THE NATION'S URANIUM PROCESSING FACILITY

UPF PAGE/PROCEDURE CHANGE NOTICE (PRCN)

PRCN Number:	PRCN-Y17-95-64-831-R04-03	Effective Date:	10/26/2023
NOTE: PRCN Effective Date cannot precede effective date of associated document.			
☐ Intent Change		☒ Non-Intent Change	
Associated Document Number:	Y17-95-64-831	Rev:	4
Associated Document Title:	*UPF Scaffold Control Management*		
Justification for Change:	This PRCN is in response to CR:25774-000-GCA-GAM-04543, *OFI-Recommendation to Clarification of Requirements Related to Swing Gates in Y17-95-64-831 to Align with SWPP (CAA-SH-801768-FY23-010)*		

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.

Change to Appendix F, *Safety Requirements for Scaffolding*, Item #11:

From:
11~~. Swing gates, or equivalent, should be used integral to the scaffold guardrail system~~

To:
11. Where possible, gates should be used integral to the scaffold guardrail system. Gates that are not integral to the guardrail system may be needed due to permanent plant obstructions (e.g., steel beam or pipe at a gate location causing a tripping hazard). Alternatively, a yellow scaffold tag may be used when a gate integral to the guardrail system is unable to be installed due to an obstruction.

Preparer			
UPF Construction Issues Management	Kellie R. Coleman *Printed Name/Signature*		10/26/23 Date
Approval			
UPF Project Field Engineer	Bradley A. Lewis *Printed Name/Signature*		10/26/23 Date

RC-UPF DMC
10/26/23 12:11

THE NATION'S URANIUM PROCESSING FACILITY

UPF PAGE/PROCEDURE CHANGE NOTICE (PRCN)

PRCN Number:	PRCN-Y17-95-64-831-R04-02	Effective Date:	09/19/23

NOTE: PRCN Effective Date cannot precede effective date of associated document.

☐ Intent Change ☒ Non-Intent Change

Associated Document Number:	Y17-95-64-831	Rev:	4
Associated Document Title:	*UPF Scaffold Control and Management*		
Justification for Change:	This PRCN is in response to CR 25774-000-GCA-GAM-04540, *Finding-Inconsistency with Scaffold Tagging Requirements (CAA-SH-801768-FY23-010)*		

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.

In Section 4.5.2, correct in-text reference:

From:
Reference ~~UPF-SH-MANUAL-001, *Elevated Work Manual,*~~ for Fall Protection and Falling Object Prevention guidance.

To:
Reference UPF-MANUAL-SH-001, *UPF Elevated Work Manual*, for Fall Protection and Falling Object Prevention guidance.

Add a NOTE at the end of Section 4.8.4:

NOTE: Yellow tags are not to be placed on scaffold as a status of non-structural items such as poor housekeeping or missing/damaged debris netting.

Remove from Section 6.1, *Source References*:

~~UPF-MANUAL-SH-A001, *UPF Elevated Work Manual*~~

Preparer			
UPF Construction Issues Management	Kellie R. Coleman	Kellie Coleman	09/18/23
	Printed Name/Signature		Date
Approval			
UPF Project Field Engineer	Bradley A. Lewis		09/18/23
	Printed Name/Signature		Date

RC-UPF DMC
09/19/23 07:05

THE NATION'S URANIUM PROCESSING FACILITY

UPF PAGE/PROCEDURE CHANGE NOTICE (PRCN)

PRCN Number: PRCN-Y17-95-64-831-R04-01	PRCN Rev: 0	Effective Date: 09/26/22

NOTE: PRCN Effective Date cannot precede effective date of associated document.

☒ PRCN Eligible Intent Change ☐ Non-Intent Change

Associated Document Number: Y17-95-64-831	Rev: 4

Associated Document Title: *UPF Scaffold Control and Management*

Identify the scope of the change, including any new, removed, or changed content. Notate any references, such as Condition Reports, that are driving the change

Section 4.5.2

From:

Free Climbing scaffold structures greater than 6 ft to the next lower level without using a Personal Fall Arrest System (e.g., harness and retractable lifeline) tied off to an acceptable anchor point is not allowed. Free climbing does not included climbing installed scaffold ladders.

To:

Free Climbing scaffold structures in any direction above a height greater than 6 ft without using a Personal Fall Arrest System (e.g., harness and retractable lifeline) tied off to an acceptable anchor point is not allowed. Free climbing does not include climbing installed scaffold ladders.

Appendix A, Free Climbing definition

From:

Climbing scaffold structures greater than 6 ft to the next lower level without using a Personal Fall Arrest System (e.g., harness and retractable lifeline) tied off to an acceptable anchor point is not allowed. Free climbing does not include climbing installed scaffold ladders.

To:

Free Climbing scaffold structures in any direction above a height greater than 6 ft without using a Personal Fall Arrest System (e.g., harness and retractable lifeline) tied off to an acceptable anchor point is not allowed. Free climbing does not include climbing installed scaffold ladders.

Appendix F, Item 11

From:

Swing gates or equivalent, should be used integral to the scaffold guardrail system.

To:

Swing gates, or equivalent, shall be used integral to the scaffold guardrail system.

Appendix F, Item 13

From:

All scaffold decks 20 ft (6.1 m,) in length or greater shall be equipped with a self-retracting lanyard at the top of the ladder unless there is a rest platform below the 20-ft elevation or another work deck to exit off the ladder. The self-retracting lanyard connector should be affixed with a tagline to allow for the lanyard to stay retracted when not in use (2HO-E0S0-00003-001, *BESH Health & Safety Fall Prevention and Protection Program Guideline)*

To:

All scaffold decks 20 ft (6.1 m,) in height or greater shall be equipped with a self-retracting lanyard at the top of the ladder unless there is a rest platform below the 20-ft elevation or another work deck to exit off the ladder. The self-retracting lanyard connector shall be affixed with a tagline to allow for the lanyard to stay retracted when not in use (2HO-E0S0-00003-001, *BESH Health & Safety Fall Prevention and Protection Program Guideline)*

RC-UPF DMC
09/26/22 13:04

THE NATION'S URANIUM PROCESSING FACILITY

UPF PAGE/PROCEDURE CHANGE NOTICE (PRCN)

Preparer			
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	Printed Name/Signature		Date
Approval			
UPF Project Field Engineer:	Bradley A. Lewis		09/26/22
	Printed Name/Signature		Date
UPF ES&H Manager:	Kieran S. Kelly		09/23/22
	Printed Name/Signature		Date
UPF Site Manager:	Robert S. Solberg		09/23/22
	Printed Name/Signature		Date

THE NATION'S URANIUM PROCESSING FACILITY

Preparer:

Mark W. Murdock
UPF Issues Management
04/29/22
Date

Approval:

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05/27/22
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Date

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04/29/22
Date

06/24/22
Effective Date

RC-UPF DMC
05/31/22 13:15

REVISION LOG

Revision 4 ☒ Intent ☐ Non-Intent

- These changes are in response to Condition Report 25774-000-GCA-GAM-03637, *Finding 1: Scaffold "Free Climbing" Exceptions Not Approved/Documented by RSS and ES&H (ISR-SH-801768-FY22-002)*
  - Revised Section 4.5.1 to state "Climbing on scaffolding components (e.g., cups, rings, diagonal members) is not allowed"
  - Added Section 4.5.2, "Free Climbing scaffold structures greater than 6 ft to the next lower level without using a Personal Fall Arrest System (e.g., harness and retractable lifeline) tied off to an acceptable anchor point is not allowed. Free climbing does not include climbing installed scaffold ladders. Reference UPF-SH-MANUAL-001, *Elevated Work Manual*, for Fall Protection and Falling Object Prevention guidance."
- PRCN information:
  - This revision supersedes PRCN-Y17-95-64-831-R03-01, *UPF Scaffold Control and Management*. The changes from the PRCN were not incorporated due to a management decision to install toe boards. No equivalent will be allowed
- Form changes:
  - No forms have been edited as part of this revision
- An evaluation determination has been performed confirming that this Procedure does implement requirements tracked in the Programmatic Requirements Management System (PRMS)
- Other changes include:
  - Updated Section 3.13, *Scaffold User*
  - Updated Appendix A, *Acronyms and Definitions*
  - Updated Appendix F, *Safety Requirements for Scaffolding*
  - Updated references
  - Editorial changes

Revision 3 ☒ Intent ☐ Non-Intent

- An evaluation determination has been performed confirming that this Command Media implements BNI quality requirements as tracked in the Programmatic Requirements Management System (PRMS).
- Global update to procedure to more align with Corporate SWPP; revised the procedure to more align with the Corporate SWPP in response to the following Condition Reports:
  - Condition Report 25774-000-GCA-GAM-02480, *Identified Issues with the UPF Scaffold Control Program*.
  - Condition Report 25774-000-GCA-GAM-02742, *Findings with Scaffold access ladder and tagging (IMA-PM-801768-FY20-004)*.
- Deleted **Appendix G, *Loading and Shipping Guidelines for Scaffolding Materials***, and incorporated the information contained in that Appendix into the body of the procedure; remaining appendices renumbered as a result.
- Other changes include:
  - Updated references.
  - Updated acronyms.
  - Updated definitions.
  - Editorial changes.
- Because of the extent of changes, revision bars are not shown.

Previous revisions on record

CONTENTS

1.0 INTRODUCTION

1.1 Purpose

This procedure defines the standard work process for the erection, control, and dismantling of scaffolding, associated safety process controls, and overall scaffold material management.

2.0 SCOPE

2.1 Applicability

This procedure is applicable to all scaffolding under the administrative control of the Uranium Processing Facility (UPF) Project.

2.2 Subcontractor Requirements

Applicability to subcontractor employees is as specified in subcontract language.

3.0 RESPONSIBILITIES

3.1 Site Manager

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

3.2 Project Field Engineer

The Project Field Engineer (PFE) is responsible for:

- Ensuring that the requirements of this procedure are properly implemented
- Supervising Field Engineering Personnel providing technical support of installation operations
- Reviewing Scaffold Qualified Person education, training, certification, experience, and/or knowledge to determine that the individual(s):
  - Possess a recognized degree, certification, or professional standing relating to the subject matter, the work, or the project

    OR
  - Demonstrate the ability to solve or resolve problems relating to the subject matter, the work, or the project through extensive knowledge, training or experience

NOTE: *The PFE will designate, in writing to the Training Department, individual(s) capable of performing the responsibilities of the Scaffold Qualified Person.*

3.3 Project Field Superintendent

The Project Field Superintendent (PFS) is responsible for:

- Ensuring the requirements of this procedure are properly implemented
- Coordinating to ensure craft labor is available to support Project needs

3.4 Responsible Scaffold Superintendent

The Responsible Scaffolding Superintendent (RSS) is responsible for:

- Optimizing the purchase, buyback, and/or rental options of required scaffolding materials
- Arranging for supplementary/remedial training on scaffolding as necessary
- Coordinating with the PFS and Procurement for the supply of scaffold material
- Ensuring supplied scaffold material meets acceptable standards and requirements
- Ensuring supplied scaffold material and labor is forecasted and requisitioned to meet the Project schedule
- Ensuring a process is in place to capture scaffolds priorities with Area Superintendent, Discipline Superintendent, and/or PFS input to ensure scaffold completions support the overall Project schedule
- Ensuring scaffolds are built in accordance with manufacturer or Scaffold Qualified Person design(s)
- Ensuring scaffold material traceability is maintained between Project purchased scaffolding and rented scaffolding, as applicable
- Reviewing their knowledge, training, and/or experience to determine that the Scaffold Competent Person(s):
  - Are capable of identifying existing and predictable hazards (e.g., conditions likely to exist) relative to the work activity

    AND
  - Have the requisite knowledge to control or eliminate the identified hazards

NOTE: *The RSS will designate, in writing to the Training Department, individual(s) capable of performing the responsibilities of the Scaffold Competent Person.*

3.5 Scaffold Coordinator

The Scaffold Coordinator is responsible for:

- Coordinating and tracking scaffold material supply
- Maintaining a centralized inventory system of scaffolding purchased and/or rented
- The Electronic Scaffold Management System exists within Process Director, which is managed in accordance with Y60-95-015, *Uranium Processing Facility Software Quality Assurance*
- Tracking material inventory changes and producing scaffold metrics

NOTE: *Scaffold Coordinator responsibilities may be completed by assigned craft or non-manuals or a combination of both, at the discretion of the RSS.*

3.6 Scaffold Erection General Foreman/Foreman

The Scaffold Erection General Foreman/Foreman is responsible for:

- Identifying scaffold material needs for each individual scaffold request
- Ensuring that scaffolds are built complete and in a safe manner
- Ensuring craft performing scaffolding work possess the Scaffold Erector qualification (D 51321521/Q 51321522)

- Ensuring competent person activities are only performed by individuals possessing the Scaffold Competent Person qualification (D 51562369/Q 51562370)
- Defining the type, size, and materials required by conducting a field walk with the Scaffold Requestor for each build or modify request
- Identifying and implementing efficiency opportunities for combining multiple, individual scaffold requests into multi-use scaffolds

NOTE: *A union refresher course is required every four years for the Scaffold Erector qualification.*

3.7 Scaffold Competent Person

The Scaffold Competent Person (typically one or more of the Scaffold Erection General Foreman/Foreman or Scaffold Builders) is responsible for:

- Ensuring that scaffolds are built and maintained according to requirements
- Ensuring scaffolds are properly tagged
- Inspecting scaffolds that will be used each shift prior to the commencement of each shift
- Ensuring scaffolds are built per manufacturer or Scaffold Qualified Person design

NOTE 1: *The Scaffold Competent Person is appointed by the RSS.*

NOTE 2: *As a prerequisite, a Scaffold Competent Person should possess the Scaffold Erector qualification (D 51321521/Q 51321522).*

3.8 Scaffold Qualified Person

The Scaffold Qualified Person (typically one or more Field Engineers) is responsible for:

- Designing custom, non-standard scaffolds that deviate from manufacturer design/guidance
- Coordinating with Scaffold Vendor Technical Representatives, as needed, to resolve technical/engineering questions/concerns
- Developing scaffold installation guides/aides as requested by the RSS

NOTE: *The Scaffold Qualified Person (D 51564037/Q 51564038) is appointed by the PFE.*

3.9 Discipline Superintendent (or Subcontractor Technical Representative for Subcontractor Scaffold Requests)

The Discipline Superintendent (or Subcontractor Technical Representative [STR] for Subcontractor Scaffold Requests) is responsible for:

- Planning installation activities that require scaffolding in accordance with construction schedules
- Ensuring “required by” scaffold request dates are populated in accordance with the Project schedule so scaffold priorities are consistent with Project schedule demands
- Identifying and coordinating potential opportunities for multi-use scaffold access needs with the Project Field Superintendent, the RSS, and other Discipline Superintendents

- Ensuring scaffolds are inspected prior to use, suitable for intended user loads, and crews are adequately trained to perform work on scaffolds
- Ensuring a scaffold is necessary (i.e., the lowest risk option for all workers, including scaffold erectors) and alternate access means are not available
- Providing scaffold request priority input to the RSS or Scaffold Coordinator, as required
- Delegating/directing Scaffold Requestor input into the electronic scaffold management system

3.10 Scaffold Requestor

The Scaffold Requestor (typically Discipline Superintendent/STR or designee) is responsible for:

- Determining that a scaffold is absolutely necessary (i.e., the lowest risk option for all workers, including scaffold erectors) and alternate access means are not available
- Requesting scaffolds and ensuring entry into the electronic scaffold management system
- Coordinating access to the work area for scaffold assembly, modification, and removal

3.11 Bechtel National, Inc., Environmental, Safety, and Health Manager

The Bechtel National, Inc. (BNI), Environmental, Safety, and Health (ES&H) Manager is responsible for oversight to ensure compliance with all UPF, National, Federal, State, and local scaffold safety requirements.

3.12 Scaffold Yard Foreman

The Scaffold Yard Foreman is responsible for:

- Receiving scaffold materials
- Performing initial receipt inspection of scaffold material to ensure quality attributes listed in **Section 4.6.4**
- Reporting discovered Suspect/Counterfeit Items (S/CIs) to the S/CI Coordinator in accordance with Y15-95-813, *Suspect/Counterfeit Item Identification and Investigation*
- Signing Kick and Count form from the Material Receiving Report to document receipt inspection
- Preparing scaffold deliveries to support individual scaffold requests
- Working with the Scaffold Coordinator to maintain an inventory of scaffold materials throughout the duration of a project
- Implementing material traceability actions

NOTE: *Scaffold Yard Foreman will possess Scaffold Competent Person qualification (D 51562369/Q 51562370) and S/CI Receipt Inspection qualification (Q 51509286).*

3.13 Scaffold User

The Scaffold User is responsible for:

- Identifying the need to use existing, standing scaffolds by initiating a “Scaffold User” request in the electronic scaffold management system to prevent premature dismantle
- Touching-the-tag before each use to ensure a scaffold inspection has been completed for the shift
- Indicating on the scaffold request when intended use will require scaffold capacity greater than light duty (i.e., 25 pounds per square foot [psf])
- Ensuring scaffold is not loaded in excess of its duty rating
- Ensuring rigging from scaffold parts, or otherwise using scaffold members to support user-commodities is not done unless the scaffold has been designed to assume the anticipated loads. Check with a Scaffold Competent Person
- Discontinuing exposed, exterior scaffold use when snow/ice begin to accumulate or storms/high winds occur and notifying a Scaffold Competent Person prior to resuming use
- Maintaining housekeeping and accumulation of materials to prevent dropped objects
- Notifying scaffold erectors when pearlweave, toe board, or other dropped object prevention controls need repair
- Utilizing barricading, as required, when scaffold dropped object controls (e.g., mesh, toe boards) are incomplete OR when hoisting material outside of the dropped object confines of the scaffold

4.0 REQUIREMENTS

4.1 General

The planning and control of work is completed in accordance with Y17-95-64-800, *UPF Construction Work Control Program*.

NOTE: *The forms located in the Appendices of this procedure may be modified at the discretion of the PFE.*

4.2 Work Planning

4.2.1 The PFS ensures a scaffold material management system is implemented with the capability to manage scaffold component inventories, cost, location of scaffold material, and monitor erected scaffolds and inspections by tag.

NOTE: *An electronic scaffold management system should be considered when developing a scaffold material management program.*

4.2.2 The PFS ensures scaffold users are trained in the hazards associated with the various types of scaffold and understand the procedures to control or minimize hazards, including:

- Electrical, fall, and falling object hazards in the work area, and how to deal with these hazards
- Fall and falling object protection systems

- Proper use and maximum intended load of scaffolding

4.2.3 The PFS ensures a scaffold request process (**Appendix B, *Scaffold Request Process***) is created using a web- or application-based request or the Scaffold Request Form (**Appendix C, *Scaffold Request Form Instructions [Sample]***).

4.2.4 The RSS, with input from Discipline Superintendents, identifies large and critical scaffold builds and develops a 90-day scaffold plan in conjunction with other disciplines (e.g., mechanical, piping). The plan should include forecasted tons and job hours.

4.2.5 The Scaffold Requestor initiates the requests for new builds, modifications, user, and dismantling scopes.

The Discipline Superintendent or STR reviews and approves the request, ensuring that the scaffold is necessary for access and alternate access means are not available and that the request details are correct.

The RSS reviews and approves the request and ensures that the proper cost code is identified for charging of scaffold erection labor hours.

NOTE 1: *Generally, the scaffold request must be submitted at least three working days prior to the scaffold need date. All major and secondary scaffold requests must be submitted at least 10 working days in advance.*

NOTE 2: *A new request is required for a modification to an existing scaffolding. Minor changes (e.g., move a single handrail, notch a toe board) may be dealt with in the field as coordinated with the Scaffold Foreman. A new request must be used whenever scaffold parts will be added or removed from the scaffold to ensure inventory control.*

4.2.6 The Scaffold Coordinator ensures each request is then reviewed by the Scaffold General Foreman/Foreman, or designee, to perform a field walk to determine the optimum scaffold configuration, required materials, and estimated man hours.

4.2.7 The Scaffold Coordinator ensures the scaffold request requirements/estimates are logged.

NOTE: *It is recommended to conduct priority meetings with key field supervision members to ensure work is aligned.*

4.2.8 The RSS ensures a weekly coordination of areas/disciplines is completed to ensure overall Project schedule priorities advance. The PFS will support this effort, as needed, to ensure overall coordination of competing priorities.

4.2.9 During erection, the hours and materials associated with each scaffold request are tracked until the scaffold is completed. These details are provided to the Scaffold Coordinator.

4.2.10 The Responsible Scaffold General Foreman/Foreman ensures completion of the scaffold request, showing the size of the scaffold and the date erected, modified, or dismantled, as appropriate. Additionally, a final list of actual materials used/removed must be completed.

4.2.11 The Scaffold Coordinator logs hours and materials used for each scaffold request, once completed.

4.2.12 The RSS ensures that each scaffold is uniquely numbered (e.g., by area/unit/structure or equipment). The number should be placed both on the scaffold tag and the request. The Scaffold Competent Person shall inspect each new scaffold and sign the scaffold tag before it is released for use.

4.3 Materials

4.3.1 The Scaffold Competent Person, shall ensure mingling or mixing of products of different manufacturers (whether tube and coupler or fabricated frame) does not occur unless physical dimensions and strength characteristics are maintained. As necessary, engage the Scaffold Qualified Person to verify strength characteristics.

4.3.2 The RSS is ultimately responsible for keeping inventory of all scaffolding materials on the jobsite. The RSS, in coordination with UPF Construction Distribs and Procurement, ensures the creation of the necessary documents to order or demobilize additional scaffold materials. Please consult manufacturer's recommendations for guidance on proper handling, storage, and shipment of scaffolding materials.

4.3.3 The RSS ensures materials are stored in a centralized scaffold yard. The Scaffold Yard Foreman manages the inventory of materials and assignment of material for each scaffold request.

4.3.4 Scaffold material shall not be cut or modified without authorization from the RSS. The RSS must ensure material traceability and strength characteristics are maintained.

4.4 Scaffold Metrics

4.4.1 The RSS/PFS establishes a process to collect scaffold metrics similar to that shown in the Scaffold Metrics (**Appendix D, *Sample Metrics***):

- Number of craft hours expended for each build, modify, or dismantle request
- Units of measure (e.g., piece, volume, or ton) completed for each build, modify, or dismantle request
- Lead time for scaffold requests by Area, Discipline, and Requestor
- Scaffold part utilization/location by component type
- Number of requests completed and outstanding by area and by discipline
- Estimated material on site against forecasted demand by tons

Metrics collected need to establish a measure of productivity and overall status of scaffold requests, but do not have to match exactly as listed above.

4.4.2 The RSS ensures that the total craft hours reported on the metric collection form match the hours charged on the scaffold crew timesheets (i.e., carpenters and tenders at the direct scaffold work face location).

The number of craft hours per scaffold should be calculated based on the metrics to assist in determining the actual cost of scaffolds.

The indirect support time contribution to overall scaffold time charges should be considered when preparing estimates by using historical, actual ratios.

PRCN 01 & 02

4.5 Scaffold Safety

4.5.1 Climbing on scaffolding components (e.g., cups, rings, diagonal members) is not allowed.

4.5.2 Free Climbing scaffold structures in any direction above a height greater than 6 ft without using a Personal Fall Arrest System (e.g., harness and retractable lifeline) tied off to an acceptable anchor point is not allowed. Free climbing does not include climbing installed scaffold ladders. Reference UPF-MANUAL-SH-001, *UPF Elevated Work Manual*, for Fall Protection and Falling Object Prevention guidance.

4.5.3 Ensure an adequate working surface during erection/dismantlement activities (e.g., provide one to two pans or planks during process of building/dismantling scaffold).

4.5.4 The PFS shall ensure scaffolds comply with applicable requirements, including (as appropriate) Bechtel, Federal Occupational Safety and Health Association (OSHA), state, and local requirements. **Appendix F, *Safety Requirements for Scaffolding***, highlights safety requirements for scaffold erection and use. **Appendix F** is not an exhaustive list. The PFS and RSS will ensure all safety requirements are understood and followed.

NOTE: *Reference OSHA 29 CFR 1926 Subpart L,* Scaffolds*, requirements at http://www.osha.gov.*

4.5.5 The RSS shall ensure scaffolds are constructed in accordance with design criteria provided by vendor technical documents and/or designs developed by a Scaffold Qualified Person, including:

- All scaffolds over 125 ft (38 m) in height from their baseplates shall be designed by a registered Professional Engineer
- Pole scaffolds are required to be designed by a registered Professional Engineer (OSHA 1926.452[a][10])

NOTE: *(OSHA 1926.451[a][6]) Appendix A to Subpart L contains guidelines to assist employers in complying with the scaffold design requirements of OSHA Subpart L. ANSI/ASSE A10.8,* Scaffolding Safety Requirements*, should also be referenced.*

4.5.6 The RSS shall ensure scaffolds are erected, moved, dismantled, or altered under the supervision and direction of a Scaffold Competent Person. Such activities will be performed by experienced and trained employees selected for such work by the competent person (OSHA 1926.451[f][7]).

4.5.7 The PFS ensures that adjustable suspension scaffolds are subject to the same tagging and inspection requirements as supported scaffolds.

4.6 Load Capacity

4.6.1 The RSS shall ensure each scaffold and scaffold component is capable of supporting its own weight and at least four times the maximum intended load applied or transmitted to it (OSHA 1926.451[a][1]).

NOTE: *Materials shall be evenly distributed on platforms and not concentrated in one area. Access platforms must not be used to store heavy materials such as cable, valves, blind flanges, etc., unless specifically designed and constructed to do so.*

4.6.2 The RSS shall ensure suspension ropes, including connecting hardware, used on non-adjustable suspension scaffolds are capable of supporting at least six times the maximum intended load applied or transmitted to that rope (OSHA 1926.451[a][3]). Each suspension rope, including connecting hardware, used on adjustable suspension scaffolds shall be capable of supporting at least six times the maximum intended load applied or transmitted to that rope with the scaffold operating at either the rated load of the hoist, or two (minimum) times the stall load of the hoist, whichever is greater (OSHA 1926.451[a][4]).

4.7 Scaffold Inspection

4.7.1 Refer to Y30-95-809, *UPF Field Procurement Material Receiving*, and **Section 3.12, *Scaffold Yard Foreman***, for initial scaffold material receipt inspection requirements.

4.7.2 The Scaffold Competent Person shall inspect scaffolds and scaffold components for visible defects before each work shift and after an occurrence that could affect a scaffold's structural integrity (OSHA 1926.451[f][3]). Any defective components shall be immediately removed from use and properly tagged.

4.7.3 The Scaffold Competent Person shall ensure the scaffold is tagged (i.e., green, yellow, or red, as defined in **Section 4.7, *Scaffold Tagging***), and sign and date the tag.

4.7.4 The Scaffold Erector shall inspect scaffold components before erecting and while dismantling. Scaffold components must be straight and free from bends, kinks, dents, and severe rusting (prevents part from achieving designed fit, form, function, or strength). Defective components shall be returned to the scaffold yard, segregated, tagged as damaged and accounted for. Inspections shall include the following:

- Elevated surfaces (e.g., beams, platforms) for loose, abandoned items that need to be addressed/removed prior to dismantle
- Components straight and free from bends, kinks, dents, and detrimental rusting
- Cracked welds
- Tube ends for splits or cracks
- Manufactured decks for loose bolts or rivet connections and bends, kinks, or dents
- Plywood free from softening attributed to rot or wear or delamination at edges
- Casters free of rough rolling surfaces, sticky swivels, and defective locks
- Tie rods, bolts, angle iron cleats, cams, springs, threads, clamps, toggle pins, other quick connecting devices for any damage
- Scaffold planks for rot, cracks, cuts, and other damage
- S/CIs

NOTE: *Component inspections do not need to be documented.*

4.7.5 The RSS shall ensure scaffolding and scaffold components are maintained in accordance with the manufacturer's instructions, fittings are serviced with manufacturer

approved lubricant, and tubes and planks that are partially damaged are cut to usable lengths.

4.8 Scaffold Tagging

4.8.1 The PFS shall ensure the use of scaffold tagging and that:

- A Scaffold Competent Person tags all scaffolds
- No one shall work from an untagged scaffold
- Untagged scaffolds shall be "off limits" to all personnel not authorized or qualified (see Scaffold Erector) to erect, dismantle or make repairs to scaffolds

4.8.2 Scaffold tagging procedures shall not be used as a substitution to build a complete scaffold (i.e., all scaffolds should be built as complete as possible). However, the potential fall exposure to Scaffold Erectors should also be considered during work planning and the overall lowest risk option selected.

4.8.3 When a scaffold deck is constructed with two different rated duty capacities (i.e., light, medium, or heavy), the different capacity sections are to be clearly tagged and separated with guardrail and/or gates.

4.8.4 The scaffold tagging system shall include the following (see **Appendix G, *Scaffold Tagging Requirements***):

- **Green Tag** – To be placed on scaffolds at the access points that comply with all requirements
- **Yellow Tag** – To be placed on scaffolds that are structurally sound, but an accessory such as a handrail cannot be installed because of the location of the scaffold, or the nature of the work that is to be performed. Fall protection is required on all yellow-tagged scaffolds
- **Red Tag** – To be placed at the access points on scaffolds that are damaged, defective, being constructed, or dismantled, where no access is permitted by personnel not authorized and qualified (see Scaffold Erector) to erect, dismantle or make repairs to scaffolds

Appendix E, *Example Guidelines for Tagging Multi-Tier Level Scaffolds with Different Tagging Designations*, provides guidance that depicts how to tag multi-tier level scaffolds with different tagging designations.

NOTE: *Yellow tags are not to be placed on scaffold as a status of non-structural items such as poor housekeeping or missing/damaged debris netting.*

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4.9 Removal of Scaffolding

The PFS ensures the scaffolding is collected and removed from the site when scaffolding is no longer needed.

5.0 RECORDS

None

6.0 REFERENCES

6.1 Source References

4MP-T11-M105, *Work Process Procedures*

4MP-T81-02103, *Scaffold Control and Management*

Integrated Work Process Procedure (IWPP) 001, *Supply Chain*

6.2 Interfacing References

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29 CFR 1926 Subpart L, *Scaffolds*

29 CFR 1926 Subpart M, *Fall Protection*

2HO-E0S0-00003-001, *BESH Health & Safety Fall Prevention and Protection Program Guideline*

ANSI/ASSE A10.8, *Scaffolding Safety Requirements*

BESH Core Process CP 212, *Fall Prevention and Protection*

UPF-MANUAL-SH-001, *UPF Elevated Work Manual*

Y15-95-813, *Suspect/Counterfeit Item Identification and Investigation*

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

Y30-95-809, *UPF Field Procurement Material Receiving*

Y60-95-015, *Uranium Processing Facility Software Quality Assurance*

7.0 SUPPLEMENTAL INFORMATION

Appendix A, *Acronyms and Definitions*

Appendix B, *Scaffold Request Process*

Appendix C, *Scaffold Request Form Instructions (Sample)*

Appendix D, *Sample Metrics*

Appendix E, *Example Guidelines for Tagging Multi-Tier Level Scaffolds with Different Tagging Designations*

Appendix F, *Safety Requirements for Scaffolding*

Appendix G, *Scaffold Tagging Requirements*

APPENDIX A
Acronyms and Definitions

(Page 1 of 2)

Acronyms

BNI	Bechtel National, Inc.
ES&H	Environmental, Safety, and Health
O.D.	Outer Diameter
OSHA	Occupational Safety and Health Association
PFE	Project Field Engineer
PFS	Project Field Superintendent
RSS	Responsible Scaffold Superintendent
S/CI	Suspect/Counterfeit Item
STR	Subcontracts Technical Representative
UPF	Uranium Processing Facility

Definitions

Competent Person	A person who is capable of identifying existing and predictable hazards in the surrounding area or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them (OSHA 1926.450).
Electronic Scaffold Management System	A web- or application-based software system used to generate and manage scaffold requests, track and maintain material inventories, and produce data that can be used to generate performance metrics.
Fabricated Frame Scaffold (Tubular Welded Frame Scaffold)	A scaffold consisting of platforms supported on fabricated end frames with integral posts, horizontal bearers, and intermediate members (OSHA 1926.450). Some manufacturers refer to their fabricated frame products as “sectional” scaffolding.
Free Climbing	Free Climbing scaffold structures in any direction above a height greater than 6 ft without using a Personal Fall Arrest System (e.g., harness and retractable lifeline) tied off to an acceptable anchor point is not allowed. Free climbing does not include climbing installed scaffold ladders.
Major Scaffold	A major scaffold is typically large, complex, and intended for multiple disciple uses (e.g., stair towers greater than 40ft [20m] in height, larger area hanging scaffolds, complex cantilever, special loading scaffolds and all scaffolds that must be engineered).
Minor Scaffold	A minor scaffold is typically small, lacks complexity, and can be erected in a quick period of time (e.g., simple volume scaffold, single & multi-decked scaffolds less than 20ft [6m] and small rolling scaffolds).
Mobile (Rolling) Scaffold	A powered or unpowered, portable, caster, or wheel-mounted, supported scaffold (OSHA 1926.450).
Qualified Person	A person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems related to the subject matter, work, or the project (OSHA 1926.450).

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APPENDIX A
Acronyms and Definitions

(Page 2 of 2)

Scaffold	Any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees, materials, or both (OSHA 1926.450).
Scaffold User	Any personnel whose work requires them to be supported by scaffolding in order to access the area of a structure where that work is performed (OSHA 1926.450).
Secondary Scaffold	A secondary scaffold is typically a large structure with moderate complexity that requires pre-planning to ensure it addresses the needs for the end user (e.g., large area birdcage scaffolds, simple cantilever scaffolds, simple hanging or suspended scaffolds and stair towers from 20–40 ft [6–12m] in height).
Suspect/Counterfeit Item (S/CI)	An item is suspect when visual inspection or testing indicates that is may NOT conform to established government or industry-accepted specifications or national consensus standards or whose documentation, appearance, performance, material, or other characteristics may have been misrepresented by the supplier or manufacturer. A counterfeit item is one that has been copied or substituted without legal right or authority or whose material, performance, or characteristics have been misrepresented by the vendor, supplier, distributor, or manufacturer (Y15-95-813).
Suspension Scaffold	One or more platforms suspended by ropes or other non-rigid means from overhead structures (OSHA 1926.450). An adjustable suspension scaffold is a suspension scaffold equipped with a hoist or hoists that can be operated by an employee(s) on the scaffold (OSHA 1926.450). Adjustable suspension scaffolds can be single-point, two-point (swing stage), or multi-point. **NOTE:** *This scaffold must have an independent tie off point separate from the scaffold.*
System Scaffold	A scaffold consisting of posts with fixed connection points that accept runners, bearers, and diagonals that can be interconnected at predetermined levels (OSHA 1926.450).
Tube and Coupler (or Clamp) Scaffold	A supported or hung scaffold consisting of platforms supported by tubing, erected with coupling devices connecting uprights, braces, bearers, and runners (OSHA 1926.450). **NOTE:** *Both System Scaffold and Tube and Coupler Scaffold can be hung (suspended) without the need of independent tie-off point and can be green tagged if all relevant criteria have been met for a green tagged scaffold. This kind of scaffold should not be confused with Suspension Scaffold in* ***Section 3.11, Bechtel National, Inc., Environmental, Safety, and Health Manager****.*

APPENDIX B
Scaffold Request Process

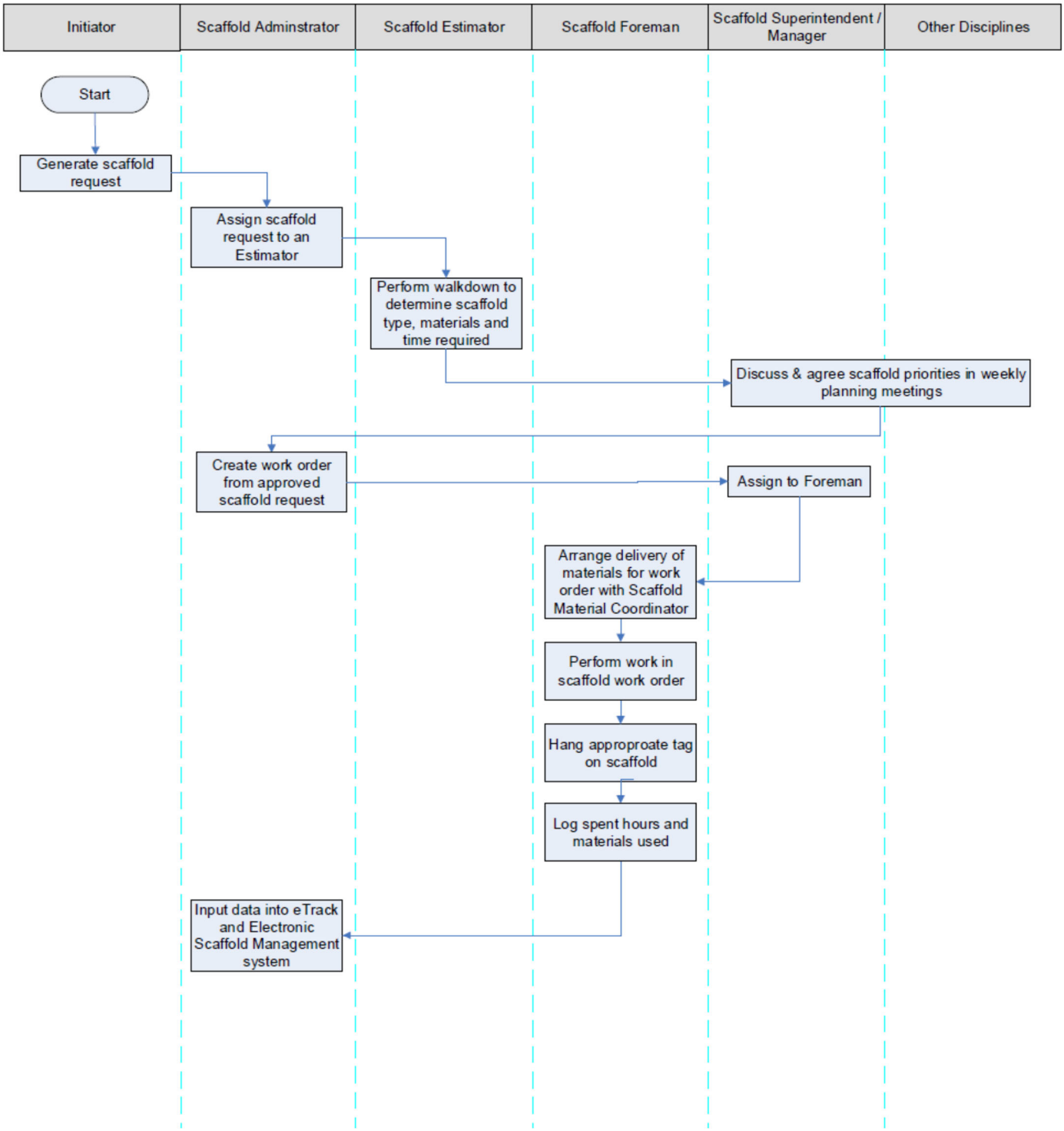

Figure B-1. Scaffold Request Process

APPENDIX C
Scaffold Request Form Instructions (Sample)

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The craft foreman/superintendent requiring a scaffold be built, modified, or dismantled should initiate the scaffold request using the Scaffold Request Form. The Scaffold Request Form should be submitted three to ten working days before the need dates, depending on complexity (minor, secondary/major), to give the scaffold crews sufficient time for manpower and material planning. The Discipline Superintendent or STR reviews and approves the request, ensuring that the scaffold is necessary for access and alternate access means are not available and that the request details are correct. The RSS reviews and approves the request and ensures that the proper cost code is identified for charging of scaffold erection labor hours.

The Scaffold General Foreman/Foreman or Responsible Scaffold Superintendent should fill out the bottom portion of the request once erection/dismantling is complete.

Entry	Description
TO BE FILLED OUT BY REQUESTING FOREMAN / SUPERINTENDENT	
Request Date	Enter the date the request is completely filled out (month / day / year)
Scaffold Tag Number	Enter the unique scaffold number (i.e. area / unit / structure / or equipment). This number is to be filled out by the Scaffold Foreman / Superintendent.
Required Date	Enter the anticipated date the scaffold is required. If work is continuing around the clock, please specify shift (i.e. day-shift 4/15/04).
Location (include sketch as required)	Specify the location of the required scaffold. Be as specific as possible. Use area / unit / structure / equipment / position (i.e. north, south, east, west). If necessary, include a sketch.
Build / Modify / Dismantle	Check the appropriate scaffold request. Build – new scaffold, Modify – Change existing scaffold, Dismantle –remove scaffold.
Description	Enter a brief description of the scaffold requested. At a minimum the description should include work area (in ft^2 or m^2) and the approximate elevation of the working deck (i.e. el. 760' or 3 m above TOC)
Required For	Enter a the work scope that is dependent upon the scaffold erection or modification (i.e. weld out valve TI-36 SG No. 1, assemble cable tray NE Wastewater Building)
To be Filled Out by Scaffold Foreman / Scaffold Superintendent	
Scaffold Erection Labor Cost Code	Enter the Cost Code for erecting the scaffold. If in question, check with Responsible Superintendent and/or Project Controls.
To Be Filled Out by Requesting Foreman / Superintendent	
Requested By	Enter the name of the Requestor along with the appropriate craft (i.e. Joe Smith, Pipefitters)
Approved By (RS)	The Responsible Superintendent is to sign upon review of the form.
To Be Filled Out by Scaffold Foreman / Scaffold Superintendent	
Date Erected / Modified	Enter the date the scaffold was erected or modified. If the work was done over several days specify range (i.e. 8/4/04 to 8/6/04). If multi-shift work is being conducted specify (i.e. day-shift 8/3/04 to night-shift 8/4/04).
Date Dismantled	Enter the date the scaffold was dismantled. If the work was done over several days specify range (i.e. 8/4/04 to 8/6/04). If multi-shift work is being conducted specify (i.e. day-shift 8/3/04 to night-shift 8/4/04).
Size	Enter the size in scaffold pieces required of the scaffold work whether it was modified or erected. Details to be added from the scaffold estimate or via an electronic estimating tool.
Labor Hours	Enter the total number of man-hours for the erection / modification of the scaffold (i.e. 20 hours – 4 men worked 5 hours)
Comments	Enter any pertinent comments (i.e. unexpected delays, change of plans, etc.)
Scaffold Foreman	The scaffold foreman is to print and sign his or her name.

Figure C-1. Scaffold Request Form Instructions

APPENDIX C
Scaffold Request Form Instructions (Sample)

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SCAFFOLD REQUEST FORM
Project Name:
Project Number:

Request #: _____
Date: _____
Scaff Tag No. _____

General Information

Requested By _____ Contact # _____
Area _____ Scaff Supervisor _____
Location _____ Date Required _____
Purpose of Scaffold _____
Grid Line _____
Estimated Removal Date _____

Request by Area ☐ Area A ☐ Area B ☐ Area C ☐ Area D *(EDIT AREAS AS REQ.)*

Request by Discipline ☐ Structural ☐ Piping ☐ Electrical ☐ Mechanical ☐ Paint ☐ Insulation ☐ Civil ☐ Other ☐ Multi-Craft

Attachments
☐ Layout / Drawings ☐ Photo of Location ☐ Sketch ☐ Other

Notes / Remarks

_____
_____

Requestor Signature _____

Scaffold Use Only

Scaffold Type:

☐ 01. Tower Scaffold: Standing from Grade
☐ 02. Independent Scaffold
☐ 03. Suspended Scaffold
☐ 04. Cantilever Scaffold
☐ 05. Bridge Scaffold
☐ 06. Scaffold for Internal Work (Confined Space)
☐ 07. Fully Decked / Additional Decking
☐ 08. Guardrail / Barrier
☐ 09. Ladder Beams / Unit Beams
☐ 10. Stairwell Access System
☐ 11. Modification Works
☐ 12. Mobile Scaffold
☐ 13. Other

Scaffold Dimensions

	Estimate	UoM	Actual
Base Height			
Length			
Width			
Height			
No. of Decking			
# of Pieces			
Tons			

	Qty	Hrs.
Manpower		
Foreman		
Total		

Erection & Modification Authorization

Discipline Superintendent (Requested by)
Print Name: _____
Date: _____

Scaffold Superintendent (Acknowledged by)
Print Name: _____
Date: _____

Dismantle Authorization

Discipline Superintendent (Requested by)
Print Name: _____
Date: _____

Scaffold Supt (Acknowledged by)
Print Name: _____
Date: _____

Figure C-2. Scaffold Request Form

APPENDIX D
Sample Metrics

Scaffold Erection Performance				
	Qty (no. of scaffolds)	No. Pieces	Hours	Minutes / Piece
Area A				
Built				
Modified				
Dismantled				
Sub-total				
Area A				
Built				
Modified				
Dismantled				
Sub-total				
TOTAL				

Scaffold Management Performance				
	Qty of Requests	Requests Planned	Requests Completed	Avg Lead Time / Request
Area A				
Structural				
Piping				
Mechanical				
Electrical				
Paint				
Insulation				
Civil				
Multi-Craft				
Other				
Area B				
Structural				
Piping				
Mechanical				
Electrical				
Paint				
Insulation				
Civil				
Multi-Craft				
Other				

Form 4MP-T81-02103-D, Scaffold Control and Management – Rev. 4

NOTE: Hours entered above must equal total hours charged on daily timesheets to scaffolding cost codes including Foremen and General Foremen time.

NOTE: This form is to be used when electronic scaffold management systems are not in use. When using electronic scaffold management systems, contact BEO for alternate scaffold metric tools.

Figure D-1. Sample Metrics

APPENDIX E
Example Guidelines for Tagging Multi-Tier Level Scaffolds with Different Tagging Designations

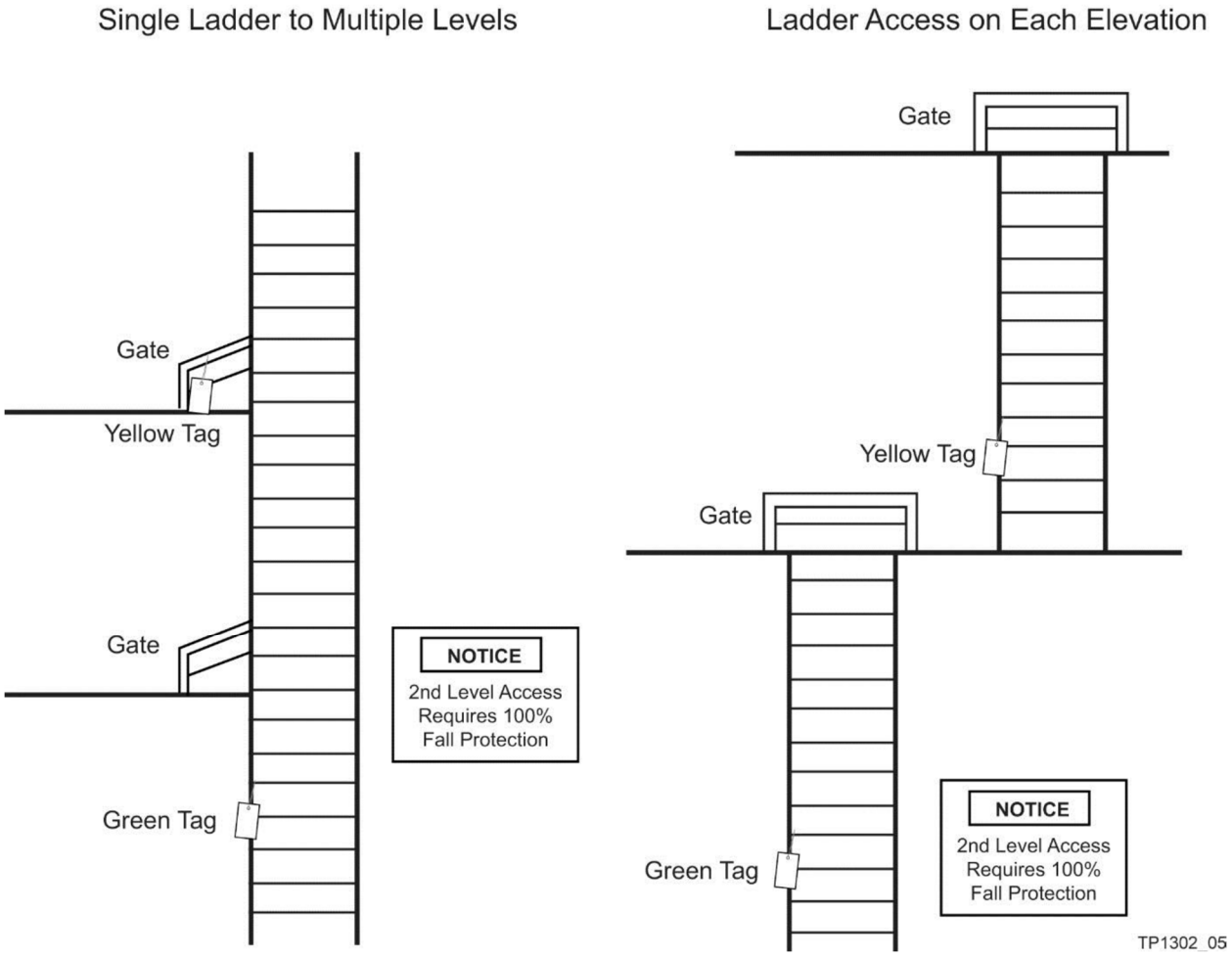

Figure E-1. Guidelines for Tagging Multi-Tier Level Scaffolds

APPENDIX F
Safety Requirements for Scaffolding

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GENERAL

1. Scaffolds shall be designed by a qualified person and shall be constructed and loaded in accordance with that design (OSHA 1926.451[a][6]). Appendix A to Subpart L contains examples of criteria that will enable an employer to comply with this requirement
2. Scaffolds shall be erected, moved, dismantled, or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling, or alteration. Only experienced and trained employees selected for such work by the competent person (OSHA 1926.451[f][7]) shall perform such activities
3. Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence that could affect a scaffold's structural integrity (1926.451[f][3])
4. Each scaffold and scaffold component shall be capable of supporting, without failure, its own weight and at least our times the maximum intended load applied or transmitted to it (OSHA 1926.451[a][1])
5. Supported scaffolds with a height to base width (including outrigger supports, if used) ratio of more than 4:1 shall be restrained from tipping by guying, tying, or bracing, or equivalent means (OSHA 1926.451[c][1])

NOTE: *Cal OSHA limits this ratio to 3:1*

6. Guys, ties, and braces shall be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member to the 4:1 height and be repeated vertically at locations of horizontal members every 20 ft (6.1 m) or less thereafter for scaffolds 3 ft (0.91 m) wide or less, and every 26 ft (7.9 m) or less thereafter for scaffolds greater than 3 ft (0.91 m) wide. The top guy, tie, or brace of completed scaffolds shall be no further than the 4:1 height from the top. Such guys, ties, and braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 ft (9.1 m) measured from one end (not both) towards the other (OSHA 1926.451[c][1][ii])
7. Supported scaffold poles, legs, posts, frames, and uprights shall bear on base plates and mudsills or other adequate firm foundation (OSHA 1926.451[c][2])
8. Footings shall be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement (OSHA 1926.451[c][2][i])
9. Unstable objects shall not be used to support scaffolds or platform units (OSHA 1926.451[c][2][ii]) (e.g., brinks, concrete blocks, or other unstable materials)
10. All scaffold access ladders shall extend at least 36 in. above the platform, or an equivalent safe access (e.g., grab bars or rails). Ladders shall be positioned so that their bottom rung is not more than 12 in. above the scaffold support level
11. Where possible, gates should be used integral to the scaffold guardrail system. Gates that are not integral to the guardrail system may be needed due to permanent plant obstructions (e.g., steel beam or pipe at a gate location causing a tripping hazard). Alternatively, a yellow scaffold tag may be used when a gate integral to the guardrail system is unable to be installed due to an obstruction

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APPENDIX F
Safety Requirements for Scaffolding

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12. When hook-on and attachable ladders are used on a supported scaffold more than 35 ft (10.7 m) high, they shall have rest platforms at 35 ft (10.7 m) maximum vertical intervals (OSHA 1926.451[e][2][iii])
13. All scaffold decks 20 ft (6.1 m) in length or greater shall be equipped with a self-retracting lanyard at the top of the ladder unless there is a rest platform below the 20-ft elevation or another work deck to exit off the ladder. The self-retracting lanyard connector shall be affixed with a tagline to allow for the lanyard to stay retracted when not in use (2HO-E0S0-00003-001, *BESH Health & Safety Fall Prevention and Protection Program Guideline*)
14. The clearance between scaffolds and power lines shall be as follows: Scaffolds shall not be erected, used, dismantled, altered, or moved such that they are or any conductive material handled on them might come closer to exposed and energized power lines than as follows: Insulated Lines – Less than 300 volts – 3 ft (0.9 m); 300 volts to 50 kV – 10 ft (3.1 m); More than 50 kV - 10 ft (3.1 m) plus 0.4 in. (1.0 cm) for each 1 kV over 50 kV. Uninsulated Lines – Less than 50 kV – 10 ft (3.1 m); More than 50 kV – 10 ft (3.1 m) plus 0.4 in. (1.0 cm) for each 1 kV over 50kV (OSHA 1926.451[f][6])

NOTE: *Exposed power lines means electrical power lines which are accessible to employees and which are not shielded from contact. Such lines do not include extension cords or power tool cords. (OSHA1926.450[b],* Definitions*).*

15. Employees shall be prohibited from working on scaffolds covered with snow, ice, or other slippery material except as necessary for removal of such materials (OSHA 1926.451[f][8]), it is the Scaffold User's responsibility to inspect before use
16. Work on or from scaffolds is prohibited during storms or high winds unless a competent person has determined that it is safe for employees to be on the scaffold and those employees are protected by a personal fall arrest system or wind screens. Windscreens shall not be used unless the scaffold is secured against anticipated wind forces imposed (OSHA 1926.451[f][12])
17. Guardrails, midrails, and toe boards must be placed on all open sides of platforms more than 6 ft (1.83 m) above ground or floor. The toprail must be placed 38–45 in. (96–114 cm) high (with minimum 200 pound [91Kg] toprail capacity) with a midrail placed halfway between the scaffold planking and the toprail. Toe-boards must be at least 3.5 in. (9 cm) high. 4-in. (10 cm) toe boards are preferred. Reference OSHA 1926.451 (4)(iii) and (iv), (v) for midrail applications
18. All guardrails and toe boards shall be securely fastened. There shall be no more than a 1/4 in. (.635 cm) space between the toe board and scaffold deck. Toe boards shall be built from materials equivalent in strength to nominal 1 in. X 4 in. (2.54 cm x 10.16 cm) construction grade lumber, which meets OSHA 29 CFR 1926 Subpart M, *Fall Protection,* requirements
19. Where persons are required to work or pass under a scaffold, scaffolds shall be provided synthetic netting, or equivalent, between toe board and the toprail. This netting must be attached in such a way as to be secure and strong enough to hold expected load requirements. Barricades may be substituted if necessary

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APPENDIX F
Safety Requirements for Scaffolding

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20. Platforms shall be tightly planked for the full width of the scaffold and they should extend over the end supports between 6 in. (15.24 cm) and 12 in. (30.5 cm). A cleat or equivalent shall be used on the bottom edges of the plank to prevent slippage. All wood scaffold planking shall be a minimum of nominal 2 in. X 10 in. and certified and stamped as scaffold grade lumber. Other scaffold planking shall have proof of certification as an equivalent: metal, laminated planks, etc.
21. Scaffolds should not block or prevent access to fire protection and/or safety equipment
22. Personnel shall be prohibited from using any untagged scaffold
23. Scaffold erectors shall comply with fall protection requirements as outlined in BESH Core Process CP 213, *Fall Prevention/Protection*, while erecting scaffolding
24. Adjusting screws shall be installed only between the baseplate and the vertical frame section. The use of adjusting screws with casters is prohibited. Extending adjusting screws beyond 12 in. (30.5 cm) is prohibited, unless built for the scaffold system by the manufacturer
25. Scaffolds should be properly braced with cross braces and/or diagonal braces to laterally secure vertical members. The length of cross braces should automatically square and align vertical members so the erected scaffolds are always plumb, square, and rigid
26. Scaffold components fabricated by different manufacturers shall not be intermixed unless written permission is obtained from both manufacturers
27. Scaffolds should be cleaned off upon completion of daily work by the craft using the scaffold
28. A toe board should never be used to aid access to a working platform; grab bars should be used instead
29. Tools or materials shall be removed or secured so they cannot fall or roll off when a scaffold is moved
30. The responsible supervisor using the scaffold must ensure tools, materials, and debris do not accumulate in quantities that create a falling objects or tripping hazard
31. Scaffolds should be checked before each work shift for quality/safety and tags signed/updated accordingly
32. Guardrails shall be surfaced to prevent injury to an employee from punctures or lacerations and to prevent snagging of clothing
33. When dismantling scaffold structures, materials should not be thrown down. The material should be lowered to prevent damage to scaffold materials and danger to the surrounding area or personnel
34. Access scaffolds shall not be used to store heavy materials

SUSPENSION SCAFFOLDS

1. Each suspension rope, including connecting hardware, used on non-adjustable suspension scaffolds shall be capable of supporting, without failure, at least six times the maximum intended load applied or transmitted to that rope (OSHA 1926.451[a][3])

APPENDIX F
Safety Requirements for Scaffolding

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2. Each suspension rope, including connecting hardware, used on adjustable suspension scaffolds shall be capable of supporting, without failure, at least six times the maximum intended load applied or transmitted to that rope with the scaffold operating at either the rated load of the hoist, or two (minimum) times the stall load of the hoist, whichever is greater (OSHA 1926.451[a][4])
3. Ropes shall be inspected for defects by a competent person prior to each work shift and after every occurrence that could affect a rope's integrity suspension ropes shall be shielded from heat-producing processes
4. To reduce the possibility of welding current arcing through the suspension wire rope when performing welding from suspended scaffolds, the following precautions shall be taken, as applicable: An insulated thimble shall be used to attach each suspension rope to its hanging support. Excess suspension wire rope and any additional independent lines from grounding shall be insulated (OSHA 1926.451[f][17][i]); The suspension wire rope shall be covered with insulating material extending at least 4 ft (1.2 m) above the hoist. If there is a tail line below the hoist, it shall be insulated to prevent contact with the platform. The portion of the tail line that hangs free below the scaffold shall be guided or retained, or both, so that it does not become grounded (OSHA 1926.451[f][17][ii]); Each hoist shall be covered with insulated protective covers (OSHA 1926.451[f][17][iii]); In addition to a work lead attachment required by the welding process, a grounding conductor shall be connected from the scaffold to the structure. The size of this conductor shall be at least the size of the welding process work lead, and this conductor shall not be in series with the welding process or the work piece (OSHA 1926.451[f][17][iv]); If the scaffold grounding lead is disconnected at any time, the welding machine shall be shut off and an active welding rod or uninsulated welding lead shall not be allowed to contact the scaffold or its suspension system (OSHA 1926.451[f][17][v & vi])
5. Each employee on a single-point or two-point adjustable suspension scaffold shall be protected by both a personal fall arrest system and guardrail system (OSHA 1926.451[g][1][ii])
6. Personnel using suspension scaffolds may require additional training

FABRICATED FRAME SCAFFOLDS

Fabricated frame scaffolds over 125 ft (38.0 m) in height above their baseplates shall be designed by a registered professional engineer, and shall be constructed and loaded in accordance with such design (OSHA 1926.452[c][6]).

TUBE AND COUPLER SCAFFOLDS

1. Tube and coupler scaffolds over 125 ft (38.0 m) in height above their baseplates shall be designed by a registered professional engineer, and shall be constructed and loaded in accordance with such design (OSHA 1926.452[b][10])
2. A light duty tube and coupler scaffold shall have all posts, bearers, runners, and bracing of nominal 2 in. (5.1 cm) outer diameter (O.D.) steel tube, aluminum tube, or pipe. The posts shall be spaced no more than 4 ft (1.22 m) apart by 10 ft (3 m) along the length of the scaffold. The runners shall be spread no more than 6 ft 6 in. (1.98 m) vertically. Other structural metals, when used, must be designed to carry an equivalent load. No dissimilar metals shall be in contact with each other

APPENDIX F
Safety Requirements for Scaffolding
(Page 5 of 6)

3. A medium duty tube and coupler scaffold shall have all posts, runners, and bracing of nominal 2 in. (5.1 cm) O.D. steel tube, aluminum tube, or pipe. Posts spaced not more than 6 ft (1.83 m) apart by 8 ft (2.4 m) along the length of the scaffold shall have bearers of nominal 2.5 in. (6.35 cm) O.D. steel tubing. Posts spaced not more than 4 ft (1.22 m) apart by 8 ft (2.4 m) along the length of the scaffold shall have bearers of nominal 2 in. (5.1 cm) O.D. steel tubing. The runners shall be spread no more than 6 ft 6 in. (1.98 m) vertically. Other structural metals, when used, must be designed to carry an equivalent load. No dissimilar metals shall be in contact with each other
4. A heavy-duty tube and coupler scaffold shall have all posts, runners, and bracing of nominal 2-in. (5.1 cm) O.D. steel tube, aluminum tube, or pipe, with the posts spaced not more than 6 ft (1.83 m) by 6 ft (1.83 m). Bearers shall be nominal 2.5 in. (6.35 cm) O.D. steel tubing, aluminum tube, or pipe. The runners shall be spaced no more than 6 ft 6 in. (1.98 m) vertically. Other structural metals, when used, must be designed to carry an equivalent load. No dissimilar metals shall be in contact with each other
5. Posts shall be accurately spaced, erected on suitable bases, and maintained plumb
6. Cross bracing shall be installed across the width of the scaffold at least every third set of posts horizontally and every fourth runner vertically. Such bracing shall extend diagonally from the inner and outer runners upward to the next outer and inner runners
7. Longitudinal diagonal bracing on the inner and outer rows of poles shall be installed at approximately a 45-degree angle from near the base node point of the first outer post upward to the top working platform node point of the scaffold. Where the longitudinal length of the scaffold permits, such bracing shall be duplicated beginning at every fifth post. In a similar manner, longitudinal diagonal bracing shall also be installed from the last post extending back and upward toward the first post. Where conditions preclude the attachment of this bracing to the posts, it may be attached to the runners

MOBILE (ROLLING) SCAFFOLDS

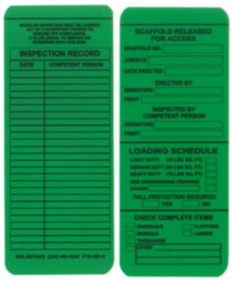
1. Scaffolds shall be braced by cross, horizontal, or diagonal braces, or combination thereof, to prevent racking or collapse of the scaffold and to secure vertical members together laterally so as to automatically square and align vertical members. Scaffolds shall be plump, level, and squared, and should rest on a level surface. All brace connections shall be secured (OSHA 1926.452[w][1])
2. Scaffold casters and wheels shall be locked with positive wheel and/or wheel and swivel locks, or equivalent means, to prevent movement of the scaffold while the scaffold is used in a stationary manner (OSHA 1926.452[w][2]). Where feasible, mobile scaffold should be tied off
3. Manual force used to move the scaffold shall be applied as close to the base as practicable, but no more than 5 ft (1.5 m) above the supporting surface (OSHA 1926.452[w][3])
4. The height to base width ratio of the scaffold during movement is two to one or less, unless the scaffold is designed and constructed to meet or exceed nationally recognized stability test requirements (OSHA 1926.452[w][6][ii])
5. A ladder or stairway shall be provided for proper access and exit and shall be affixed or built into the scaffold and so located that when in use it will not have a tendency to tip the scaffold

APPENDIX F
Safety Requirements for Scaffolding

(Page 6 of 6)

6. Scaffolds in use by any persons shall rest upon a suitable footing and shall stand plumb. The casters or wheels shall be locked to prevent any movement
7. Employees shall not be allowed on scaffolds while they are being moved from one location to another

APPENDIX G
Scaffold Tagging Requirements



Green tag must be attached to all scaffolds that have been erected to meet all regulatory requirements and UPF requirements and are safe for all personnel.

Yellow tag must be attached to a scaffold that has been completed but does not meet all regulatory requirements, specifically related to fall protection. This tag will be used only in special circumstances when an obstruction prohibits installation of all required guardrail protection.

Red tag shall be affixed to scaffold which is partially erected/dismantled, or which is defective or damaged in any way. Only authorized employees assigned to scaffold erection are allowed to climb the scaffold. Authorized employees are required to wear and use all required personal protective equipment (e.g., personal fall arrest systems).

Entry	Description
Green, Yellow, and Red Tags Front	
Date	Enter the date and shift (if applicable) that the erection or modification of the scaffold was completed (e.g., PM 8/3/04).
Scaffold Erection Foreman	Enter the name of the Responsible Scaffold Erection Foreman, who oversaw the erection.
Scaffold No.	Enter the unique Scaffold Number. This number shall be the same as the number on the Scaffold Request Form. This does not apply to Red Tags.
Green and Yellow Tags Back	
Date	Enter the date and shift (if applicable) that a Scaffold Competent Person inspected the scaffold.
Name	Enter the name of the Scaffold Competent Person who inspected the scaffold.