
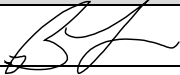




## UPF PAGE/PROCEDURE CHANGE NOTICE (PRCN)

PRCN Number:	PRCN-Y17-95-64-877-R03-03	Effective Date:	10/18/2023
<b>NOTE: PRCN Effective Date cannot precede effective date of associated document.</b>			
<input type="checkbox"/> Intent Change		<input checked="" type="checkbox"/> Non-Intent Change	
Associated Document Number:	Y17-95-64-877	Rev:	3
Associated Document Title: <i>UPF Hot Work Permit</i>			
Justification for Change: This PRCN is in response to CR25774-000-GCA-GAM-04552, Action 2, Revise Y17-95-64-877, <i>UPF Hot Work Permit</i> .			
Identify the scope of the change, including mark-up (i.e., strike-through for deletions, colored text for additions) of any new, removed, or changed content.			
<b>Update Section 2.5:</b>			
<b>From:</b>			
<b>2.5 BNI Fire Protection Engineer</b>			
The Bechtel National, Inc. (BNI), Fire Protection Engineer (FPE) is responsible for the following:			
<b>To:</b>			
<b>2.5 BNI Fire Protection Engineer or Delegate</b>			
The Bechtel National, Inc. (BNI), Fire Protection Engineer (FPE) or Delegate is responsible for the following:			

Preparer			
UPF Construction Issues Management	Kellie R. Coleman		10/12/23
		Printed Name/Signature	Date
Approval			
UPF Project Field Engineer	Bradley A. Lewis		10/17/23
		Printed Name/Signature	Date

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.


Name: Steve Buffalo Date: 10/17/23

**RC-UPF DMC**  
10/18/23 08:10



## UPF PAGE/PROCEDURE CHANGE NOTICE (PRCN)

PRCN Number:	PRCN-Y17-95-64-877-R03-02	Effective Date:	08/31/23
<b>NOTE: PRCN Effective Date cannot precede effective date of associated document.</b>			
<input type="checkbox"/> Intent Change		<input checked="" type="checkbox"/> Non-Intent Change	
Associated Document Number:	Y17-95-64-877	Rev:	3
Associated Document Title: <i>UPF Hot Work Permit</i>			
Justification for Change: Clarifications needed to Section 1.2, <i>Scope</i> , and Appendix E, <i>Hot Work 35 Foot Rule</i>			
Identify the scope of the change, including mark-up (i.e., strike-through for deletions, colored text for additions) of any new, removed, or changed content.			
<p><b>Addition to Section 1.0, INTRODUCTION</b></p> <p><b>From:</b> <b>1.2 Scope</b></p> <p>This Procedure applies to UPF activities that involve welding, cutting, open flame, grinding, or other spark producing activities defined as hot work performed in either Designated Areas or Permit-Required Areas.</p> <p><b>To:</b> <b>1.2 Scope</b></p> <p>This Procedure applies to UPF activities that involve welding (<b>excludes autogenous orbital tube welding</b>), cutting, open flame, grinding, or other spark-producing activities defined as hot work performed in either Designated Areas or Permit-Required Areas.</p> <p><b>Add a NOTE at the end of Section 3.1.8</b></p> <p><b>NOTE:</b> See Notes 3A and 3B in <b>Appendix E, Hot Work 35-Foot Rule</b>, clarifying acceptable location of protected combustibles within the 35-foot radius.</p> <p><b>Addition to Appendix E, Hot Work 35 Foot Rule:</b></p> <p>In the first diagram, add a box in between the boxes for 3 and 4 with two notes:</p> <p><b>Note 3A:</b> The welding blanket, screen, and/or curtain that is protecting the combustibles can be located around the combustibles or around the hot work operator.</p> <p><b>Note 3B:</b> Covering and/or protecting combustibles that are located within the Hot Work 35-Foot Rule is not considered a modification to the 35-Foot Rule that requires a FPE approval.</p>			

Preparer			
UPF Construction Issues Management	Kellie R. Coleman		08/29/23
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Approval			
UPF Project Field Engineer	Bradley A. Lewis		08/31/23
		Printed Name/Signature	Date

UCN-23182 (01-17-2023)  
Y15-95-235  
Y15-95-236  
Page 1 of 1

**RC-UPF DMC**  
08/31/23 09:31

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Name: Chuck Heatherly Date: 08/31/23



## UPF PAGE/PROCEDURE CHANGE NOTICE (PRCN)

PRCN Number:	PRCN-Y17-95-64-877-R03-01	Effective Date:	03/20/2023		
<b>NOTE: PRCN Effective Date cannot precede effective date of associated document.</b>					
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Associated Document Number:	Y17-95-64-877	Rev:	3		
Associated Document Title:	UPF Hot Work Permit				
Justification for Change:	This PRCN is in response to CR 25774-000-GCA-GAM-03941, <i>CNS Concerns with BNI Compliance with Records Identification and Retention Requirements (CNS letter 25774-22-CNS-017) [*CA]</i>				
Identify the scope of the change, including mark-up (i.e., strike-through for deletions, colored text for additions) of any new, removed, or changed content.					
Update to 4.0 Records:					
<b>From:</b> <b>4.0 RECORDS</b>  <del>Records generated by this Procedure shall be maintained in accordance with Y15-95-800, <i>UPF Document Management</i>. Record types for documents managed by the UPF DMC in InfoWorks are identified in ML PS-801768 A004, <i>Uranium Processing Facility Project Records Retention and Turnover List</i>, as prescribed by Y15-95-806, <i>UPF Records Retention and Turnover</i>. In accordance with E-PROC-3114, <i>Records Management</i>, Quality Records are deemed Lifetime or Nonpermanent. The record Quality Type will be identified as Quality Lifetime (QA-L) or Quality Nonpermanent (QA-NP) for Quality Records. All non-quality records will be designated Non-Quality (Non-QA).</del>  <del>Records generated during the performance of this Procedure include:</del>					
Record or Form Number	Record Title	Record Holder	System/Location	Document Type	Quality Type
CFN-1137	<del>UPF Designated Area Tracking and Inspection Log</del>	<del>UPF DMC</del>	InfoWorks	DAIR	<del>Non-QA</del>
CFN-1138	<del>UPF Designated Area for Hot Work Placard</del>	<del>Not Applicable (N/A)</del>	N/A	N/A	<del>Non-QA</del>
CFN-1139	<del>UPF Hot Work Permit</del>	<del>UPF DMC</del>	InfoWorks	HWP	<del>Non-QA</del>
<b>To:</b> <b>4.0 RECORDS</b>  Records generated by this Document shall be maintained in accordance with Y15-95-800, <i>UPF Document Management</i> .  The following records generated are:					
Record or Form Number	Record Title	System/Location	Document Type		
CFN-1137	<i>UPF Designated Area Tracking and Inspection Log</i>	InfoWorks	DAIR		
CFN-1139	<i>UPF Hot Work Permit</i>	InfoWorks	HWP		

UCN-23182 (01-17-2023)

Y15-95-235

Y15-95-236

Page 1 of 2

**RC-UPF DMC**  
03/20/23 10:13

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Name: C. T. Hawk Date: 03/20/23



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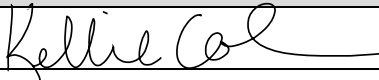
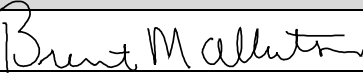

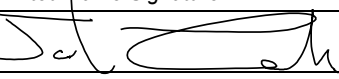
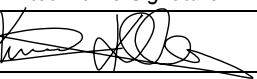
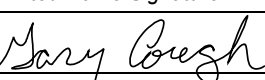
## UPF PAGE/PROCEDURE CHANGE NOTICE (PRCN)

### Remove from 5.2, Interfacing References:

E-PROC-3114, *Records Management*

ML-PS-801768-A004, *Uranium Processing Facility Project Records and Retention and Turnover List*

Y15-95-806, *UPF Records Retention and Turnover*

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		Printed Name/Signature	Date
UPF Project Field Engineer	Bradley A. Lewis		03/20/23
		Printed Name/Signature	Date
UPF ES&H Oversight Lead, CNS	John D. Campbell		03/20/23
		Printed Name/Signature	Date
UPF ES&H Manager, BNI	Kieran S. Kelly		03/16/23
		Printed Name/Signature	Date
UPF Site Manager	Gary J. Cough		03/20/23
		Printed Name/Signature	Date

UPF Hot Work Permit



Preparer:

Mark W. Murdock  
UPF Issues Management

06/01/22

Date

Approval:

Brent Albertsen

06/02/22

Brent M. Albertsen  
UPF Engineering Group Supervisor (HVAC/FP/MET/EQ)

Date

Bradley Lewis

06/08/22

On Behalf  
Of:

Justin R. Swanson  
UPF Project Field Engineer

Date

Samuel D. Easterling  
UPF ES&H Oversight Lead, CNS

06/06/22

Date

Kieran S. Kelly  
UPF ES&H Manager, BNI

06/02/22

Date

Robert S. Solberg  
UPF Site Manager

06/01/22

Date

07/08/22

Effective Date

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06/09/22 10:30

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does not constitute clearance for Public Release.

Name: J. S. Kyle

Date: 06/08/22

## UPF Hot Work Permit

## REVISION LOG

Revision 3	<input checked="" type="checkbox"/> Intent <input type="checkbox"/> Non-Intent
<ul style="list-style-type: none"> <li>This change is in response to Condition Report 25774-000-GCA-GAM-03415, <i>Personnel Conducting Relief Fire Watch Not Signing-Off On Hot Work Permits (MAW-SH-801768-FY21-001)</i> <ul style="list-style-type: none"> <li>Added the following to NOTE under Section 3.2.10, sub-header "Fire Watch": All Fire Watches assigned to the hot work, including relief Fire Watches, must review and sign CFN-1139.</li> </ul> </li> <li>No forms have been edited as part of this revision</li> <li>An evaluation determination has been performed confirming that this Procedure implements requirements tracked in the Programmatic Requirements Management System (PRMS)</li> <li>Other changes include:           <ul style="list-style-type: none"> <li>Added a paragraph to and deleted a note from Section 3.1.3</li> <li>Added new Sections 3.1.4 and 3.1.5</li> <li>Updated Note in Section 3.2.10</li> <li>Updated Section 4.0, <i>Records</i></li> <li>Updated acronyms</li> <li>Editorial changes</li> </ul> </li> </ul>	
Revision 2	<input checked="" type="checkbox"/> Intent <input type="checkbox"/> Non-Intent
<ul style="list-style-type: none"> <li>Revision to incorporate changes to welding clothing and personal protective equipment requirements in response to Condition Report 25774-000-GCA-GAM-03184, <i>Arc Between Welder Safety Toe Boot / Welding Whip (ORPS Reportable NA-UPO-CNS-UPRPROJ-2021-0007)</i></li> <li>This revision incorporates the changes identified in and supersedes PRCN-Y17-95-64-877-R01-01</li> <li>This revision incorporates the 05/29/2018 Pen &amp; Ink change</li> <li>The following forms were changed with this revision:           <ul style="list-style-type: none"> <li>CFN-1137, <i>UPF Designated Area Tracking and Inspection Log</i></li> <li>CFN-1139, <i>UPF Hot Work Permit</i></li> </ul> </li> <li>An evaluation determination has been performed confirming that this Procedure does implement requirements tracked in the Programmatic Requirements Management System (PRMS)</li> <li>Other changes:           <ul style="list-style-type: none"> <li>Updated format to match current template; sections renumbered as a result</li> <li>Added Bechtel Copyright statement to the footer</li> <li>Changed all instances of "Construction Manager"/"CM" to "Site Manager"</li> <li>Added responsibility for reviewing CFN-1137, <i>UPF Designated Area Tracking and Inspection Log</i>, monthly to Section 2.5, <i>BNI Fire Protection Engineer</i></li> <li>Deleted previous Section 3.8, <i>Environment, Safety, and Health (ES&amp;H)</i></li> <li>Updated various section titles</li> <li>Updated all appendices</li> <li>Updated references</li> <li>Updated acronyms</li> <li>Editorial changes</li> </ul> </li> <li>This revision is a total rewrite; because of the extent of changes, revision bars are not shown</li> </ul>	
Previous revisions on record	

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## 1.0 INTRODUCTION

### 1.1 Purpose

This Procedure establishes and implements controls to prevent fires as a result of hot work at the Uranium Processing Facility (UPF) and establishes areas authorized by management where hot work is permitted.

### 1.2 Scope

This Procedure applies to UPF activities that involve welding (excludes autogenous orbital tube welding), cutting, open flame, grinding, or other spark-producing activities defined as hot work performed in either Designated Areas or Permit-Required Areas. Use of cutting tools that result in an unintended spark(s) is not considered hot work. Hot work on systems that contain or have contained flammable liquids is prohibited.

Applicability to subcontractor employees is as specified in subcontract language.

## 2.0 RESPONSIBILITIES

### 2.1 UPF Site Manager

The Site Manager is responsible for ensuring the requirements of this Procedure are properly implemented.

### 2.2 UPF Project Superintendent

The Project Superintendent is responsible for the following:

- Overall safe hot work operations
- Ensuring all individuals involved in the hot work operations, including subcontractors, are familiar with and implement the provisions of this Procedure
- Designating Permit Authorizing Individuals (PAIs)

### 2.3 UPF Responsible Superintendent

The Responsible Superintendent (or designee) is responsible for the following:

- Ensuring individuals involved in hot work operations are trained in the safe operation of their equipment and in the safe use of the process
- Ensuring workers involved in hot work operations are:
  - Trained to the requirements of this Procedure
  - Aware of the inherent risks involved and understand the emergency procedures in the event of fire

### 2.4 Permit Authorizing Individual

The PAI is responsible for the following:

- Considering the safety of the hot work operator and Fire Watch with respect to personal protective equipment (PPE) for other special hazards beyond hot work



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- Determining site-specific flammable materials, hazardous processes, or other potential fire hazards that are present or likely to be present in the work location
- Ensuring the protection of combustibles from ignition
- Determining when and where hot work can be performed
- Ensuring that fire protection and extinguishing equipment are properly located at the work area
- Establishing Permissible Areas for hot work operations
- Assigning a qualified Fire Watch for hot work operation in Permit-Required Areas
- In Designated Areas where a Fire Watch is not required, ensuring final check of the hot work location approximately 30 minutes after the completion of hot work operations to detect and extinguish smoldering fires

## 2.5 BNI Fire Protection Engineer or Delegate

The Bechtel National, Inc. (BNI), Fire Protection Engineer (FPE) or Delegate is responsible for the following:

- Approving exceptions or enhancements to the requirements annotated in this document
- Reviewing CFN-1137, *UPF Designated Area Tracking and Inspection Log*, monthly

## 2.6 Hot Work Operator

Hot Work Operator(s) are responsible for the following:

- Knowing and understanding the environment in which the work is to be performed, and complying with the permit generated by this Procedure
- Knowing the most current safe operation practices for their equipment
- Receiving PAI approval before starting hot work operations
- Ceasing hot work operations if unsafe conditions develop
- Notifying the PAI for reassessment of the situation if unsafe conditions develop

## 2.7 Fire Watch

A Fire Watch shall perform duties in accordance with UPF-CP-227, *UPF Safety Watches*, with emphasis on the following:

- Stopping the hot work operations if unsafe conditions develop
- Having fire-extinguishing equipment readily available and be trained in its use
- In the event of a fire:
  - Potentially attempting to extinguish the fire
  - Notifying and clearing out nearby personnel
  - Notifying supervisor and PAI, and ensuring the Y-12 National Security Complex Operations Center has been contacted

## UPF Hot Work Permit

### 3.0 PROCEDURE

**NOTE 1:** *Welding blanket, welding curtains, and welding pads are approved. Fire resistant plastic sheeting is not approved for hot work operations.*

**NOTE 2:** *Exceptions to the following requirements may be made based on approval from the BNI FPE and documented on the Hot Work Permit.*

#### 3.1 Establishing Permissible Areas

##### Permit Requestor

- 3.1.1 Ensure a Job Hazard Analysis related to a work package is completed, as applicable, in accordance with Y17-95-64-823, *UPF Safety Task Analysis and Risk Reduction Talk/Job Hazard Analysis (STARRT/JHA) Process*.

**NOTE:** *Appendix C, Hot Work Permit Decision Tree, is provided to determine if a hot work permit is necessary.*

- 3.1.2 Ensure CFN-1139, *UPF Hot Work Permit*, or Section 1, “Establishment of a Designated Area,” of CFN-1137 has been initiated for hot work area inspection.

##### Permit Authorizing Individual

- 3.1.3 Ensure an alternative method to hot work has been considered to protect combustibles from ignition. IF the scope of work and the tools used to conduct hot work could result in possible travel of mobile sources of ignition (e.g., slag, sparks, spatter) farther than 35 feet, the PAI is permitted to increase the 35-foot boundary with approval from the BNI FPE and documented on CFN-1139. THEN ensure the distances and areas addressed in **Sections 3.1.7 through 3.1.14** are extended. IF the scope of work and the tools used to conduct hot work are known to be incapable of generating mobile sources of ignition capable of leaving the immediate area of the applied hot work (e.g., Tungsten Inert Gas [TIG] welding), the PAI is permitted to reduce the 35-foot boundary with approval from the BNI FPE and documented on CFN-1139. THEN ensure the distance and areas addressed in **Sections 3.1.7 through 3.1.14** are reduced.

**NOTE 1:** *Steps 3.1.4 through 3.1.23 may be performed in any order.*

**NOTE 2:** *Hot work operations that might fall into the category where the 35-Foot Rule could be enlarged include, but are not limited to, elevated hot work areas and windy conditions.*

- 3.1.4 Ensure the hot work equipment to be used is in satisfactory operating condition.
- 3.1.5 IF floors (including temporary flooring material) are combustible, THEN perform any the following:
- Keep floors wet
  - Protect with welding blanket or welding pad

## UPF Hot Work Permit

**WARNING**

**The possibility of electrocution or serious physical harm exists where an employee is working with or near electrical equipment that is in contact with moisture.**

IF floors have been wetted down AND personnel are operating arc welding equipment or cutting equipment, THEN ensure personnel will be protected from possible shock.

- 3.1.6 IF combustible materials (e.g., clippings, wood shavings, or textile fibers) are on the floor within the hot work area, THEN remove the material from the floor.

**NOTE:** *When hot work is performed at an elevated level, it should be noted that sparks or slag can fall at a trajectory and land farther than 35 feet horizontally from a point directly under the hot work operator.*

- 3.1.7 Ensure all combustibles that can be relocated are moved at least 35 feet in all directions away from the hot work operation.

- 3.1.8 IF relocation of combustibles is impractical, THEN ensure combustibles are protected by any of the following:

- Welding blanket
- Welding curtain
- Welding pad

**NOTE:** *See Notes 3A and 3B in **Appendix E, Hot Work 35-Foot Rule**, clarifying acceptable location of protected combustibles within the 35-foot radius.*

- 3.1.9 IF floor and wall openings are present within 35 feet of the work location, THEN ensure the openings are protected as noted in the hot work permit.

- 3.1.10 IF ducts and conveyor systems that might carry sparks to distant combustibles are present within the work site, THEN protect the ducts and conveyor systems by shielding, shut down, or both.

- 3.1.11 IF hot work is done near any of the following:

- Walls
- Partitions
- Ceilings
- Roofs of combustible construction

THEN ensure they are protected by any of the following:

- Welding curtain
- Welding blanket
- Welding pad

- 3.1.12 IF hot work is done on one side of the following AND combustibles are on the other side of the following:

- A wall
- Partition

PRCN 02

## UPF Hot Work Permit

- Ceiling
- Roof

THEN perform one of the following:

- Ensure precautions have been taken to prevent ignition of combustibles on the other side by relocating the combustibles

OR

- Ensure a Fire Watch is provided on the side opposite from where the work is being performed

3.1.13 Ensure hot work will NOT be attempted on a partition, wall, ceiling, or roof that has a combustible covering or insulation.

3.1.14 Ensure hot work will NOT be attempted on walls or partitions of combustible sandwich-type panel construction.

3.1.15 IF hot work is close enough to cause ignition by conduction while performing hot work on pipes or other metal that is in contact with combustibles, such as, but not limited to the following:

- Combustible walls
- Combustible partitions
- Combustible ceilings
- Combustible roofs

THEN prohibit hot work from being performed.

3.1.16 Ensure a fully charged and inspected 10-pound (minimum), Class ABC dry chemical or equivalent fire extinguisher is available at the work area.

3.1.17 Identify sprinkler heads and smoke detectors in close proximity to the hot work.

3.1.18 IF hot work will be performed in an area protected by a sprinkler system when the system is impaired, THEN the requirements of National Fire Protection Association (NFPA) 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, must be met, and ensure approval by the BNI FPE (or designee) is documented on CFN-1139.

**CAUTION**

**Smoke detectors and sprinkler heads can be damaged by contact with residue, heat, fumes, and smoke generated by hot work operations. Heat from the hot work operation may damage the metal alloy fusible link within the sprinkler head and affect its activation.**

Consult the BNI FPE to ensure sprinkler heads and fire detection systems are adequately protected within the hot work area and documented on CFN-1139.

## UPF Hot Work Permit

- 3.1.19 Ensure the operator and nearby personnel are suitably protected against dangers such as heat, sparks, and slag. Refer to the Job Hazard Analysis or UPF-CP-205, *Personal Protective Equipment and Safe Work Apparel*, for the appropriate selection to minimize the potential for ignition, burning, trapping hot sparks, and electric shock.

**NOTE:** *Appendix D, Fire Watch Decision Tree, is provided to determine when a Fire Watch is necessary. Appendix E demonstrates the hot work 35-Foot Rule.*

- 3.1.20 Designate a Fire Watch for the hot work operation.

**NOTE:** *In certain situations, additional Fire Watches may be necessary (e.g., line-of-sight or Travel path to perform Fire Watch duties are impeded, hot work performed near open shafts, elevated heights, or where sparks can travel through spaces such as openings).*

IF sparks or slag produced by the hot work operation cannot be directly observed by the initial Fire Watch, THEN ensure an addition Fire Watch is provided.

- 3.1.21 IF hot work will be performed in a Permit-Required Area, THEN ensure the inspection of the work location is documented and approved on CFN-1139.
- IF the permit will extend beyond the issued shift, THEN re-inspect the Permit-Required Area to validate the Hot Work Permit
  - Post the Hot Work Permit at the job location
  - WHEN the Permit-Required Area closes or is no longer valid, THEN turn CFN-1139 in to the UPF Document Management Center (DMC)
- 3.1.22 IF hot work will be performed in a Designated Area, THEN ensure the inspection of the work location is documented and approved on Section 1 of CFN-1137.
- Submit CFN-1137 to the Project Superintendent (or designee) for approval
  - Ensure CFN-1138, *UPF Designated Area for Hot Work Placard*, has been completed
  - Post CFN-1138 at all access points of a Designated Area
  - WHEN the Designated Area closes or is no longer valid, THEN turn CFN-1137 in to the UPF DMC

### **BNI Fire Protection Engineer**

- 3.1.23 Indicate and approve modifications to the 35-Foot Rule on CFN-1139.
- 3.1.24 Approve hot work operations performed in an area protected by a sprinkler system when the system is impaired on CFN-1139.
- 3.1.25 Provide direction for adequate protection of sprinkler heads and fire detection systems within the hot work area and document on CFN-1139.

## UPF Hot Work Permit

**3.2 Performing Hot Work****Permit Authorizing Individual**

- 3.2.1 Ensure hot work is coordinated so that operations that could potentially expose combustibles to ignition sources is prohibited during hot work operations.
- 3.2.2 IF hot work will be performed in a Designated Area, THEN ensure the area is inspected in accordance with Section 2, "Permit Authorizing Individual Inspection Criteria," of CFN-1137.
- 3.2.3 In a Designated Area, perform final check of the hot work location 30 minutes after the completion of hot work operations to detect and extinguish smoldering fires.
- 3.2.4 In a Permit-Required Area, close CFN-1139 once the hot work operation and Fire Watch responsibilities are complete.

**Hot Work Operator**

- 3.2.5 Ensure the following:
- The requirements of **Steps 3.1.9** and **3.1.10** are met
  - Ventilation is working properly
  - Equipment is in working order

**NOTE:** *The PAI inspects the area at least once per shift while the hot work permit is in effect to ensure the conditions in accordance with the permit are maintained.*

- 3.2.6 IF hot work will be performed in a hot work Permit-Required Area, THEN ensure the area has been inspected by a PAI.
- 3.2.7 IF the PAI approves of the Permissible Area, THEN perform hot work in accordance with the applicable work package.

**NOTE:** *Fire Screens on the inlet to local exhaust may be used if fumes contain sparks.*

- 3.2.8 Use exhaust ventilation devices (e.g., moveable ducts/hoods or portable exhaust units) to remove welding fumes or other airborne contaminants arising from hot work operations as near to the source as possible as determined by Environmental, Safety, and Health (ES&H).
- 3.2.9 Ensure work is confined to the area or equipment specified.
- 3.2.10 IF conditions covered by a Hot Work Permit change during hot work operations, THEN perform the following:
1. Stop Work
  2. Notify the PAI
  3. IF the conflicting condition cannot be corrected, THEN request the PAI to close the permit and initiate a new Hot Work Permit with additional controls

## UPF Hot Work Permit

**Fire Watch**

**NOTE:** *Observations continue while hot work is in progress or until the assigned Fire Watch is relieved by another qualified Fire Watch. All Fire Watches assigned to the hot work, including relief Fire Watches, must review and sign CFN-1139.*

- 3.2.11 A single Fire Watch can support multiple co-located hot work operations as long as:
- The hot work activities are within the same permitted location and covered by a single hot work permit
  - The hot work operations can be observed from the same observation position, and must have clear line-of-sight to the operation
  - Clear communication exists between each hot work operation and the Fire Watch
  - The Fire Watch has clear access to the hot work operation to allow for quick response
- 3.2.12 In a Permit-Required Area, observe hot work operations to ensure fire safe conditions, as specified in the Hot Work Permit, are maintained.
- NOTE:** *The duration of the Fire Watch may be extended if the PAI determines the fire hazards warrant the extension.*
- 3.2.13 Remain in the area for at least 30 minutes after the completion of hot work operations to detect and extinguish smoldering fires.
- 3.2.14 Close CFN-1139 once the hot work operation and Fire Watch responsibilities are complete.

**4.0 RECORDS**

Records generated by this Document shall be maintained in accordance with Y15-95-800, *UPF Document Management*.

The following records generated are:

Record or Form Number	Record Title	System/Location	Document Type
CFN-1137	<i>UPF Designated Area Tracking and Inspection Log</i>	InfoWorks	DAIR
CFN-1139	<i>UPF Hot Work Permit</i>	InfoWorks	HWP

**5.0 REFERENCES****5.1 Source References**

29 CFR 1926, *Safety and Health Regulations for Construction*

American National Standards Institute (ANSI)/ASC Z49.1 94, *Safety in Welding, Cutting, and Allied Processes*

PL-CM-801768-A001, *Construction Management Plan and Execution Strategy*

UPF Hot Work Permit
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PL-SH-801768-A007, *Bechtel National, Inc. Uranium Processing Facility  
Environmental, Safety and Health Plan*

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

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

## 5.2 Interfacing References

NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire  
Protection Systems*

NFPA 51B, *Fire Prevention During Welding, Cutting, and Other Hot Work*

UPF-CP-205, *Personal Protective Equipment and Safe Work Apparel*

UPF-CP-227, *UPF Safety Watches*

Y15-95-800, *UPF Document Management*

Y17-95-64-823, *UPF Safety Task Analysis and Risk Reduction Talk/Job Hazard  
Analysis Program (STARRT/JHA) Process*

PRCN 01

PRCN 01

## 6.0 SUPPLEMENTAL INFORMATION

Appendix A, *Acronyms and Definitions*

Appendix B, *Equipment/Materials within a Permissible Area*

Appendix C, *Hot Work Permit Decision Tree*

Appendix D, *Fire Watch Decision Tree*

Appendix E, *Hot Work 35-Foot Rule*



## APPENDIX A

### Acronyms and Definitions

(Page 1 of 2)

#### Acronyms

<b>BNI</b>	Bechtel National, Inc.
<b>DMC</b>	Document Management Center
<b>ES&amp;H</b>	Environmental, Safety, and Health
<b>FPE</b>	Fire Protection Engineer
<b>N/A</b>	Not Applicable
<b>NFPA</b>	National Fire Protection Association
<b>Non-QA</b>	Non-Quality
<b>PAI</b>	Permit Authorizing Individual
<b>QA-L</b>	Quality-Lifetime
<b>QA-NP</b>	Quality-Nonpermanent
<b>UPF</b>	Uranium Processing Facility

#### Definitions

<b>35-Foot Rule</b>	The initial radius length extending out and encircling the hot work on a horizontal and vertical plane for 35 feet or less to noncombustible material (e.g., concrete wall or floor) and can be modified (i.e., distance extended or reduced) by the PAI based upon hot work operations and/or site conditions.
<b>Combustible Liquids</b>	Liquids having a flashpoint at or above 100°F.
<b>Combustible Material</b>	A material that, in the form in which it is used and under the conditions anticipated, has the characteristic to ignite and burn.
<b>Contractor Authority Having Jurisdiction (AHJ)</b>	An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.
<b>Designated Area</b>	A specific location designed and approved for hot work operations that is maintained fire-safe, such as a maintenance shop or a detached outside location, that is of noncombustible or fire-resistive construction, essentially free of combustible and flammable contents, and suitably segregated from adjacent areas (NFPA 51B, <i>Standard for Fire Prevention During Welding, Cutting, and Other Hot Work</i> ).
<b>Fire Watch</b>	A designated individual trained in specific Fire Watch duties and dedicated to both worker safety and property loss prevention for a specified duration. Performs Fire Watch duties when assigned exclusively; no other duties shall interfere.
<b>Flammable Liquids</b>	Liquids having a flashpoint below 100°F.
<b>Hot Work</b>	Work involving burning, welding, grinding, or a similar operation that is capable of initiating fires or explosions.
<b>Hot Work Area</b>	Encompasses the area defined by the 35-Foot Rule or modified by the PAI.

## APPENDIX A

### Acronyms and Definitions

(Page 2 of 2)

<b>Hot Work Permit</b>	A permit issued by the PAI to authorize work involving burning, welding, or a similar operation capable of initiating fires or explosions in a non-designated area, which is based on implementing preventative actions and precautions.
<b>Permissible Area</b>	A Designated Area or Permit-Required Area as defined by this Procedure.
<b>Permit Authorizing Individual (PAI)</b>	The individual designated by management to authorize Hot Work Permits.
<b>Permit-Required Area</b>	Any location other than a designated area that is approved for hot work and is made fire-safe by removing or protecting combustibles from ignition sources.
<b>Welding Blanket</b>	A heat-resistant fabric listed, approved, and designed to be placed in the vicinity of a hot work operation; intended for use in horizontal applications with light to moderate exposures such as that resulting from chipping, grinding, heat treating, sand blasting, and light horizontal welding; designed to protect machinery and prevent ignition of combustibles such as wood that are located adjacent to the underside of the blanket.
<b>Welding Curtain</b>	A heat-resistant fabric listed, approved, and designed to be placed in the vicinity of a hot work operation, intended for use in vertical applications with light to moderate exposures such as that resulting from chipping, grinding, heat treating, sand blasting, and light horizontal welding; designed to prevent sparks from escaping an area.
<b>Welding Pads</b>	A heat-resistant fabric listed, approved, and designed to be placed directly under a hot work operation such as welding or cutting, intended for use in horizontal applications with severe exposures such as that resulting from molten substances or heavy horizontal welding; designed to prevent the ignition of combustibles that are located adjacent to the underside of the pad.

## **APPENDIX B**

### **Equipment/Materials within a Permissible Area**

The list below is an example of items and is not all-inclusive. Each area is required to be evaluated by a PAI using their best judgment on a case-by-case basis.

The following is a partial list of example items that would be allowed within a Permissible Area and still be considered essentially free of combustibles:

- Gas lines for hot work equipment
- Air hoses for hot work equipment
- Electric cords/cables for hot work equipment
- Non-combustible walls (concrete, gypsum wallboard on metal studs, steel partitions to segregate a welding area) without openings or cracks in the construction for at least a height of five feet above the hot work surface
- Non-combustible floor (concrete, earth, steel) without openings or cracks to floor/area below, as applicable
- Heavy timber (greater than a typical 4 inches x 4 inches) necessary to support material
- Tools (e.g., wire brush, soap stone, Metal Inert Gas [MIG] pliers, screw drivers, chipping hammer, torpedo level) necessary to perform hot work
- Bollards/candlestick stands/cones, barricade tape/chain/rope, and signage/tags necessary to support hot work
- Fire-resistive lumber

The following list is to provide guidance of combustibles that are prohibited when uncovered or less than 35 feet from hot work within a Permissible Area:

- Cardboard
- Paper and binders
- Shrink-wrap or wind screening material that is not clearly marked or labeled as meeting the listing or approval for hot work operations; contact the BNI FPE or ES&H with questions
- Fire-resistant/fire-retardant plastic sheeting
- Combustible/flammable liquids and compressed gases
- Wooden materials not treated with fire retardants
- Plastic products (e.g., trash cans, five-gallon buckets)

APPENDIX C  
Hot Work Permit Decision Tree

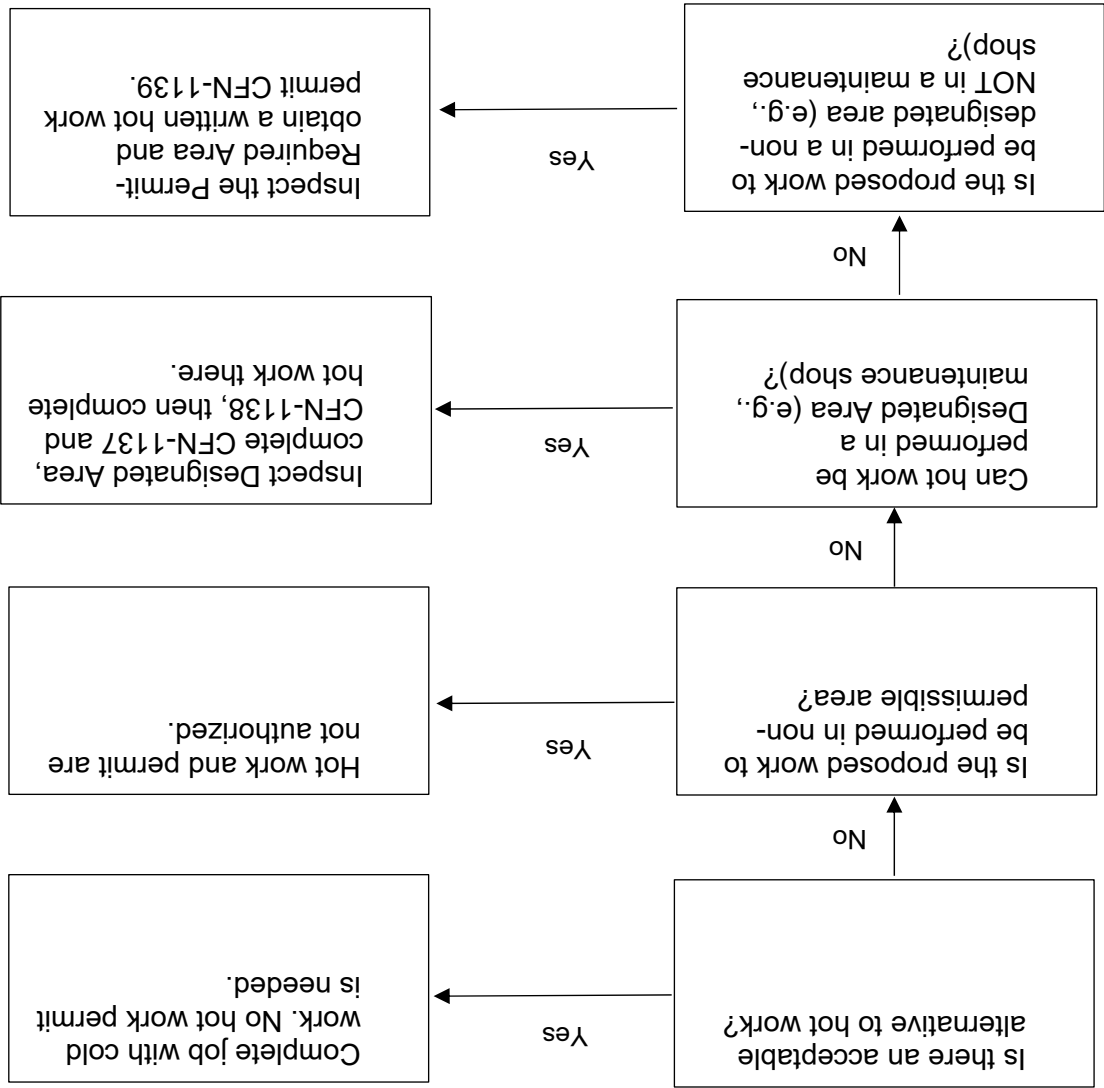
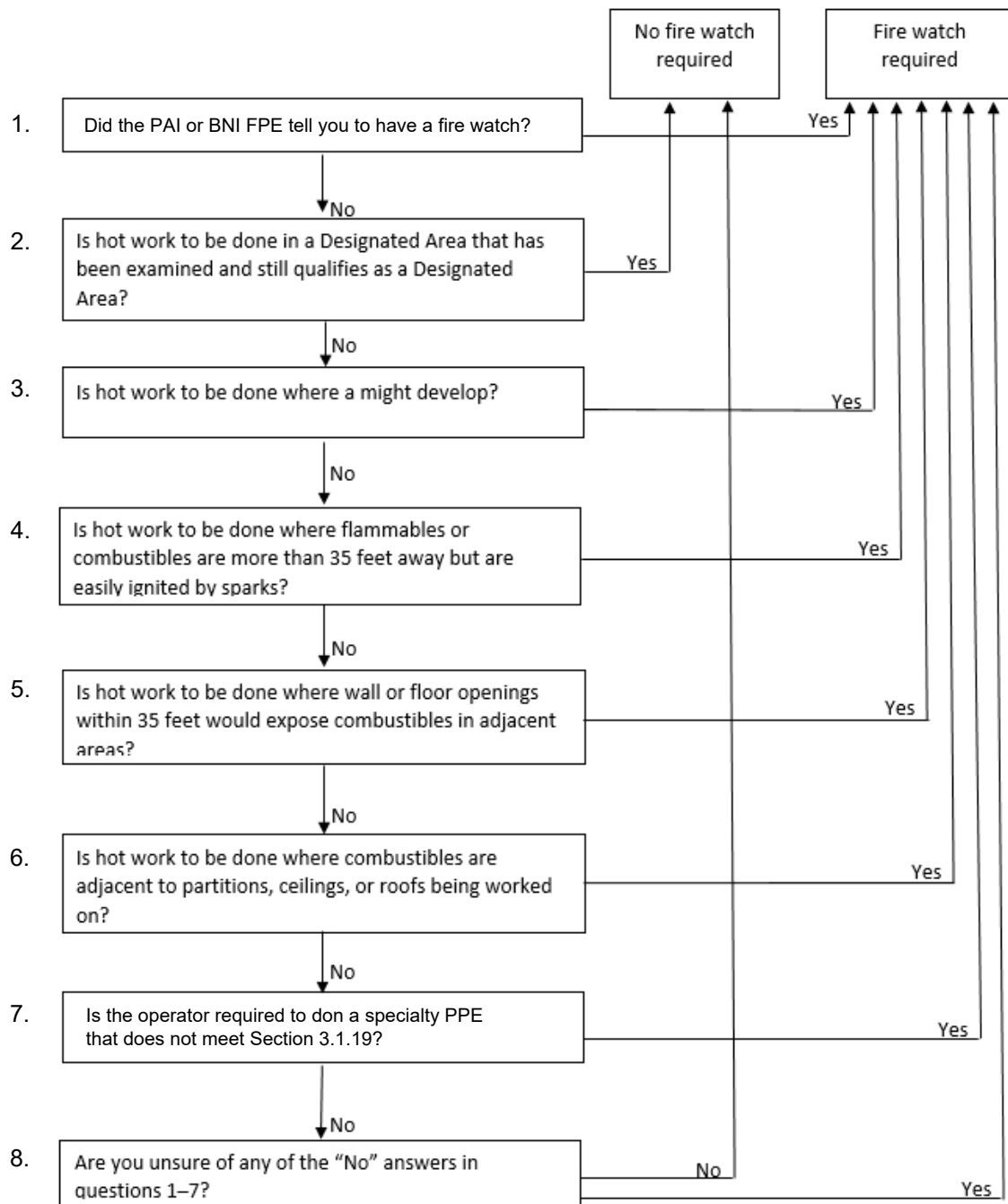


Figure C-1. Hot Work Permit Decision Tree

## APPENDIX D

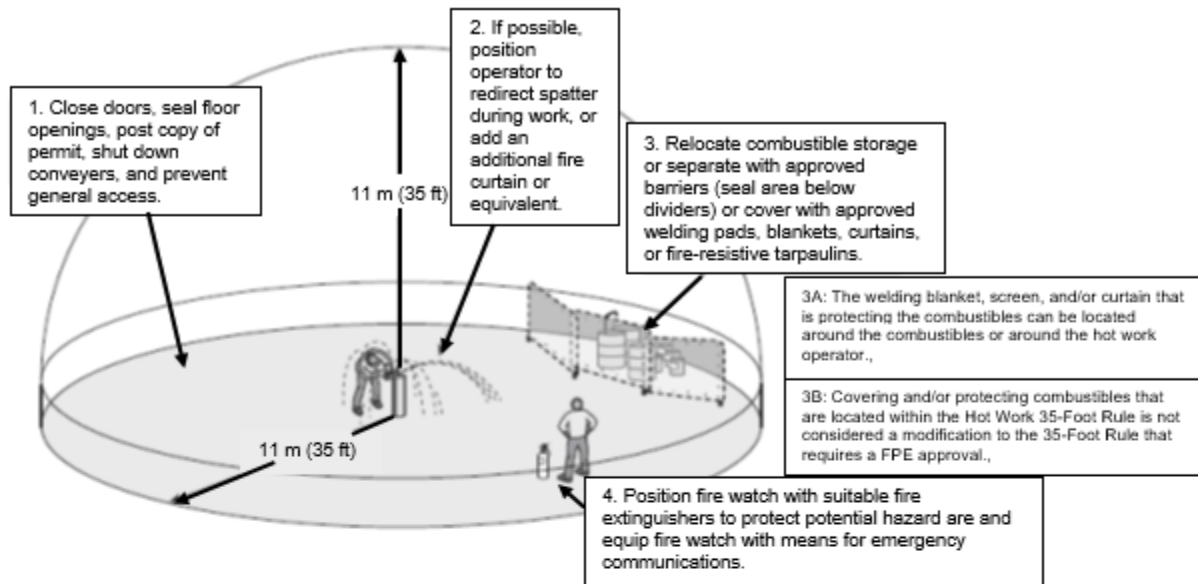
### Fire Watch Decision Tree



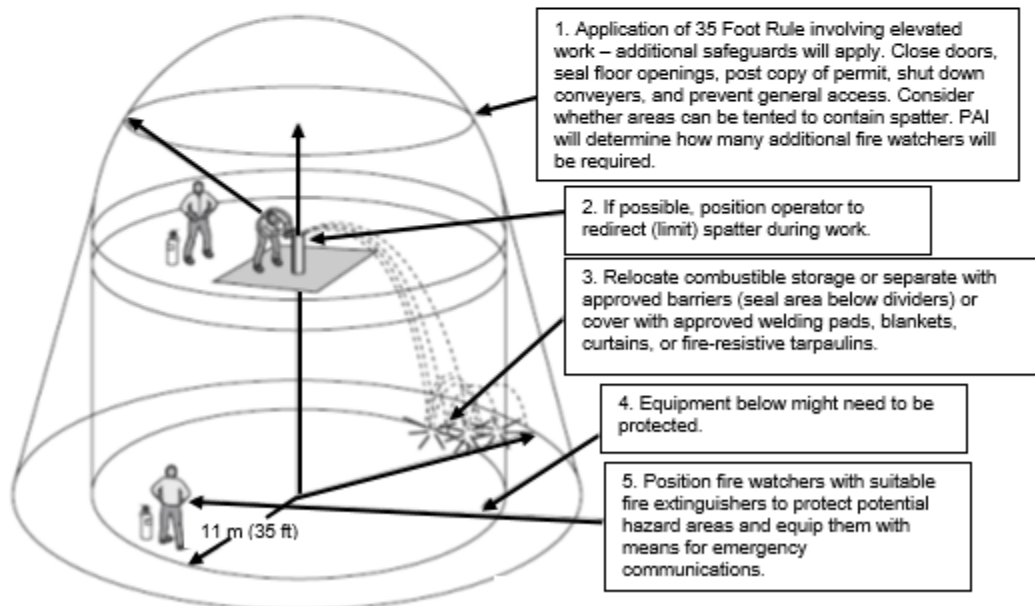
**Figure D-1. Fire Watch Decision Tree Diagram**

## APPENDIX E

### Hot Work 35-Foot Rule



### 35 Foot Rule Illustrated



### Example of Where Multiple Fire Watches Are Needed

Figure E-1. Hot Work 35-Foot-Rule Diagram