System which is maintained using this procedure, Fire Safety Systems are maintained by the ORNL Fire Department and ORNL Fire Department Certified Individuals per the SBMS "<u>Maintain/Modify Fire</u> <u>Protection Systems and Equipment</u>" procedure.
- Construction and service work performed by subcontractors working under the latest revision of the <u>Oak Ridge National Laboratory/Chestnut Ridge Facilities Project</u> <u>Safety and Health Plan, (SNS 102030000-ES0007)</u>. If invoked by the subcontract, this procedure may be applied.

2.0 PRECAUTIONS AND LIMITATIONS

The <u>SNS Final Safety Assessment Document (FSAD) for Neutron Facilities (102030102-ES0016)</u> and the <u>SNS Final Safety Assessment Document (FSAD) for Proton Facilities</u> (102030103-ES0018) identify hazards inherent with the operation of the SNS, evaluate those hazards relative to the exposed worker, and assign **Credited Engineered Controls (CEC)** or **Credited Administrative Controls (CAC)** as appropriate to prevent or mitigate those hazards.

The configuration of the equipment and systems that implement those controls is closely controlled to ensure that their safety function is maintained. As such, this equipment is identified as a **CEC** and delineated on the <u>SNS Credited Engineered Controls List (SNS 102030100-ES0007)</u>.

Any work affecting a **CEC** or **Credited Radiation Shielding** is subject to a more extensive review and approval process, i.e., Grade 2 work. See section 4.3.3 of this procedure as well as the <u>SNS Quality Manual (SNS-QA-P01)</u>, and the <u>SNS Shielding Policy (SNS 102030000-ES0008)</u>.

There is no Nuclear Facility work (Grade 1 work) on Chestnut Ridge. Refer to the SBMS OM&S procedure for information regarding Grade 1 work.

3.0 PREREQUISITES AND REQUIREMENTS

- **3.1.** NScD personnel assigned as Area Manager, Task Leader, Work Package/Plan Author, Screener, or Worker complete training on the roles and responsibilities of this procedure (including referenced procedures and tools) before performing those functions. However, an untrained Area Manager, Task Leader, Work Package/Plan Author, or Screener may perform these roles under the supervision of a trained individual. Up to two untrained Workers may work alongside a trained Worker.
- **3.2.** The <u>Neutron Sciences Directorate Policy on Configuration Management (80000000-CMT10002)</u> is in place to ensure the integrity of facility Structures, Systems, and Components (SSCs). NScD personnel conducting work in Chestnut Ridge complex are responsible for ensuring these configuration management requirements are followed during work activities to maintain system status and provide for proper configuration control.
- **3.3.** A prioritization process places proper emphasis on safety requirements, maintenance backlog, system availability, and requirements for those infrastructure elements identified as part of the facility FSADs. NScD Accountable Management is responsible for ensuring that OM&S work in Chestnut Ridge complex facilities is properly planned for priority, grade and status.
- **3.4.** Continuous improvement is dependent upon a process for feedback and lessonslearned based on the relevant information from the results of operations, maintenance and assessment efforts. Task Leaders are responsible for obtaining feedback from workers following the completion of work.
- **3.5.** The <u>ORNL Electronic Work Plan System</u> is used for development and documentation of work packages/plans.
- **3.6.** Minimum Grade 4 Work Documentation
 - 3.6.1. Grade 4 work should have a Work Order which defines and limits the scope of work authorized.
 - 3.6.2. At a minimum, the worker performs a pre-job hazard assessment (workers can use laminated card with twelve questions for Pre-Job Safety Review and Should this job have a work plan?).
 - 3.6.3. Although not required for Grade 4 work, a work plan may always be used if desired.

3.7. Area Manager work start authorization is implicitly provided for call-ins by a qualified Central Control Room (CCR) Operator, Operations Shift Technician (OST), or the Instrument Hall Coordinator (IHC).

4.0 PROCEDURE

NOTE: Task Leader, Work Package/Plan Author, Screener, and Worker roles can be filled separately or by the same individual.

4.1. Work Identification

ALL PERSONNEL

- **NOTE:** If conditions present a personnel safety risk, an *Accelerator Safety Envelope* (<u>SNS 102030103-ES0016</u>) issue, an *SNS Operations Envelope* (<u>SNS OPM 2.B-1</u>) issue, OR may be Occurrence Reporting Process System (ORPS) reportable, the line management shall be notified immediately.
- **NOTE:** For operations activities which use an Operating Procedure, Work Requests, Work Orders, and screening are not required.
- 4.1.1. If the request is defined as "Urgent Work," go to section 4.8, **Urgent Work**.
 - **NOTE:** An electronic service request does not have to be submitted if a work order has been created to identify work or a needed service.
- 4.1.2. If work or a service is needed, submit a service request electronically either by using the <u>Facility Service Center Service Request</u> ("Chestnut Ridge Services" icon) or by selecting the "<u>Work Requests</u>" square under SNS OPERATIONS "Work Control" from the internal NScD homepage. Anyone may identify a deficient condition or request needed work by submitting a service request.
- 4.1.3. Task Leaders responding to a call-in from CCR, the OST, or the IHC will create a Work Order in lieu of an operator submitting a Work Request.

AREA MANAGER/SCREENER

- **NOTE:** It is recognized that service requests may come in many forms: verbal, e-mail, texts, etc. It is left to the recipient's discretion whether to accept "non-standard" requests or to insist they be submitted using the electronic service request process.
- 4.1.4. If a non-standard work request is accepted, ensure that the request is entered into the electronic service request system. This allows for appropriate work screening. If the service request is made directly to the screener of the system requiring work then entering a work request into the system is not required.

- 4.1.5. In the work request,
 - 4.1.5.1. Identify the organization that should perform (or be the lead organization) for the requested work using the Support Group/Team menu, the asset location hierarchy menu, or the asset bar code.
 - 4.1.5.2. The work request will use the system/asset information to automatically direct the work request to the appropriate Screener/Task Leader.

4.2. Work Screening

SCREENER

- 4.2.1. Evaluate the requested scope of work and consult with the Requester, Area Manager, and affected organizations as necessary to obtain sufficient information to:
 - 4.2.1.1. Identify purpose of work and work location(s),
 - 4.2.1.2. Identify hazards associated with work activity,
 - 4.2.1.3. Identify likely controls and permits,
 - 4.2.1.4. Identify applicable regulatory requirements (accelerator safety, life safety, NEPA, etc.),
 - 4.2.1.5. Identify whether the work being requested is a design change. For clarification on the definition of a design change see <u>Spallation</u> <u>Neutron Source Design Change Approver List (802000000-</u>PLC10001).
 - If yes and the Design Change Notice (DCN) document or drawing is "Document Control Center (DCC) Released" or Field Engineering Change (FEC) is approved then continue the screening process. For specifics on DCNs see <u>SNS</u> <u>OPM 9.A-3</u> and for FECs see <u>Field Engineering Changes at</u> the Spallation Neutron Source (802000000-PCD10006).
 - If yes and the DCN document or drawing is NOT "DCC Released" or FEC is NOT approved then there is a need for Design Change Approver (DCA) Approval see <u>Spallation</u> <u>Neutron Source Design Change Approver List (802000000-PLC10001)</u>.

- 4.2.1.6. If necessary to properly plan, authorize design change, and/or perform the work, re-direct the work request to the correct lead organization by using the "Support Group/Team" pull-down menu options and by selecting "Save, But Don't Submit". Utilize the <u>SNS</u> <u>System Ownership Definitions (802020000-PLC10000)</u> and the <u>Enterprise Asset Management (EAM)</u> tool to find the appropriate "Support Group/Team".
- 4.2.2. Determine the appropriate work grade by answering questions 1 4 of the <u>Work Plan Checklist</u>. Enter this information on the work request.
- 4.2.3. Select appropriate work priority, job type, impacted areas and facility status. (See Appendix A for definitions.) Enter this information on the work request.
 - **NOTE:** The graded approach for screening on Chestnut Ridge is the process by which the work screener considers funding, safety, and competing priorities prior to approving a work request. The purpose of this activity is to understand the specific work identified/requested. In addition to gaining an understanding of work scope, the screening function is comprised of categorizing the work by grade, priority, job type, facility status, and identification of areas impacted by the proposed work. The work screener documents the results in the work request; it will be imported into the EAM Work Order when created.
- 4.2.4. Approve or reject the work request.
 - 4.2.4.1. If the request is approved, create a work order by submitting the request to EAM.
 - 4.2.4.2. If the request is rejected, electronically reject it by selecting the "Reject Request" action. Notify the requester of the disposition.
 - 4.2.4.3. The Accountable Manager makes the final decision when the disposition of a work request is disputed.
- 4.2.5. If the work is determined to be Grade 4, assign a Task Leader and go to section 4.5, "Work Start Authorization."
- 4.2.6. If the work is not Grade 4, assign a Task Leader and go to section 4.3, "Work Plan Development."

4.3. Work Plan Development

WORK PACKAGE/PLAN AUTHOR/PLANNER/TASK LEADER

- **NOTE:** Operations are performed using procedures that are developed, reviewed, and approved in accordance with <u>SNS-OPM 1.A-2, SNS-OPM Plans Policies, and Operating Procedures</u>, and supporting documents. Accountable Management (or designee) determines which procedures are OM&S work. Hazards and controls are documented in the Operating Procedure or in an associated Job Hazard Evaluation.
- 4.3.1. Determine if the work is covered by a work plan or an Internal Operating Procedure (IOP). If so, verify:
 - 4.3.1.1. The work plan or IOP are within their approval periodicity and adequately address the requirements to accomplish the work requested.
 - 4.3.1.2. The work plan or IOP is appropriately graded for the work.
 - 4.3.1.3. The work plan or IOP accurately addresses assumed facility conditions, work scope, hazard controls and work instructions applicable for the job. This verification and subsequent use of preapproved work plan or IOP serves as certification of hazard assessment for personal protective equipment (PPE) (thereby completing Step 5 of the SBMS "<u>Implement Work Control for</u> *Operations, Maintenance and Services*" procedure).
 - 4.3.1.4. Make sure pre-approved work plans for grades 2 and 3 jobs have a complete set of work instructions commensurate with the complexity of the task and include any permit requirements, per <u>Work Package</u> <u>Documentation Requirements</u> exhibit.
 - 4.3.1.5. The IOP, if being used, satisfies the requirements of steps 10.7 and 10.8 of the SBMS OM&S work control procedure.
 - 4.3.1.6. If the work plan or IOP satisfy these requirements, go to section 4.5, "Work Start Authorization."
 - 4.3.1.7. If the work plan or IOP do not satisfy these requirements, continue with step 4.3.2.
- 4.3.2. Use the <u>Work Plan System</u> (WPS) for OM&S to develop the work plan (thereby completing Steps 10.1 through 10.6 of the SBMS "<u>Implement Work Control</u> <u>for Operations, Maintenances and Services</u>" procedure). Note that the Screener may have already completed the <u>Work Plan Checklist</u>.
 - **NOTE:** Job Hazard Evaluations (JHEs) should focus on job specific hazards and not include hazards covered by site, building, or facility orientation and training so as not to dilute their effectiveness.

- 4.3.3. Work performed on SNS CECs can require a level of rigor that is not specified in SBMS for Grade 2 work.
 - 4.3.3.1. The CEC System Engineer makes this determination for components found in the SNS Credited Engineered Controls List (SNS 102030100-ES0007), considering factors such as the potential impact on CEC functionality due to the nature of the work or due to the conditions required to perform it. Additional requirements might include:
 - Documentation (procurement and certification paperwork, receipt inspections, equivalency determinations, surveillance procedures, drawings, compensatory actions, etc.),
 - Reviews (Quality Assurance, standing SNS committees, Safety Basis, etc.).
 - 4.3.3.2. The SNS Radiation Safety Officer (RSO) makes this determination for radiation shielding, considering factors such as the impact on the credited function of the shielding and on facility radiological conditions. The RSO convenes the Radiation Safety Committee (RSC) to review work proposals when appropriate.
 - **NOTE:** Post Maintenance Testing (PMT) is used to determine that work has been properly performed and the equipment operates correctly and performs its desired functions. The test should be commensurate with the work performed and the importance of the equipment with respect to facility safety and reliability.
- 4.3.4. Use procedure <u>SNS-OPM 9.D-01</u> *Spallation Neutron Source Work Control* to determine PMT requirements for inclusion in Work Plans, IOPs, or other procedures as an alternative to using PMT forms.

4.4. Work Plan Review and Approval

NOTE: Approval of "Call-In" work plans can be provided outside of the ORNL Work Plan System (verbal, text, etc.) and annotated in the work plan by the Work Package/Plan Author.

SUBJECT MATTER EXPERTS

- 4.4.1. Review and concur on the work packages that:
 - 4.4.1.1. Have specific action steps to mitigate hazards or ensure compliance with regulatory/contractual/ORNL requirements in their area of expertise.
 - 4.4.1.2. Require exemptions, variances, or formal interpretations of regulatory/contractual/ORNL requirements in their area of expertise.

- 4.4.1.3. Initiate or require mandatory review of an activity through the requirements of another Subject Area, Management System, procedure, policy, or guideline [e.g., Radiological Work Review Checklist, Laboratory Space Manager Program, generating a new Data Quality Objective (DQO), establishing a Satellite Accumulation Area (SAA)].
- 4.4.1.4. Provide input on prioritization of hazard control requirements in cases of abnormal situation response or conflicting requirements.

WORK PACKAGE/PLAN AUTHOR

4.4.2. Resolve and incorporate comments per the following guidelines:

- Build the Work Plan using the Work Planning Tool. Reviewers should be manually assigned and involved up front as needed.
- Reviewers/Approvers are determined from SBMS <u>Work Package</u> <u>Reviewers Table</u> exhibit.
- The Work Plan is distributed for initial review (electronically preferred). Ideally, a reasonable "need by" date (~1 week) should be provided.
- Reviewers review, comment, and evaluate other documents in the Work Package (drawings, permits, etc.) if needed. The SBMS <u>Work Package</u> <u>Reviewers Table</u> exhibit provides the expected scope of each type of review.
- Comments are sent to the Work Package/Plan Author who incorporates and resolves conflicts.
- Feedback to reviewers is provided for all comments not incorporated.
- The Work Package (including all documents) is made available for final review and approval in the ORNL Work Plan System.
- 4.4.3. Obtain "Review/Approver" signatures.
 - 4.4.3.1. By signing as Reviewer/Approver, personnel are approving the Work Package as written.
 - 4.4.3.2. Signatures can be made electronically in the ORNL Work Plan System or on a hard copy.
- 4.4.4. When the Work Package is ready for work (all required documentation, permits, hazard evaluations, DCA approved DCN and/or drawings with "DCC Released" stamp, reviews, approvals and concurrences) and materials (tools, equipment, parts, etc.) are available, provide electronic copies of all signed documents to the assigned Task Leader.

4.5. Work Start Authorization

TASK LEADER

- 4.5.1. Link all work package documents to the work order in the NScD instance of EAM.
- 4.5.2. Request work start Area Manager authorization ("Out for Authorization" in the EAM work order status pull down menu). For call-in work, first ensure "Call In" has been selected as the facility status.
 - **NOTE:** CEC Engineers will receive an automatic notification from EAM when the status of a work order concerning their system(s) is set to "Out for Authorization." This notification is not sent if the CEC Engineer is also the work order creator, Task Leader, or Area Manager.

AREA MANAGER

- **NOTE:** Area Manager work start authorization is implicitly provided by the call-in from CCR, the OST, or the IHC.
- 4.5.3. Authorize work start by written or electronic workflow approval of the EAM work order (electronically select "Authorized") signifying:
 - 4.5.3.1. Planned operations and facility conditions are appropriate for the work to proceed.
 - 4.5.3.2. There is no conflict with other planned work.

4.6. Work Execution

NOTE: Plan of the Day (POD) meetings facilitate a common understanding and integration of scheduled activities, and minimize any impact to ongoing maintenance, operations and/or experiments. Maintenance Coordination meetings occur weekly.

TASK LEADER

- 4.6.1. When ready, change the Work Order status to "Released" and, for call-in work, notify CCR, the OST, or the IHC (whoever made the call-in) that work is about to begin.
- 4.6.2. Perform Pre-Job Safety Review as follows:
 - 4.6.2.1. For Grades 2, and 3, or where required by a job-specific IOP or an Operating Procedure, the Task Leader and workers conduct documented pre-job safety review using Pre-job Safety Review (PJSR) form or equivalent.

- 4.6.2.2. Task leader/designee briefs any worker who joins a Grade 2 or 3 work activity after the initial pre-job brief **prior to performing work**.
- **NOTE:** The PJSR should focus on job specific hazards and not include hazards covered by site, building, or facility orientation and training so as not to dilute its effectiveness.

WORKER(S)

- 4.6.2.3. For Grade 4, Workers perform their own informal pre-job safety review. As a minimum, workers should answer the following safety review questions. If the answer to any of the six questions is "yes," the work may not be grade 4 and the Worker should contact the Task Leader for resolution.
 - Will I be exposed to hazards at the work location that are **not** associated with the job?
 - Will I use chemicals or materials for which I do not understand the hazards?
 - Will the job require Personal Protective Equipment (PPE) that I do not normally use or that I have not been trained to use?
 - Will bystanders be exposed to job hazards?
 - Will any permits be required?
 - Is there any aspect of the work that I do not feel safe performing?
- 4.6.2.4. For any skill of the worker (SOTW) activity, regardless of work grade, prepare by asking these or similar questions:
 - What am I (are we) doing? What is the scope?
 - What are the hazards? What PPE is required?
 - What communication is needed during the task? How will we communicate?
 - What is the worst thing that can happen? How can I/we prevent it? What will I/we do if it happens?
 - How are we going to respond in the event of a local, area, or equipment alarm?
 - Are there lessons learned that should be considered?
- 4.6.2.5. Any workers who join Grade 2 or 3 work after the initial pre-job brief sign in on the documented PJSR form or its equivalent being used for job **prior to performing work**.

TASK LEADER

- **NOTE:** Task leader may involve project leaders, issuing authorities (IA), radiological protection (RP), industrial safety/hygiene (IS/IH), environmental protection officers (EPOs), environmental compliance representatives (ECRs), waste services representatives (WSRs) or other SMEs that may be needed in conducting portions of pre-job brief. Pre-job Safety Review form provides basic guide for content and mechanism to document the review, if required.
- **NOTE:** Supervisors and workers are encouraged to use a variety of Human Performance Improvement (HPI) tools in addition to pre-job briefings to reduce frequency of human errors and minimize consequences when they do occur. See <u>Take-A-Minute</u>, <u>Self-Check</u>, and <u>Peer-Check</u> guidelines for explanation of how to use these three HPI tools.)
- 4.6.3. Verbally approve work start to the workers by providing them the Work Order (Grade 4 work) or by providing them the PJSR and work package (Grade 2 and 3 work). Task Leader approval confirms the following verifications are complete:
 - 4.6.3.1. Customer approval for the scheduled work start has been obtained.
 - 4.6.3.2. Work package/plan or IOP has been reviewed and approved.
 - **NOTE:** Even slight differences in scope can result in major impacts to health, safety, or waste management, or compliance issues.
 - 4.6.3.3. Pre-Approved Work Plans or job-specific IOPs cover the proposed scope of work.
 - 4.6.3.4. Task Leader and workers share common understanding of the following:
 - Complete work scope for each work location (e.g., both field work and home shop work)
 - Hazards associated with the work
 - Controls necessary to prevent accidents, injuries and property damage.
 - Conditions are appropriate for work to proceed.
 - All necessary permits have been obtained and completed and permit conditions have been met or appropriate hold point inserted.

WORKER(S)

- 4.6.3.5. Workers maintain the work package at the job site based on work grade:
 - For Grade 2 work, while work is in progress,
 - For Grade 3 and 4 work, at the discretion of the Task Leader,

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- **NOTE:** Work package may be printed copy or as viewed from electronic device such as personal computer (PC), personal digital assistant (PDA) or tablet.
- 4.6.4. If, at any time during work execution, the planned work changes OR an issue arises concerning planned work, then workers suspend work and notify the Task Leader.

TASK LEADER

- 4.6.5. If Work Package/Plan or job-specific IOP changes are required after approval, categorize the changes as either "intent" or "non-intent" and perform the following:
 - 4.6.5.1. For intent revisions, Task Leader evaluates need for work suspension and returns to appropriate work control process step that will provide necessary corrective action and approvals. Intent changes must be documented. Intent changes occur when the change does one of the following:
 - Significantly changes personnel safety hazards or controls,
 - Significantly alters work scope beyond original purpose (i.e., directions in work package or IOP do not address change in work being considered),
 - Significantly changes the work location, or
 - Identifies a new environmental hazard.
 - 4.6.5.2. For non-intent revisions, the Task Leader revises the work package/work plan and restarts work. Task Leader initials and dates all handwritten changes to work package/plan.

WORKER(S)

- 4.6.6. Staff exercise <u>Stop Work</u> authority when they observe a task or activity that does one of the following:
 - Presents an unsafe situation to human health or the environment,
 - Indicates an undesirable trend related to operations, safety, the environment, quality, or security, or
 - Presents an imminent danger situation.
 - **NOTE:** An imminent danger situation may require issuing a stop work order per<u>Initiating Stop Work Authority, Resolving Concerns, and</u> <u>Restarting Work Activities</u> procedure.

- 4.6.7. At the completion of the job, workers perform the following:
 - 4.6.7.1. Ensure that no personnel hazards are introduced in the work area by the work performed. This can be done by either posting area as work in progress OR by performing housekeeping to return the area to its original condition.
 - 4.6.7.2. Ensure work packages/procedures are returned to Task Leader.

TASK LEADER

4.6.8. Verify that the work and applicable PMT are complete. For call-in work, notify CCR, the OST, or the IHC (whoever made the call-in) that the work is complete.

4.7. Work Closeout

TASK LEADER

- 4.7.1. Verify the work site is left in a clean and safe condition.
- 4.7.2. Collect feedback from workers, work package, documents, and requestor.
- 4.7.3. Record any Work Plan lessons-learned in the "Feedback for Approved Work Plans" under the "Feedback" tab of the approved work plan.
- 4.7.4. Perform administrative closeouts including:
 - Initiate any additional or identified changes to drawing (DCR/DCN) and/or configuration management software (i.e. electrical changes update Powertree),
 - Update applicable panel schedules located in the panels,
 - Update the equipment (system/position/asset) history,
 - Forward copies of completed permits to the appropriate SBMS program manager as required by SBMS (e.g., confined space),
 - Ensure that completed work control documents, including test results, and permits as applicable are entered into the work order record in EAM see <u>SBMS Records Management Guideline: Document/Record Decision Tool</u>.
- 4.7.5. Change the work order status in EAM to "Complete" and inform Operations (where appropriate) and the requestor of the return to service.
- 4.7.6. Take action on feedback where applicable. Possible actions may include:
 - Initiate a change to a pre-approved work plan or IOP,
 - Initiate development of a pre-approved work plan or IOP,
 - Notify appropriate SME, system engineer, or equipment owner of issues experienced,

- Initiate a follow-on work request for correcting issues identified,
- Submit as a Formal Lessons Learned.

4.8. Urgent Work

RESPONDING STAFF

When an urgent work situation occurs and immediate actions are required from staff, the Responding Staff must:

- 4.8.1. Understand the goals of the immediate actions to be performed this allows for recognition of when to transition from the urgent to normal work control processes.
- 4.8.2. Quickly analyze work tasks to be performed. Responding staff may include Supervisor(s), worker(s), and appropriate SME(s) it may also include the Complex Facility Manager (CFM) or the Laboratory Shift Superintendent (LSS).
- 4.8.3. Identify hazards associated with the work and ensure controls are put in place. When available, pre-approved instructions should be used.
- 4.8.4. Ensure work is authorized by the owning Division Director, the SNS Operations Manager, or the Chief Operating Officer (or designee) prior to performing.
 - The goals or steps are reviewed with the authorizing manager.
 - Authorization can be written or verbal (by phone for example).
- 4.8.5. Perform a pre-job safety review.
- 4.8.6. When the urgent work conditions have been resolved or are under control, work under this section must be stopped.
 - 4.8.6.1. The Task Leader prepares or ensures that documentation is prepared (Work Order, Work Plan, Permit, etc.) to describe the activities that took place.
 - 4.8.6.2. The Task Leader lists approvers and authorizers of the work including those that helped analyze hazards and develop controls.

5.0 REFERENCES

- **5.1.** SBMS "Implement Work Control for Operations, Maintenances and Services" (OM&S) procedure
- **5.2.** SBMS "Implement ISM in Research and Development"
- 5.3. SBMS "Implement ISM for Other Work"
- 5.4. SBMS "Maintain/Modify Fire Protection Systems and Equipment"

- 5.5. SBMS "Initiating Stop Work Authority, Resolving Concerns, and Restarting Work Activities"
- **5.6.** SBMS "Stop Work"
- 5.7. SBMS "See Take-A-Minute, Self-Check, and Peer-Check"
- 5.8. SBMS "Work Package Reviewers Table"
- 5.9. SBMS "Work Plan Checklist"
- **5.10.** SBMS "Records Management Guideline: Document/Record Decision Tool"
- 5.11. SNS Final Safety Assessment Document (FSAD) for Neutron Facilities, SNS 102030102-ES0016
- 5.12. SNS Final Safety Assessment Document (FSAD) for Proton Facilities, SNS 102030103-ES0018
- 5.13. Neutron Sciences Directorate Policy on Configuration Management, SNS 80000000-CMT10002
- 5.14. Spallation Neutron Source Design Change Approver List, SNS 802000000-PLC10001
- 5.15. Field Engineering Changes at the Spallation Neutron Source, SNS 802000000-PCD10006
- 5.16. SNS Credited Engineered Controls List, SNS 102030100-ES0007
- 5.17. SNS Quality Manual, SNS-QA-P01
- 5.18. SNS Shielding Policy, SNS 1020300000-ES0008
- **5.19.** Oak Ridge National Laboratory/Chestnut Ridge Facilities Project Safety and Health *Plan,* SNS 102030000-ES0007.
- 5.20. SNS Plans Policies, and Operating Procedures, SNS-OPM 1.A-2
- 5.21. SNS Accelerator Safety Envelope, SNS 102020103-ES0016
- 5.22. SNS Operations Envelope, SNS-OPM 2.B-1
- **5.23.** SNS Equivalency Form for Credited Engineering Controls (CEC), SNS-OPM ATTACHMENT-3.A-8.1.b
- **5.24.** RAD Procedure for Design of New or Changes to Existing Systems, Structures, Components or Software. SNS OPM 9.A-3
- 5.25. SNS Work Control, SNS-OPM 9.D-1

6.0 **DEFINITIONS**

Accelerator Safety Envelope (SNS 102030103-ES0016) - The set of verifiable physical and administrative credited controls that define the bounding conditions for safe operation and address the accelerator facility hazards and risks.

Accountable Management - The Line Manager, Equipment Owner, or Facility Manager responsible for the system(s) being maintained or modified.

Area Manager - The individual responsible for coordinated OM&S workflow in an assigned geographic area. This person ensures requests for work in the area are directed to the correct organization, and authorizes work start by written or electronic workflow approval of work package ensuring:

- Planned operations and facility conditions are appropriate for the work to proceed, and
- There is no conflict with other planned work.

Reject – The status a Screener selects when a Work Request is not accepted. If the request for service is rejected for any reason, the Screener shall notify the requester of the reason. Accountable Management makes the final determination when the Requester does not agree with the Screener's judgment.

Credited Administrative Control – An administrative control identified in the safety assessment documents per SNS policy.

Credited Engineered Control – An engineered control identified in the safety assessment documents per SNS policy.

Design Change – "The form, fit, or function is being altered by the work being performed."

Design Change Approver Approval – This assures new designs or changes to existing designs (on paper or in the field) are adequately reviewed, formally approved, and properly documented before fabrication, procurement, or making physical changes in the field.

Design Owner – Responsible for managing design changes, supporting troubleshooting of the system, addressing long-term needs of the system, and maintaining cognizance of the requirements of the system.

Facility Status – This is the facility condition, as judged by the Screener, necessary to perform the requested work. The options are:

- Anytime The work can occur anytime regardless of beam status.
- Call-In "Call-In" is used to identify after-hours work when staff are called in to complete work as soon as possible. It is not used as an aid in work scheduling.
- Maintenance Day The work requires the beam to be shut down completely but can reasonably occur within the period of one day (the Maintenance Day).
- Partial Outage Accelerator/Target To do the work, the beam must be off to the target or off in some accelerator areas but not shut down completely. The work will likely need more than one day to complete.

- Partial Outage Neutron Instruments To do the work, the beam must be off to one or more neutron instruments. The work will likely need more than one day to complete.
- Planned Outage The beam must be shut down completely for an extended period of time to accomplish the full scope of the work.

GRADE 1 - Work that could affect the operation of a CAT 1, 2, or 3 Nuclear Facility. Grade 1 tasks are subdivided into 8 types (A-H) based on the on the definitions below. These types are driven by the documentation and review requirements for work being performed.

- A May not effect operation of facility, however facility management determines that work Requires Facility Manager Attention.
- **B** Experiment Systems Maintenance
- **C** Non-Safety Related Preventive Maintenance, Calibrations, or Routine Operations
- D Non-Safety Related Corrective Maintenance, Trouble Shooting/Testing, or Routine
 Operations
- E Safety Related Preventive Maintenance, Calibrations, or Routine Operations
- **F** Safety Related Corrective Maintenance, Trouble Shooting/Testing or Routine Operations
- G Non-Safety Related Facility Modification
- H Safety Related or Technical Safety Requirement Related Facility Modification

GRADE 2 – Work that could affect the following:

- Life Safety—Non-nuclear functional features relative to fire, storm, collapse, crowd behavior, and other related safety considerations within a structure or facility.
- **High Rigor Equipment**—Equipment for which maintenance or repair requires a high degree of rigor in work planning, performance and documentation, as specified in regulations or standards due to potential for serious injury. This equipment may have defined work protocols required by OSHA, a nationally recognized standard such as ANSI or ASME, or by the equipment manufacturer. Examples: cranes, forklifts, man lifts or work platforms, pressure vessels, high pressure systems, etc. SNS Credited Engineered Controls are another example of high rigor equipment.
- Facility Modifications—Significant changes to a facility Structures, Systems, or Components (SSCs) that are governed by Building, Fire, or other recognized codes or standards. NOTE: Additional guidance is provided in the procedure "Implement Work Control for Operations, Maintenance, and Services" (see Work Grading Guidance).

GRADE 3 - Work activities not classified as Grade 1 or 2 that require job specific permitting for personnel safety or a high level of coordination due to the fact that the work might have a significant impact on laboratory operations. **NOTE**: Additional guidance is provided in the procedure "Implement Work Control for Operations, Maintenance, and Services" (see Work Grading Guidance).

GRADE 4 - Work activities that can be completed and controlled effectively through skillof-the-worker. **NOTE**: Additional guidance is provided in the procedure "Implement Work Control for Operations, Maintenance, and Services" (see Work Grading Guidance). **Hold Point** – A Hold Point is a step in the Work Plan that identifies the necessary safe work environment and prerequisite conditions for the workers to safely and effectively perform the requested work. A Hold Point requires facility conditions to be verified or changed and require a signature from the cognizant discipline (i.e. Accountable Management, RCT, IH, Quality, etc.) prior to proceeding in the workplan.

Hold points are placed at the discretion of the work plan author and used to identify critical steps, changes in operating or safety conditions, or other instances where proceeding beyond the hold point without having accomplished the requirements of the hold point would produce dire results.

- Example A work plan requires a specific system alignment for work to continue. This would require a Hold Point which would only be released by the Accountable Management's signature, once the system alignment is complete.
- Example A work plan requires intrusion into a potentially contaminated system. This
 would require a Hold Point which would only be released by a Radiological Control
 Technician's signature, once the work area has been surveyed to meet the
 specifications in the work package.

"Intent" Work Plan change – A required change to an approved work plan, normally discovered during work execution, that:

- Significantly changes personnel safety hazards or controls
- Significantly alters work scope beyond original purpose (i.e., directions in work package or IOP do not address change in work being considered)
- Significantly changes the work location
- Identifies new environmental hazard

In addition to being annotated in the work plan, intent changes require applicable reviews and approvals be repeated.

Impacted Area(s) (Primary, Second, Third, & Fourth) – The Work Request and EAM fields that identify the areas that will be impacted by the requested work, particularly when the impacts extend beyond the location of the component or system (for example, work requiring a power, cooling water, or controls outage that affects multiple areas).

Job Type – The Work Request or EAM data field that provides additional information regarding the work. Options include:

- Breakdown Immediate repair/replacement of equipment that prevents neutron production. Replace components with like-for-like parts or with parts for which an equivalency determination has been made (For Equivalency determinations, see <u>SNS-OPM ATTACHMENT-3.A-8.1.b</u>, <u>SNS Equivalency Form for Credited Engineering</u> <u>Controls (CEC)</u>.
- Corrective Maintenance Immediate repair/replacement of equipment that occurs outside of neutron production. Replace components with like-for-like parts or with parts for which an equivalency determination has been made (For Equivalency determinations, see <u>SNS-OPM ATTACHMENT-3.A-8.1.b</u>, <u>SNS Equivalency Form for</u> <u>Credited Engineering Controls (CEC)</u>.

- Installation/Upgrade Work that installs newly designed equipment (not installation of a new like-for-like part). Equipment installed after Accelerator Configuration Control Committee (ACCC) approval would be an example of this Job Type.
- Predictive Maintenance refers to the use of data-driven, proactive maintenance methods (monitoring alarm and interlock trends for example) designed to analyze the condition of equipment and help predict when maintenance should be performed. Example would be monitoring equipment temperature or rack air flow or fan speed or fan vibration to determine when to clean air filters or replace fans.
- Preventive Maintenance is the regular and routine maintenance of equipment and assets to keep from unexpected equipment failure. Example would be routinely cleaning air filters and checking fan operation in racks every month.
- PM Corrective Immediate repair/replacement of equipment identified during preventive maintenance.
- Repairable Spare Repair of a spare and/or determination of the root cause of its failure. These are shop or "send out" repairs, and not repairs in place (rebuilding for return to service in the future, i.e. barcoded asset, history tracking).
- Routine Work that does not specify an asset (painting, shop cleanup, training, test stand R&D)
- Standing Work Order (wo) Work covered under a blanket work order such as janitorial services.
- Subcontract Work Any maintenance or Installation/Upgrade activities performed by a Subcontractor.

"Like-for-Like" Part – A part that has the same manufacturer (make) and model number as the currently installed counterpart.

Maintenance Owner – Responsible for performing maintenance or installing upgrades.

"**Non-Intent**" **Work Plan change** – A required change to an approved work plan, normally discovered during work execution, that is essentially editorial and doesn't satisfy the definition of an intent change. Task Leaders approve non-intent changes and annotate the work plan to reflect them.

Operations Owner – Responsible for day-to-day operation of the system, monitoring the operational performance, and initiating maintenance or engineering design changes.

Problem Code – The EAM tool designation that identifies the technical organization (and Screeners) responsible for a piece of equipment or system if asset information is known. If asset information is not known, the problem code can be assigned in the Work Request application (Screener & Area Manager view) by selecting the correct technical organization using the "Support Group/Team" menu.

Service Provider - Any directorate, division, group, crew individual, or ORNL staff responsible for supervision or oversight of a service subcontractor that provides an activity, product or hands-on-labor for their own or any other organization including warranty work. This does not include administrative activities in an office environment.

Skill of the Worker - The knowledge, skills and abilities that enable a staff member to readily and effectively perform a task. "Skill of the worker" knowledge, skills and abilities

form the baseline a worker brings to a position with no additional training or certification and continue to grow as the worker gains experience.

SNS Operations Envelope (<u>SNS OPM 2.B-1</u>) – A document that defines the conditions, safe boundaries, and administrative controls to ensure that the SNS is operated within the defined ASE limits and bounding conditions.

Standing Maintenance Work Package (SWMP) – A work package, containing a pre-approved work plan, that is used to perform corrective, preventive, or predictive maintenance and is intended to cover more than one occurrence of the work scope.

Task Leader - The person responsible for obtaining work authorization, work execution, documentation of work, and obtaining feedback at the completion of work.

Urgent Work – Work conducted using verbal planning, authorization, and execution. Necessary to address an identified deficiency that may result in a personnel safety hazard or other abnormal condition that cannot be addressed in a timely manner through the documented work control process without undue risk, hazard exposure, or consequence. Level 2 Manager (owning Division Director, the SNS Operations Manager, or the Chief Operating Officer or designee) authorization is required.

Work Authorizer – Collectively, the individuals having authority to approve the initiation of work, access to the worksite, and funding for the work.

Work Order Status:

<u>Caution</u>: Do not use **On-Hold** or **Deferred** options in work orders that are automatically generated; doing so will bypass future release authorizations or break the logic that generates future work orders.

- "Work Request" The initial status of a Work Order created from a Work Request; no Work Order action has been taken in EAM.
- "In Planning" The Work Order is being processed by a Planner or Task Leader.
- "Out for Authorization" The Task Leader has requested Area Manager authorization in EAM to do the work.
- "Authorized" The Area Manager has authorized the work to proceed.
- "Ready for Parts" Triggers materials clerk to kit parts for the work order.
- "Parts Issued" Parts are kitted and delivered.
- "Ready for Scheduling" Work Order planning is completed. Parts are available. Work is placed in ready backlog.
- "Released" The Task Leader has released the Work Order for Workers to do the work.
- "Cancelled" The Task Leader has decided not to perform the work described in the work order (change in work scope developed, duplicative work order, etc.).
- "Deferred" The Task Leader has decided the work cannot be performed as scheduled but still needs to be accomplished at a future date.
- "On-Hold" The Task Leader has paused the work for an indeterminate period of time for any reason.
- "Complete" The Task Leader has completed administrative processing of the Work Order following completion of the work.

Work Package - The group of documents needed to complete a job, consisting of the Work Plan (produced through the ORNL Work Plan System), permits, drawings, etc.

Work Package/Plan Author - The work author is responsible for ensuring proper completion of the JHE and work planning checklist, preparing the subsequent work instructions, obtaining the proper reviews in compiling the work package/plan.

Work Plan - The work document produced through the ORNL Work Plan System.

Work Screener - A person who represents the service group and is knowledgeable about the work performed and the work environment.

Priority	Priority Definitions
Émergency Response	 Caution: The Emergency Response process does not maintain configuration control and operability of equipment, has fewer controls to prevent human injury and error, and is intended for Emergency Response only. Work immediately, such as: Real time prevention or response to injury Mitigation of ongoing emergency event
1	 Work <u>as soon as possible</u>, such as: Deficiencies that are preventing the accelerator or a beam line(s) from operating Correction or mitigation of imminent safety hazards: This category includes industrial safety, radiological safety, environmental protection, security (physical, nuclear material) situations where direct action is needed to correct, mitigate, prevent risk to the public, workers, or the environment.
2	 Work <u>promptly</u>, such as: Deficiencies that degrade and ultimately could prevent the accelerator or a beam line from operating; Deficiencies that threaten the completion of an approved experiment. Corrective and preventive maintenance of CECs—the systems and components formally defined by Safety Assessment Documents (SAD). It may also include comparable systems and components that provide protection from significant biological, chemical, and security hazards. This significant category typically addresses "active" systems and components. Operator workarounds (for example, resolution of systems bypasses)
3	 Work <u>when resources are available</u>, such as: Corrective/Preventive/Predictive maintenance: This category includes corrective, preventive, and predictive maintenance of non-CECs that can be planned for future completion. (for example, equipment calibration or replacement, filter replacement, belt replacement)
4	 Work if resources are available, such as: Blanket support work activities or activities of undefined scope Cosmetic improvements Good practices that are not in any above priority

7.0 WORK CONTROL ROLES

Area Manager

<u>Role:</u> Stewardship of an assigned area within the Chestnut Ridge complex. Facilitate efficient planning, coordination and daily oversight of area Maintenance & Services activities.

Responsibilities:

- Coordinate and provide oversight for all Maintenance & Services activities in assigned area.
- Resolve interface problems, working according to established priorities and anticipating actions necessary to produce beam and neutrons as scheduled.
- Work with Task Leaders to coordinate and schedule tasks in assigned area.
- Provide status of maintenance progress, problems and plans at the SNS POD or other area specific meetings.
- Identify necessary maintenance and modifications in assigned area; participate in planning for these activities.
- Set expectations to maintain a clean and orderly work environment within assigned area(s). Note that this responsibility does not extend to areas, such as labs, that already have responsible individuals (Lab Space Manager, etc.).
- Assure management is aware of resource limitations or other problems preventing the effective implementation of the above roles and responsibilities.

Accountabilities:

• To Accountable Management for carrying out the responsibilities listed above.

Authorities:

- Authorize all Maintenance & Services work in their assigned area(s).
- Stop unauthorized work in assigned area(s).
- Require personnel working in assigned area to adhere to established standards for a clean, safe and orderly environment.

Planner

<u>Role:</u> Plan assigned Work Control tasks within the Chestnut Ridge Complex.

Responsibilities:

- Review the assigned Work Order and communicate with the requestor as necessary to clearly understand the intent and scope.
- If being used to perform the work, ensure the pre-approved work plan or Internal Operating Procedure (IOP) covers the location, hazards, controls, and required reviews/approvals for the proposed work.
- If the work is not Grade 4 or being performed using an IOP or pre-approved work plan, develop the Work Plan using the ORNL Work Plan System involving workers, System Engineers, and Subject Matter Experts (SME), as appropriate.
- Ensure that the Work Plan documents required by SNS 10800000-PR0061, Chestnut Ridge Operations, Maintenance, and Services Work Control Procedure, are available before assigning work plan reviewers and approvers (normally done by electronically attaching the documents to the Work Plan).

- Process changes and obtain new Work Plan approvals, when directed, in response to the discovery of "intent" changes (new scope, hazards, locations, etc.).
- Identify necessary maintenance and modifications in assigned area; participate in planning for these activities.

Accountabilities:

• To Accountable Management for carrying out the responsibilities listed above.

Authorities:

• To develop work plans as described above.

Screener

<u>Role:</u> Stewardship of Work Requests for the Chestnut Ridge Complex.

Responsibilities:

- Review the Work Request first to ensure that the request has been properly assigned
- Verify/update information submitted by the requestor for clarity in scope, intent and purpose.
- Add "Asset ID" if the asset(s) is not identified.
- Identify the hazards associated with the work including the likely controls and required permits.
- Identify regulatory requirements that apply to the work.
- Populate the mandatory fields in the Work Request System fields (grade, priority, type, facility status, and impacted areas).
- Accept or Reject the Work Request. If rejected, promptly notify the Requestor of the determination.
- If accepted, assign a Task Leader and submit the Work Request to EAM (making it a Work Order). The Screener may also be the Task Leader.

Accountabilities:

• To Accountable Management for carrying out the responsibilities listed above.

Authorities:

- To make the determinations listed above.
- To require Requesters to provide the information necessary to process a Work Request.

Task Leader

<u>Role:</u> Stewardship of an assigned Work Control Task within the Chestnut Ridge Complex. Facilitate efficient planning, coordination and daily oversight of assigned task activities.

Responsibilities:

- Review the Work Order from the Screener and communicate with the requestor as necessary to clearly understand the intent and scope.
- If being used to perform the work, ensure the pre-approved work plan or Internal Operating Procedure (IOP) covers the location, hazards, controls, and required reviews/approvals for the proposed work.
- If the work is not Grade 4 or being performed using an IOP or pre-approved work plan, develop the Work Plan using the ORNL Work Plan System involving workers, System Engineers, and Subject Matter Experts (SME), as appropriate.
- Ensure that the Work Plan documents required by SNS 108000000-PR0061, *Chestnut Ridge Operations, Maintenance, and Services Work Control Procedure,* are available before assigning work plan reviewers and approvers (normally done by electronically attaching the documents to the Work Plan).
- Ensure that the Work Plan documents are available for Area Manager review before requesting Work Order authorization (normally done by electronically attaching the documents to the Work Order).
- For Grade 2 and 3 work, conduct a Pre-Job Safety Review (PJSR) with workers involving the appropriate SMEs, as appropriate. Ensure any workers joining a job in progress receive a PJSR before beginning work.
- Work with Area Managers to coordinate and schedule tasks.
- Identify necessary maintenance and modifications in assigned area; participate in planning for these activities.
- Approve work start, ensuring that the customer has approved work start, the Area Manager has authorized the Work Order, and the workers have a common understanding of the work scope, hazards and controls.
- Stop work when job conditions are discovered to be different from those planned (scope, hazards, location, etc.). Obtain approval for "intent" changes.
- Ensure that Asset information is updated when work is complete.
- At a minimum, ensure that lessons-learned are documented in the ORNL Work Plan System "Feedback" field.

Accountabilities:

- To Accountable Management for carrying out the responsibilities listed above.
- For Grade 2 and 3 work, to Accountable Management for only conducting work under an approved Work Plan or IOP.
- To the responsible Area Manager for only performing work that has been authorized.

Authorities:

- To stop work that has not been approved or that exceeds the scope of the Work Plan/IOP.
- To require personnel working in assigned area to adhere to established standards for a clean, safe and orderly environment.
- To make the determination and approve "non-intent" changes to a Work Plan/IOP.

8.0 REVISION LOG

10	 Complete rewrite to adopt the SBMS "Implement Work Control for Operations, Maintenances and Services" (OM&S) procedure as the basis for Chestnut Ridge work control. Other significant changes were: Expanded the applicability of this procedure to all OM&S work in the Chestnut Ridge Complex. Implemented an Area Manager role and deleted Operations Engineer, Area Engineer, and Area Physicist involvement in work control Implemented the ORNL Work Plan System for work plan development as well as the associated Accountable Management role Eliminated "Immediate Work" that allowed work control to be bypassed because of the operational impact
11	 The definitions were revised to define "job type" options available in Infor EAM (Calibration, Routine, Standing wo). The definitions were revised to define "work order status" options available in Infor EAM (Cancelled, Deferred, On-Hold). Updated section 4.8 and the "Urgent Work" definition to reflect organizational changes.
12	 Updated the following links that were either broken Sections 1 & 2, or the document title was revised slightly Sections 1 & 3.2: Section 1 Oak Ridge National Laboratory/Chestnut Ridge Facilities Project Safety and Health Plan (SNS 102030000-ES0007) Section 2 SNS Quality Manual (SNS-QA-P01) Section 3.2 SNS Configuration Management Policy Section 4 work request application link Added NOTE: after step 4.5.2 explaining automatic CEC Engineer notification of work on their system(s) Updated "Urgent Work" approval roles in section 4.8 and in the definitions section to reflect organizational changes.

13	 Updated the following links that were broken in Sections 1 & 2 Section 1 Oak Ridge National Laboratory/Chestnut Ridge Facilities Project Safety and Health Plan, SNS 102030000-ES0007. Section 2 SNS Credited Engineered Controls List (SNS 102030100-ES0007). Section 2 SNS Shielding Policy (SNS 102030000-ES0008). Section 2 SNS Quality Manual (SNS-QA-P01), The definitions were revised to update "job type" options available in EAM (Breakdown, Corrective, PM Corrective) The definitions were revised to update "work order status" options available in EAM (Work Request, Ready for Planning, Ready for Parts, Parts Issued) The definitions were revised to update "Priority" options available in EAM (Priorities 1, 2, 3, 3.1, 3.2, 3.3, 3.4, and 4 were changed to priorities 1, 2, 3, and 4)
14	 Section 3 Prerequisites and Requirements Section 3.2 Removed 9.A-1 and added the NScD configuration management policy. Section 4 Procedure Section 4.1.4 Added a brief explanation for why a non-standard work request should be entered into the work request system. Also added if the request is made directly to the screener for the equipment then a work request is not required. Section 4.2.1.5 New section added to identify the need to get approval for a design change. Added the link to Design Change Approver and Field Engineering Change documents. Section 4.2.1.6 Updated to include re-directing to the appropriate support group with link to the ownership document and link to EAM. Section 4.3.1.3 Added wording to verify the work plan or IOP accurately address facility conditions, work scope, hazard controls and work instructions following Step 5 of the SBMS OM&S Work Control Procedure. Section 4.3.1.4 New section added to make sure pre-approved work plans for grades 2 and 3 have appropriate work instructions following SBMS Work Package Documentation Requirements. Section 4.4.4 Added DCA approved drawings with "Released" stamp. Section 4.7.4 Added wording to make sure personnel are updating configuration management software with Powertree as an example. Added updating panel schedules within panels. Added attaching permits as applicable to the work order. Section 5 References Updated references to include all linked documents. Section 6 Definitions Job Type Removed link to 9.A-3.a which is cancelled. Added Design Change, Design Change Approver Approval, Design Owner, Maintenance Owner, and Operations Owner