

Administrative Procedure

CPCC-PRO-WKM-079

PRC-PRO-WKM-079

Job Hazard Analysis

Revision 0, Change 3

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Use Type: Administrative



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Canister Storage Building/Interim Storage Area	(Screening/Determination Performed (no issues)) CSB-24-078	Garrett, Robert
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Capsule Storage Area	(Screening/Determination Performed (no issues)) CSA-24-087	Garrett, Robert
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Description of Change

Role tasks updated.

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1.0 INTRODUCTION

1.1 Purpose

This procedure establishes the requirements for integrating activity-based job hazard analyses into field work. The job hazard analysis (JHA) process is used to identify, evaluate, control, and communicate potential hazards relative to discrete work activities or tasks to be performed. The JHA process is an integral part of the Central Plateau Cleanup Company (CPCCo) development of technical work documents (TWD) via the processes identified in CPCC-PRO-WKM-12115, *Work Management*, CPCC-PRO-MS-589, *Central Plateau Cleanup Company Procedures*, and CPCC-PRO-MN-19304, *Periodic Maintenance Process*.

1.2 Scope

This procedure applies to the analysis of task-specific hazards that may be encountered during the execution of CPCCo work activities. Application to subcontractors will be as specified or excluded in the Statement of Work (SOW) or approved safety plan, as described in CPCC-PRO-SH-40078, *Contractor Safety Processes*.

The following documents are exempted from having a hazard analysis performed per this procedure:

- Emergency Response Procedures (ERP) – ERPs are performed by trained and qualified emergency responders under the Emergency Management System (EMS). Hazards and controls associated with emergency actions are evaluated and implemented as part of the EMS process.
- Radiological Surveillances developed per CPCC-PRO-RP-40029, *Required Radiological Surveillances*. This assumes no beyond skill-based hazards other than radiological. If other beyond skill-based hazards are present for the surveillance activities, then they must be planned in accordance with CPCC-PRO-WKM-12115 and analyzed per this procedure.

1.3 Applicability

This procedure applies to JHAs performed as required by procedures CPCC-PRO-WKM-12115, CPCC-PRO-MS-589, CPCC-PRO-MN-19304, and CPCC-PRO-SH-40078.

Work contracted through a SOW will define the mechanism for hazard analysis, whether through this procedure or a job hazard analysis (JHA) developed by the subcontractor and reviewed by CPCCo Occupational Safety & Industrial Hygiene (OS&IH) in accordance with CPCC-PRO-SH-40078. The incorporation of controls, regardless of the mechanism used to develop the hazard analysis, shall be completed in a manner that complies with this procedure.

1.4 Implementation

This procedure is effective upon publication for new work documents and those in the planning phase not yet submitted for review and approval.

Hazard analyses that support work documents developed per CPCC-PRO-WKM-12115, that are in or past the review and approval phase, may proceed as planned. New hazard analyses, and changes to completed hazard analyses, will conform to this revision.

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Hazard analyses that support Periodic Maintenance and Surveillance (PM/S) activities developed per CPCC-PRO-MN-19304 will be updated according to the periodic review schedule.

Hazard analyses that support technical procedures developed per CPCC-PRO-MS-589 will be updated according to the respective procedure's periodic review schedule.

2.0 RESPONSIBILITIES

Training and qualification requirements are contained in CPCC-STD-TQ-40380, Work Management Training Program Description.

2.1 Conduct of Work Technical Support

Conduct of Work Control Technical Support is responsible for development, maintenance, and assessment of the CPCCo JHA program to include:

- Develop and maintain the JHA procedures and training.
- Maintain JHA Checklist content and functionality.
- Assignment of the JHA Technical Authority (TA) who serves as the program subject matter expert (SME).
- Coordinate with Project/Facilities on input into the JHA Checklist.
- Maintain the General Hazard Analysis (GHA) and Craft Hazard Analysis (CHA) documents.

2.2 Facility/Project

The Facility/Project has the responsibility for implementing the requirements of this procedure and staffing the following positions.

2.2.1 JHA Coordinator

JHA Coordinators are typically planners, technical procedure writers, and TAs who are assigned by the facility management they support to initiate and facilitate the JHA process. They assist facility/project personnel in the use of the JHA Checklist.

2.2.2 Responsible Manager (RM)

An individual accountable and responsible for the implementation of this process for TWDs created per CPCC-PRO-WKM-12115.

2.2.3 Technical Authority (TA)

An individual accountable and responsible for the implementation of this process for technical procedures created per CPCC-PRO-MS-589 and PM/S work instructions created per CPCC-PRO-MN-19304.

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2.2.4 Functional Manager (FM)

An individual accountable and responsible for the implementation of this process by the TA for technical procedures created per CPCC-PRO-MS-589 and PM/S work instructions created per CPCC-PRO-MN-19304.

2.2.5 Subject Matter Expert (SME)

An individual who, by virtue of education, training, and/or experience, is a recognized authority on a particular subject, topic, or system, and has been assigned by management to represent a specific area of expertise in the hazard analysis process. During the JHA process, the SME is responsible for participation in the work site walkdowns, roundtables, hazard identification, hazard analysis, selection of hazard control(s) commensurate to the associated work scope

3.0 PROCESS

3.1 Hazard Analysis Tools

3.1.1 General Hazard Analysis (GHA)

Each employee performing work for CPCCo is expected to work safely and to maintain a safe work environment. All CPCCo employees will review the GHA annually.

The GHA identifies the control measures for routine industrial hazards common to the core activities of all CPCCo workers in their assigned job positions. The GHA also identifies hazards that are common among the skill sets of most Hanford Atomic Metal Trades Council (HAMTC) and Building Trades Workers. Employees are trained to recognize these hazards and controls through the annual Hanford General Employee Training (HGET) with additional training specific to hazards. The GHA is a basis for establishing work that may be considered skill-based.

GHA hazards and controls are not covered in work instructions or technical procedures. The GHA does not cover the environment in which these activities may be performed. The GHA is published on the CPCCo Work Control web site,

3.1.2 Craft Hazard Analysis (CHA)

All CPCCo craft workers will review the applicable CHA annually.

A CHA is documented for each craft discipline and includes the hazard analysis for work activities that a journeyman craftsman performs routinely with limited work instructions. The craftsman obtains training and experience in identifying and controlling applicable hazards through journeyman training, as defined in the bargaining unit contracts and manager-assigned training. The controls listed in the CHA are beyond those listed in the GHA that the craftsman with journeyman skills is expected to utilize in the performance of their daily work to mitigate hazards, and therefore do not need to be documented in work instructions.

These hazards and controls are not covered in work instructions or technical procedures. The CHA documents do not cover the environment in which these activities may be performed. CHA documents are published on the CPCCo Work Control web site,

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3.1.3 Project Health and Safety Plan (HASP)

Project HASPs are developed in accordance with the HAZWOPER standard (29 CFR 1910.120(b)) and document a list of general hazards and their mitigations that may be encountered at the project. These hazards have been evaluated by Health & Safety and are considered “General” in nature meaning they are easily recognizable and mitigated by employee’s fundamental knowledge and training. General hazards are not typically included in work packages or procedures unless particular emphasis is needed.

3.1.4 Work Location Hazards Identification

The hazards associated with the work environment must be considered along with the hazards of the work activity and any co-located work. Site Form A-6006-300, Work Location Hazards Identification, is an optional tool available for CPCCo facilities to use for identifying and communicating known worksite hazards to assist in the hazard analysis and work planning processes. It may also be used to communicate hazards to other Hanford contractors developing work as a managed task.

3.1.5 JHA Checklist

An activity-level Job Hazard Analysis Checklist (JHA Checklist), Site Form A-6006-681, shall be prepared for each work activity determined to be beyond skill-based. The analysis assesses each aspect of the work activity to identify hazards that can reasonably be expected during the performance of the work, and then determine appropriate controls for the identified hazards. The checklist is designed to support cross hazard evaluation and de-confliction of selected controls.

3.1.6 Subcontractor Job Hazard Analysis

Work activities performed by a subcontractor working to a SOW will undergo hazard analysis by the means specified in the SOW and CPCC-PRO-SH-40078, Contractor Safety Process. If the hazard analysis process is not specified in the SOW, then the process in this procedure shall be used.

3.2 Hazard Analysis Determination: Skill-Based or Beyond Skill-Based

Skill-Based is a hazard level category in the CPCCo hazard analysis process for work where employees, based on their fundamental trade knowledge and/or training provided by CPCCo, can reasonably:

- Be expected to recognize and mitigate hazards without the controls being stated in a TWD.
- Comply with requirements as prescribed by the appropriate SME screening/analysis/assessment (e.g., permits, plans, personal protective equipment [PPE], controls).

Skill-based controls are not required to be incorporated in the TWD. Skill-based controls associated with the proposed activity may be implemented via various approved methods (e.g., postings, permits, plans).

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Beyond Skill-Based are those activities and/or hazards that trigger criteria in Appendix B and require a hazard analysis for the entire work scope and incorporation of beyond skill-based controls.

Actionee	Step	Action
NOTE:		<i>The work scope and work instructions should be defined to the level of detail that is practical to facilitate the identification of industrial health and safety hazards prior to starting the JHA process.</i>
RM/TA/ JHA Coordinator	1. REVIEW	the work scope and work site for each task within the scope.
	2. IDENTIFY	the hazards for the scope tasks, including input from members of the Hazard Analysis Team.
NOTE:		<ul style="list-style-type: none"> • <i>If any activity, control, or condition of the work scope is beyond skill-based, the work scope is considered beyond skill-based.</i> • <i>An activity or hazard not identified within the GHA, CHAs, HASP, SME documents, or defined in Appendix B are considered beyond skill-based.</i>
RM/TA	3. DETERMINE	<p>if the work scope requires a JHA in accordance with the criteria established in Appendix B, based upon the complexity of risk and hazards using:</p> <ul style="list-style-type: none"> • GHA to identify evaluated and documented general activities, controls, and/or conditions considered skill-based. • Applicable CHAs to identify evaluated and documented craft-specific activities, controls, and/or conditions considered skill-based. • Project HASP to identify evaluated and documented general activities, controls, and/or conditions considered skill-based. • SME screening, analysis, and/or assessment to evaluate identified hazards. <p>4. <u>IF</u> the work scope is determined to be skill-based, <u>THEN</u> DOCUMENT the skill-based determination:</p> <ul style="list-style-type: none"> • For work documents per CPCC-PRO-WKM-12115 and PM/S activities per CPCC-PRO-MN-19304, SELECT skill-based in the Job Control System (JCS) fields for that purpose. • For technical procedures per CPCC-PRO-MS-589, SELECT Technical-Skill-based in the Plateau Procedure System (PPS) field. • EXIT this procedure.

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RM/TA

5. IF the work scope is determined to be beyond skill-based (BSB), THEN DOCUMENT the BSB:
 - For work documents per CPCC-PRO-WKM-12115 and PM/S activities per CPCC-PRO-MN-19304, SELECT “BSB” or “JSA-Const.” in the Job Control System (JCS) fields for that purpose.
 - For technical procedures per CPCC-PRO-MS-589, SELECT “Technical-JHA” in the Plateau Procedure System (PPS) field.

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3.3 Beyond Skill-Based Hazard Analysis

For work scope that includes any activity determined to be beyond skill-based, a documented activity-level hazard analysis shall be prepared using one of the authorized tools (e.g., JHA Checklist, JHA/AHA).

Actionee	Step	Action
RM/TA/JHA Coordinator	1.	IDENTIFY individuals to participate on the Hazard Analysis Team.
JHA Coordinator	2.	DEVELOP draft hazard analysis using the JHA Checklist. <ul style="list-style-type: none"> • IDENTIFY site and task specific hazards, exposures, or constraints. • IDENTIFY interfacing hazards from co-located work impacts based on known and expected site conditions. • IDENTIFY interfacing hazards from multiple work documents conducted in the same area or to support completion of a larger project. • CONSIDER any potential hazards for changing conditions. • REVIEW applicable work history (e.g., work documents, JHAs, and lessons learned).
Hazard Analysis Team	3.	WALK DOWN the work location(s) and IDENTIFY the potential hazards relating to the work activities and work site conditions.
JHA Coordinator	4.	UPDATE the identified hazards in the draft JHA.
SMEs	5.	DEVELOP necessary analyses, assessments, permits, and/or plans, using the hierarchy of controls: <ol style="list-style-type: none"> a. Elimination or substitution of hazards where feasible and appropriate. b. Use of engineered controls. c. Work practices and administrative controls. d. Use of personal protective equipment (PPE).

NOTE: *A physical walkdown of the area may be waived by the RM/FM when it creates a greater hazard to the Hazard Analysis Team, (e.g., High Radiation, Fall Hazard, IDLH, Confined Space).*

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|--------------------------|--|
| Hazard
Analysis Team | 6. REVIEW the hazards, analyses, assessments, permits, and/or plans that include hazard controls, to ensure: <ul style="list-style-type: none">a. Controls are appropriate for the work scope.b. Additional hazards are not created due to the selected controls.c. Conflicts do not exist between controls (e.g., PPE requirements for radiological hazards do not conflict with PPE requirements for Industrial Hygiene hazards or create a greater hazard).d. Hazards that will likely change in magnitude during the work are addressed for the most likely circumstances (e.g., ambient temperatures during work that will be performed outdoors). |
| JHA
Coordinator | 7. DOCUMENT the results of the hazard identification, hazard analysis, and selection of controls on the JHA Checklist. |
| SMEs/RM/TA | 8. REVIEW <u>AND</u> APPROVE the JHA Checklist ensuring completeness, technical accuracy, and controls identified for activities are appropriate. |
| JHA
Coordinator | 9. ENSURE participation in the hazard analysis is documented on the JHA Checklist signature sheet or on the <i>Work Planning Roster / Comment Form</i> (Site Form A-6005-916). |
| RM/TA/JHA
Coordinator | 10. ENSURE work has been screened per CPCC-CHRT-WKM-53060, <i>Hazard Review Board</i> . |

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3.4 Incorporation of Hazard Controls into the TWD, Retention of JHA Documents

Skill-based controls may be included in the TWDs at the request of the Planning Team and are not required to be included in the JHA.

Beyond skill-based controls must be implemented within the work instructions or supporting document(s) for the work activity unless the planning team concurs that beyond skill-based controls can be left out and documents the justification within the comment section of the JHA Checklist. When these controls are implemented into the TWD, they should be tailored as appropriate for the worker training and experience, and for specific circumstances.

The following additional guidelines should be used to incorporate controls into the work document:

- Precautions & Limitations/Prerequisites – The control should be verified as complete prior to the start of work (Prerequisites) or applies to the entire scope of the work activity (Precautions & Limitations).
- Work Instruction – Provided through incorporating specific steps and step sequencing within the work instructions (may be accompanied by use of CAUTION/WARNING statements).
- Permit/Plan/Checklist – Controls, requirements, or actions are specified in a permit, plan, or checklist (e.g., RWP, Beryllium Work Permit [BWP], Hanford Site Electrical Risk Assessment).

Actionee	Step	Action
Planner/TA	1.	INCORPORATE beyond skill-based hazard controls for the work activity into the TWD.

NOTE: *It is not required to include a copy of the JHA Checklist in the work package until the package is closed and filed for retention.*

2. RETAIN the approved hazard analysis document(s).
 - a. For work packages, UPLOAD a copy into JCS for reference, AND RETAIN hard copy with the work package upon work completion per CPCC-PRO-WKM-12115
 - b. For PM/S activities, RETAIN per CPCC-PRO-MN-19304.
 - c. For technical procedures, UPLOAD the approved document into the Technical Basis Files in PPS for the respective procedure.
 - d. For JHA/AHAs, RETAIN per CPCC-PRO-SH-40078.

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3.5 Changes to Hazard Analysis Documents

The JHA is a planning document to establish the beyond skill-based hazards and controls to be implemented within the initial TWD. Changes prior to approval of the JHA will be performed per Section 3.5.1. After the TWD has been approved, changes to the hazard and controls shall be performed as follows:

- Technical procedures (CPCC-PRO-MS-589) – update JHA per Section 3.5.2
- PM/S activities (CPCC-PRO-MN-19304) – update JHA per Section 3.5.2
- Work packages (CPCC-PRO-WKM-12115) – update directly in the work package via the work package change process or per Section 3.5.2

3.5.1 Changes Prior to Complete Approval of the JHA

Actionee	Step	Action
JHA Coordinator	1.	NOTIFY those who have already signed the document of the changes <u>AND</u> PROVIDE them opportunity to make adjustments to their input to ensure they align with the changes.

NOTE: *Prior to printing out the JHA Checklist, changes should be made electronically as part of the normal review process.*

2. MAKE pen and ink changes to the original document, OR GENERATE a new form electronically AND RE-ROUTE for approval.
3. NOTIFY SMEs who have already approved the JHA AND OBTAIN their concurrence for the changes.
4. REVIEW the applicable TWD to determine if changes to the TWD are required.

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3.5.2 Changes After Approval of the JHA

While it is not required to maintain the JHA after TWD approval (for documents created per CPCC-PRO-WKM-12115), the JHA may be revised to identify or help de-conflict changes in hazards and/or controls. This section is provided for guidance should it be desired to update or revise the JHA.

Actionee	Step	Action
JHA Coordinator	1.	<p>SELECT the method appropriate for the number and significance of the changes that are required and the ability for the change to be made in a legible manner.</p> <p>a. UPDATE the JHA via pen and ink,</p> <p style="text-align: center;"><u>OR</u></p> <p>PREPARE a revision to the JHA to include the change to hazards and/or controls.</p>
RM/TA	2.	DETERMINE reviewers for the changes.
SME	3.	DOCUMENT concurrence with changes on the revised JHA.
	4.	ENSURE the respective TWD aligns with changes made to the JHA.
JHA Coordinator	5.	RETAIN changes in the same way as the original JHA.
RM/TA	6.	<p>VERIFY the respective TWD aligns with changes made to the JHA.</p> <p>a. <u>IF</u> the documents do not align, <u>THEN INITIATE</u> a change per the respective TWD administrative process.</p>

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4.0 FORMS

A-6005-916, *Work Planning Roster/Comment Form*

A-6006-300, *Work Location Hazards Identification*

A-6006-681, *Job Hazard Analysis Checklist*

5.0 RECORD IDENTIFICATION

All records are generated, processed, and maintained in accordance with CPCC-PRO-IRM-10588, *Records Management Processes*.

Records created during the performance of a work package shall be managed in accordance with CPCC-PRO-WKM-12115, *Work Management*.

Records Capture Table

Name of Record	Submittal Responsibility	Retention Responsibility
<i>Work Package (includes Job Hazard Analysis Checklist, A-6006-681,)</i>	Work Control	IRM Service Provider.
General Hazard Analysis Document	JHA TA	Document will be maintained in a site database available to all HLAN users for printed copies. Original will be maintained in Work Control files.
Craft Hazard Analysis Documents	JHA TA	Document will be maintained in a site database available to all HLAN users for printed copies. Original will be maintained in Work Control files.

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6.0 SOURCES**6.1 Requirements**

10 CFR 1021, *National Environmental Policy Act Implementing Procedures*
10 CFR 830, *Nuclear Safety Management, Subpart A--Quality Assurance*
10 CFR 851, *Worker Safety and Health Program*
CRD O 232.2 (Supp), *Occurrence Reporting and Processing of Operations Information*
CRD O 433.1B (Supp), *Maintenance Management Program for DOE Nuclear Facilities*
CRD O 226.1B *Implementation of Department of Energy Oversight Policy*
DOE O 414.1D, *Quality Assurance*
DEAR 970.5223-1, *Integration of Environment, Safety, and Health into Work Planning and Execution*
U.S. Department of Energy Lessons Learned No. 2001-HQ-EH-2001-001, *Protecting Workers from Exothermic Chemical Reaction*, 03/22/01

6.2 References

CPCC-CHRT-WKM-53060, *Hazard Review Board*
CPCC-PRO-IRM-10588, *Records Management Processes*
CPCC-PRO-MN-19304, *Periodic Maintenance Process*
CPCC-PRO-MS-589, *Central Plateau Cleanup Company Procedures*
CPCC-PRO-QA-19579, *OCRWM Records Management*
CPCC-PRO-RP-40029, *Required Radiological Surveillances*
CPCC-PRO-SH-40078, *Contractor Safety Processes*
CPCC-PRO-WKM-12115, *Work Management*
CPCC-STD-EN-53924, *Chemical Compatibility Evaluations*
CPCC-STD-TQ-40380, *Work Management Training Program Description*

6.3 Bases

CPCC-MP-MN-40443, *Nuclear Maintenance Management Program (NMMP) Description Document*
CPCC-PRO-RP-40109, *Radiological Work Planning*

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Appendix A - Glossary

Term	Definition
Hazard	A physical, chemical, biological, or safety condition with a potential to cause illness, injury, or death to a person or damage to the environment, facilities, and/or equipment.
Hazard Analysis Team	The team identified by the RM/TA that should include the planner/procedure writer, representatives of the principal crafts involved in the field work (preference is for all craft jurisdictions to be represented), as well as the identified SMEs whose areas of expertise address the hazards expected for the activities represented in the scope statement. (Also referred to as Planning Team.)
Hazard Controls	<p>Measures to mitigate hazards to workers, the public, or the environment, including physical, design, structural, and engineering features; safety structures, systems, and components; safety management programs; technical safety requirements; and other controls necessary to provide adequate protection from hazards. Hazard controls must be selected based on the following hierarchy:</p> <ol style="list-style-type: none"> 1) Elimination or substitution of the hazards where feasible and appropriate. 2) Engineering controls where feasible and appropriate. 3) Work practices and administrative controls that limit worker exposures. 4) Personal protective equipment.
Job Hazard Analysis (JHA)	An evaluation of all aspects of the task performance to include an analysis of the hazards associated with performing the task, and an evaluation of hazards associated with the work area where the activity will be performed (e.g., confined space, radiological areas). Controls for the hazards are identified and incorporated into the work control documents (procedures/work instructions) as appropriate.
JHA Coordinator	The individual assigned as having the responsibility for initiating and facilitating the JHA Checklist. This position is usually filled by the planner, procedure writer, or technical authority.
Technical Work Document (TWD)	A term used to generically identify formally approved documents that direct field work, such as technical procedures, work packages, or PM/S Activities.

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Appendix B - Hazard Analysis Determination Criteria

Each row corresponds to a row on the *Job Hazards Analysis Checklist* (Site Form A-6006-681) and lists an activity, and/or a hazard, and examples of criteria that defines when that item is considered Beyond Skill-Based.

	Activity/Hazard	Beyond Skill-Based Criteria
1.	Aerial Lifts - Falls from	<ul style="list-style-type: none"> Fall Protection Work Permit is required
2.	Asbestos	<ul style="list-style-type: none"> Any disturbing or intrusive work on Presumed Asbestos Containing Material (PACM) or Asbestos Containing Material (ACM) Work within 75 feet of steam lines outside of maintained facilities with potential to disturb the PACM/ACM
3.	Beryllium	<ul style="list-style-type: none"> Intrusive work within a Beryllium Controlled Area (BCA) or Beryllium Suspect Area (BSA) Entry into a Beryllium Regulated Area (BRA)
4.	Biological Hazards (e.g., animals, carcasses, insects, snakes, feces, mold)	<ul style="list-style-type: none"> Potential for exposure as determined by CPCC-PRO-SH-54851, <i>Hazardous Biological Agents</i> Mold, mildew, etc., with a potential respiratory hazard
5.	Blind Penetrations	<ul style="list-style-type: none"> Work requiring penetrations greater than 1 ½ inches Work where drawings, documentation and site inspection cannot confirm the absence of electrical circuits or conductors in the location of the penetration Work where the presence and location of electrical circuits or conductors cannot be accurately identified and completely de-energized
6.	Breach of System (Opening or connecting to a system or component)	<ul style="list-style-type: none"> See other pertinent activity/hazards (e.g., Chemical, Radiological Work, Hazardous Energy)

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	Activity/Hazard	Beyond Skill-Based Criteria
7.	Chemical Use/Handling of Hazardous Material Chemicals; Dust, Toxic Fumes and Vapors	<ul style="list-style-type: none"> IHEA/screening identifies chemical potential exposure $\geq 50\%$ of the Occupational Exposure Limit (OEL) IHEA/screening identifies potential dermal hazards that would require PPE beyond safety glasses and nitrile/latex/surgeon exam gloves Work introduces new chemicals that will mix with bulk chemicals or chemical accumulations already present in laboratories, processing or treatment facilities which requires an engineering chemical compatibility evaluation per CPCC-STD-EN-53924, <i>Chemical Compatibility Evaluations</i>
8.	Confined Space	<ul style="list-style-type: none"> Work which requires personnel entry into any confined spaced as described by DOE-0360.
9.	Ergonomics, Moving: (e.g., body position, vibration)	<ul style="list-style-type: none"> Unassisted single person lifting greater than 55 lbs
10	Excavation Work	<ul style="list-style-type: none"> Excavation Work Permit is required
11	Falls – from Heights	<ul style="list-style-type: none"> Fall Protection Work Permit is required
12	Falling Objects from Overhead	<ul style="list-style-type: none"> None
13	Fire Hazard: Weld, Burn, and Grind Fire Marshall Permits; Flammable, Explosive, Combustibles	<ul style="list-style-type: none"> Hot Work Permit or other Hanford Fire Marshall Permit is required to control flammables/explosives Hot work at a Hazard Category 2 or 3 Facility (i.e., Activities Requiring Technical Safety Requirement [TSR] Ignition Controls) Planned impairment on Documented Safety Analysis (DSA) -credited fire systems Use of explosives Modification to a means of Egress (e.g., blocking an exit with scaffolding)
14	Hand Tools/Portable Equipment Use	<ul style="list-style-type: none"> Modified Tool Modified Portable Equipment

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Appendix B - (Cont.)

	Activity/Hazard	Beyond Skill-Based Criteria
15	Hazardous Energy Sources (e.g., electrical, hydraulic, kinetic, mechanical, pneumatic, pressure, rotation, thermal, spring, steam)	<ul style="list-style-type: none"> Work requiring an Energized Electrical Work Permit (EEWP) When exposure to non-electrical hazardous energy cannot be eliminated (e.g., LOTO, machine guards)
16	Hoisting, Rigging, Cranes and Forklifts	<ul style="list-style-type: none"> Critical or Special Lifts
17	Lead	<ul style="list-style-type: none"> IHEA/assessment or Lead Control Plan identifies lead exposure potential \geq Action Level
18	Noise/Noisy Environments	<ul style="list-style-type: none"> Activity not covered by existing postings Equipment will be brought into the work area that hasn't been evaluated for noise level (e.g., port-a-band, circular saw, portable generators)
19	Overhead Utilities	<ul style="list-style-type: none"> Potential to be working within 20 feet of energized lines Within the specific Limited Approach Boundary (LAB)
20	Pressurized Gas Cylinders	<ul style="list-style-type: none"> None
21	Radiological Area Work	<ul style="list-style-type: none"> An ALARA Management Worksheet (AMW) is required per CPCC-PRO-RP-40109, <i>Radiological Work Planning</i>.
22	Roof Work <i>(Repair or maintenance of a roof, or work where the roof is the work platform)</i>	<ul style="list-style-type: none"> Fall Protection Work Permit is required No current roof evaluation that allows access
23	Scaffold Erection, Dismantling, Modification	<ul style="list-style-type: none"> Greater than 10 feet without fall protection Fall Protection Work Permit is required
24	Scaffold Use	<ul style="list-style-type: none"> Fall Protection Work Permit is required
25	Sharp Objects, Cut or Puncture Hazard	<ul style="list-style-type: none"> Work with materials or tools with severe injection consequences

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	Activity/Hazard	Beyond Skill-Based Criteria
26	Temperature Extremes, Thermal Stress	<ul style="list-style-type: none">• Wearing impermeable clothing (e.g., water or vapor barrier encapsulating suits or 40 cal/cm² Arc-Rated suit)• When working in a greenhouse or other enclosure with minimal air movement that could result in heat build-up
27	Vehicle, Heavy Equipment, Forklift Use, and Traffic	<ul style="list-style-type: none">• See other pertinent activity/hazards (e.g., hoisting and rigging, overhead lines, excavation)
28	Vehicle Use – Off Road, Tertiary Road Travel	<ul style="list-style-type: none">• None (management authorization is required to access tertiary roads)