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

THE NATION'S URANIUM PROCESSING FACILITY

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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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Implements Quality Requirements

☒None ☐BNI ☐CNS ☐BNI & CNS

REVISION LOG

Revision	Description	Intent	Non Intent
3	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.	X	
2	Added Section 3.6, *STARRT Card Evaluation* Responsive to the following Corrective Actions: 25774-000-GCA-GAM-00852, *Near Miss - Iron Worker's Shirt Caught on Rebar Resulting in Worker Being Raised Up Couple Feet Off Flatbed* 25774-000-GCA-GAM-01045, *Improperly Maintained Safety Task Analysis and Risk Reduction (STARRT) Cards*	X	
Previous Revisions	On Record	N/A	

CONTENTS

1.0 INTRODUCTION

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 the existing JHAs are revised or the work activity (i.e., Construction Work Package) has a Change Request processed, 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 the development, issuance, use, and revision of 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 use of the Safety Task Analysis and Risk Reduction Talk (STARRT) process.

This procedure focuses on the second function of the Integrated Safety Management System (ISMS) (Identify and Analyze Hazards) and the third function of ISMS (Develop and Implement Hazard Controls).

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

1.2 Scope

All direct and managed (subcontract) UPF Construction employees shall participate in the JHA/STARRT process and use them as primary planning and Lessons Learned tools.

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 will be formal contract submittals and approved by the Subcontractor Technical Representative (STR) after review by an Environment, Safety, and Health (ES&H) representative and pertinent organizations.

This procedure is applicable to personnel performing 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*. JHA and STARRT processes shall be utilized to identify the potential task-specific hazards (safety, health, and/or environmental) 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

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

2.1 UPF Site Manager

The UPF Site Manager is responsible for the following:

- Ensuring effective implementation and compliance with the requirements of this procedure.

2.2 UPF Field Engineer

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

- Reviewing CFN-1016, *UPF Work Package Cover Sheet* to ensure that the work scope is described in sufficient detail, work accomplishment methods are detailed, and craft and support disciplines participating in work scope are identified
- Coordinating with the Responsible Superintendent to determine members of JHA development team (beyond the required minimum)
- 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
- Documenting identified hazards associated with the work scope and coordinating the development of hazard controls
- Facilitating the revision of JHAs

2.3 UPF Subcontract Technical Representative

The UPF Subcontract Technical Representative is responsible for the following (subcontracted work scopes):

- Reviewing CFN-1016 to ensure that the work scope is described in sufficient detail, work accomplishment methods are detailed, and craft and support disciplines participating in work scope are identified
- Determining required members of JHA development team
- Facilitating 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
- Documenting identified hazards associated with the work scope and coordinating the development of hazard controls
- Facilitating the revision of JHAs

2.4 UPF Environment, Safety, and Health (ES&H) Representative

The UPF ES&H Representative is responsible for the following:

- 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.

2.5 JHA Development Team

The JHA Development Team is responsible for the following:

- 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 recent familiarization/knowledge of the area
- Contributing to the development of hazard controls/mitigations for each identified hazard
- Participating, as needed, in the revision of JHAs

2.6 UPF Responsible Superintendent/Craft Foreman

The UPF Responsible Superintendent is responsible for the following:

- 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

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

FE/STR

3.1.1 Review the work scope on CFN-1016 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 a 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)

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

Responsible Superintendent/STR

3.2.1 Assemble the JHA development team at the designated work location to perform a walkdown or in another location to perform the table-top review.

JHA Development Team

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** to continue.

3.2.3 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 (WAC).

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.

JHA Development Team

3.3.1 The hierarchy of hazard controls is as follows:

A. Elimination/substitution (e.g., less hazardous work practice and/or material)
B. Engineering control (e.g., glove boxes, ventilation hoods)
C. Administrative control (e.g., flagging, postings)
D. 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.

3.3.4 Place completed CFN-1019 into the work package.

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 and placement into the work package.

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 personnel document briefing to the JHA by signing and dating the CFN-1251 for the current revision of the JHA.

1.1.0 Forward approved JHA to the Document Management Center (DMC) for processing and placement into the work package.

3.4 Revise Job Hazard Analysis

3.4.1 WHEN work activities, scope, or work area conditions change to the extent that different or additional hazards may be present, THEN:

- Suspend work and place work area into a safe condition, if changes directly impact current work activities.
- Revise the JHA in accordance with **Sections 3.2** and **3.3** of this procedure.

3.4.2 Obtain signature concurrences for the revision on the CFN-1019 and JHA.

3.4.3 Forward the revised JHA to UPF DMC for processing and placement into the work package.

3.4.4 Re-brief the work crew on the revised JHA prior to work, AND ensure that personnel document their briefing to the revised JHA on a new CFN-1251.

3.5 Implement Safety Task Analysis and Risk Reduction Talk

3.5.1 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 and ensure they are identified and hazard controls/mitigations are in place to eliminate/reduce them.
- Ensure new, additional hazards not identified and controlled by the approved JHA are not present.

3.5.2 Using UCN-23162, *Safety Task Analysis and Risk Reduction Talk (STARRT) Card*, 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 personnel document attendance in the “Employee” section of the UCN-23162 STARRT card.

3.5.3 IF no new hazards are identified, THEN it is permissible to add the current date to the existing UCN-23162 STARRT card and initial and date beside the date entry.

3.5.4 IF the work area changes, personnel with different classifications will be working in close proximity, differing types of work or complexity warrant, or at the Responsible Superintendent's discretion, THEN conduct appropriate pre-work briefings.

3.5.5 UCN-23162 STARRT cards should be turned in at the end of each shift at the designated collection points.

3.6 Tower Crane Operations

3.6.1 For UPF Tower Crane operations, implement the STARRT card process identified in **Section 3.5** using CFN-1268, *UPF Tower Crane Operations STARRT Card*.

3.7 STARRT Card Evaluation

Responsible Superintendent

3.7.1 Review and sign all applicable STARRT cards.

3.7.2 IF no feedback is provided on the STARRT Card, THEN provide to ES&H.

3.7.3 IF feedback is provided on the STARRT card, THEN enter feedback in the CFN-1262, *UPF STARRT Card Feedback Log* and provide 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 Number	Record Title	Record Holder	System/ Location	Quality Type
CFN-1158	UPF Job Hazard Analysis	UPF DMC	InfoWorks	QA-L
CFN-1262	STARRT Card Feedback Log	UPF Construction	N/A	Non-QA
CFN-1268	UPF Tower Crane Operations STARRT Card	UPF Construction	N/A	Non-QA
UCN-23162	Safety Task Analysis and Risk Reduction Talk (STARRT) Card	UPF Construction	N/A	Non-QA

5.0 REFERENCES

5.1 Source References

Core Process 2H-H030-00105 (CP-105), *Safety Task Analysis and Risk Reduction Talk/ Job Hazard Analysis (STARRT/JHA)*

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

OT-CM-801768-A009, *STARRT Card Evaluation*

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

Y60-101PD, *Quality Assurance Program Description*

5.2 Interfacing References

CFN-1016, *UPF Work Package Cover Sheet*

CFN-1019, *UPF JHA Walkdown*

CFN-1021A, *UPF Work Package Pre-Job Briefing*

CFN-1251, *UPF Construction Attendance Sheet*

COI-CM-801768-A087, *Delegation of Site Manager Signature Authority for Job Hazard Analyses*

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:

BNI	Bechtel National, Inc.
DMC	Document Management Center
ES&H	Environment, Safety, and Health
FE	Field Engineer
ISMS	Integrated Safety Management System
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, Field Engineer or Subcontract Technical Representative, 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 (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.

APPENDIX A
Acronyms and Definitions

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Pre-Job Briefing (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.
Safety Task Analysis and Risk Reduction Talk (STARRT)	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. 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.
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.