THE NATION'S URANIUM PROCESSING FACILITY

UPF JOB HAZARD ANALYSIS

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JHA NO.: JHA-00739	**REV: 0**	**ISSUE DATE: 5-1-24**
JHA TITLE: Electrical Terminations	**WORK PACKAGE NUMBER: N/A**	**SPECIFIC LOCATION: N/A**

Activity	Sub-Activity	Hazard	Control
Hand & Power Tools	Hand, Air and Electrical Tools	Improper Use of Tools/Equipment Laceration/Grinding Wheel Failure Fire Electric Shock Inhalation of Carbon Monoxide, Nitrogen Dioxide, and/or Other Combustion Gases, Chemical Asphyxiation Struck-by Abrasion	Review the applicable work activities and implement the associated work controls listed in **JHA-00721,** *Hand and Power Tools.*
Manual Material Handling	Manual Material Handling	Muscle Strain/Sprain Ergonomics Pinch Points	· Supervisors will be trained in the basics of manual material handling, hazards and basic controls, and conducting basic risk assessments for material handling work
			· Where manual handling is unavoidable, the supervisor will conduct an informal risk assessment as part of the FLHA process and follow up with employees before work starts
			· Inspect for shifted loads, stored energy, or loose items prior to unloading
			· Keep hands and arms clear when stacking material
			· Remove/protect sharp edges with "softeners" prior to lifting
			· To understand safe lifting limits during manual material handling, refer to OT-SH-801768-A128, *UPF Ergonomics Lifting Guidelines*
Personal Protective Equipment (PPE)	Hearing Protection - Noise Levels Between Eighty-Five (85) and Ninety-Nine (99) dBA.	Noise	· Refer to ML-SH-801768-A011, *Sound Levels of Common Construction Power Tools*
			· Wear approved single hearing protection devices with a minimum NRR of 21
			· Barricade and Signage:
			o Install caution sign, or caution barricade tape with caution signs or tags requiring hearing protection on the barricade to establish the eighty-five (85) dBA boundary around the work area

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Activity	**Sub-Activity**	**Hazard**	**Control**
			o Contact Industrial Hygiene to evaluate noise levels for new/changed work activities or when working in enclosed areas.
Confined Space Entry (Life Critical Activity)	General Requirements	Engulfment/Entrapment Hazardous Atmosphere Limited Access/Egress	· Never enter a confined space unless you are trained and authorized to do so, and an entry evaluation or permit has been completed
			· Never enter a confined space unless atmospheric testing has been performed
			· Never enter a confined space without an approved permit
			· Never enter a confined space without an attendant at the entrance. Even when an attendant is present, do not enter without an effective way to communicate with the attendant from inside the confined space
			· Confined spaces include, but are not limited to, sewers, tunnels, underground utility vaults, water towers, storage tanks, process vessels, bins, boilers, and ductwork
			· These spaces share common characteristics that help us understand what a confined space is.
			· Characteristics of a confined space include the following:
			o it is large enough for a worker or workers to enter
			o it has limited means of entry and exit
			o it is not designed for people to enter and work in on a regular basis, and it can contain some form of hazard
			· Some hazards that can be present in confined spaces are oxygen deficiency, flammable or explosive gases, toxic gases, slips and falls, and electrical and mechanical hazards. Contact ES&H for assistance and evaluation of confined spaces on the construction site
			· IF a suspect space is confined AND you cannot confirm that a confined space classification was conducted, THEN DO NOT enter the space
			· Contact supervision to determine if the space was evaluated and classified
			· IF supervision cannot provide a confirmation, THEN request that ES&H classify the space

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Activity	Sub-Activity	Hazard	Control
			· Do not enter any confined space prior to contacting ES&H and completing UCN-23273, *Confined Space Entry Evaluation*
Field Level Hazard Assessment (FLHA)	Field Level Hazard Assessment Process	Unidentified and Unmitigated Hazards	· FLHA is a pre-task briefing that must be used daily by crews at the beginning of their work shift or when new tasks are undertaken. It is a process of employee participation to identify and mitigate environmental, safety, and health risks and hazards associated with their planned work that day. The JHA process must not replace, or be a substitute for, the daily FLHA process.
Field Level Hazard Assessment (FLHA)	Implementing Field Level Hazard Assessment	Unidentified and Unmitigated Hazards	Prior to beginning work activities each day or after an extended break or interruption (e.g., shift change, weekend), perform the following:
			· Perform a Walkdown and review the work location with involved personnel
			· Review area hazards to ensure they are identified and hazard controls/mitigations are in place to eliminate/reduce them
			· Ensure there are no new hazards unidentified and uncontrolled by the approved JHA
			Using UCN-23552, perform the following:
			o Conduct a FLHA briefing with the work crew and support disciplines
			o Resolve any issues/concerns with the work crew
			o List and discuss the scope of work, anticipated hazards, and controls/mitigation measures for the work to be performed
			o Ensure personnel document participation in the "Employee" section of UCN-23552
			o Conduct appropriate FLHA briefings when any of the following conditions exist:
			· The work area changes
			· Personnel with different classifications will be working in close proximity
			· Differing types of work are performed in close proximity
			· The work activity changes

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Activity	Sub-Activity	Hazard	Control
			· The Responsible Superintendent deems it necessary
			· Turn in completed forms (i.e., UCN-23552, UCN-23464, UCN-23544, CFN-1268) as applicable at the end of each shift at the designated collection points. The end of shift review/de-briefing section must be completed before submitting these forms to UPF DMC.
Ladders	General Requirements	Fall to Elevation Below Dropped Objects	All portable ladders purchased or used on the Project shall meet minimum specifications, including:
			· Ladders must be vendor-certified as American National Standards Institute (ANSI) Type 1A or greater
			· Only nonmetallic ladders will be purchased and used on the site (fiberglass ladders are recommended)
			· Tripod ladders (ladders with three legs) are prohibited
			· Straight ladders longer than 20 feet are prohibited
			· Extension ladders longer than 36 feet are prohibited
			· Stepladders and platform ladders longer than 12 feet are prohibited
			· All portable ladders will be equipped with nonskid feet
Ladders	Ladder Use	Fall to Elevation Below Dropped Objects	Inspect ladders prior to use to verify:
			· All hardware and fittings are securely attached and the movable parts operate freely without binding or undue play
			· Ladder rungs are free from grease, oil, mud, and other materials
			· Ladder safety feet and other auxiliary equipment are in good condition
			· Ladder does not have any broken or missing steps, rungs, cleats, broken side rails, or any other faulty equipment

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Activity	Sub-Activity	Hazard	Control
			When using a ladder: • Do not use ladders in any manner other than their intended purpose Two or more people will not work from the same ladder unless it is specifically designed for two people • Place portable ladders on a level and stable surface and secure them or have them held by another person to prevent slipping • Personnel shall face the ladder when ascending or descending and use both hands to grasp the ladder • Do not carry materials or tools in hands while ascending or descending ladders If working from portable ladders, then remain within the confines (side rails) of the ladder • Prevent unauthorized entry in the area below the ladder with barricades or flagging when overhead hazards are present during ladder use • Do not stand on the platform or top step of a stepladder (i.e., top two steps) • Do not sit on or straddle a stepladder to perform work • When accessing another elevation, extend the top of the ladder 36 inches beyond the upper landing surface. If this is not possible because of the ladder's configuration, install a grab rail(s) 36 inches above the landing to help personnel mount and dismount the ladder
Ladders	Ladder Inspection	Fall to Elevation Below Dropped Objects	· Ladders that do not have the current quarterly color code marking shall be tagged out of service at the point of discovery using a "Do Not Use" tag until inspected and color coded
			· Ladders that are damaged or defective shall be immediately tagged out of service at the point of discovery using a "Do Not Use" tag and returned to the Tool Crib
Ladders	Ladder Storage	Fall to Elevation Below Dropped Objects	· When not in use, store portable ladders to protect them from the elements and direct sunlight store ladders away from excessive heat and in areas with good ventilation
			· Other materials are not to be stored on ladders
		Laceration	· Use an approved wire stripping tool

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Activity	Sub-Activity	Hazard	Control
Stripping of Electrical Conductors	Stripping of Electrical Conductors		· An approved, fixed blade knife shall be used when a wire stripping tool is infeasible. The use of a fixed blade knife requires the review and approval of the Superintendent and an ES&H Representative on the FLHA card.
Installation/Removal of Electrical Equipment, Cables, and Accessories	General Requirements	Electric Shock Arc Flash	· Ensure power is isolated, performing a live dead live test to any equipment, devices and cable/conductors
			· Ensure LOTO is applied and verified prior to accessing existing Electrical equipment and accessories
			· Always perform the required independent zero energy verification
			· Arc Flash PPE shall be worn where exposure exists
			· Ensure installations comply with site procedures and regulations
			· Cables and leads are installed with the minimum 7' clearance above floor level
			· Cables are installed on insulated non-conductive supports
			· Ensure testing is maintained in a barricaded area, to ensure work area is safe for work crews and other workers
			· Ensure electrical equipment has the required safe access/egress clearance to disconnecting means:
			o 36" to 120/208-volt
			o 42" to 480-volt
			· Standard 120-volt extension cords and 208-volt (single-phase twist lock) extension cords are a tool of the trade and craft persons can plug or unplug these cords, after shedding the load (e.g., turning off the welder, tool, or heater)
			· Only Temporary Power Electricians can plug in, unplug, route, or relocate 480-volt cord sets

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Activity	Sub-Activity	Hazard	Control
Defeating Safety Devices (Life Critical Activity)	Guards / Safety Protection Devices	Unsafe Conditions	Never Disable, bypass, modify, or remove any safety protection devices without written authorization from the Site Manager and ES&H Manager. This includes, but it's not limited to:
			· Disconnect load indicators
			· Remove Guards or handles from rotating equipment or tools
			· Fix or lock triggers and power switches to keep them in the "on" position
			· Hardwire electrical wires into outlets
			· Use damaged or defective equipment and/or tools
			· Skip or bypass required inspections before using equipment and/or tools
			· Operate equipment without deploying outrigger pads when they are required
Ergonomic Hazard Activities	Various Activities	Musculoskeletal Disorder Injury	Contact ES&H/IH (Radio: Channel 1) to evaluate your work activity if any of the following risk factors are encountered.
			Risk Factors
			The risk of musculoskeletal disorder (MSD) injury depends on work positions and postures, how often the task is performed, the level of required effort and how long the task lasts. Risk factors that may lead to the development of MSDs include:
			· **Exerting excessive force**. Examples include lifting heavy objects or people, pushing or pulling heavy loads, manually pouring materials, or maintaining control of equipment or tools.
			· **Performing the same or similar tasks repetitively**. Performing the same motion or series of motions continually or frequently for an extended period of time.

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Activity	Sub-Activity	Hazard	Control
			· **Working in awkward postures or being in the same posture for long periods of time**. Using positions that place stress on the body, such as prolonged or repetitive reaching above shoulder height, kneeling, squatting, leaning over a counter, using a knife with wrists bent, or twisting the torso while lifting.
			· **Localized pressure into the body part**. Pressing the body or part of the body (such as the hand) against hard or sharp edges, or using the hand as a hammer.
			· **Cold temperatures**. In combination with any one of the above risk factors may also increase the potential for MSDs to develop. For example, many of the operations in meatpacking and poultry processing occur with a chilled product or in a cold environment.
			· **Vibration, both whole body and hand-arm, can cause a number of health effects**. Hand-arm vibration can damage small capillaries that supply nutrients and can make hand tools more difficult to control. Hand-arm vibration may cause a worker to lose feeling in the hands and arms resulting in increased force exertion to control hand-powered tools (e.g., hammer drills, portable grinders, chainsaws) in much the same way gloves limit feeling in the hands. The effects of vibration can damage the body and greatly increase the force which must be exerted for a task.
			· **Combined exposure to several risk factors**. May place workers at a higher risk for MSDs than does exposure to any one risk factor.

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Ensure a new corresponding CFN-1251, *UPF Construction Attendance Sheet*, is signed and inserted in the CWP to document JHA briefing.		
PREPARER:	Nicholas Prewitt Printed Name/Signature	05/01/24 Date
APPROVAL:		
ES&H:	Anton Panev Printed Name/Signature	05/01/24 Date
SITE MANAGER: (DOA-CM-801768-A214)	Alex Carlson Printed Name/Signature	05/01/24 Date