

UPF Safety Watches



Preparer:

*J. Michael Johnson* 12/06/18  
 John M. Johnson Date  
 UPF ES&H Representative

Approval:

*Jamie M Horning* 12/06/18  
 Jamie Horning Date  
 UPF BNI ES&H Manager

*Gary F. Hagan* 12/07/18  
 Gary F. Hagan Date  
 UPF ES&H Manager

*Dave Ross* 12/20/18  
 Dave Ross Date  
 UPF Site Manager

*John P. Howanitz* 12/19/18  
 John P. Howanitz Date  
 Senior Vice President and UPF Project Director

12/26/18  
 Effective Date

RC-UPF DMC  
 12/26/18 09:51

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: *Neal Mowery* Date: 12/21/18

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## REVISION LOG

Revision	Description	Intent	Non Intent
7	<p>This revision provides current vest color designation and cosmetic changes to position titles.</p> <p>An evaluation determination has been performed confirming this Command Media implements no Quality requirements, as tracked in PRMS.</p>	X	
6	This revision provides further clarification for color of vests used for Safety Watches, referring to UPF-CP-205.	X	
Previous revisions	On record.	N/A	

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## **1.0 INTRODUCTION**

### **1.1 Purpose**

This procedure establishes guidelines and standards for the duties and responsibilities of personnel assigned to be Safety Watches for a specific activity on the Uranium Processing Facility (UPF) construction site.

### **1.2 Scope**

This procedure applies equally to all UPF construction site personnel, including subcontractors, during the course of the project. A Safety Watch is a person specifically trained and assigned to warn others of potentially unsafe situations or emergency conditions and to provide safety action as necessary.

## **2.0 RESPONSIBILITIES**

### **2.1 Site Manager**

The Site Manager (SM) has the overall responsibility of ensuring the implementation of this procedure, ensuring that all project personnel actively participate, and providing worker support, facilities, and other resources necessary to effectively carry out this procedure.

### **2.2 Environment, Safety, & Health Manager**

The Environment, Safety, & Health Manager has the overall authority for interpretation of the regulations associated with the procedure and the interpretation of the procedure as to intent and application.

### **2.3 Environment, Safety, & Health Representative**

The Environment, Safety, & Health Representative (ESH-R) has the responsibility of compliance oversight with the procedure through periodic field inspections and is responsible for supplying technical advice and interpretation of the environmental, safety, and health codes included in the procedure.

### **2.4 Discipline Superintendent**

The Discipline Superintendent (DS) is responsible for being thoroughly familiar with this procedure and his or her individual responsibilities regarding compliance with and implementation of this procedure, pre-planning work activities to identify the appropriate tool/equipment to use, ensuring that only trained personnel are used in Safety Watch assignments, and ensuring workers understand the requirements of the procedure.

### **2.5 Supervisor**

The Supervisor is responsible for ensuring that the applicable safety controls and processes are incorporated into the planning and execution of the work and that the workers are using the correct tool/equipment/personnel for the assigned task.

## 2.6 Safety Watch

The Safety Watch is responsible for understanding and complying with the requirements of this procedure and how it applies to the work performed; identifying emerging hazards during work activities; pausing or stopping work until hazards are addressed and performing the watch responsibilities as the sole function for the protection of workers; and preventing property damage.

## 3.0 PROCESS

- Types of Safety Watches include:
  - Fire Watch (Hot Work)
  - Confined Space Watch (attendant)
  - Traffic Watch (flagman)
  - Equipment Watch (spotter)
  - Overhead Safety Watch
- Workers will be given the appropriate Safety Watch training before working. Training is conducted in accordance with Y17-95-64-823, *UPF Safety Task Analysis and Risk Reduction Talk (STARRT)/Job Hazard Analysis (JHA) Program Process*.
- More than one Safety Watch may be needed to assist with a specific work task.
- Safety Watches must be fully capable of informing others of emergency conditions and understanding their requirements.
- In the event of an emergency, individuals performing Safety Watch duties are to discontinue the assignment and respond to the emergency as required (e.g., Take Cover, Evacuation).

### 3.1 Fire Watch

- A Fire Watch will be identified and signed on to the Hot Work permit when the following conditions exist:
  - Hot work is performed outside of a Designated Hot Work Area.
  - Building construction combustible material or contents are closer than 35-ft. to the point of operation in all directions.
  - Wall or floor openings/penetrations within a 35-ft. radius of the point of operation expose combustible materials in adjacent areas, including concealed spaces in floors and walls.
- Fire Watches will have:
  - Training to understand the inherent hazards of the work location and Hot Work.
  - Fire Extinguisher(s) positioned to protect the Hot Work area.
  - Training in proper use of the equipment.
- A worker assigned as a Fire Watch:
  - Must wear an orange vest in accordance with UPF-CP-205, *Personal Protective Equipment*.
  - Directly observes Hot Work activities to ensure that fire safe conditions, as specified in the Hot Work permit, are maintained. Such observations will continue while Hot

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- Work is in progress or until such a time that the assigned Fire Watch is relieved by another qualified Fire Watch.
- Will remain at the work area for at least 30 minutes after Hot Work activities have stopped to ensure that no smoldering embers or slag exist.
  - Fire Watches will watch for fires in all exposed areas and notify supervision and other workers in the event of a fire.
  - The Fire Watch ensures that the Hot Work area is barricaded, if required by the permit, and keeps other personnel from entering the barricaded work area.
  - More than one Fire Watch is required if:
    - Combustible materials that could be ignited by the Hot Work operation and that cannot be directly observed by the initial Fire Watch are present (e.g., when welding or cutting over grating surfaces adjacent to floor and wall openings).
    - Fire prevention methods are not sufficient to adequately ensure the prevention of fires. The supervisor responsible for the welding and/or cutting activities then requires additional Fire Watches to guard against fires.
  - The Fire Watch will have the authority to stop welding and/or cutting work activities if unsafe conditions develop.
  - In the event of a fire, the Fire Watch:
    - May attempt to extinguish the fire.
    - Notifies and clears out nearby personnel.
    - Ensures that emergency response has been summoned.
  - The Fire Watch shall notify the ESH-R if any fire extinguishers are discharged so that they may be refilled and appropriate clean-up and disposal of the material can be completed.
  - Upon completion of the job and after it has been determined that no fires or smoldering materials are present, the Fire Watch returns the fire protection equipment to its original location.

### 3.2 Confined Space Watch (Attendant)

A Confined Space Watch, also referred to as an attendant, is required when personnel must enter a permit-required confined space (e.g., vessel, tank, pit, excavation). Refer to Y73-95-802, *Confined Space Entry Program* for Confined Space Watch responsibilities.

Workers assigned as a Confined Space Watches must wear orange vests in accordance with UPF-CP-205.

### 3.3 Traffic Watch (Flagman)

UPF Construction's primary objective will be to design traffic flow and patterns so that it will not be necessary to have a person on the ground to direct traffic. Using personnel for guiding vehicles will be permitted only where no other method is practical. A Job Hazard Analysis or risk assessment to confirm that other measures (without people) are not available, such as a Mobile Equipment Personnel Interface evaluation, is required for using any spotter/flagman and must be signed by the SM.

When a Traffic Watch has been deemed necessary, the following requirements apply for use of Traffic Watch personnel:

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- A Traffic Watch is any person assigned the responsibility of directing, guiding, or otherwise advising the flow of traffic via the use of visible hand signals or other means. Training will be provided for use of standard hand signals as applicable for traffic control (see **Appendix C, Standard Hand Signals**).
- The construction project will provide substantial physical protection measures capable of withstanding vehicle impact for personnel who are involved with directing/guiding vehicles (e.g., concrete barriers; earthen barriers).
- The construction project will provide appropriate lighting arrangements for night work (when applicable), including adequate flashlights or other handheld lighting device for each Traffic Watch personnel.
- Where the Traffic Watch will direct traffic around obstructions in normal thoroughfares, the construction project will attempt to eliminate any need for reverse driving when vehicles are being guided by personnel on the ground.
- Flags, stop/slow signs, and/or other traffic signals will be used to direct traffic safely.
- Traffic watches shall wear orange vests, in accordance with UPF-CP-205.
- Traffic watches may only leave the work area when work has stopped and/or they are replaced with another traffic watch.
- Construction management will ensure that all areas where Traffic Watch personnel are used are monitored on a regular basis to ensure proper placement of Traffic Watch locations. Construction management will also modify arrangements as needed and/or eliminate the use of Traffic Watches when conditions no longer warrant the need.
- For Traffic Watch personnel having routine long-term assignments at stationary locations, the construction project will provide suitable and appropriate shelter to protect these personnel from exposure to extended weather extremes (e.g., rain, extreme sun/heat, snow).
- Use of mobile phones by Traffic Watch personnel is prohibited while guiding vehicles except where two-way project radio communication is needed for the control of traffic.

### 3.4 Equipment Watch (Spotter)

- A Spotter is used to assist the equipment operator in maintaining adequate clearance between the equipment and hazards. When a Spotter is used, the following will apply:
  - The Spotter must wear an orange vest in accordance with UPF-CP-205.
  - Spotters must be trained in the proper methods of signaling, as applicable, and directing movement of mobile equipment in order to avoid property damage and injury to personnel (see **Appendix C, Standard Hand Signals**).
  - The operator and Spotter(s) will jointly identify and discuss their responsibilities, method of communication between each other, location of the Spotter(s), and blind spots during the STARRT Card process.
  - The Spotter will establish and maintain visual and verbal contact with the operator at all times during the task.
  - If visual or verbal contact is lost between the Spotter and the operator, then the operator:
    - Must stop movement of the equipment.
    - Resumes operation only after visual and verbal channels are re-established.

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- Additional Spotters should be used, as needed, to safely move equipment through congested areas or areas with overhead hazards.
- Spotters are required when aerial man lifts and cranes are traveling and when forklifts operate in and around equipment or pipe racks.

### 3.5 Overhead Safety Watch

Where personnel cannot be adequately protected from overhead hazards by the use of barricading (caution or danger), an Overhead Safety Watch may be used. The Overhead Safety Watch(es) will perform tasks from a safe location with clear visibility of approaching personnel and the assigned work activity. The responsible DS will approve the use of an Overhead Safety Watch and document the decision on the STARRT card.

When an Overhead Safety Watch is used, the following will apply:

- Overhead Safety Watch(es) must wear orange vests in accordance with UPF-CP-205.
- A single Overhead Safety Watch may be used for a small area having limited access, such as hallways or areas with a single point of access (e.g., rooms, platforms).
- Multiple Overhead Safety Watches will be used in larger areas to control all access/egress points.
- The Overhead Safety Watch will notify approaching personnel of the Overhead hazard and prevent access to areas below Overhead work for the duration of the work.
- If access to a work area below the Overhead work is required, the Overhead Safety Watch shall stop the Overhead work and have it placed in a safe configuration before allowing workers in the area.
- An Overhead Safety Watch will be maintained until the job task is completed or discontinued (e.g., end of shift, lunch). The Overhead Safety Watch will be re-established when work is resumed and remain as part of the work requirements until the task is completed or the hazards are removed.

## 4.0 RECORDS

None

## 5.0 REFERENCES

### 5.1 Source References

Nuclear, Security & Environmental (NS&E) ES&H Manual 4SM-6BH-F0001, NS&E-227, *Safety Watches*

Y15-101, *Records and Controlled Documents*

### 5.2 Interfacing References

UPF-CP-205, *Personal Protective Equipment*

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

Y73-95-802, *Confined Space Entry Program*



## **6.0 SUPPLEMENTAL INFORMATION**

*Appendix A, Acronyms and Definitions*

*Appendix B, Safety Watch Flowchart*

*Appendix C, Standard Hand Signals*

## APPENDIX A Acronyms and Definitions

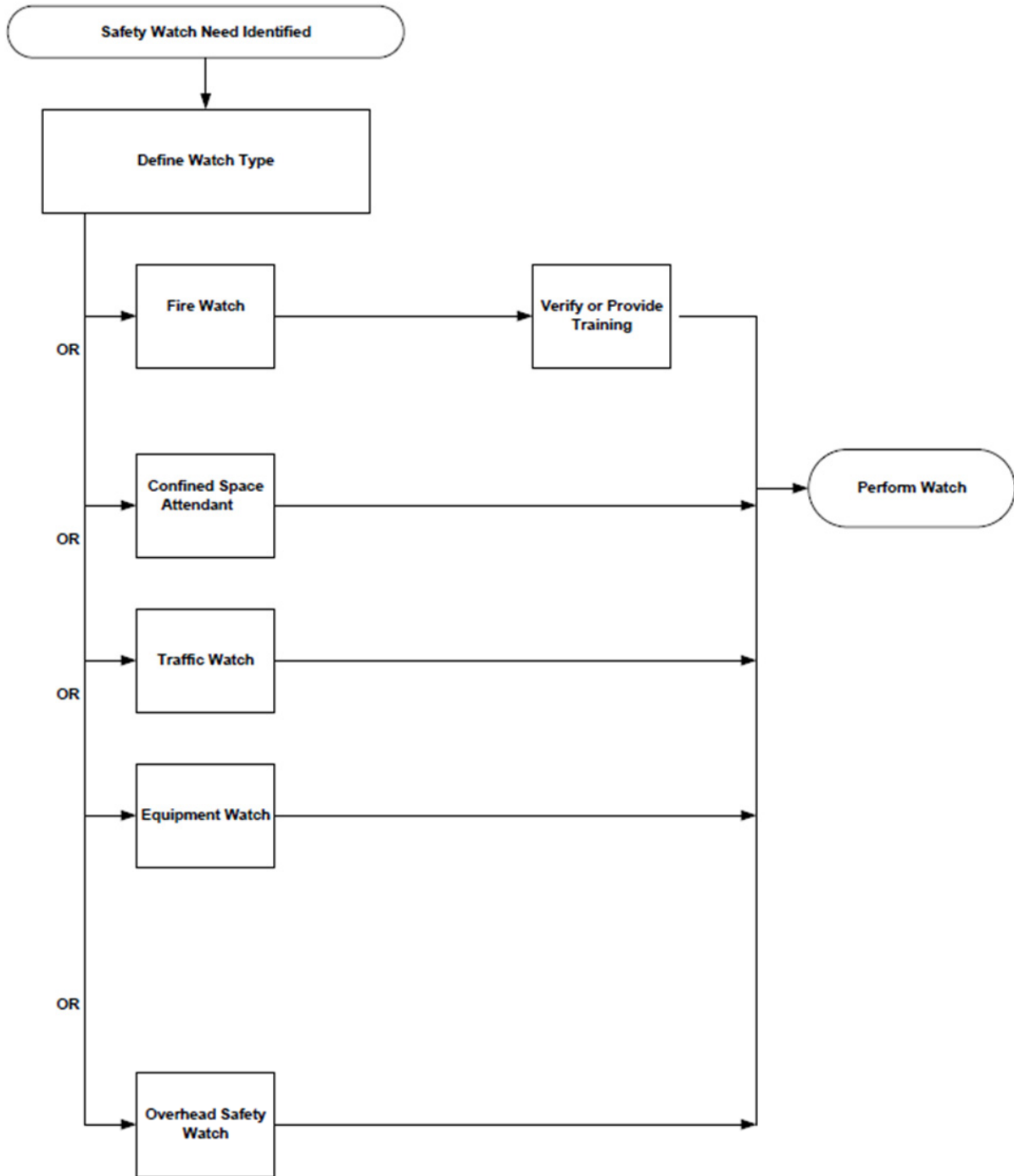
### ACRONYMS:

<b>DS</b>	Discipline Superintendent
<b>ESH-R</b>	Environment, Safety, & Health Representative
<b>JHA</b>	Job Hazard Analysis
<b>NS&amp;E</b>	Nuclear, Security, & Environmental
<b>SM</b>	Site Manager
<b>STARRT</b>	Safety Task Analysis and Risk Reduction Talk
<b>UPF</b>	Uranium Processing Facility

### DEFINITIONS:

<b>Combustible Material</b>	A material that, in the form in which it is used and under the conditions anticipated, will ignite and burn.
<b>Designated Area</b>	A permanent location designed or approved for Hot Work operations that does not require the use of a Fire Watch.
<b>Gas(es)</b>	Propane, argon, nitrogen, mixed gas, or other gases used with oxygen for cutting and welding activities.
<b>Hazardous Areas</b>	Locations or activities identified by Supervision or ESH-M as containing explosive, flammable, toxic, or radiologically contaminated atmospheres or surfaces.
<b>Hot Work</b>	Work involving burning, welding, grinding, or a similar operation that is capable of initiating fires or explosions (Does not include Tungsten Inert Gas [TIG] Welding).
<b>Operator</b>	A worker that has manipulation control of mobile equipment (i.e., stop, start, up, down, forward, backward).
<b>Spotter</b>	A trained worker identified by the operator (or supervisor) who assists the operator with identifying hazards and obstacles that the operator may be unable to see while operating mobile equipment.
<b>Welding/Cutting Operations</b>	Processes such as arc welding, oxy-fuel gas welding, metal inert gas welding, grinding, open-flame soldering, brazing, thermal spraying, oxygen cutting, and arc cutting.

## APPENDIX B Safety Watch Flowchart



## APPENDIX C Standard Hand Signals

