

UPF Safety Task Analysis and Risk Reduction Talk/Job Hazard Analysis Program (STARRT/JHA) Process



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Pen & Ink for minor correction per Y15-95-800

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Effective Date

Minor correction to a revision-controlled document requires the requestor to make the corresponding correction to the authoring database and/or native file.

Selection Required:

- Native File Authoring Database N/A for non-revision controlled
- Signatures below verify that this is a minor correction and that the required changes have been made as checked above.

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Implements Quality Requirements
 None BNI CNS BNI and CNS

UPF Safety Task Analysis and Risk Reduction Talk/Job Hazard Analysis Program (STARRT/JHA) Process

REVISION LOG

Revision 4

Major intent Minor intent Non-intent

- This revision incorporates the changes identified in and supersedes PRCN-Y17-95-64-823-R03-02.
- An evaluation determination has been performed confirming that this Command Media implements no quality requirements as tracked in the Programmatic Requirements Management System (PRMS).
- Forms:
 - CFN-1019 is now associated with this document.
 - CFN-1285 has been created for this document.
- This revision incorporates the following changes:
 - Editorial changes
 - Source corrections.

Revision 3

Major intent Minor intent Non-intent

- Obsoleted CFN-1157, *UPF JHA Review Form*
- Added CFN-1268, *UPF Tower Crane Operations STARRT Card*
- Added Section 3.6, *Tower Crane Operations*
- Deleted Appendix B, *UPF STARRT/JHA Process*
- This revision is in response to the following Condition Reports:
 - 25774-000-GCA-GAM-00846, *F2 - JHA Hazard Controls Do Not Accurately Reflect Project Procedure (MSR-PM-801768-FY18-054)*
 - 25774-000-GCA-GAM-00847, *OFI 1 - Improve the Rigor of JHA Development (MSR-PM-801768-FY18-054)*
 - 25774-000-GCA-GAM-00848, *OFI 2 - Improve Consistency of JHA Hazard Controls (MSR-PM-801768-FY18-054)*
 - 25774-000-GCA-GAM-00849, *OFI 3 - Streamline JHA Revision Process (MSR-PM-801768-FY18-054)*
 - 25774-000-GCA-GAM-01484, *Finding - JHA did Not have Construction Manager Signature (IMA-PM-801768-FY19-059)*
- An evaluation determination has been performed confirming this Command Media implements no Quality requirements as tracked in PRMS.

Previous revisions on record

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1.0 INTRODUCTION

NOTE: *Job Hazard Analyses (JHAs) that have been approved prior to the effective date of Revision 3 of this procedure do not require immediate revision in order to be compliant with this procedure. When existing JHAs are revised or the work activity (i.e., Construction Work Package) has a Change Request processed, the JHAs shall be updated using the hazard controls/mitigations defined in ML-CM-801768-A019, UPF Construction Hazard Tree.*

1.1 Purpose

This procedure defines the work process for developing, issuing, using, and revising JHA documentation at the Y-12 National Security Complex (Y-12) Uranium Processing Facility (UPF) construction site. This procedure also defines the methodology and requirements for the Safety Task Analysis and Risk Reduction Talk (STARRT) process.

This procedure focuses on the second and third functions of the Integrated Safety Management System (ISMS) (i.e., “Identify and Analyze Hazards” and “Develop and Implement Hazard Controls,” respectively).

The identification and analysis of work area hazards and the development of controls/mitigations to address the work area hazards during work are critical to the safe and successful performance of work on the UPF Project.

1.2 Scope

All direct and managed (i.e., subcontracted) UPF Construction employees shall participate in the JHA/STARRT process and use it as the primary tool for planning and Lessons Learned.

Requirements for Subcontractors performing activities are as described in the Supplemental Conditions of the contracting documents. Subcontractors may submit JHAs for work scopes to be performed; these work scopes will be formal contract submittals and the Subcontract Technical Representative (STR) will approve them after review by an Environment, Safety, and Health (ES&H) representative and pertinent organizations.

This procedure applies to personnel who perform field work activities at the Y-12 UPF site using UPF Construction Work Packages generated in accordance with Y17-95-64-800, *UPF Work Control Program*. The JHA and STARRT process shall be used to identify the potential task-specific ES&H hazards associated with UPF field work activities and to define the specific controls and/or actions required to eliminate or minimize the hazard risks.

2.0 RESPONSIBILITIES

NOTE: *Assigned authorities/responsibilities described may be delegated to a designee(s).*

2.1 UPF Site Manager

The UPF Site Manager is responsible for ensuring that:

- This procedure is effectively implemented.
- Work activities comply with the requirements of this procedure.

2.2 UPF Field Engineer/Subcontract Technical Representative

The UPF Field Engineer (FE)/STR is responsible for the following direct-managed work scopes:

- Coordinating with the Responsible Superintendent to determine members of the JHA Development Team beyond the required minimum
- Documenting identified hazards associated with the work scope and coordinating the development of hazard controls
- Facilitating the revision of JHAs.

2.3 UPF ES&H Representative

The UPF ES&H Representative is responsible for:

- Coordinating with UPF Construction Superintendents, craft, and FEs, to develop a list of hazard mitigations and controls for use in UPF JHAs.
- Ensuring hazard controls and mitigations are institutionalized and controlled via ML-CM-801768-A019.

2.4 JHA Development Team

The JHA Development Team is responsible for:

- Reviewing the work scope, including the proposed methods of accomplishment.
- Participating in the physical walkdown of the work scope or in a table-top review of the work scope in order to identify hazards.
- Being familiar with the jobsite, either by participating in the JHA walkdown, visiting the site prior to development of the JHA, or having general knowledge of the area.
- Contributing to the development of hazard controls/mitigations for each identified hazard.
- Participating, as needed, in the revision of JHAs.

2.5 UPF Responsible Superintendent/Craft Foreman

The UPF Responsible Superintendent is responsible for:

- Facilitating the JHA development process, including assembling the JHA Development Team, reviewing the work scope with the JHA Development Team, and performing either a physical walkdown or table-top review of the work scope with the JHA Development Team.

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- Coordinating with the FE to determine members of JHA Development Team (beyond the required minimum).
- Conducting the JHA Development Team's work area walkdown.
- Ensuring that—when work activities, scope, or work area conditions change to the extent that different or additional hazards are present or existing controls are not effective—the work is suspended, the work area is placed into a safe condition, and the JHA is revised to properly identify and analyze the hazard and hazard controls are developed.
- Ensuring that the STARRT process is implemented.
- Ensuring that completed UCN-23162, *Safety Task Analysis and Risk Reduction Talk (STARRT) Card*, forms are maintained in accordance with procedural guidance.
- Reviewing and signing all applicable STARRT cards or assigning a designee to do so.

3.0 PROCESS

The following sections describe the process for review of the work scope, identification of the hazards associated with the work scope, and the process and requirements for defining the controls in JHA documentation to mitigate the risk for the identified hazards. Revision of the JHA documentation and the process for use of the STARRT card are also presented.

3.1 Review Work Scope

The FE/STR is responsible for the items listed in this section.

- 3.1.1 Review the work scope on CFN-1016A, *UPF Work Package Scope and Approvals* and ensure that:
- The work scope is described in sufficient detail, including work scope boundaries.
 - How the work will be performed and who will be performing the work allows for hazard identification.
- 3.1.2 At minimum, the following personnel shall be on the JHA Development Team:
- ES&H representative(s)
 - Responsible Superintendent
 - FE for direct-managed work scope
 - STR for subcontracted work
 - Discipline-specific Craft representative (e.g., pipefitter, electrician, boilermaker, depending on work scope)
 - Other support disciplines and/or subject matter experts, as appropriate to work scope (e.g., Radiological Control Organization representative for work in contaminated/radiological areas).

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3.1.3 Assemble the JHA Development Team and review the work scope. Ensure that the work scope boundaries and work task, including work location(s), starting point, and ending point, are reviewed with the team members.

3.1.4 Based on work scope complexity and frequency of performance (from first-time evolution to repetitive performance), evaluate if a physical walkdown of the work scope is required or if a table-top review of the work scope will be performed.

3.2 Identify and Analyze Hazards

3.2.1 The Responsible Superintendent/STR shall assemble the JHA Development Team at the designated work location to perform a walkdown or assemble the team in another location to perform the table-top review.

3.2.2 IF the JHA Development Team is in agreement that a physical walkdown is not required, THEN perform a table-top review of the work scope's anticipated work activity hazards. GO TO **Section 3.3, Develop Hazard Controls**, to continue.

3.2.3 The JHA Development Team shall perform a walkdown identifying the work scope-specific tasks. The walkdown shall be documented on CFN-1019, *UPF JHA Walkdown*, with an attached Work Activity Checklist.

3.3 Develop Hazard Controls

JHAs may be developed using CFN-1158, *UPF Job Hazard Analysis*, or an approved electronic application (i.e., TEAMWorks), but must be generated using hazard controls/mitigations defined in ML-CM-801768-A019.

The JHA Development Team is responsible for the following sections

3.3.1 The hierarchy of hazard controls is as follows:

- Elimination/substitution (e.g., less hazardous work practice and/or material)
- Engineering control (e.g., glove boxes, ventilation hoods)
- Administrative control (e.g., flagging, postings)
- Personal protective equipment.

3.3.2 Populate JHA by entering Work Activities and corresponding hazard controls/mitigations defined in ML-CM-801768-A019. Hazard controls may include, but are not limited to:

- Specialized training needed
- Permits required
- Need for a competent or qualified person
- Specialized tools
- Construction methods and scheduling/sequencing of work tasks, including hold points.

3.3.3 Obtain signatures of all JHA Development Team members on CFN-1019.

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- 3.3.4 Retain completed CFN-1019 until applicable field work is complete.
Site Manager signature authority has been delegated to the Responsible Superintendent for approval of JHAs. Refer to COI-CM-801768-A087, *Delegation of Site Manager Signature Authority for Job Hazard Analyses*.
- 3.3.5 Forward approved JHA to the Document Management Center (DMC) for processing.
- 3.3.6 Ensure the work crew and support discipline personnel are briefed on the JHA prior to work start AND ensure all personnel document briefing on the JHA by signature/date on the CFN-1251, *UPF Construction Attendance Sheet*. The initial Pre-Job Briefing (CFN-1021A, *UPF Work Package Pre-Job Briefing*) and JHA Briefing may utilize the same CFN-1251.
- 3.3.7 Ensure any new members of the work crew and support discipline personnel are briefed on the JHA prior to work start AND ensure briefed personnel sign and date the CFN-1251 for the current revision of the JHA.

3.4 Revise JHAs

- 3.4.1 When work activities or scope of work change to the extent that additional hazards may be present, complete the following:
- If the changes directly impact current work activities, suspend work and place the work in a safe condition.
 - Revise the JHA in accordance with **Section 3.2, Identify and Analyze Hazards**, and **Section 3.3** of this procedure.
- 3.4.2 Obtain signature concurrences for the revision of CFN-1019 and the JHA.
- 3.4.3 Forward the revised JHA to the UPF DMC for processing and placement into the work package.
- 3.4.4 Provide the work crew with a secondary briefing on the revised JHA prior to work and ensure that personnel document the briefing on a new CFN-1251.

3.5 JHA Change Notice

A completed CFN-1285, *JHA Change Notice (JCN)*, may be used to document a revision of or additions to ML-CM-801768-A019. The JCN process is used to document quickly-needed changes to ML-CM-801768-A019 and continue work.

The document number assigned to the JCN will identify the document, revision, and incremental number of the JCN. For example, if there is a JCN for Revision 3 of ML-CM-801768-A019, and this is the second JCN for that revision, then the document number will be JCN-ML-CM-801768-A019-R03-02.

The completed JCN form will be issued and added as the first page(s) of ML-CM-801768-A019 in InfoWorks. If there is more than one JCN, then the most recent JCN should be on top.

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The JCN will be sent for review and signature by the UPF ES&H Manager and UPF Site Manager (or their respective designees).

A briefing is required for the JCN prior to continuing field work. A JCN briefing may be applied to any of the relevant JHAs that are affected by the JCN.

Up to five JCNs can be generated against a revision of ML-CM-801768-A019 before a full revision is required. ML-CM-801768-A019 requires that all of these JCNs be incorporated before the next full revision. In addition, up to five JCNs may be applied to any JHA document before a full revision is required.

3.6 Implement Safety Task Analysis and Risk Reduction Talk

3.6.1 Prior to beginning work activities each day or after an extended break or interruption (e.g., shift change, weekend), perform the following:

- Walkdown and review the work location with involved personnel.
- Review area hazards to ensure that they are identified and hazard controls/mitigations are in place to eliminate/reduce them.
- Ensure that there are no new hazards unidentified and uncontrolled by the approved JHA.

3.6.2 Using UCN-23162, perform the following:

- Conduct a Pre-Work Briefing with the work crew and support disciplines.
- Resolve any issues/concerns with the work crew.
- List and discuss any permitting changes and any changes in questions for contacts or emergencies.
- Ensure that personnel document attendance in the "Employee" section of UCN-23162.

3.6.3 When any of the following conditions exist, conduct appropriate STARRT Card Briefings:

- The work area changes
- Personnel with different classifications will be working in close proximity
- Differing types of work are performed in close proximity
- The complexity of the work warrants a Pre-Work Briefing
- The Responsible Superintendent deems it necessary.

3.6.4 UCN-23162 forms should be turned in at the end of each shift at the designated collection points. The end of shift/Post-Job Briefing section must be completed before the UCN-23162 forms are submitted.

3.7 Tower Crane Operations

For UPF Tower Crane operations, implement the STARRT card process identified in **Section 3.5, *Implement Safety Task Analysis and Risk Reduction Talk***, using CFN-1268, *UPF Tower Crane Operations STARRT Card*.

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3.8 STARRT Card Evaluation

- 3.8.1 The Responsible Superintendent shall review and sign all applicable STARRT cards.
- 3.8.2 If no feedback is provided on the STARRT Card, then the Responsible Superintendent shall provide it to ES&H.
- 3.8.3 If feedback is provided on the STARRT card, then the Responsible Superintendent shall enter feedback into CFN-1262, *UPF STARRT Card Feedback Log*, and provide the STARRT card to ES&H.

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 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:

Record or Form Number	Record Title	Record Holder	System/ Location	Quality Type
CFN-1016A	<i>UPF Work Package Scope and Approvals</i>	UPF Construction	Shared Drive	Non-QA
CFN-1019	<i>UPF JHA Walkdown</i>	UPF Construction	NA	Non-QA
CFN-1021A	<i>UPF Work Package Pre/Mid-Job Briefing</i>	UPF Construction	Shared Drive	Non-QA
CFN-1158	<i>UPF Job Hazard Analysis</i>	UPF DMC	InfoWorks	QA-L
CFN-1251	<i>UPF Construction Attendance Sheet</i>	UPF DMC	InfoWorks	QA-L
CFN-1262	<i>UPF STARRT Card Feedback Log</i>	UPF DMC UPF Construction	InfoWorks N/A	Non-QA
CFN-1268	<i>UPF Tower Crane Operations STARRT Card</i>	UPF DMC UPF Construction	InfoWorks N/A	Non-QA
CFN-1285	<i>JHA Change Notice (JCN)</i>	UPF DMC	InfoWorks	QA-L
UCN-23162	<i>Safety Task Analysis and Risk Reduction Talk (STARRT) Card</i>	UPF DMC UPF Construction	InfoWorks N/A	Non-QA

Initials: 
Date: 03/05/20

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5.0 REFERENCES

5.1 Source References

- Bechtel Core Process 2H-H030-00105 (CP-105), *Risk Assessment and Objectives*
- OT-CM-801768-A009, *STARRT Card Evaluation*
- PL-QA-801768-A001, *Bechtel National Incorporated (BNI) Uranium Processing Facility (UPF) Project Quality Assurance Plan (QAP)*

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

Y73-95-804, *UPF Project Industrial Hygiene Exposure Assessment & Surveillance Strategy and Process*

5.2 Interfacing References

COI-CM-801768-A087, *Delegation of construction Site Manager, 10 CFR 851 Signature Authority for Job Hazard Analysis (JHAs)*

ML-CM-801768-A019, *UPF Construction Hazard Tree*

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

Y15-95-800, *UPF Document Management*

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

6.0 SUPPLEMENTAL INFORMATION

Appendix A, *Acronyms and Definitions*

APPENDIX A Acronyms and Definitions

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Acronyms

DMC	Document Management Center
ES&H	Environment, Safety, and Health
FE	Field Engineer
ISMS	Integrated Safety Management System
JCN	JHA Change Notice
JHA	Job Hazard Analysis
STARRT	Safety Task Analysis and Risk Reduction Talk
STR	Subcontract Technical Representative
UPF	Uranium Processing Facility
Y-12	Y-12 National Security Complex

Definitions

Construction Work	Physical/manual work performed, excluding administrative work activities Hands-on activities intrusive to a system, structure, component, or equipment (includes testing, troubleshooting, and calibration activities).
Hold Point	A mandatory verification point in the sequence of work The hold point may not be passed without being released by the identified person or organization based on confirmation that specified conditions have been met or completed. Hold points are steps in a process that due to safety, technical, or work process importance may need to have additional oversight, verification, or documentation.
JHA Development Team	A team comprised of Supervision, FE or STR, ES&H representative, and workers The team may also include other technical or subject matter representatives as appropriate for the scope of work. The team identifies hazards and develops appropriate hazard controls/mitigations based on the scope of work and documents on CFN-1158.
Job Hazard Analysis	Form CFN-1158; A process that identifies key job activities/tasks associated with a definable activity, examines key job activities/tasks to determine the foreseeable hazards associated with the task (e.g., chemical, biological, physical, workplace), and establishes criteria to eliminate or control the hazards
Pre-Job Briefing	Form CFN-1021A; A meeting to brief personnel involved in the performance of an approved work package This meeting is held before the initial start of field activities or when new workers are added to the team, and may be repeated if there are significant changes in project conditions or plans. At a minimum, the meeting is to discuss the scope of work, permits required to perform activities, hazards and controls associated with work activity, worker qualifications, Lessons Learned, and special requirements as deemed appropriate by Responsible Superintendent conducting the meeting. For subcontracted work, this meeting also establishes the personnel responsible for roles identified in the work scope.

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Safety Task Analysis and Risk Reduction Talk (STARRT)	<p>An informal process performed at or near the work location designed to engage workers and support personnel in reviewing area hazards, ensuring appropriate hazard controls are in place, and focusing workers on the requirements for safe work activity performance</p> <p>The STARRT card (UCN-23162) is a tool used to facilitate this process. Use of the STARRT process may occur upon arriving at the start of the shift, after breaks or interruptions, prior to interaction with equipment, etc., to ensure hazards are recognized and the controls to eliminate, mitigate, or minimize the hazards are properly communicated and understood.</p>
Walkdown	An activity used to familiarize personnel with the work, its location, hazards, current conditions, and other points important to planning safe performance of the work
Work Package	Document that provides the scope, direction and design documents to accomplish the activity, including information to meet project requirements
Worker Representative(s)	Personnel representing a work group, responsible for input to the work planning process
Workers	Individuals assigned responsibility for performance of the work identified in the work package