

UPF Housekeeping



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RC-UPF DMC
 05/08/18 12:54

This document has been reviewed by a Y-12 DC / UCNI-RO and has been determined to be UNCLASSIFIED and contains no UCNI. This review does not constitute clearance for Public Release.
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REVISION LOG

Revision	Description	Intent	Non Intent
3	Incorporated sections from UPF-CP-201, <i>General Housekeeping</i> . This procedure supersedes UPF-CP-201. Addressed and incorporated comments from the Functional QC Procedure Readiness Assessment. Removed parts referencing CFN-1036. This issuance of this procedure renders CFN-1036, <i>UPF Cleaning Placard</i> , obsolete. Updated to the current procedure template – revision bars used.	X	
2	Major Revision – no revision bars used. This revision incorporates and supersedes CNS Bluesheet CNS-Y17-95-64-837 and PRCN-Y17-95-64-83716-A001. This revision re-aligned format, updated references to current, added roles and responsibilities for performers, and adjusted for alignment with 4TMP-T81-02102, <i>Housekeeping</i> , as applicable to the purpose and scope of this procedure.	X	
Prevision Revisions	On Record	NA	

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1.0 INTRODUCTION

1.1 Purpose

This procedure defines the work process for Zone Area housekeeping, foreign material exclusion (FME), and general safety housekeeping requirements at the Uranium Processing Facility (UPF) construction site and provides direction for their implementation.

This procedure invokes the requirements and standards set forth by the American Society of Mechanical Engineers (ASME) in NQA-1-2008, *Quality Assurance Requirements for Nuclear Facility Applications*, Part II, Subpart 2.3, "Quality Assurance Requirements for Housekeeping at Nuclear Power Facilities," and general housekeeping requirements set forth by the Occupational Safety and Health Administration (OSHA) in 29 CFR 1910 and 29 CFR 1926 safety and health regulations for construction.

1.2 Scope

This procedure applies to all construction housekeeping activities under the administrative control of the UPF Project. Applicability to subcontractor employees is as specified in subcontract language.

Deficiencies identified for Zones 1 and 2 shall be controlled in accordance with Y17-95-64-804, *UPF Construction Nonconformance Reporting and Control*.

NOTE: *System internal cleanliness requirements are addressed in Y17-95-64-835, UPF Piping System Cleanliness.*

1.3 UPF Graded Approach to Quality

Construction execution of a graded approach to quality for inspections and tests will be implemented in accordance with Y17-95-64-807, *UPF Construction Quality Control Process for Inspection, Testing, and Inspection Records*. The quality level will dictate the required level of inspection and the degree of independence of the inspection.

Refer to Y17-95-64-807 for information regarding quality-level descriptions and the Technical Evaluation of Critical Attributes and Mitigation (TECAM) process used to identify and document critical attributes and acceptance methods.

2.0 RESPONSIBILITIES

2.1 Construction Manager

The Construction Manager (CM) is responsible for ensuring that the requirements of this procedure are properly implemented.

2.2 Project Field Engineer

The Project Field Engineer (PFE) is responsible for ensuring that the requirements of this procedure are properly implemented, and is responsible for supervising the field engineering personnel providing technical support of installation operations.

2.3 Project Field Superintendent

The Project Field Superintendent (PFS) is responsible for housekeeping on the Project site and on the grounds that are under the care and control of Construction.

2.4 Responsible Superintendent

The Responsible Superintendent (RS) is responsible for implementing the requirements of this procedure in his/her respective disciplines, work areas, and personnel. The RS shall perform housekeeping inspections as required by this procedure. The RS can designate an individual to perform housekeeping inspections.

2.5 Environment, Safety, and Health Representative

The Environment, Safety, and Health (ES&H) Representative has the responsibility of compliance oversight with this procedure through periodic field inspections, and is responsible for providing technical advice, interpretations, and oversight with regard to environmental, safety, and health codes referenced in this procedure.

2.6 Project Environmental Group

The Project Environmental Group is responsible for all Project environmental activity and concerns in accordance with the Bechtel Environmental Safety and Health (BES&H) Core Process; ES&H procedures; Project procedures; and federal, state, and local codes, requirements, and laws.

2.7 Employee (Non-Manual and Manual)

All Project non-manual and manual employees are responsible for implementing housekeeping in their work areas and notifying Project management of inadequate or dangerous housekeeping.

3.0 PROCESS

3.1 Requirements

3.1.1 Minimum Cleaning Requirements

Table 1. Minimum Cleaning Requirements

Description	Light Cleaning	Heavy Cleaning	Sanitized Cleaning	Remarks
Common Office Space	Daily	Weekly		
Personal Office Space	End of Shift (by employee; includes desks and work area, but not floor)	Weekly		
Restrooms with running water			Each Shift	Hot water shall be provided in these facilities.
Restrooms without running water (portable toilets) with Hand Sanitizing Station Adjacent			Weekly (or after topped)	<i>Usage may require more frequent cleaning.</i> Facilities designated for women's use should be marked as such and kept locked. All women on the Project should have a key for these facilities.
Informal Cooking/Eating Areas (contract and non-contract)		Each Shift	Daily	Each employee shall be responsible for cleaning and stowing personal items, as well as keeping refrigeration units clean and emptied of unused items.
Ice Machines		Weekly (outside and accessories)	Six months minimum (see Remarks)	To be cleaned, thawed, drained, sanitized, and secured (all in accordance with the manufacturer's guidance).

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Description	Light Cleaning	Heavy Cleaning	Sanitized Cleaning	Remarks
Smoking Areas	Daily			Ash and butt receptacles <i>at designated (posted) locations only</i> to be provided, and shall be used.
Permanent Plant Open-Craft Work Areas	Each Shift (or at task completion)			
Permanent Plant Enclosed-Craft Work Areas (motor control centers, pump rooms, water treatment rooms, etc.)	Each Shift	Weekly		Wet-mopping will depend on floor type.
Permanent Plant Environmentally Controlled Craft Work Areas (offices, control rooms, warehouse areas, etc.)	Each Shift	Weekly		Wet-mopping will depend on floor type.
Temporary Open-Craft Work Areas (shed-style covered areas, open laydown areas, etc.)	Each Shift			
Temporary Enclosed-Craft Work Areas (temporary shops, warehouse areas, etc.)	Each Shift			
Coolers used for drinking water	Weekly			Wipe with clean cloth inside and out.

3.2 General Requirements

- 3.2.1 Employees shall be instructed as to the importance of good ES&H housekeeping during the Site Orientation. These instructions shall be documented under the manual and non-manual training program.
- 3.2.2 Unless otherwise indicated, all housekeeping zones shall be categorized as Zone V. When the category is other than Zone V, the appropriate housekeeping zone shall be either posted prominently in the facility by signage, or shall be denoted in Construction Work Packages.
- 3.2.3 Documents CFN-1038, *UPF FME Monitor Checklist - FME Monitor Briefing Sheet*, and CFN-1039, *UPF Personnel, Material, and Tool Log*, shall be utilized as designated by CFN-1040, *UPF Foreign Material Exclusion Checklist*, and **Section 3.9**, "Restriction List."
- 3.2.4 As work progresses, zone areas may be reclassified to be compatible with the work being performed at the time. The zones shall use natural or installed barriers, or shall be designated by signs for Zones I, II, or III.
- 3.2.5 Five cleanliness zones are described in the following paragraphs. Zone V is for unrestricted construction areas that require good housekeeping practices only. Zones IV, III, II, and I are increasingly restrictive. The FME Zone requirements **SHOULD NOT** be confused with the system internal cleanliness requirements and classifications. These two are separate requirements, and they are used together to prevent foreign material intrusion.

3.3 Zone V

Zone V designates unrestricted construction areas requiring good housekeeping practices, such as the following:

- 3.3.1 Materials, tools, and construction equipment shall be stored in an orderly manner. Small items should be stored in containers, whenever practical. Free access to Plant communications and fire protection equipment shall be maintained for use in emergencies. A minimum 36 inches of clearance shall be maintained around Plant communications and fire protection equipment. A minimum 18 inches of clearance shall be maintained around building fire protection sprinkler and smoke detection systems.
- 3.3.2 There shall be no excessive waste or debris on floors, obstacles in passageways, oil hazards, or excessive water or dust.
- 3.3.3 Covers shall be in place on pipe, and equipment openings shall be closed, as appropriate. Burning and welding safety precautions shall be practiced; welders shall use stub buckets. A qualified Fire Watch and/or Hot Work Permit is required, as applicable to Y17-95-64-877, *UPF Hot Work Permit*.
- 3.3.4 Waste disposal containers must be provided in adequate quantities and at convenient locations so that workers can use them with minimum effort. They should be located so that a fire in a container would not affect other items.
- 3.3.5 All hazardous materials shall be stored in labeled containers suitable for this purpose in accordance with UPF-CP-202, *UPF Hazard Communication Program*, and UPF-CP-211, *Fire Prevention and Protection*.
- 3.3.6 Protruding objects must be cleared from work areas and passageways, or personnel protection shall be provided.
- 3.3.7 Combustible debris (e.g., solvent rags, empty flammable cans, etc.) must be stored in specially identified, fireproof, covered containers. Containers storing solvent rags shall be emptied or removed each day.

- 3.3.8 Sanitary facilities shall be maintained and cleaned at intervals appropriate for the location and use.
- 3.3.9 Smoking is prohibited in the following areas:
- Within 25 feet of entrances, exits, windows that open, and ventilation intakes that serve an enclosed area where smoking is prohibited
 - Enclosed work areas, restrooms, conference rooms, classrooms, break rooms, and lunchrooms
 - Government and company vehicles and other common enclosed areas
 - In the vicinity of areas where hazardous operations take place or combustible/flammable materials are present.
- 3.3.10 "NO SMOKING" signs shall be posted in areas near hazardous operations or combustible/flammable materials.

3.4 Zone IV

Zone IV housekeeping requirements are the same as Zone V, with the following additions:

- 3.4.1 Use of tobacco (smoking, vaping, or any other use of tobacco products) is prohibited.
- 3.4.2 Eating and drinking are prohibited.

3.5 Zone III

Zone III applies primarily to internal work in tanks, vessels, and restricted areas, where the configuration of the equipment could conceal a dropped part or tool. These areas are less restrictive than Zones I and II, but require access control over personnel and materials. The housekeeping requirements are the same as Zone IV, with the following additions:

- 3.5.1 All personnel entrances into the area shall be posted as FME Zones.
- 3.5.2 The zone number shall be clearly and visibly posted, along with any special restrictions.
- 3.5.3 Identify all materials and tools brought in and removed.
- 3.5.4 Maintain logs for entry and exit of personnel, materials, and tools. See CFN-1039, *Personnel, Material, and Tool Log (PMTL)*.

3.6 Zone II

The housekeeping requirements are the same as Zone III, with the following additions:

- 3.6.1 Access shall be limited to approved personnel.
- 3.6.2 Material and tools shall be pre-cleaned.
- 3.6.3 Clean gloves, head covers, and shoe covers shall be worn.

3.7 Zone I

As areas requiring the highest order of cleanliness, these shall be equipped with a clean clothing change facility at the vestibule or entrance. Such areas shall provide for complete change of outer clothing by personnel. Zone I housekeeping requirements are the same as Zone II, with the following additions:

- 3.7.1 Clean clothing change facility shall be provided for complete change of outer clothing by personnel, including the use of shoe covers, head covers, and gloves.
- 3.7.2 Filtered air shall be provided.

3.8 Foreign Material Exclusion

- 3.8.1 Access Control: maintaining personnel and material accountability in a work area (see CFN-1039 for PMTL).
- 3.8.2 Fail Safe: introducing any item into a system or component should not result in any damage, and the item must be easily retrieved. Materials such as tools and eyeglasses can be made Fail Safe for the purpose of this definition by securing them with lanyards.
- 3.8.3 FME Cover: a device installed outside a system for sealing and protecting the system (or component) from the introduction of foreign material when the system (or component) is unattended. An FME cover should meet the following requirements:
 - Fire resistant/retardant
 - Non-brittle, non-splitting, non-melting, and thick enough to avoid damage to underlying surfaces
 - Non-tearable (materials such as paper or clear plastic should not be used unless reinforced)
 - Will not damage system or component
 - Will not deteriorate or decompose over time
 - Does not cause any chemical reaction
 - Fail-safe design
 - Easily detectable and retrievable.
- 3.8.4 FME Dam: a device installed inside a system or component, including a lanyard, for protecting a system or component from intrusion of foreign material.
- 3.8.5 FME Zone Boundary: a physical boundary around an area, generally consisting of a rope or ribbon, complete with a sign visibly identifying the area as an FME Zone.
- 3.8.6 Foreign Material: materials that are not part of the system or component as designed, such as dirt, debris, parts, oil, solvents, slag, tools, rags, chemicals, lapping, compounds, grinding/welding particles, and any other item that could affect the intended operation of the system or component.
- 3.8.7 Immediately Retrievable: can be recovered at once after entry into a system or component. Safety shall always be considered, even though foreign material may be immediately retrievable.

3.8.8 Loss of FME Integrity exists when the following occur:

- Unexpected foreign material is discovered inside a system or component upon initial breach
- Material logged on a PMTL that cannot be accounted for during log reviews or closure activities
- Material found inside an FME Zone is not logged as required
- Material dropped inside an FME Zone is not logged as required
- Material is dropped into a system or component that cannot be immediately retrieved
- Internal barriers fail or external covers are damaged/missing.

3.9 Restriction List

Table 2. Restriction List

RESTRICTION	ZONE				
	I	II	III	IV	V
Filtered Air	Yes	No	No	No	No
Material Pre-cleaning	Yes	Yes	No	No	No
Clothing Change	Yes	No	No	No	No
Clean gloves, shoe covers, and head cover	Yes	Yes	No	No	No
Material Accountability	Yes	Yes	Yes	No	No
Personnel Accountability	Yes	Yes	Yes	No	No
Regulation of tobacco use and eating	Yes	Yes	Yes	Yes	No

3.10 Monitoring Activities

NOTE: *The Quality Assurance organization may perform surveillances to verify the proper implementation of the UPF Housekeeping program.*

- 3.10.1 Housekeeping monitoring activities are based on the zone designation as defined in this procedure. When the zones change from one designation to another, the monitoring activities will change accordingly.
- 3.10.2 Zones I and II shall be monitored and documented daily by RS and Quality Control; Zone III shall be monitored by RS (or designee) and Quality Control; and Zones IV and V shall be monitored and documented monthly by RS (or designee) and Quality Control, with the exception of inaccessible components and areas, which shall be monitored and documented as they become accessible. Scheduled intervals can be increased if RS and/or Quality Control determine that additional monitoring is needed. Housekeeping monitoring activities shall be documented on CFN-1037, *Housekeeping Monitoring Report*.
- 3.10.3 The RS and Quality Control Engineer, depending on the housekeeping zone, shall complete all appropriate line items and blocks on the Housekeeping Monitoring Report. The items deemed not applicable shall be marked "N/A." The date of the report shall reflect the date the monitoring activities were performed.
- 3.10.4 Housekeeping discrepancies for Zones I and II, which indicate a potential loss of cleanliness, shall be documented on a Nonconformance Report (NCR) in accordance with Y17-95-64-804, *UPF Construction Nonconformance Reporting and Control*. Discrepancies for Zones III, IV, and V shall be identified on form CFN-1037, in the comments section, and a copy shall be provided to the RS. Zones III, IV, and V discrepancies in housekeeping practices that are corrected during monitoring shall be documented on form CFN-1037, and correction shall be noted in the comments section. Discrepancies not corrected during monitoring shall be documented on an NCR in accordance with Y17-95-64-804.

3.11 Control of Temporary Material

- 3.11.1 Temporary construction materials, equipment, tools, and supplies shall be maintained in a neat and orderly manner; such items shall be segregated as much as practical from permanent Plant materials and equipment.

4.0 RECORDS

Records generated by this procedure shall be maintained in accordance with Y15-95-800, *UPF Document Management*. Record types for documents submitted to the UPF Document Management Center (DMC) are identified in ML-PS-801768-A001, *Uranium Processing Facility Project Master Document Type List*. Quality Type is listed as Quality-Lifetime (QA-L), Quality-Nonpermanent (QA-NP), or Non-Quality (Non-QA).

Records generated during the performance of this procedure include the following:

Record Number	Record Title	Record Holder	System/ Location	Quality Type
CFN-1037	<i>UPF Housekeeping Monitoring Report</i>	UPF DMC	InfoWorks	QA-L
CFN-1038	<i>UPF FME Monitor Checklist - FME Monitor Briefing Sheet</i>	UPF DMC	InfoWorks	QA-L
CFN-1039	<i>UPF Personnel, Material, and Tool Log</i>	UPF DMC	InfoWorks	QA-L
CFN-1040	<i>UPF Foreign Material Exclusion Checklist</i>	UPF DMC	InfoWorks	QA-L

5.0 REFERENCES

5.1 Source References

Bechtel Standard Work Process Procedure 4MP-T81-02102, *Housekeeping*

PL-PJ-801768-A001, *Document Control and Records Management Plan for the Uranium Processing Facility Project*

PL-QA-801768-A001, *Bechtel National Incorporated (BNI) Uranium Processing Facility (UPF) Project Quality Assurance Plan*

PL-SH-801768-A007, *Bechtel National Inc. (BNI) Uranium Processing Facility (UPF) Environmental Safety and Health (ES&H) Plan*

Y15-95-800, *UPF Document Management*

Y17-95-64-800, *UPF Construction Work Control Program*

Y60-95-102PD, *UPF Quality Assurance Program Description*

5.2 Interfacing References

ASME NQA-1-2008, *Quality Assurance Requirements for Nuclear Facility Applications*, Part II, Subpart 2.3, "Quality Assurance Requirements for Housekeeping at Nuclear Facilities"

ML-PS-801768-A001, *Uranium Processing Facility Project Master Document Type List*

OSHA 29 CFR 1910.91, *Housekeeping, General Working Conditions*

OSHA 29 CFR 1926.25, *Housekeeping, General Safety and Health Provisions*

UPF-CP-202, *UPF Hazard Communication Program*

UPF-CP-211, *Fire Prevention and Protection*

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Y15-95-200, *UPF Graded Approach to Quality*

Y15-95-800, *UPF Document Management*

Y17-95-64-804, *UPF Construction Nonconformance Reporting and Control*

Y17-95-64-807, *UPF Construction Quality Control Process for Inspection, Testing, and Inspection Records*

Y17-95-64-835, *UPF Piping System Cleanliness*

Y17-95-64-877, *UPF Hot Work Permit*

6.0 SUPPLEMENTAL INFORMATION

Appendix A, Acronyms and Definitions

APPENDIX A Acronyms and Definitions

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ACRONYMS:

ASME	American Society of Mechanical Engineers
BES&H	Bechtel Environmental, Safety & Health
BNI	Bechtel National Incorporated
CM	Construction Manager
DMC	Document Management Center
ES&H	Environment, Safety, and Health
FME	Foreign Material Exclusion
NCR	Nonconformance Report
OSHA	Occupational Safety and Health Administration
PFE	Project Field Engineer
PFS	Project Field Superintendent
PMTL	Personnel, Material, and Tool Log
QL	Quality Level
RS	Responsible Superintendent
SDS	Safety Data Sheet (formerly Material Safety Data Sheet)
SSC	Structures, Systems, and Components
TECAM	Technical Evaluation of Critical Attributes and Mitigation
UPF	Uranium Processing Facility

DEFINITIONS:

Heavy Cleaning	Includes light cleaning activities plus wiping down desks, tables, countertops, and other items with a damp towel and wet-mopping the floors.
Light Cleaning	Includes dusting, sweeping the floor, emptying trash receptacles, and stowing work items, tools, and accessories.
Permanent Plant Material	Material(s) for construction used as part of the permanent facilities (or plant) or having a direct impact on the quality of completed work and/or field services.

APPENDIX A Acronyms and Definitions

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DEFINITIONS:

Quality-Level (QL) Designator	Used to indicate the level of control(s) and independence that must be applied to an item in order to mitigate risk associated with the critical characteristics designated by Engineering or risk attributes designated by the owner. Quality level designators are obtained from Y15-95-200, <i>UPF Graded Approach to Quality</i> .
Safety Data Sheet (SDS)	Document that describes specific products and chemistries, including approved uses, safety measures, medical information, and clean-up (formerly Material Safety Data Sheet).
Sanitized Cleaning	Includes heavy cleaning activities plus using sanitizing cleaning compounds to clean toilets, sinks, and wet-mopping the floors.
Structures, Systems, and Components (SSC)	Refers collectively to the following three things: <ul style="list-style-type: none"> • Structures are elements that provide support or enclosure, such as buildings, freestanding tanks, basins, dikes, and stacks. • Systems are collections of components assembled to perform a function, such as piping; cable trays; conduits; and heating, ventilation, fire protection, and air conditioning. • Components are items of equipment, such as pumps, valves, relays, dollies, or carts, as well as elements of a larger array, such as computer software, lengths of pipe, elbows, and reducers.
System Internal Cleanliness	Refers to internal areas of system piping and components.