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CP3-OP-0204 **FRev. 1**	**TITLE**: Out Of Service Equipment Control	Page 1 of 12

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1.0 PURPOSE AND SCOPE

1.1 Purpose

To provide instruction for removal of equipment from service and the restoration of equipment considered Out of Service (OOS) by the Paducah Gaseous Diffusion Plant (PGDP) Deactivation & Remediation (D&R) contractor.

1.2 Scope

This procedure applies to PGDP D&R contractor personnel performing removal of equipment from service and/or restoration of equipment which have been considered long-term OOS, hereafter referred to as OOS.

Existing "Abandoned in Place" signs are currently installed on OOS stand-by equipment throughout the plant. These signs are equivalent to OOS, until replaced.

Exclusion:

This procedure does **NOT** apply to equipment placed OOS for inspection, testing, or maintenance.

This procedure does **NOT** apply to protection of personnel performing maintenance or support activities where the release of stored energy could cause injury to any personnel during servicing and maintenance of machines and equipment, as covered under CP3-HS-2010, *Instructions for Lockout/Tagout.*

This procedure does **NOT** apply to electrical equipment 'air-gapped' in accordance with CP3-SD-0001, *Air-Gap Identification and Verification*, however, this procedure may be applied in conjunction with 'air-gap activities'.

2.0 REFERENCES

2.1 Use References

- CP2-OP-1119, *Readiness Review Program at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*
- CP3-EN-0314, *Preventive Maintenance Program*
- CP3-OP-0002, *Developing and Maintaining Performance Documents*
- CP3-OP-0028, *Use and Application of Administrative Control Devices*
- CP3-OP-0201, *Tracking of Inoperable TSR Structures, Systems, and Components and Mode Changes*
- CP3-OP-0309, *Alarm Response Guidelines and Status Control*
- CP3-SM-1101, *Work Package Development*

2.2 Source References

- CP1-NS-3000, *Documented Safety Analysis for the Department of Energy Paducah Site Deactivation Project*
- CP1-NS-3001, *Technical Safety Requirements for the U.S. Department of Energy Paducah Site Deactivation Project*

- CP2-HS-2000, *Worker Safety and Health Program for the Paducah Gaseous Diffusion Plant Paducah, Kentucky*
- CP2-OP-1100, *Conduct of Operations Program at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*
- CP2-SM-1000, *Activity Level Work Planning and Control Program for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*
- CP3-OP-1117, *Facility Inspections*
- CP3-OP-1118, *Facility Management*
- CP3-QA-3001, *Issues Management*
- CP3-SD-0001, *Air-Gap Identification and Verification*

3.0 COMMITMENTS

None

4.0 RESPONSIBILITIES

4.1 Site Operations Manager or Designee

Assumes overall responsibility for the implementation of this procedure.

4.2 Equipment Owner

4.2.1 Determines if equipment is to be removed from service (considered OOS) or returned to service.

4.2.2 Requests Engineering representative evaluate equipment to be removed from service.

4.2.3 Requests Environmental Management representative evaluate impact of the equipment to be removed from service that contain hazardous chemicals.

4.2.4 Ensures equipment that has been removed from service remains in a safe configuration.

4.2.5 Ensures the following when equipment is ready to be returned to service:

- Applicable authorization to restart has been obtained.
- Inspection criteria are established, if applicable.
- Investigations and/or applicable corrective actions are completed.
- Acceptance criteria for applicable repairs, inspections, and surveillances are completed.
- Readiness review and/or readiness assessment has been conducted in accordance with CP2-OP-1119, *Readiness Review Program at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, as required.

4.2.6 May authorize the return to service of all non-Technical Safety Requirements (TSR)-related equipment, after assurance the aforementioned issues are complete.

4.3 Nuclear Facility Manager

Once all necessary reviews are performed and required documentation is in place, grants authorization for TSR-related equipment to be removed from service and returned to service.

4.4 Emergency Management

If equipment to be removed from service or returned to service contained hazardous chemicals, **then** evaluates impact of the equipment status change on the Emergency Management Program.

4.5 Engineering

4.5.1 Identifies acceptance criteria.

4.5.2 Evaluates equipment to be removed from service, when requested.

4.6 Environmental Management

Evaluates equipment to be removed from service, when requested.

4.7 Infrastructure Contractor Security

If equipment to be removed from service or returned to service contained/contains hazardous chemicals, **then** evaluates impact of the equipment status change on the Infrastructure Contractor Security Program.

5.0 GENERAL INFORMATION

5.1 Hazards shall be evaluated during development of Activity Level Work Control Documents (ALWCDs).

5.2 OOS equipment shall be identified in accordance with CP3-OP-0028, *Use and Application of Administrative Control Devices.*

5.3 CP3-OP-0204-F01, *Removing Equipment from Service Checklist,* and CP3-OP-0204-F02, *Returning Equipment to Service Checklist,* are provided as tools for the Equipment Owner to manage the processes described in this procedure, and are **NOT** required to be retained as records.

5.4 When determined necessary by PGDP management, special inspections or investigations involving major equipment failures shall be initiated.

5.5 The future need of the equipment shall be determined, and a work request(s) generated to initiate equipment repair, as necessary.

6.0 INSTRUCTIONS

6.1 Removing Equipment from Service

Equipment Owner

6.1.1 **If** equipment will be or has been removed from service, **then** perform the following:

A. Request Engineering evaluate the following:

1. Whether there are additional requirements resulting from the equipment status change.

2. Whether there are any Preventive Maintenance (PM) revision requests or PM Deferrals, as appropriate, necessary to discontinue all applicable PM actions.

B. Request Nuclear Safety (NS) evaluate the effect of equipment status change on Documented Safety Analysis (DSA) and TSR, identifying whether any changes will be necessary.

C. Request Environmental Management evaluate to determine whether equipment status change could impact regulatory requirements.

D. **If** fissile equipment, **then** request Nuclear Criticality Safety (NCS) evaluate to determine whether equipment status change could impact fissile operations.

E. **If** equipment contained/contains hazardous chemicals, **then** perform the following:

1. Request Environmental Management evaluate impact of the equipment status change on regulatory requirements.

2. Request Infrastructure Contractor Security evaluate impact of the equipment status change on the Infrastructure Contractor Security Program.

3. Request Emergency Management evaluate impact of the equipment status change on the Emergency Management Program

F. **If** fire protection equipment, **then** request a fire protection impairment permit from the Fire Department.

G. **If** equipment status change applies to any TSR-required Structure, System, or Component (SSCs), **then** request Nuclear Facility Manager (NFM) approval to place equipment in a safe configuration and in a mode that is **NOT** applicable to any Limiting Condition for Operation (LCO) of the TSRs according to CP3-OP-0201, *Tracking of Inoperable TSR Structures, Systems, and Components and Mode Changes*.

NOTE:

Equipment is ready to be removed from service when Steps **6.1.1A** through **6.1.1G**, as applicable, have been completed.

6.1.2 Perform the following:

A. Ensure equipment is placed in a safe configuration by confirming the following:

- TSR LCOs are implemented, if applicable
- Energy sources have been isolated
- Industrial Safety issues have been resolved
- Industrial Hygiene issues have been resolved
- Environmental Management issues have been resolved

B. Install equipment controlling devices according to CP3-OP-0028, *Use and Application of Administrative Control Devices*, to identify that equipment is OOS, as applicable.

C. Ensure the following has been performed and appropriate documentation completed summarizing the reason for removal from service, as applicable:

- **If** TSR-required SSCs, **then** NFM has been notified to discontinue tracking for operability according to CP3-OP-0201.
- Logbook entry has been completed.
- Alarms have been removed according to CP3-OP-0309, *Alarm Response Guidelines and Status Control*.
- Scheduling has been notified to discontinue all applicable TSR surveillance tracking.
- Necessary Preventive Maintenance Requests (PMRs) have been completed to discontinue all applicable PM actions.

D. Ensure any procedure(s) impacted by the change in equipment status is modified, deleted, or placed on hold according to CP3-OP-0002, *Developing and Maintaining Performance Documents*.

E. Ensure any work control document(s) impacted by the change in equipment status is modified, deleted, or placed on hold according to CP3-SM-1101, *Work Package Development*.

6.2 Returning Equipment to Service

Equipment Owner

6.2.1 Before returning OOS equipment to service, perform the following:

NOTE:
Log book entries (if applicable), TSR surveillances, etc. serve as documentation of Section **6.2** completion.

A. Request all support organizations that provided input to equipment being removed from service in Steps **6.1.1A** through **6.1.1G** evaluate the regulatory and safety impacts for returning the equipment to service. Support organizations may include, but are **NOT** limited to, the following:

- Engineering
- NCS
- NS
- Industrial Hygiene
- Safety
- Environmental Management
- Fire Department
- Emergency Management
- Infrastructure Contractor Security

B. Determine if a readiness review and/or readiness assessment should be conducted in accordance with CP2-OP-1119, as required.

C. Ensure any procedure(s) impacted by returning the equipment to service is modified or taken off hold, **or** develop any required new procedure(s), according to CP3-OP-0002.

D. Ensure any work control document(s) impacted by returning the equipment to service is modified or taken off hold, **or** develop any required new work control document(s), according to CP3-SM-1101.

6.2.2 Ensure all applicable TSR surveillance requirements have been successfully performed and applicable LCO tracking has been closed.

6.2.3 Ensure approval for equipment restart or return to service has been obtained by all involved support organizations that provided input to equipment being removed from service. Support organizations may include, but are **NOT** limited to, the following:

- Engineering
- NCS
- NS
- Industrial Hygiene

- Safety
- Environmental Management
- Fire Protection
- Emergency Management
- Infrastructure Contractor Security

6.2.4 Ensure all Quality Level (QL)-1 or QL-2 work packages have been completed and reviewed by applicable system engineer.

6.2.5 Initiate a PM revision request according to CP3-EN-0314, *Preventive Maintenance Program*, to initiate all applicable PM actions, if necessary.

6.2.6 Ensure all related work packages and Engineering Service Order(s) (ESO) with required paperwork are closed out.

6.2.7 Ensure all PMs are current or dispositioned according to CP3-EN-0314, as necessary.

6.2.8 Before equipment restart or return to service, ensure all of the following have been completed (**all actions closed**):

- Inspections
- Acceptance Tests
- Final Equipment Checks
- Investigations
- Corrective Actions
- Operational Readiness Reviews/Readiness Assessments, when applicable.

6.2.9 Obtain NFM Declaration of Operability for TSR-related equipment restart and return to service.

6.2.10 Ensure NFM Declaration of Operability Authorization is placed in facility logbook and NFM logbook.

6.2.11 Restart **or** return equipment to service according to the applicable work control document(s).

6.2.12 Ensure control devices designating equipment OOS are removed according to CP3-OP-0028.

7.0 RECORDS

7.1 Records Generated

The following records may be generated by this procedure:

None

Appendix A – Acronyms/Definitions

ACRONYMS

ALWCD – Activity Level Work Control Document

D&R – Deactivation & Remediation

DSA – Documented Safety Analysis

ESO – Engineering Service Order

LCO – Limiting Condition for Operation

NCS – Nuclear Criticality Safety

NFM – Nuclear Facility Manager

NS – Nuclear Safety

OOS – Out of Service

PGDP – Paducah Gaseous Diffusion Plant

PM – Preventive Maintenance

PMR - Preventive Maintenance Requests

QL – Quality Level

SSC – Structure, System, or Component

TSR – Technical Safety Requirements

DEFINITIONS

Operable – Any SSC shall be operable or have operability when it is capable of performing its function(s), and when all necessary attendant instrumentation, controls, electrical power, cooling or seal water, lubrication, or other auxiliary equipment required for the SSC to perform its functions are also capable of performing the related support functions(s). SSCs that are Out of Service are not required to be operable since the TSR operational modes do not apply to this equipment.

Out of Service (OOS) – Equipment that cannot fulfill its intended function and is shut down, isolated from the system it once served, isolated for repair or testing, or as determined by PGDP management any special instructions or investigations involving major equipment failures. This equipment can be returned to service based on the future project need, or after repairs and testing have been completed and operational conditions restored.

Safe Configuration – Equipment placed in a condition where energy sources are isolated, nuclear criticality safety issues are resolved, industrial safety issues are resolved, and industrial hygiene issues resolved.

CP3-OP-0204-F01 – Removing Equipment from Service Checklist

Equipment Owner:		Equipment Name & Location	

6.1 Removing Equipment from Service				
Step No.	**Action**	**Complete?**		
6.1.1A	Engineering evaluation requested?	☐ YES	☐ NO	
6.1.1B	Nuclear Safety evaluation requested?	☐ YES	☐ NO	
6.1.1C	Environmental Management evaluation requested?	☐ YES	☐ NO	
6.1.1D	NCS evaluation requested? (for fissile equipment only)	☐ YES	☐ NO	☐ N/A
6.1.1E1	Environmental Management evaluation requested? (for hazardous chemicals only)	☐ YES	☐ NO	☐ N/A
6.1.1E2	Infrastructure Contractor Security evaluation requested? (for hazardous chemicals only)	☐ YES	☐ NO	☐ N/A
6.1.1E3	Emergency Management evaluation requested? (for hazardous chemicals only)	☐ YES	☐ NO	☐ N/A
6.1.1F	Fire protection impairment permit requested? (for fire protection equipment only)	☐ YES	☐ NO	☐ N/A
6.1.1G	NFM approval requested to place equipment in a safe configuration and in a mode that is NOT applicable to any LCO of the TSRs?	☐ YES	☐ NO	☐ N/A
6.1.2A	Have the following been verified to ensure equipment is placed in a safe configuration?		☐ YES	☐ NO
	• TSR LCOs are implemented, if applicable	☐ YES	☐ NO	☐ N/A
	• Energy sources have been isolated	☐ YES	☐ NO	☐ N/A
	• Industrial Safety issues have been resolved	☐ YES	☐ NO	☐ N/A
	• Industrial Hygiene issues have been resolved	☐ YES	☐ NO	☐ N/A
	• Environmental Management issues have been resolved	☐ YES	☐ NO	☐ N/A
6.1.2B	Have equipment controlling devices identifying equipment as OOS been installed per to CP3-OP-0028?	☐ YES	☐ NO	☐ N/A
6.1.2C	Have the following been performed and appropriate documentation completed summarizing reason for removal from service?		☐ YES	☐ NO
	• If equipment applies to any TSR-required SSCs, has NFM been notified to discontinue tracking for operability per CP3-OP-0201?	☐ YES	☐ NO	☐ N/A
	• Has necessary Logbook entry(ies) been made?	☐ YES	☐ NO	☐ N/A
	• Has alarm(s) been removed per CP3-OP-0309?	☐ YES	☐ NO	☐ N/A
	• Has Scheduling been notified to discontinue all applicable TSR surveillance tracking?	☐ YES	☐ NO	☐ N/A
	• Have necessary PMRs been completed to discontinue all applicable PM actions?	☐ YES	☐ NO	☐ N/A
6.1.2D	Have any procedure(s) impacted by the change in equipment status been modified, deleted, or placed on hold per CP3-OP-0002?	☐ YES	☐ NO	☐ N/A
6.1.2E	Have any work control document(s) impacted by the change in equipment status been modified, deleted, or placed on hold per CP3-SM-1101?	☐ YES	☐ NO	☐ N/A

Comments: _____

_____

_____

CP3-OP-0204-F02 – Returning Equipment to Service Checklist

Equipment Owner:		Equipment Name & Location	

6.2 Returning Equipment to Service

Step No.	Action	Complete?
6.2.1A	Have all support organizations that provided input when equipment was removed from service been requested to evaluate returning the equipment to service? (May include, but are not limited to, the following:) ☐ Engineering ☐ N/A ☐ Industrial Hygiene ☐ N/A ☐ Fire Protection ☐ N/A ☐ NCS ☐ N/A ☐ Safety ☐ N/A ☐ Emergency Mgmt. ☐ N/A ☐ NS ☐ N/A ☐ Environmental Mgmt. ☐ N/A ☐ Infrastructure Contractor Security ☐ N/A ☐ Other: ☐ N/A ☐ Other: ☐ N/A ☐ Other: ☐ N/A	☐ YES ☐ NO
6.2.1B	Has determination been made whether a readiness review and/or readiness assessment is required per CP2-OP-1119?	☐ YES ☐ NO ☐ N/A
6.2.1C	Is required procedure(s) modification, removal from hold, or new development complete per CP3-OP-0002?	☐ YES ☐ NO ☐ N/A
6.2.1D	Is required work control document(s) modification, removal from hold, or new development complete per CP3-SM-1101?	☐ YES ☐ NO ☐ N/A
6.2.2	Have all applicable TSR surveillance requirements been successfully performed and applicable LCO tracking closed?	☐ YES ☐ NO ☐ N/A
6.2.3	Has approval for equipment restart or return to service been obtained from all support organizations that provided input when equipment was being removed from service? (May include, but are not limited to, the following:) ☐ Engineering ☐ N/A ☐ Industrial Hygiene ☐ N/A ☐ Fire Protection ☐ N/A ☐ NCS ☐ N/A ☐ Safety ☐ N/A ☐ Emergency Mgmt. ☐ N/A ☐ NS ☐ N/A ☐ Environmental Mgmt. ☐ N/A ☐ Infrastructure Contractor Security ☐ N/A ☐ Other: ☐ N/A ☐ Other: ☐ N/A ☐ Other: ☐ N/A	☐ YES ☐ NO
6.2.4	Have all QL-1 or QL-2 work packages been completed and reviewed by applicable system engineer?	☐ YES ☐ NO ☐ N/A
6.2.5	Has a PM revision request to initiate all applicable PM actions been generated per CP3-EN-0314, if necessary?	☐ YES ☐ NO ☐ N/A
6.2.6	Have all related work packages and ESO(s) with required paperwork been closed out?	☐ YES ☐ NO ☐ N/A
6.2.7	Are all PMs current or dispositioned per CP3-EN-0314, as necessary?	☐ YES ☐ NO ☐ N/A
6.2.8	Are all of the following completed with all actions closed?	
	• Inspections	☐ YES ☐ NO ☐ N/A
	• Acceptance Tests	☐ YES ☐ NO ☐ N/A
	• Final Equipment Checks	☐ YES ☐ NO ☐ N/A
	• Investigations	☐ YES ☐ NO ☐ N/A
	• Corrective Actions	☐ YES ☐ NO ☐ N/A
	• Operational Readiness Reviews/Readiness Assessments, if applicable	☐ YES ☐ NO ☐ N/A
6.2.9	If a TSR-related equipment restart and return to service, has NFM Declaration of Operability been obtained?	☐ YES ☐ NO ☐ N/A
6.2.10	Has equipment been restarted and returned to service according the applicable work control document(s)?	☐ YES ☐ NO ☐ N/A
6.2.14	Have control devices designating equipment as OOS been removed per CP3-OP-0028?	☐ YES ☐ NO ☐ N/A

Comments: _____