Job Hazard Analysis

JHA No.	DND-JHA-26-0001	Revision No.	0	General or Job-Specific	General	JHA Issue Date	10/1/2025	Expiration Date	NA
Description of Work	General Work Job Hazard Analysis [GW JHA] Addresses common (neither unique nor substantial hazard) work activities conducted by the company and its Construction Support Contractor.								
Site Location	PORTS			Activity or Area Name	General Site				
Facility or Project	Site Wide			Specific Location	N/A				

History Notes

This JHA supersedes FBP-JHA-13-1647 Revision 52

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
1. General Work Tasks and Use of General Work JHA	General industry or construction industry hazards for which a more robust, job or project specific JHA DOES not exist	• Ensure all work is performed in accordance with DND-WPC-PDD-00001, Integrated Work Control Program Description Piketon, Ohio, unless otherwise identified as an excluded work activity in Appendix B, WPC/CWP Exclusions.
2. Activities Requiring the Use of A Spotter (does not apply to passenger vehicles) NOTE: For the purposes of this JHA, spotters are required for activities where: • Driver/operator has limited or obstructed visibility in the direction the vehicle/equipment/forklift is traveling	• Crush • Electrical Shock/Electroction • Equipment Damage • Pinch Point • Property Damage • Struck By	• Personnel designated to function as spotters shall complete SOCCo Spotter Safe Practices Training. • Spotters shall be identified by project supervision. • Supervision shall communicate to spotters including the scope of work, signal protocol to be utilized by the spotter(s)/operators, what to do if visual or voice communication between spotter and operator is lost, and walk-down routes to be utilized by vehicles, equipment, or forklifts to identify potential hazards (i.e., potential for personnel being struck, potential for striking other moving objects/fixed objects, overhead hazards, uneven surfaces, blind intersections, etc.). • Spotters have no other duties while actively performing this role. • Spotters are aware of their roles and responsibilities. • Spotters and other personnel must wear high visibility apparel meeting ANSI Class II. • Operators must know who their designated spotters are, and the roles have been communicated to each other.

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• Activities in tight spots, or locations where there is likelihood for personal injury by being struck by equipment, the potential for property damage, or there is potential for damage to equipment. • In proximity to or traveling underneath overhead hazards (communications lines, pipe runs, other utilities [except energized electrical]) where the clearance is less than 10-feet. • Work performed within or adjacent to an active pedestrian walkway. • Adjacent to a roadway where traffic must be maintained or controlled – NOTE: a minimum of two (2) spotters are required when the activity impacts a section of PORTS roadway. • During loading and unloading activities (including semi-trailers or flatbed trailers). • When directed by project supervision or OS&H personnel. Deviations from requirements listed in this section must be addressed on a job-specific JHA or in a separate general JHA (e.g., project JHA).		• Spotters and operators must fully understand the communication protocol to be used during their interaction. • Spotters and other personnel must be positioned in a safe location away from the turn radius, travel direction, and swing radius of equipment (line of fire). • Operator must see the full body of the spotter unless additional mitigations, e.g., multiple spotters, etc., and are agreed on and approved by the supervisor and OS&H. • Spotters must never be closer than 5' to heavy equipment, etc., unless the equipment is turned off or in park and the operator provides them approval to advance towards the equipment. • Duties of the spotter must be discussed at pre-job briefings to emphasize the Golden Rule that spotters must not ever position themselves in a hazardous position between equipment and other objects. • No personnel, other than the designated spotter, will direct the operator; but, anyone may give a "stop" signal. • If deviations from the above requirements are necessary, alternative controls (as protective) must be defined in a Project specific/Job specific JHA.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
3. Equipment and Vehicle Activities (does not apply passenger vehicles)- Traversing Around/Operating Heavy Equipment/Machinery NOTE: This JHA does not address the OPERATION of heavy equipment/machinery within 10-feet or TRAVEL within 4-6 feet (depending on the voltage) of energized overhead electrical lines. Activities performed at a closer distance than these shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA). Operation of cranes and/or derricks shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA). Deviations from requirements listed in this section must be addressed on a job-specific JHA or in a separate general JHA (e.g. project JHA).	Electric Shock/Electrocution due to contact with overhead energized electrical lines	• Operating equipment shall maintain a minimum clearance from overhead energized electrical wires of 10-feet for voltages up to and including 50 kV. NOTE: Clearance distances increase with higher voltages, beginning at >50 kV [refer to OSHA 1910.333(c) and 1926.1407 - .1411 for more information]. • Traveling equipment shall maintain a minimum 4-6 foot clearance (depending on voltage) from overhead energized electrical lines.
	Slips / Falls mounting or dismounting the equipment	• Establish and maintain 3 points of contact when mounting / dismounting the equipment. Use the hand hold devices as provided by the manufacturer. Ensure shoes / boots are free of oil / grease and/or excessive mud, snow, or ice. If more than one step is present, then face the steps / ladder mounting and dismounting.

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	Struck By Equipment Damage to Equipment/Facilities	• No personnel, other than the designated spotter, will direct the operator; but, anyone may give a "stop" signal. • Spotters and operators must fully understand the communication protocol to be used during their interaction. • Use only trained/qualified and licensed operators. • Excavations located adjacent to active roadways shall be protected by "jersey barriers" or other SOCCo-approved protection devices which will function as a warning device that the mobile equipment is approaching the edge of the excavation. • Designate a trained spotter when required. Ensure controls identified in Task 2 are followed for spotters. • Establish signs and barricades for the work area. • OS&H shall establish safe distances from equipment for ground personnel. The minimum safe distance shall be 30-feet for personnel not directly involved with the activity. • If ground personnel (not involved with the activity) must position themselves within 30-feet of heavy equipment, the following shall be observed: A. Approach the heavy equipment away from the direction of travel but in a manner that the operator can see you; B. Utilize hand signals or radios to contact the operator; C. The operator shall ground equipment attachment(s) as necessary, place controls in a neutral configuration, and set the equipment brakes (when equipped); D. The operator communicates (hand signals or radio) that it is okay for the ground person(s) to enter into the area; and E. The ground person(s) shall notify the equipment operator when they have cleared the 30-ft. zone. F. When within the work boundary, follow all posted PPE requirements. Required PPE based on present hazards may include: -Safety Glasses or goggles -Protective Footwear -Helmet, Protective (hard hat) -Gloves -Clothing, High Visibility, as outer layer, minimum ANSI Class 2 All PPE must meet minimum specifications as outlined in DND-OS-PRO-00021, Personal Protective Equipment and Protective Clothing. * If deviations from the above requirements are necessary, alternative controls (as protective) must be defined in a Project specific/Job specific JHA. • Non-essential ground personnel shall not enter into any swing radius of operating equipment.

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	Release of Fuel or Oil into the Environment	• An adequate quantity of spill kits to address the hazardous materials of concern must be available at the job site. • Spills within a containment device must be addressed immediately to remove all spilled contents. • Any single piece of equipment that remains stationary during use (e.g., generator, compressor, light plant, etc.) and has a fuel or oil capacity of 55 gallons or greater must be equipped or provided with secondary containment. • Locate, maintain, or refuel equipment away from waterways or drainages to allow sufficient distance for spill response equipment to be deployed to prevent fuel or oil from entering ditches, storm drains, ponds or streams in the event of a leak or spill. If unsure, then contact the PSS for assistance in determining what constitutes sufficient distance.

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	Pulling (line-of-fire)	• A constrained pathway for pulling operations where the object is pulled under or over an obstruction must first be physically verified to be of sufficient size and configuration to allow the pulled object to travel through by at least 1.5 times its greatest dimension. For example, a 10" diameter pipe pull must have a verified clear and free unobstructed path of at least 15" diameter prior to executing the pull. A free and open trench line is not considered such a "pathway," and is exempt from the 1.5 times rule. As an example, a pull of a 10" diameter pipeline down a 12" wide ditch line with no obstructions is acceptable. • Prior to conducting the pull, ensure that an evaluation of the weight of the object, materials of construction of both the object and pathway, obstructions and other factors is completed by a qualified person(s), and that approval to proceed is granted. • Sling(s) shall be visually inspected prior to each pull. • Sling(s) will be attached to the equipment used to conduct the pull at the manufacturer's approved connection point with approved rigging hardware and using approved rigging techniques. For example, in lieu of direct sling connections via a shackle to the approved connection point on the equipment, utilize a shackle/master link/shackle and swivel hook (or similar) arrangement to ensure the sling is not cut or pinched during the pull. • Unless otherwise approved, slings shall not be shackled together to extend their length when a longer sling can be used; however, a combination is acceptable when using one "short-choked" to the object being pulled. • Verify that no sharp edges are in contact with the sling(s) without the use of softeners (e.g., HPDE flanges and back-up rings or other similar items in contact with the slings). • In the event an obstructed pull must be performed, use or apply an energy-dissipating mechanism in case of rigging failure. • Slings used in the field for pulling shall be labeled with a supplementary tag and/or with permanent markings with "For Pulling Only" to ensure they are not also used for traditional hoisting and rigging applications. • Personnel, including spotters when possible, shall avoid positioning themselves in the line-of-fire during the pull and attempt to maintain a distance from the rigging under tension of at least 1-1/2 times the sling length. • When within the work boundary, follow all posted PPE requirements. Required PPE based on present hazards may include: -Safety Glasses or goggles -Protective Footwear -Helmet, Protective (hard hat) -Gloves -Clothing, High Visibility, as outer layer, minimum ANSI Class 2 All PPE must meet minimum specifications as outlined in DND-OS-PRO-00021, Personal Protective Equipment and Protective Clothing.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
4. Equipment and Vehicle Activities (does not apply passenger vehicles) - Powered Industrial Trucks (Forklifts) NOTE: This JHA does not address the OPERATION of powered industrial trucks within 10-feet, or TRAVEL within 4-6 feet (depending on voltage), of energized overhead electrical lines. Activities performed at a closer distance than these shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA). Operation of cranes and/or derricks shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA).	Slips / Falls mounting or dismounting the Powered Industrial Truck	• Establish and maintain 3 points of contact when mounting / dismounting the equipment. Use the hand hold devices as provided by the manufacturer. Ensure shoes / boots are free of oil / grease and/or excessive mud, snow, or ice.
	Unstable or Unsecured Load (resulting in a falling load)	• Secure all loads (except as may otherwise be allowed by specific work documents). Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered. Certain engineered loads (e.g., jersey barriers with fork pockets) may NOT need to be secured if handled as designed. • All movements of lead acid batteries will be secured prior to movement of ANY distance on ANY surface. "Secured" means the load is banded, strapped, shrink-wrapped, or connected by other means together, to a pallet or the backrest of the equipment. Inspect pallets prior to loading/use for broken/split wood, missing nails, rotted wood, missing wood members. Do not use pallets whose load bearing integrity is compromised. • Follow requirements of an approved checklist for hoisting and rigging activities. • For hoisting and rigging lifts, establish and control work boundary radius at minimum 1-1/2 times lift height. • DO NOT rig slings to forks during rigging operations; attach slings ONLY to an approved lifting device that has been evaluated and approved for use on the forklift. • Use edge protectors (softeners) where sling or other rigging device may be abraded by edge of load.
	Electrocution or Electric Shock from contact with overhead electrical lines	• Operating equipment shall maintain a minimum clearance from overhead energized electrical wires of 10-feet for voltages up to and including 50 kV. NOTE: Clearance distances increase with higher voltages, beginning at >50 kV [refer to OSHA 1910.333(c) and 1926.1407 - .1411 for more information]. • Traveling equipment shall maintain a minimum 4-6 foot clearance (depending on voltage) from overhead energized electrical lines.

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	Struck By Damage to Equipment or Facilities	• Designate a trained spotter when required. Ensure controls identified in Task 2 are followed for spotters. • Only trained operators shall operate forklifts. • When load obstructs operator view, operator must travel in reverse. • Drive equipment inside buildings only when necessary to perform work. • Contact the facility manager to receive a briefing on facility specific rules for equipment operation. • When inside facilities, equipment shall NOT travel at speeds greater than 5 mph, or a brisk walking pace. • When within the work boundary, follow all posted PPE requirements. Required PPE based on present hazards may include: -Safety Glasses or goggles -Protective Footwear -Helmet, Protective (hard hat) -Gloves -Clothing, High Visibility, as outer layer, minimum ANSI Class 2 All PPE must meet minimum specifications as outlined in DND-OS-PRO-00021, Personal Protective Equipment and Protective Clothing. • For hoisting and rigging lifts, establish and control work boundary radius at minimum 1-1/2 times lift height.
	Crush or Pinch (e.g., to hands/extremities when manually adjusting fork width)	• When possible, tilt the mast forward to free up forks for ease in moving forks; if the fork is too heavy to lift alone, obtain help from another worker. • Handle forks away from mast components to limit exposure to pinch-points. • When manually adjusting fork widths, personnel shall be aware of potential hand pinch-points. • Use leather, or other approved, work gloves during adjustment.
5. Equipment and Vehicle Activities (does not apply passenger vehicles): - Loading/Unloading Roll-Off Box-type Containers - Operating Trash Trucks	Crush/Struck By (pinned between vehicles or vehicles and equipment) Pinch Points/Sharp Edges (cuts, lacerations, punctures)	• Be situationally-aware at all times while in the work zone. • Contact the project supervisor or area facility manager for permission prior to entering into the active work area. When within the work boundary, follow all posted PPE requirements. Required PPE based on present hazards may include: -Safety Glasses or goggles -Protective Footwear -Helmet, Protective (hard hat) -Gloves -Clothing, High Visibility, as outer layer, minimum ANSI Class 2

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NOTE: This JHA does not address the OPERATION of equipment within 10-feet, or TRAVEL within 4-6 feet (depending on voltage), of energized overhead electrical lines. Activities performed at a closer distance than these shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA). Operation of cranes and/or derricks shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA).		All PPE must meet minimum specifications as outlined in DND-OS-PRO-00021, Personal Protective Equipment and Protective Clothing. • Designate a trained spotter when required. Ensure controls identified in Task 2 are followed for spotters.
	Line-of-Fire/Struck By (wire rope cable due to failure and sudden release of energy during loading or unloading of roll-off container)	• OS&H shall establish safe distances from equipment for ground personnel. The minimum safe distance shall be 30-feet for personnel not directly involved with the activity. Exception applies for personnel protected by other means such as tarp stands or concrete barriers, as approved by OS&H. If ground personnel (not directly involved with the activity) must position themselves within 30-feet of heavy equipment, the following shall be observed: A. Approach the heavy equipment away from the direction of travel but in a manner that the operator can see you; B. Utilize hand signals or radios to contact the operator; C. The operator shall ground equipment attachment(s), place controls in a neutral configuration, and set the equipment brakes (when equipped); D. The operator communicates (hand signals or radio) that it is okay for the ground person(s) to enter into the area; and E. The ground person(s) shall notify the equipment operator when they have cleared the 30-ft. zone. F. When within the work boundary, follow all posted PPE requirements. Required PPE based on present hazards may include: -Safety Glasses or goggles -Protective Footwear -Helmet, Protective (hard hat) -Gloves -Clothing, High Visibility, as outer layer, minimum ANSI Class 2 All PPE must meet minimum specifications as outlined in DND-OS-PRO-00021, Personal Protective Equipment and Protective Clothing. * If deviations from the above requirements are necessary, controls must be defined in a Project specific/Job specific JHA. • In addition to the above, wear the following **Personal Protective Equipment (PPE):** - Helmet, Protective (hard hat), Type I Class G [top impact, general - low voltage electrical]

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	Electrocution or Electric Shock from contact with overhead electrical lines	• Ensure rack is in stowed position while traveling in reverse. • Operating equipment shall maintain a minimum clearance from overhead energized electrical wires of 10-feet for voltages up to and including 50 kV. NOTE: Clearance distances increase with higher voltages, beginning at >50 kV [refer to OSHA 1910.333(c) and 1926.1407 - .1411 for more information]. • Traveling equipment shall maintain a minimum 4-6 foot clearance (depending on voltage) from overhead energized electrical lines.
6. Performing Elevated Work/Fall Protection NOTE: Elevated work which cannot be performed under the protection of engineered barriers or using Engineering certified anchorage points shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA). OSHA defines a hole as "a gap or open space in a floor, roof, horizontal walking-working surface, or similar surface that is two inches (5 cm) in its least dimension". Hazards and controls for work that is performed from Man-Lifts is addressed in the next section.	Fall to an Elevation Below (greater than or equal to 4 feet during facility maintenance/general industry activities or greater than or equal to 6 feet for construction activities).	• Personnel will have completed fall protection training when working from elevated heights. Elevated heights are defined as any unprotected area in excess of 6 feet above the next lower surface for construction activates, and any area in excess of 4 feet above the next lower surface for general industry activities (excluding scaffolding) from which work will be performed or access is required. • A competent person will inspect the work area daily. • Consult the project Occupational Safety and Health (OS&H) representative for further guidance if needed, particularly as it may pertain to minimum 'safe distance to fall' requirements.
	Fall through a hole to an elevation 4 feet or greater below for general industry or 6 feet or greater below for construction	• Fall protection requirements for holes are identified in 1910.28(b)(3) and require that each employee is protected from falling through any hole that is 4 feet (1.2 m) or more above a lower level by one or more of the following: * Covers * Guardrail systems; * Travel restraint systems; or * Personal fall arrest systems. Any workers within a work area boundary are considered "exposed" to the fall hazard and must be protected by one of the means identified above.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Proper use/application of Self Retracting Lifelines (SRL) SRL Equipment Failure SRL Contact with Leading Edge NOTE: This guidance is flowed down from ANSI Z359 and incorporated into DND-OS-PRO-00020, Fall Prevention and Protection. For further questions on the application of any Fall Protection Equipment contact an approved FLL Job Content Evaluator (JCE).	• When selecting the appropriate Self Retracting Lifeline (SRL) there are currently 5 types/classes in circulation. Identify your SRL class prior to work start to ensure proper application. Ensure SRL is compatible with your Body Harness. Contact OSH if any of these are not clear based on your specific equipment's labeling. Improper use of an SRL class could cause degradation of the lifeline or sever the lifeline in the event of a fall. To prevent SRL failure Class 1, Class A, and most Class B SRLs can only be used in a configuration where the tie off point is above the Dorsal D Ring and the lifeline will not come in contact with a Leading Edge. Class 2 and Class B SRLs with an Leading Edge Designation (LE) are approved for use where the tie off point is up to 5 feet below the Dorsal D Ring, where the lifeline could contact a Leading Edge, and in horizontal applications.
	Failure of Fall Protection PPE due to Fire	• For electrical or hot work activities at elevation, all fall protection PPE including, by example, full body harness and SRL are to be FR-rated or Arc Flash rates (as applicable) to prevent fall protection PPE failure due to fire.
	Slip/Trip/Fall While Traversing Mezzanine Areas/Grating Surfaces	• Be aware of conditions and surroundings when accessing mezzanines and grating surfaces. Make sure walking surfaces are even, clear of tripping hazards, firm/stable, does not move/shift, and no significant corrosion or degradation is identified. If areas of concern are found, ensure area is controlled and/or marked so it is not used. Contact engineering and safety for further evaluation if access is required.

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	Dropped Object or Tool	• Do not travel under overhead work activities. • Be aware - is there anyone working above you? • Be aware - is there anyone working below you? • Barricade areas below when working above. • Contact supervision to obtain permission before entering barricade area(s). • Only take needed tools and equipment to complete the job. • Secure all tools (such as using tool lanyards) and materials when working at height, if practicable. • Practice excellent housekeeping. • Report all dropped object/tool events. • When in the barricaded area, wear the following **Personal Protective Equipment (PPE):** - Footwear, Protective (reinforced toe boots/shoes) - Helmet, Protective (hard hat), Type I Class G [top impact, general - low voltage electrical]
	Contact with Energized Lines	• Inspect the work area for the presence of overhead energized electrical lines. • Operating equipment shall maintain a minimum clearance from overhead energized electrical wires of 10-feet for voltages up to and including 50 kV. NOTE: Clearance distances increase with higher voltages, beginning at >50 kV [refer to OSHA 1910.333(c) and 1926.1407 - .1411 for more information].
7. Working from Man-Lifts [Aerial Lifts and Mobile Scaffolds (i.e., scissors lifts)] NOTE: This JHA does not address the OPERATION of equipment within 10 feet or TRAVEL within 4-6 feet (depending on voltage) of energized overhead electrical lines. Activities performed at a closer distance than these shall be addressed in job-specific JHA or in	Fall From or Thrown From Man-lift Type Equipment	• Aerial Lifts - For aerial lifts, and when required for mobile scaffolds, utilize a personal fall arrest system: - Fall protection training is required when personal fall protection systems are utilized. - Aerial lifts shall NOT be utilized to gain access to or from elevated levels unless the aerial lift manufacturer approves this type of usage. - Using an engineering approved anchor point, 100% tie off must be maintained when transferring at height. - When required, manufacturer's guidelines and instructions for use shall be followed. - Both feet are required to remain on the floor or lift equipment when personnel are working from lift equipment. - Aerial lift must be approved by the manufacturer to have the capacity to withstand the vertical and lateral loads caused by an arrested fall; lifts must be approved for fall arrest to utilize a fall arrest system. - A Personal Fall Arrest System (PFAS) or Personal Fall Restrain System (PFRS) shall be utilized when working from lifts. When tying off to manufacturer approved tie off points when in the lift, 2 methods can be used: 1. A Lanyard no greater than 3 foot in length.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
a separate general JHA (e.g. project JHA). Operation of cranes and/or derricks shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA).		2. A Self Retracting Lifeline (SRL) if used per the manufacturer's design (see controls on proper use of SRL). - PFAS/PFRS shall be used by all employees in the lift.
	Proper use/application of Self Retracting Lifelines (SRL) SRL Equipment Failure SRL Contact with Leading Edge NOTE: This guidance is flowed down from ANSI Z359 and incorporated into DND-OS-PRO-00020, Fall Prevention and Protection. For further questions on the application of any Fall Protection Equipment contact an approved FLL Job Content Evaluator (JCE).	• When selecting the appropriate Self Retracting Lifeline (SRL) there are currently 5 types/classes in circulation. Identify your SRL class prior to work start to ensure proper application. Ensure SRL is compatible with your Body Harness. Contact OSH if any of these are not clear based on your specific equipment's labeling. Improper use of an SRL class could cause degradation of the lifeline or sever the lifeline in the event of a fall. To prevent SRL failure Class 1, Class A, and most Class B SRLs can only be used in a configuration where the tie off point is above the Dorsal D Ring and the lifeline will not come in contact with a Leading Edge. Class 2 and Class B SRLs with an -LE (Leading Edge Designation) are approved for use where the tie off point is up to 5 feet below the Dorsal D Ring, where the lifeline could contact a Leading Edge, and in horizontal applications.
	Electrical Shock (due to operation adjacent to or contacting energized overhead utilities)	• Operating equipment shall maintain a minimum clearance from overhead energized electrical wires of 10-feet for voltages up to and including 50 kV. NOTE: Clearance distances increase with higher voltages, beginning at >50 kV [refer to OSHA 1910.333(c) and 1926.1407 - .1411 for more information]. • Traveling equipment shall maintain a minimum 4-6 foot clearance (depending on voltage) from overhead energized electrical lines.

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	Struck By or Pinch Point (operating man-lift type of equipment in tight or limited areas)	• Personnel shall be trained and qualified. • Manufacturer's operation manual shall be present. • Keep ALL non-operating personnel away from man-lift during all driving and swing operations. • Establish safe work zone, including use of signs and barricades for ground personnel, as needed. • Utilize a spotter when working in tight locations or limited areas. Designate a trained spotter when required. • Be aware of objects that could strike the body or result in a whole body pinch point type of injury (such as exposure to low head space clearance, or head/body/extremities caught between stationary object and man lift equipment components). • Minimum PPE Requirements for using man-lift type of equipment shall include: - Eyewear, Protective, with rigid side shields meeting ANZI Z87 standard (latest revision) - Footwear, Protective (reinforced toe boots/shoes) - Gloves, Leather (unless a cut hazard exits, then wear at a minimum ANSI Class 2 Cut Resistant Gloves) - Helmet, Protective (hard hat), Type I Class G [top impact, general - low voltage electrical] • NOTE: Hard hat required only if overhead hazard exists.
	Dropped Object or Tool	• Do not travel under overhead work activities. • Be aware - is there anyone working above you? • Be aware - is there anyone working below you? • Barricade areas below when working above. • Contact supervision to obtain permission before entering barricade area(s). • Only take needed tools and equipment to complete the job. • Secure all tools (such as using tool lanyards) and materials when working at height, if practicable. • Practice excellent housekeeping. • Report all dropped object/tool events. • When in the barricaded area, wear the following: Personal Protective Equipment (PPE): -Clothing, High-Visibility (Outer Garment) Minimum ANSI Class 2 -Helmet, Protective (hard hat), Type I Class G [top impact, general - low voltage electrical] -Eyewear, Protective, with rigid side shields meeting ANSI Z87 standard (latest revision) -Footwear, Protective (reinforced toe boots/shoes)

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	Man-lift Equipment Failure - Occupied Aerial-lift Becoming Disabled with Personnel at Elevated Positions	• Conduct a pre-use inspection/function test on man-lift. For aerial lifts, a support person shall be assigned any time the basket is in the air and aerial lift is operating. This person shall be available at the worksite and shall have been instructed on the means to manually operate the lower the aerial-lift basket in the event that the personnel in the basket have lost power and cannot lower the basket themselves. Communication (radio or verbal) between the support person and aerial-lift basket occupants shall be available at all times.
	Tip-over of Equipment During Operation	• Contact PSS and/or project OS&H for wind speed evaluation if windy conditions are anticipated. • Consult Operator's manual for wind speed limitations. • Set outriggers, when provided, on pads or level, solid surfaces. • Complete the Aerial Lift Platform Weight Evaluation Form prior to performing the planned elevated task.
	Struck By (adjacent crane or equipment)	• Complete the Aerial Lift Platform Weight Evaluation Form prior to performing the planned elevated task. • Establish means to prevent being struck by moving equipment (including adjacent cranes); means shall include one or more of the following: - Communication with adjacent work group(s) as to work location, scope, timing, etc. - Work zone boundary - Assigned spotter(s) - Administrative control of crane pendant, remote control box(es), key(s), etc. - Installation of rail stop(s) - Other administrative or physical means approved by OS&H Personal Protective Equipment (PPE): Clothing, High-Visibility (Outer Garment) Minimum ANSI Class 2
8. Utilizing Portable Ladders to Perform Elevated Work [including ladder stands] NOTE: This JHA does not address the use of portable ladders within 10-feet of overhead electrical lines	Fall from Portable Ladder	• Users will have completed portable ladder training. • Ensure by visual inspection that each portable ladder is maintained in good usable condition at all times, labels are legible to include maximum weight capacity. • Do NOT set a portable ladder on boxes, barrels, scaffolds, or other unstable surfaces to obtain additional work height. • Avoid over-reaching; keep your body near the middle of the ladder and do not extend the center of torso beyond the ladder rails to perform work. • When ascending or descending, face the ladder using both hands and keep at least three points of

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as determined by visual observation. This is an arbitrarily-conservative distance chosen for this general JHA; activities performed at a closer distance than this shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA).		contact at all times. • Do NOT use ladders for any purpose for which they are not designed. • Use a ladder only on a stable and level surface, unless it has been secured to prevent accidental movement or slippage. • Wear proper footwear with good tread when climbing.
	Struck By (overhead obstructions)	• Be aware of overhead obstructions when working from a ladder. • In addition to other required PPE, if overhead hazards are present, then wear the following **Personal Protective Equipment (PPE):** - Eyewear, Protective, with rigid side shields meeting ANSI Z87 standard (latest revision) - Helmet, Protective (hard hat), Type I Class G [top impact, general - low voltage electrical]
	Contact with Electric Lines	• Contact Supervisor regarding ladder placement, and the need for electrical isolation or protection, before placing ladder into a position that has the potential for making contact with exposed electrical power lines or in close vicinity to exposed electrical power lines. • Use ladders made of non-conductive material, i.e., fiberglass, when the employee or ladder could contact energized electrical equipment. The SWITCHYARD will apply this requirement on a job-specific basis.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Overhead Hazards to Ground Personnel	• Do not travel under overhead work activities. • Do NOT carry materials with your hands while ascending/descending a ladder. • Use signs, barricades, guards, or locks, as appropriate, to protect ground personnel from walking into work area. • Watch for people working under or around the ladder. Avoid walking under ladders while in use. • Personnel within the work zone shall wear the following at a minimum, always follow posted PPE requirements. **Personal Protective Equipment (PPE):** - Eyewear, Protective, with rigid side shields meeting ANSI Z87 standard (latest revision) - Footwear, Protective (reinforced toe boots/shoes) - Helmet, Protective (hard hat), Type I Class G [top impact, general - low voltage electrical]
	Dropped Object or Tool	• Do not travel under overhead work activities. • Be aware - is there anyone working above you? • Be aware - is there anyone working below you? • Barricade areas below when working above. • Contact supervision to obtain permission before entering barricade area(s). • Only take needed tools and equipment to complete the job. • Secure all tools (such as using tool lanyards) and materials when working at height, if practicable. • Practice excellent housekeeping. • Report all dropped object/tool events. • When in the barricaded area, wear the following: -Clothing, High-Visibility (Outer Garment) Minimum ANSI Class 2 -Helmet, Protective (hard hat), Type I Class G [top impact, general - low voltage electrical] -Eyewear, Protective, with rigid side shields meeting ANSI Z87 standard (latest revision) -Footwear, Protective (reinforced toe boots/shoes)
9. Utilizing Fixed Ladders	Overhead Hazards to Ground Personnel	• Do not travel under overhead work activities. • Personnel within the work zone shall wear the following at a minimum, always follow posted PPE requirements. -Eyewear, Protective, with rigid side shields meeting ANSI Z87 standard (latest revision) -Footwear, Protective (reinforced toe boots/shoes)

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
		-Helmet, Protective (hard hat), Type I Class G [top impact, general - low voltage electrical] • Do NOT carry materials with your hands while ascending/descending a ladder. • Use signs, barricades, guards, or locks, as appropriate, to protect ground personnel from walking into work area. • Watch for people working under or around the ladder. Avoid walking under ladders while in use.
	Fixed Ladder Defect/Malfunction	• Ladder User Inspection (All ladders) - Users shall: - Inspect visible portions of ladder before use to identify defects, damage, or other hazards, - Report any deficiencies to the Facility Manager (FM) and, if deemed valid, then have ladder taken out of service until corrected. - Report any deficiencies noticed during use immediately to the FM and have work paused to wait for a determination. NOTE: FM shall request a compliance inspection by the Quality Assurance Group if uncertain that ladder is compliant with OSHA standard 1910.23. • Required Periodic Inspection (Exterior Ladders): - Users shall ensure a Quality Inspection Tag is in place and current; if not current, then contact the FM and do not use the ladder. - FM or designee will walk down facility to determine what ladders will remain in service and apply appropriate Accident Prevention/Equipment Control Tag(s) on those ladders whose use is no longer needed or are not equipped with a current Quality Inspection Tag.
	Fall from Fixed Ladder	• When ascending or descending, face the ladder using both hands and keep at least three points of contact at all times.
	Fall from Fixed Ladder due to Wet/Slippery Surfaces (ice, snow)	• Inspect work areas prior to starting the assigned activity/task. • Wear proper footwear with good tread when climbing.
10. Hand/Power Tool Use	Electrical Shock/Electrocution	• A. Inspect tools/extension cords prior to use. B. Use only double-insulated, or 3-wire grounded, power tools. C. Utilize extension cords that are rated for the work environment.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
		D. Extension cords shall not be located in standing water, placed so that they create a trip hazard, ran over by vehicles or equipment, or otherwise damaged. E. Stanchions or other means to keep extension cords out of standing water shall be utilized. F. GFCI protection is mandatory for construction and outdoor areas. G. GFCIs shall be tested daily before use. I. GFCIs shall be placed at the electrical power source (e.g., between electrical outlet and extension cord). J. Unplug power tools before servicing. K. Electrical repairs shall be made only by a qualified electrician. L. Remove any damaged cords or defective tools from service and tag them “Out of Service” with an ORANGE Defective Equipment Tag.
	Noise with the Potential to Equal or Exceed 85 dBA	• If noise levels meet or exceed 85 dBA as an 8-hr TWA or are reasonably expected to meet or exceed 85 dBA as an 8-hr TWA or until noise levels have been evaluated; -Approved hearing protection is required -Personnel shall have completed an annual audiometric exam -Personnel shall have completed annual hearing conservation training -Noise hazards shall be posted in high noise areas and/or equipment refer to DND-OS-PRO-00029, Construction and Work Zone Barricades and Signs. Contact IH to evaluate noise levels. When noise levels exceed 105 dBA consult IH to ensure hearing protection with adequate NRR is used.
	High noise with the potential to affect CAAS Audibility	• Prior to performing work which requires hearing protection and/or a high noise boundary within a CAAS covered facility or IEZ, ensure the work/task has been reviewed and approved by the NFM and/or cognizant system engineer (CSE), following guidelines in DND-SM-PRO-00310 Operation of Criticality Accident Alarm system. Concurrence or additional compensatory actions will be provided by the NFM and/or CSE.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Sharp Blade/Edge (power tools)	• Reciprocating saws should be equipped with constant pressure switches that will shut the tool off when the switch is released. Reciprocating saws may also be equipped with a lock-on control provided that turnoff can be accomplished by a single motion of the same finger (i.e., pressing and releasing the pressure/power switch). Such saws shall be labeled: "CAUTION - KEEP FINGER OVER TRIGGER DURING USE." All hand-held power tools with a cutting/grinding function (such as porta band saws, angle grinders, saber saws, disc sanders, belt sanders, and other similar operating power tools): 1. WILL NOT have a TRIGGER LOCKING function that maintains the tool in operation if the operator's finger is released from trigger. 2. Shall be evaluated to have a Dual Push Safety Switch function with a starting action to require operator to do a switch/trigger press action to activate the blade/wheel. If the tool does not contain this function, the project/division shall make every effort to procure the tool with a dual push safety switch. In the event this is not a manufactured option, a WCD and JHA shall provide alternative safety steps to support specific tool use with the approval of the ESH&Q Lead. 3. Shall be evaluated to be equipped with a constant-pressure switch or control that shuts off the power when pressure/trigger is released. The project/division shall make every effort to procure the tool with this safety feature. In the event this is not a manufactured option, a WCD and JHA shall provide alternative safety steps to support specific tool use with the approval of the ESH&Q Lead. • All other hand-held power tools: 1. WILL NOT have a TRIGGER LOCKING function that maintains the tool in operation if the operator's finger is released from the trigger. 2. Shall be evaluated to be equipped with a constant-pressure switch or control that shuts off the power when pressure/trigger is released. The project/division shall make every effort to procure the tool with this safety feature. In the event this option is not a manufactured option, a WCD and JHA shall provide alternative safety steps to support a specific tool use with the approval of the ESH&Q Lead. 3. DUAL PUSH SAFETY SWITCH function should be considered. • Use power tools, accessories and tool bits, etc. in accordance with the user's manual, operational instructions, and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. • Maintain situational awareness of your work, work area and adjacent work activities. • SOCCo hazard analysis has determined that where hand cut and/or puncture hazards are a possibility, only work gloves with a minimum cut resistant rating of 2 and a puncture resistance rating of 3 shall be used. Contact OSH for guidance about glove cut resistance and puncture ratings.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Eye Injury / Inhalation hazard from flying objects or generation of excessive airborne particulates / dust from cutting materials with power saws, grinding, power washing, abrasive blasting, etc.)	• Wear Protective Eyewear (Safety Glasses with rigid side shields, or in combination with Face Shield, as required by the manufacturer or in consultation with OS&H). For excessive dust, wear dust specification safety glasses or form fitting goggles that provide a close-fitting seal to the face. Follow any additional PPE requirements when prescribed by the manufacturer i.e. face shield for face protection. Use local exhaust ventilation whenever practical.
	Hand Tools: - Pinch Points - Sharp Blade/Edge (laceration) - Struck By (cuts / punctures)	• SOCCo hazard analysis has determined that where hand cut and/or puncture hazards are a possibility, only work gloves with a minimum cut resistant rating of 2 and a puncture resistance rating of 3 shall be used. Contact OSH for guidance about glove cut resistance and puncture ratings. NOTE: There are times when the use of gloves impedes the work (handling small nuts and bolts, intricate pieces, etc.) and is not practical. Personnel need to assess the job and determine conditions under which the work can be completed safely.
	Carbon Monoxide Exposure from gasoline powered tools used indoors or in confined areas	• Contact project IH representative to determine the need for, and to conduct, monitoring for carbon monoxide
	Uncontrolled Whipping Air Hose - Contusion	• All airline connections shall be secured by safety clips, approved whip control restraints or other means to prevent injury due to a whipping hose.
11. Work Involving the Use of Chemicals	General Exposure	• Ensure employees have completed Hazard Communication General Training.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
NOTE 1: Activities involving bulk chemicals (e.g., handling, deliveries, transfers, off-loading), disturbing uncharacterized areas/materials [e.g., potential for ACM, lead, PCBs] or performing HAZWOPER tasks shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA). NOTE 2: This JHA does not cover the use of acids or bases with a pH of less than 2 or greater than 12.5		• Know how to access the Safety Data Sheet (SDS). • Substitute with a less hazardous (toxic) alternative material, if possible. • Contact IH personnel to evaluate the need for chemical monitoring and/or sampling. Follow the recommendations provided by IH based on the monitoring/sampling results. • Chemical Exposure Action Levels will be determined by IH based on the hazards present. • Follow the work practices and specific training on how to work safely with these materials at your worksite. • Store in labeled containers recommended by the manufacturer; protect against damage when handling; keep closed at all times when not in use. • Store in dry, cool areas out of direct sunlight or as directed by manufacturer; keep inventories as low as possible. • Inspect containers for damage or leaks before handling (never use containers that appear to be swollen). • Know measures to take to clean up spills or how to notify spill responders and steps to take in an emergency; maintain spill control equipment at the work site. • Do not reuse empty containers – the residue may be hazardous. • Handle and dispose of toxic wastes safely.
	Exposure by Ingestion	• Do NOT eat, drink, smoke or apply cosmetics/lip balm in areas where toxic materials may be present. • Wash hands and face before eating, drinking, smoking or applying cosmetics/lip balm after working with toxic materials.
	Exposure by Inhalation	• Ensure that available engineering controls (e.g., ventilation) are operating. Closed handling systems may be necessary to prevent the release of the material (dust, mist, vapor, gas) into the workplace. • If Engineering controls are not feasible or available, contact OS&H to determine the need for respiratory protection. - Use respiratory protection type, configuration, filtering agents, and change out schedule as specified by OS&H. - Enrollment in the respiratory protection program (fit-test, medical approval, training) will be verified by the respirator facility upon respirator issue.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Exposure by Skin Absorption or Skin Contact	• Avoid skin contact – wear gloves, apron, boots, coveralls, eyewear, and/or other clothing as recommended by OS&H. • Know in advance where the closest eyewash/safety shower station is located and how to use it. • Protect portable eyewash/safety shower equipment from temperature extremes (i.e., direct sunlight or freezing conditions). • In case of accidental contact, call immediately for medical assistance. • Portable eyewash bottles can be used in instances where plumbed or self-contained units can't reasonably be provided (e.g., an outside yard) in the immediate work area, but only until they can reach a unit which can provide the amount of flushing fluid necessary to flush the eyes for at least 15 minutes.
	Fire/Explosion	• Eliminate all ignition sources (sparks, smoking, flames, hot surface) when using flammable products. • Dispense combustible/flammable liquids carefully and ensure proper ventilation is present. • Store flammable materials in approved storage cabinets and locations. • DO NOT store combustible or flammable gases/liquids with incompatible materials as described in the MSDS or other guidance literature. • DO NOT accumulate combustible debris.
	Spill or Release of Hazardous Materials or Waste	• Do not change the container used to store the hazardous material without verifying the compatibility of the material and container. • An adequate quantity of spill kits to address the hazardous materials of concern must be available at the job site. • All fuels, oils, greases, and chemicals in containers being stored outdoors, regardless of the size of containers, must be stored on or within adequate secondary containment capable of holding the entire capacity of the single largest container within the containment plus an additional 10 percent of that capacity if exposed to precipitation. • Waste and hazardous material receptacles shall be closed or otherwise covered when not being actively loaded or unloaded. • Spills within a containment device must be addressed immediately to remove all spilled contents.
12. Work in Areas with Radiological Contamination/ Other Radiological Hazards	Airborne Potential Intakes Loss of Control of Radioactive	• Verify Rad Worker training is current. • Ensure that fit test is current for respirator to be used. • Contact Radiation Protection (RP) to determine the appropriate Radiological Work Permit (RWP) and

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
NOTE: Contact Radiation Protection to evaluate the need to perform a RAD survey above 8-ft in a Radiological Facility.	Material Personnel Contamination	task for the work. • Comply with all RWP requirements. • Comply with any additional RP instructions/direction.
	Exposure to Ionizing Radiation Personnel Contamination	• Verify Rad Worker training is current. • Contact Radiation Protection (RP) to determine the appropriate Radiological Work Permit (RWP) and task for the work. • Comply with all RWP requirements. • Comply with any additional RP instructions/direction.
	Work on or With Radioactive Materials (RAM)	• •Verify Rad Worker Training is Current •Handle Radioactive Materials in accordance with DND-RP-PRO-00054 Conduct of Radiological Operations •Contact Radiation Protection (RP) if integrity of RAM is questionable or compromised. •If an RWP is required ensure you are working to the correct RWP and task •Comply with all RWP requirements •Comply with any additional RP instructions/directions
13. Establishing Lay-down and Staging Areas NOTE: This JHA does not address the OPERATION of equipment within 10-feet, or TRAVEL within 4-6 feet (depending on voltage), of energized overhead electrical lines. Activities performed at a closer distance than these shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA).	Struck By (delivery trucks/construction equipment, moving vehicles/equipment, poor visibility conditions)	• Ground personnel shall position themselves outside the potential tip-over zone when trucks are dumping their loads. The tip-over zone shall be considered as the area within one and a half times the height (in fully-raised position) of the elevated bed or the highest point of the truck being dumped. • Personnel shall be situationally-aware of their surroundings, especially moving vehicles/equipment, at all times they are within the defined project area. • At least one spotter shall be utilized. Designate a trained spotter. Ensure controls identified in Task 2 are followed for spotters. • The spotter shall be positioned in front of the truck being dumped, when possible, or outside the potential tip-over zone prior to signaling the truck driver to dump his load. • Trucks shall not dump their load until signaled by the spotter. • Personnel (not immediately involved with the activity) shall maintain at least a 30-foot distance from equipment. • Prior to signaling the truck to dump, the spotter shall verify that the truck is on stable, level ground. Trucks shall not be dumped on unstable, soft or uneven ground.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
Operation of cranes and/or derricks shall be addressed in job-specific JHA or in a separate general JHA (e.g. project JHA).		
	Release of Fuel or Oil Into Environment	• An adequate quantity of spill kits to address the hazardous materials of concern must be available at the job site. • Visually inspect equipment to identify drips, leaks, spills, etc. at a minimum before initial use each day or, in the case of equipment that remains stationary during use (e.g., generators, compressor, light plants, etc.), at least once every seven days or when refueling, whichever is less. • Any oil, including fuels, greases, lubricants, etc. in containers with a capacity of 55 gallons or greater must be stored on or within adequate secondary containment capable of holding the entire capacity of the single largest container within the containment plus an additional 10 percent of that capacity if exposed to precipitation. • All fuels, oils, greases, and chemicals in containers being stored outdoors, regardless of the size of containers, must be stored on or within adequate secondary containment capable of holding the entire capacity of the single largest container within the containment plus an additional 10 percent of that capacity if exposed to precipitation. • Any single piece of equipment that remains stationary during use (e.g., generators, compressor, light plant, etc.) that has a fuel or oil capacity of 55 gallons or greater must be equipped, or provided with, secondary containment. • Spills within a containment device must be addressed immediately to remove all spilled contents.
	Storm Water Runoff (that contains soil, silt, and/or sediment that can cause a negative environmental impact and permit exceedance)	• Install, and maintain in proper functioning condition, erosion and sediment controls (e.g., silt fence, storm water inlet protection, rock check dams). • Contact SOCCo Environmental Protection for direction.
	Electrical Shock/Electrocution (due to striking energized overhead wires)	• Operating equipment shall maintain a minimum clearance from overhead energized electrical wires of 10-feet for voltages up to and including 50 kV. NOTE: Clearance distances increase with higher voltages, beginning at >50 kV [refer to OSHA 1910.333(c) and 1926.1407 - .1411 for more information]. • Traveling equipment shall maintain a minimum 4-6 foot clearance (depending on voltage) from overhead energized electrical lines.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
14. Installing Site Controls: • Silt Fencing • Project Perimeter Area Barricades • Project Signage NOTE: A SOCCo Penetration Permit is required prior to penetration by any means other than those considered excavation or tracking greater than 12-inches into the ground or 3-inches into PORTS Site roadways or when breaching or penetrating any building surface greater than 1-1/2".	Disturbance of Habitat (for Protected Species)	• Do not remove or cut trees without first obtaining permission from SOCCo Environmental Protection.
	Noise with the Potential to Equal or Exceed 85 dBA	• If noise levels meet or exceed 85 dBA as an 8-hr TWA or are reasonably expected to meet or exceed 85 dBA as an 8-hr TWA or until noise levels have been evaluated; -Approved hearing protection is required -Personnel shall have completed an annual audiometric exam -Personnel shall have completed annual hearing conservation training -Noise hazards shall be posted in high noise areas and/or equipment refer to DND-OS-PRO-00029, Construction and Work Zone Barricades and Signs. Contact IH to evaluate noise levels. When noise levels exceed 105dBA consult IH to ensure hearing protection with adequate NRR is used.
	High noise with the potential to affect CAAS Audibility	• Prior to performing work which requires hearing protection and/or a high noise boundary within a CAAS covered facility or IEZ, ensure the work/task has been reviewed and approved by the NFM and/or cognizant system engineer (CSE), following guidelines in DND-SM-PRO-00310 Operation of Criticality Accident Alarm system. Concurrence or additional compensatory actions will be provided by the NFM and/or CSE.
	Environmental Insult (Disturbance of Wetlands or Streams)	• No work will be allowed in streams or wetlands without SOCCo Environmental Protection approval.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	• Sharp Edges (finger, hand, arm, head, foot injuries during fence and sign installation) • Struck By (finger, hand, arm, head, foot injuries during fence and sign installation)	• During fence and sign installation, wear the following **Personal Protective Equipment (PPE):** - Eyewear, Protective, with rigid side shields meeting ANSI Z87 standard (latest revision) - Footwear, Protective (reinforced toe boots/shoes) - Gloves, Cut-Resistant , Minimum ANSI Cut Rating of 2 or higher - Helmet, Protective (hard hat), Type I Class G [top impact, general - low voltage electrical] • NOTE: Hard Hats shall only be required when overhead hazards exist.
	Blockage of Emergency Access Routes	• Be aware of placement of the barricades or other control measures so as not to block access to fire hydrants or ingress of fire department emergency equipment response routes; contact Fire Services Group for direction.
	Uncontrolled Whipping Air Hose - Contusion	• All airline connections shall be secured by safety clips, approved whip control restraints or other means to prevent injury due to a whipping hose.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Pinch Points (smashed finger/hand/arm/head/foot)	• When installing "T" posts, use a powered or a manual post driver (DO NOT drive "T" posts with any type of manual hammer). • When using manual post drivers, DO NOT lift the post driver completely above the top of the post being driven into the ground. • Be aware of the potential pinch point between any part of the post driver and the post at all times to avoid pinch-type injuries to the fingers, hands, and upper extremities. • Wear the following **Personal Protective Equipment (PPE):** - Eyewear, Protective, with rigid side shields meeting ANSI Z87 standard (latest revision) - Footwear, Protective (reinforced toe boots/shoes) - Gloves, Cut-Resistant , Minimum ANSI Cut Rating of 2 or higher - Helmet, Protective (hard hat), Type I Class G [top impact, general - low voltage electrical]
	Striking Buried Utilities (installing site controls including silt and construction fencing, T-posts, etc.)	• Prior to driving a post, stake, or like object into the ground, it can be marked at a distance of 11-inches from the end to be placed into the ground. • Wear leather or other approved gloves. • DO NOT drive the object into the ground greater than the 11-inch mark.
15. Dust Control Activities	Release of Fuel or Oil Into Environment	• An adequate quantity of spill kits to address the hazardous materials of concern must be available at the job site. • Locate, maintain, and refuel equipment to allow sufficient distance for spill response equipment to be deployed to prevent fuel or oil from entering ditches, storm drains, ponds or streams in the event of a leak or spill. If unsure, then contact the PSS for assistance in determining what constitutes sufficient distance.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Struck By (moving vehicles/equipment in poor visibility conditions)	• Utilize a spotter when low visibility conditions may exist. Use a spotter when in tight spaces or the travel path is obscured. Designate a trained spotter. Ensure controls identified in Task 2 are followed for spotters. • Personnel not involved with the activity shall maintain at least a 30-foot distance from equipment. • Wear high visibility clothing. -Clothing, High-Visibility (Outer Garment) Minimum ANSI Class 2
	Inhalation of Airborne Dust	• All project personnel shall have the authority to suspend work when excessive dust is being generated at the project. • All work activities shall be paused or stopped until the dust has been controlled (e.g., by application of water, slowing vehicle speeds down, etc.).
	Injury from Fire Hydrant Operation	• Supervision shall coordinate the use of fire hydrants as a water supply through the Fire Services Group. • Only Fire Services Group personnel (ext. 5909) shall operate fire hydrant valves. • Fire services may install temporary valves that may be operated by project personnel for dust control.
	Slick and/or Muddy Conditions (caused by over-use of dust control water)	• Personnel should be aware that the application of excessive amounts of water can create muddy and slippery conditions that could result in fall-type injuries and/or vehicles and equipment sliding off the designated roadway. • Ground personnel should avoid walking through muddy or over-watered areas located within the project area.
	Storm Water Runoff (that contains soil, silt and/or sediment that can cause a negative environmental impact and permit exceedance)	• Install, and maintain in proper functioning condition, erosion and sediment controls (e.g., silt fence, storm water inlet protection, rock check dams). • Contact SOCCo Environmental Protection for direction.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Fugitive Dust Emissions to Environment Dust Emissions Impacting Project Personnel (excludes vehicle drivers in closed cab)	• Apply dust suppression water to mitigate visible emissions. • Wear the following **Personal Protective Equipment (PPE):** - Eyewear, Protective, with rigid side shields meeting ANSI Z87 standard (latest revision)
16. Working in Permit-Required Confined Spaces	Permit Required Confined Space Entry - Exposure to, or potential exposure to, these hazards: A. Chemical B. Oxygen deficiency C. Biological (snake, spider, bees, etc.) D. Physical (cut/laceration, pinch point, slip, trip, fall, struck by, noise, inadequate lighting, temperature extremes, etc.) E. Fall	• Personnel shall have completed Confined Space training. • Confined Space Entry Permit must be completed prior to entry. Follow the requirements of the permit. • Contact OS&H personnel to perform initial atmospheric monitoring. Refer to Fall through a hole hazards and controls identified in task 6, Performing Elevated Work / Fall Protection, for fall protection controls as required. Any workers within the work boundary are considered "exposed" to the fall hazard and must be protected (e.g. Supervisor, Entrant(s), and Attendant).
17. Working in Non-Permit-Required Confined Space (Non-PRCS)	Adjacent Activities (introducing new hazards) Changing Conditions, Fall	• Ensure space has been evaluated and designated as a non-PRCS; if not; then contact Confined Space Program Manager (CSPM) and OS&H to evaluate. • Contact OS&H prior to entry to determine whether atmospheric monitoring is necessary or not. • Ensure no additional hazards are introduced into or near the space (e.g., welding, generator use, equipment/vehicles, chemical cleaning, etc.). Refer to Fall through a hole hazards and controls identified in task 6, Performing Elevated Work / Fall Protection, for fall protection controls as required. Any workers within the work boundary are considered "exposed" to the fall hazard and must be

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
		protected (e.g. Supervisor, Entrant(s), and Attendant). • IF conditions change, THEN STOP, vacate the space and contact OS&H and CSPM for re-evaluation.
18. Operation of Truck-Mounted Lift Gates NOTE: The term "riding" means standing on the lift, not supporting the load, while the lift gate is being raised and lowered.	Improper Equipment Operation	• ONLY one person may ride a liftgate at a time. • Ensure the area in which the liftgate platform opens and closes is clear and that the platform area, including the area in which loads may fall from the platform, is clear before and during liftgate operation. • Ensure that liftgate has required safety markings and decals prior to operation. Mark hazards (pinch points, uneven surfaces, edges, etc.) using visible tape, paint, etc. Should a liftgate be found without proper markings and/or decals, notify supervision to have a 'CAUTION' tag applied to the liftgate controls which state that the liftgate shall not be ridden until proper markings have been affixed. • Initially, brief all liftgate users (drivers/material handlers) who operate liftgates in safe operation, and additionally at a frequency determined by their supervisor. • Users shall be aware of the manufacturer's decals, although meeting the requirements of this JHA provides variances to manufacturers' restrictions on personnel riding on the liftgate platform. • The liftgate "rider" shall be in visual sight of the liftgate operator at all times the liftgate is in operation. • Manufacturer's operation manual is located in the vehicle. • Perform a visual check for potential defects of the liftgate before each use. • If the liftgate unit shows signs of defects such as deterioration, abuse, or fails to operate freely, then tag out the gate with a "WARNING – DEFECTIVE EQUIPMENT" tag and/or report deficiencies to supervision. • Operation of the liftgate shall be a minimum of a two person operation UNLESS the sole purpose is to raise or lower a load, and personnel will NOT ride the liftgate.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Fall/Falling Load	• Employees shall stabilize themselves by holding a non-movable part of the vehicle (not near a pinch point) or the load. • In the event, during lifting or lowering of material, should the load become unstable and begin to tip or fall off of the lift, do not attempt to prevent the load from falling and keep out of the path of the load. • Ensure that liftgate has required safety markings and decals prior to operation. Mark hazards (pinch points, uneven surfaces, edges, etc.) using visible tape, paint, etc. Should a liftgate be found without proper markings and/or decals, notify supervision to have a 'CAUTION' tag applied to the liftgate controls which state that the liftgate shall not be ridden until proper markings have been affixed. • Prior to mounting or dismounting, the platform must come to a complete stop. • Personnel shall NOT be on a liftgate while the vehicle is moving. Prior to "riding" the liftgate, employees must confirm that the vehicle is in a "stable" position: vehicle brakes set, wheels chocked when required, keys removed from the ignition, and the liftgate "riders" have verified that the vehicle is "stable." • Loads (material and personnel) must not exceed the maximum capacity of the liftgate. • Loads shall be fully and independently stabilized prior to lifting or lowering; ensure loads are not top heavy.
	Struck By	• Ensure the area in which the liftgate platform opens and closes is clear and the platform area, including the area in which loads may fall from the platform, is clear before and during liftgate operation. • Liftgate users shall be aware of overhead obstructions when working from a raised liftgate. If overhead hazards are present, the vehicle shall be re-positioned where possible or users shall wear head protection (e.g. hard hats) to prevent injury.
	Crush/Pinch	• Liftgates shall have OSH-approved safe standing areas designated before use for personnel riding. Safe standing areas are solid portions of the liftgate that are between the hazard markings. Personnel standing in the truck/vehicle shall not stand on hazard markings. • Ensure that liftgate has required safety markings and decals prior to operation. Mark hazards (pinch points, uneven surfaces, edges, etc.) using visible tape, paint, etc. Should a liftgate be found without proper markings and/or decals, notify supervision to have a 'CAUTION' tag applied to the liftgate controls which state that the liftgate shall not be ridden until proper markings have been affixed. • To ensure hands and feet are clear of all pinch points when operating the lift, liftgate riders shall exercise extreme caution and be positioned on or within the designated safe standing area of the liftgate platform.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Inadvertent Vehicle Movement	• Park the vehicle on a stable surface as level as possible with the brake set.
	Trip	• Ensure that liftgate has required safety markings and decals prior to operation. Mark hazards (pinch points, uneven surfaces, edges, etc.) using visible tape, paint, etc. Should a liftgate be found without proper markings and/or decals, notify supervision to have a 'CAUTION' tag applied to the liftgate controls which state that the liftgate shall not be ridden until proper markings have been affixed. • The liftgate platform shall be flush with the truck bed when in the raised position.
19. Performing Work in a COLD Environment (indoor and outdoor activities)	Temperatures that May Result in COLD Stress-related Symptoms or Effects (e.g., frostbite or metabolic slow down such as hypothermia)	• When dry-bulb air temperatures are less than or equal to 39F: - Supervisors will contact OS&H Professional for evaluations, monitoring, and recommendations of cold stress controls. - Personnel shall have completed Temperature Extremes training. - Personnel shall have completed annual medical exam for temperature extremes. • When engaged in continuous/prolonged work in equivalent wind chill temperatures 11F or below: A. Workers should be under constant protective observation (buddy system or supervision). B. The work rate should not be so high as to cause heavy sweating that will result in wet clothing. IF heavy work must be done, THEN rest periods should be taken in heated shelters and opportunity for changing into dry clothing should be provided. C. The work should be arranged in such a way that sitting still or standing still for long periods in the cold environment is minimized. D. Personnel must be properly instructed in the hazards of cold stress and the controls utilized for personnel protection.
20. Performing Work in a HOT Environment (indoor and outdoor activities)	Dry-bulb Air Temperatures Greater Than or Equal to 80F or when heat stress increasing conditions have been identified (using layered or impermeable PPE, undertaking heavy or very heavy work activities: - Heat Illness	• Utilize one of the following monitoring techniques; * Physiological monitoring, * Detailed heat stress analysis, and * Work rest regimens. If using work/rest regimens, obtain WBGT readings. Encourage the use of physiological monitoring. Encourage frequent breaks and fluid replacement. Refer to DND-IH-PRO-00069, Temperature Extremes. Personnel shall have completed applicable annual temperature extremes training.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	- Heat Stroke	Personnel shall have completed an annual medical exam for temperature extremes. Contact an OS&H Professional for evaluations, monitoring and recommendations for heat stress controls.
21. Refueling Vehicles/Mobile Equipment; Stationary Equipment (light plant generators, diesel pumps, etc.)	Fire/Explosion	• Never fill an unapproved container. • DO NOT overfill; leave room for expansion of fuel. • Do not use electronic devices while fueling, as a spark could cause ignition. • Always turn off the engine before fueling equipment. • Never smoke while refueling or refuel near any open flame. • Ensure a minimum 10-pound ABC fire extinguisher is present at the site fueling station. • Ensure fueling stations are set up in well-ventilated areas. • For VEHICLES/MOBILE EQUIPMENT: - Maintain nozzle contact with the container at all times. • For STATIONARY EQUIPMENT: - Ensure fuel pipeline systems are properly installed, grounded, and bonded.
	Chemical Exposure	• Ensure fueling is conducting in a well ventilated area Remove any clothing that has absorbed gasoline or diesel fuel and wash from your body thoroughly Portable containers shall be metal, have tight closures with screw or spring covers and shall be equipped with spouts or other means to allow pouring without spilling. Leaking containers shall not be used. Fuel dispensed by a portable tank with transfer pump shall have dispensing nozzles with automatic shut offs and hoses less than 50 feet with no leaks detected prior to use PPE Requirements for refueling: -Nitrile Gloves shall be worn when there is potential for repeated or prolonged skin exposure to gasoline or diesel fuel -If the potential for splashing exists goggles or a face shield with safety glasses (ANSI 87.1) underneath shall be worn, if no splash hazard exists ANSI Z87.1 Safety Glasses shall be worn

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Release of Fuel or Oil into the Environment	• Visually inspect equipment to identify drips, leaks, spills, etc. prior to refueling. • DO NOT overfill; leave room for expansion of fuel. • An adequate quantity of spill kits to address the hazardous materials of concern must be available at the job site. NOTE: Spill kits are not required when storage containers or equipment have secondary containment capable of capturing an overfill and/or spill from the refueling connection to the storage container or equipment. • Refueling activities shall not take place within 100 feet of waterways, drainage ditches, creeks, streams, etc. If refueling must occur within 100 feet of such watercourses, then contact Environmental Protection for further guidance on required protective measures.
22. Work Involving Energy Isolation NOTE: Arc flash hazards at or above 1.2 cal/cm2 at a working distance of 18 inches or less is not allowable for work covered under the General Work JHA, and personnel must follow Electrical Program requirements.	Electrical Shock and/or Arcing when plugging/unplugging 480 Volt cord connected equipment	• -Ensure doors/covers are intact without openings or gaps. -Inspect for water intrusion (do not use if detected). -Ensure switch is off before plugging or unplugging. -Stand off to side when operating switch. -Inspect cord and plug for defects before using. -Ensure cords are not exposed to water.
	Electrical Shock or Electrocution	• Qualified Electrical Worker (for hazardous electrical energy) • Control access to the Limited Approach Boundary. • Voltage Rated Test Instrument. • Perform lockout/tagout (LOTO) actions and system isolation verification (SIV), including absence-of-voltage test (AVT), on electrical circuits up to 240 VAC supplied from one transformer rated less than 125 KVA. • When working within the Restricted Approach Boundary, wear the following with leather protectors **Personal Protective Equipment (PPE):** - Gloves, Voltage-Rated
	-Arc Flash	• The General Work JHA may not be utilized where the Electrical Task Risk Assessment (ETRA) determines there is an arc flash hazard at or above 1.2 cal/cm2 at a working distance of 18 inches or less. A job-specific JHA must be developed for hazard controls.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Exposure to Hazardous Energy Sources (other than electrical) - chemical - mechanical - pneumatic - potential	• Bleed off pressure or relieve energy, as applicable. • If release of energy can adversely impact personnel coming into the work zone, then barricade or post qualified person for hazardous area. • Perform lockout/tagout (LOTO) actions and SIV, including absence-of-energy check prior to starting work. • Evaluate for additional controls.
	DC Voltage or Less Than (<) 50 Volts AC	• Determine that there is no increased exposure to electrical burns or explosions due to electrical arcs (i.e., flammable or combustible atmospheres). • Only use non-conductive tools when working around exposed battery terminals. • Wear proper PPE for chemical hazards when working around batteries.
23. Working in a Fixed Weld Shop - Brazing - Cutting (oxy-acetylene torch; plasma) - Grinding - Welding	Fire	• Ensure that fixed weld shop permit approval has been obtained before starting hot work operations. • Follow requirements of fixed weld shop permit. • Hot Work Qualified Worker. • Inspect area for combustibles and all equipment prior to use to ensure safe operating condition. • If combustibles cannot be cleared out, they shall be covered and protected with a fire blanket or equivalent; shields and curtains can also be used to keep sparks from reaching combustible materials. • Ensure presence of fully charged fire extinguisher of appropriate size and type for the work being performed. • Stop hot work operations if unsafe conditions develop, and notify the area supervisor for reassessment of the situation. • Ensure use of Flame-Resistant (FR) Personal Protective Equipment (PPE), as described in Appendix C, Supplemental Information for Personal Flame Resistant Clothing, of welding, burning and hot work procedure or as approved by Industrial Safety, before starting hot work operations.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Exposure to: - Carbon Monoxide (CO) - Nitrogen Dioxide (NO2) - Heavy Metals and/or - Welding Fumes - Other Contaminants	• Task ventilation (e.g., fume exhauster) is required during all hot work activities. • IH will conduct sampling during hot work activities, at their discretion. • In the absence of sampling results characterizing the work activity, contact Industrial Hygiene (IH) to determine the need for, and to conduct, monitoring of fumes and/or poisonous gas (e.g., CO, NO2, etc.) generating activities. • IH will prescribe respiratory protection, where required.
	Electrical Shock (welding equipment)	• Ensure proper grounding is completed before starting the welder. • Inspect cables, cable connectors, welding leads, hoses, etc. prior to use. • Remove any defective equipment, materials or tools from service.
	Radiant Energy - IR and UV Exposure to Welding Arc	• Employ welding curtains around the work area to prevent bystander exposure to welding arc. • Only essential personnel shall be allowed in the direct vicinity of the welding operation; ensure those personnel wear proper level of safety glass tinting for the type of welding occurring. • Wear welding helmet with level of tinting commensurate with welding method to protect against welding arc injury. Follow guidelines as listed in American National Standard Z49.1 - Safety in Welding, Cutting and Allied Processes.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Grinding Wheel Failure	• Ensure grinding wheel is rated for higher revolutions per minute (RPM) than grinder. • Ensure guard is on grinder. • Wear the following **Personal Protective Equipment (PPE):** - Ear Plugs or Ear Muffs - Eyewear, Protective, with rigid side shields meeting ANSI Z87 standard (latest revision) - Face Shield, Chemical-resistant, meeting ANSI Z87 standard (latest revision) - Footwear, Protective (reinforced toe boots/shoes) - Gloves, Cut-resistant and Puncture Resistant, Minimum ANSI Cut Rating of 2 or higher and Puncture rating of 3 or higher
	Noise with the Potential to Equal or Exceed 85 dBA	• If noise levels meet or exceed 85 dBA as an 8-hr TWA or are reasonably expected to meet or exceed 85 dBA as an 8-hr TWA or until noise levels have been evaluated; -Approved hearing protection is required -Personnel shall have completed an annual audiometric exam -Personnel shall have completed annual hearing conservation training -Noise hazards shall be posted in high noise areas and/or equipment refer to DND-OS-PRO-00029, Construction and Work Zone Barricades and Signs. Contact IH to evaluate noise levels. When noise levels exceed 105 dBA consult IH to ensure hearing protection with adequate NRR is used.
	High noise with the potential to affect CAAS Audibility	• Prior to performing work which requires hearing protection and/or a high noise boundary within a CAAS covered facility or IEZ, ensure the work/task has been reviewed and approved by the NFM and/or cognizant system engineer (CSE), following guidelines in DND-SM-PRO-00310 Operation of Criticality Accident Alarm system. Concurrence or additional compensatory actions will be provided by the NFM and/or CSE.
24. Work In and Around: - Un-manicured vegetation (e.g., high grass, weeds, bushes and	General Exposures - Arachnids	• Be aware when operating equipment in areas that could have underground or hidden nests; inspect areas that could have nests before disturbing. • Request to have plants removed or weed control applied prior to work.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
trees) - Infrequently entered structures (e.g., pump house, storage building, tunnel access buildings, etc.) - Rodent/vermin harboring environments (e.g., piles of lumber/wood, stagnant water, hollow logs, etc.)	- Poisonous Plants - Vector-borne Insects - Wildlife	• Report a sting, bite or contact with poisonous plants to Supervisor and obtain medical treatment immediately. • Avoid placing unprotected hands/fingers in dark, damp locations. • Brief workers on the identification of poison ivy, oak and sumac plants, and signs and symptoms of contact with these poisonous plants. • Avoid touching allergenic-suspect leaves. • Wear boots and long pants when working outdoors.
	Contact with Poisonous Plants - Poison Ivy - Poison Oak - Poison Sumac	• Have allergenic plants removed by qualified workers. • Do not burn allergenic plants since inhaling smoke from them can cause severe allergic respiratory problems. • After using tools on or around allergenic plants, clean with rubbing alcohol (isopropyl alcohol, aka isopropanol) or large amounts of soap and water. • If working in proximity to allergenic plants, wear clothing to prevent skin contact including long pants, long sleeves and gloves. • If protective clothing cannot adequately cover all exposed skin, consider use of barrier cream on portions of exposed skin (NOTE: barrier cream should be washed off and reapplied twice per day when used).
	Contact with Vector-borne Insects (mosquitoes and ticks) and Arachnids (spiders)	• Use EPA-registered insect repellents on exposed skin and clothing, per manufacturer's recommendations. • When handling stacked or undisturbed piles of materials, wear protective clothing such as a long-sleeved shirt and long pants, hat, gloves and boots. • If working in or around long/thick vegetation, tuck pants in boots or socks to prevent tick bites. • Check skin and clothing for ticks daily. • Shower after work and examine your body for ticks after work (check hair, underarms, and groin; remove ticks promptly).

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Bee Sting (allergic reaction)	• Workers with a history of severe allergic reactions to insect bites or stings should consider carrying an epinephrine auto-injector (EpiPen) and should wear a medical identification bracelet or necklace stating their allergy. • Notify Supervisor and Medical Department of known allergies and suggest briefing co-workers how they can assist with using "EpiPen" and where it is kept.
	Contact with Wildlife (e.g., rodents, snakes, skunks, etc.)	• Avoid climbing on rocks or wood piles where a snake may hide. • Be aware that snakes tend to be active at night and in warm weather. • If wildlife (rodent, snake, skunk, etc.) is encountered, avoid contact and keep distance. • If wildlife remains at work area upon arrival, leave and contact supervision. • If bitten/scratched, get medical attention immediately (note color and shape of snake's head). • Keep poisonous snake bite victim still and calm to slow spread of venom. • Do not cut bite victim wound or attempt to suck out the venom.
	Exposure to Bird Droppings (in large quantity) - Cryptococcosis (pigeons) - Histoplasmosis - Psittacosis	• If bird droppings are to be disturbed during a work evolution, then - pause the work - contact supervision and - have droppings cleaned up or consult OS&H for alternate work methods to ensure no airborne potential exists
25. Operation of Manual and/or Powered Pallet Jack	Improper Equipment Operation - Crush - Strike/Struck By	• Ready access to equipment's Operator Manual. • Trained and qualified operator of powered pallet jack. • All movements of lead acid batteries will be secured prior to movement of ANY distance on ANY surface. "Secured" means the load is banded, strapped, shrink-wrapped, or connected by other means together, to a pallet or the backrest of the equipment. Inspect pallets prior to loading/use for broken/split wood, missing nails, rotted wood, missing wood members. Do not use pallets whose load bearing integrity is compromised.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Strain/Sprain (equipment selection and use)	• Supervision shall evaluate use of mechanical means prior to use of pallet jack. • Never use a pallet jack to move a load that exceeds its weight rating. • Size up any load when using a pallet jack and ask for assistance when/if required. • Contact supervision to assist in evaluating the area to determine the proper method of movement.
	Caught Between/Crush	• Be mindful of body positioning and never position yourself in a possible pinch point, line-of-fire or crush situation. • Use a spotter when in tight spaces or the travel path is obscured. Ensure controls identified in Task 2 are followed for spotters. • Keep your hands on the controls and feet on the platform. • While riding, never stick a foot or any part of your body outside the truck, no matter how slow the truck is moving. • When traveling forks first, keep both hands on the controls; be careful when changing direction; keep your feet clear of the truck. • Operate truck at a speed that will give you time to react in an emergency; stop the truck completely before dismounting.
	Struck By	• Ensure that you have room to drive and turn; watch out for power unit swing and slow down when making turns. • Use a spotter when in tight spaces or the travel path is obscured. Designate a trained spotter. Ensure controls identified in Task 2 are followed for spotters. PPE Requirements: Clothing, High-Visibility (Outer Garment) Minimum ANSI Class 2
26. Performing Work in Areas with Elevated Noise Levels	Noise with the Potential to Equal or Exceed 85 dBA	• If noise levels meet or exceed 85 dBA as an 8-hr TWA or are reasonably expected to meet or exceed 85 dBA as an 8-hr TWA or until noise levels have been evaluated; -Approved hearing protection is required -Personnel shall have completed an annual audiometric exam -Personnel shall have completed annual hearing conservation training -Noise hazards shall be posted in high noise areas and/or equipment refer to DND-OS-PRO-00029, Construction and Work Zone Barricades and Signs. Contact IH to evaluate noise levels.

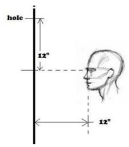
Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
		When noise levels exceed 105 dBA consult IH to ensure hearing protection with adequate NRR is used.
	High noise with the potential to affect CAAS Audibility	• Prior to performing work which requires hearing protection and/or a high noise boundary within a CAAS covered facility or IEZ, ensure the work/task has been reviewed and approved by the NFM and/or cognizant system engineer (CSE), following guidelines in DND-SM-PRO-00310 Operation of Criticality Accident Alarm system. Concurrence or additional compensatory actions will be provided by the NFM and/or CSE.
27. Performing Manual Material Handling Tasks	Musculoskeletal Injuries Strains Sprains	• Use mechanical equipment to move heavy or large loads, when possible. • Get help when moving large items or use mechanical equipment to move heavy or large loads, when possible. • Perform warm-up exercises and stretches that will keep your muscles strong and flexible before strenuous, repetitive work, or moderate-to-heavy lifting. • Keep your back straight while standing, sitting, bending or lifting. • Bend your knees and get down close to the load. • Keep your head straight and forward. • Establish secure footing before attempting to lift. • Lift gradually using your legs without jerking or twisting your body while in motion. • Keep the load close to your body. • DO NOT lift more than 50 pounds or 1/3 of your body weight, whichever is less, without help. • A manual lift over 50 pounds or 1/3 of your body weight (whichever is less) shall require partner assist of one or more persons, and a supervisor walk-down and review prior to execution. Supervisor review of any lift is to determine: a. Weight of item(s) being lifted b. The approach for lifting item(s) c. If an ergonomic evaluation is needed This does not allow the supervisor to approve an individual lifting over 50 lbs. The intent is so that the supervisor can evaluate the weight and method of lifting if being lifted by two or more personnel. • For manual push-pull activities of 40-pounds or greater, or of unknown amount, contact OS&H for approval. This requirement excludes activities involving the following: - Compressed gas cylinders. - Mechanical means (e.g., carts and carriers on rollers or wheels designed specifically for moving materials). - Grid Sweeps by Waste Management.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Hot Surface (burns)	• Avoid contact with hot surfaces; wear long-sleeved clothing and pants; leather gloves. • Ensure guards, shields and/or insulation is in place to protect from hot surfaces. • Situational awareness.
	Burrs Glass Items Pointed Objects Sharp Edges Splinters	• Inspect item to be handled. • Do not reach blindly when grabbing onto a potentially rough- or sharp-edged object. • Do not handle items with burrs, sharp edges and/or splinters unless wearing abrasion-, cut- and/or puncture resistant personal protective equipment (e.g., clothing, gloves, etc.). Cut resistant gloves must have a minimum ANSI cut rating of 2 or higher. Puncture resistant gloves must have a minimum ANSI rating of 3 or higher. • Consult OS&H if in doubt about the use and types of personal protective equipment (i.e., gloves).
28. Work Activity Impacting, or Impacted By, Fissile Material	Activities Affecting Fissile Materials	• Evacuate the building when you hear the CAAS horn. • Follow controls established in Nuclear Criticality Safety Evaluations • Keep fissile material and hazardous material in special designated containers/areas. • Perform housekeeping activities in fissile control area, as required in specific NCSAs/NCSEs
29. Work in Areas with Inadequate Lighting	Insufficient Illumination Levels - Slips, Trips, Falls - Electric Shock and Burns - Inability to Exit the Space - Strike; Struck By	• Clean and/or re-lamp existing lighting fixture(s). • Use portable, temporary lighting (e.g., generator-powered light stands, battery-powered LED lights, etc.). • Protect temporary lighting lamps against breakage/contact. • Temporary lighting in wet/conductive locations should be provided with GFCI protection, or a 12V lighting system should be used. • Use flashlight. • In low-light level areas, wear the following: Clothing, High-Visibility (Outer Garment) Minimum ANSI Class 2 • Contact OS&H if lighting evaluation is desired.
30. Scaffold Erection, Access,		

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
Inspection, Use and Disassembly NOTE: Prior to any of the above activities, ensure appropriate scaffold training is complete; does not include use of PFAS at or above 10-ft from lower level (Assembly/Disassembly)	Improper Use/Application of controls	• Prior to accessing a scaffold for general use, scaffolds must be inspected, tagged, and approved for use by a scaffold competent person. Note: Scaffold erection, inspection, and disassembly can take place without the scaffold being inspected, tagged, and approved for general use due to the nature of the work, but shall follow all applicable fall protection controls and guidance as provided by DND-OS-PRO-00061, Scaffolds.
	Slips and Falls	• Employees shall be prohibited from working on scaffolds covered with snow, ice or other slippery material except for removal of such material. • The platform surface shall be kept clear of extraneous tools and materials. • Scaffold stairways shall have slip-resistant treads and landings.
	Electrocutions	• Operating equipment shall maintain a minimum clearance from overhead energized electrical wires of 10-feet for voltages up to and including 50 kV. NOTE: Clearance distances increase with higher voltages, beginning at >50 kV [refer to OSHA 1910.333(c) and 1926.1407 - .1411 for more information]. • Scaffolds generally must be at least 10 feet from electric power lines (higher voltages require greater distances). • Special attention to overhead power lines must be paid when erecting or relocating scaffolds.
	Fall from Height (less than 10-ft from lower level)	• A scaffold shall not be moved while personnel are on it. • All scaffolds, where work is conducted in excess of 6 feet in height, shall have toeboards. • Scaffolds are to be used only on an even surface. • Work platforms shall be secured in position. • Working platforms must have a non-slip surface.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Struck By Falling Objects	• Do not travel under overhead work activities. • Areas below scaffold work should be barricaded during erection/disassembly unless a protective canopy is installed. • Protective footwear and helmet (hard hat) must be worn within an area beneath elevated work where objects could fall from a height and strike workers. • Paneling or screening may be required to contain larger objects from falling. • Toeboards are to be used along the edges of platforms.
31. Use of Portable Pumps and Generators	Abrasion Crush Hot Surface Laceration Pinch Point Puncture Rotating Equipment/Machinery Struck By	• Keep all guards and shields in place. • Avoid contact with hot surfaces; wear long sleeve clothing and pants. • Keep hands, hair and loose clothing clear of all moving parts. • Where any object handled could possibly cause cuts, punctures or abrasions to hands, wear appropriate gloves for identified hazard. Cut resistant gloves must have a minimum ANSI cut rating of 2 or higher. Puncture resistant gloves must have a minimum ANSI rating of 3 or higher. (Exception: where rotating machinery presents a greater hazard of entangling gloves, they are optional with written justification). • Where any object handled would possibly cause injury to feet if dropped, safety shoes shall be worn.
	Shocks and Electrocution (from improper use of power or accidentally energizing other electrical systems)	• Keep the generator dry. • Only authorized users can operate equipment. • Maintain and operate portable generators in accordance with the manufacturer's use and safety instructions. • Always plug electrical appliances directly into the generator using the manufacturer's supplied cords. Use undamaged heavy-duty extension cords that are grounded (3-pronged). • Use ground-fault circuit interrupters (GFCIs).

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Carbon Monoxide (from a equipment exhaust) Fuel Vapors	• Always operate in an open well-ventilated area or vent the engine exhaust directly outdoors. • Connections and machine grounding shall be checked prior to use. • Operate equipment in strict accordance with Manufacturer's instructions. • Report any observed defect or safety hazard to your supervisor immediately. • Set up mechanical ventilation when used in an enclosed area. When use outdoors, situate equipment so that exhaust is directed away from the work area. • Never place a generator outdoors near doors, windows, or vents. • If you or others show symptoms of CO poisoning — dizziness, headaches, nausea, tiredness — get to fresh air immediately and seek medical attention.
	Noise with the Potential to Equal or Exceed 85 dBA	• If noise levels meet or exceed 85 dBA as an 8-hr TWA or are reasonably expected to meet or exceed 85 dBA as an 8-hr TWA or until noise levels have been evaluated; -Approved hearing protection is required -Personnel shall have completed an annual audiometric exam -Personnel shall have completed annual hearing conservation training -Noise hazards shall be posted in high noise areas and/or equipment refer to DND-OS-PRO-00029, Construction and Work Zone Barricades and Signs. Contact IH to evaluate noise levels. When noise levels exceed 105 dBA consult IH to ensure hearing protection with adequate NRR is used.
	High noise with the potential to affect CAAS Audibility	• Prior to performing work which requires hearing protection and/or a high noise boundary within a CAAS covered facility or IEZ, ensure the work/task has been reviewed and approved by the NFM and/or cognizant system engineer (CSE), following guidelines in DND-SM-PRO-00310 Operation of Criticality Accident Alarm system. Concurrence or additional compensatory actions will be provided by the NFM and/or CSE.
32. Excavation, Trenching and Penetration Activities (not meeting the exception criteria in DND-OS-PRO-00022)	Cave-in	• Follow the requirements of the issued Excavation/Penetration permit. • Ensure that a project-specific Excavation Competent Person is identified prior to any excavation.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
33. Compressed Gas Cylinder Storage, Handling and Use [except those: containing UF6 > 1-ton capacity, Dewars, in placardable amounts (per 49 CFR), emptied fire extinguishers awaiting RAD survey]	Crush Pinch Struck By	• Qualified Workers who connect, operate, maintain or modify compressed gas equipment, systems and associated equipment must be trained to operate those systems safely before assignment. • Dispose of non-refillable cylinders after usage, according to Waste Management direction. • Remove regulators from cylinders: - At the end of each shift, except for conditions that support ongoing processes or operations (e.g., analytical instrumentation), provided that the cylinder is properly secured in the upright position and is protected from falling objects. - When compressed gas cylinders are not being used.
34. Handle and/or Remove Lead Objects or Lead Components without lead disturbance. Note: This excludes the removal/disturbance (i.e., cutting, scraping) of lead containing objects/components, lead based paint or paint that has not been evaluated by IH. This shall be addressed in a job-specific JHA.	Lead: Dermal Ingestion	• If not already determined through prior sampling events, then contact IH to evaluate. • Ensure lead awareness training is completed by workers potentially coming into contact with lead. • Define the scope of work area and post per OS&H recommendations. • PPE requirements: •Safety Glasses •Protective footwear •Disposable (or Tyvek) work coveralls when coming into contact with lead objects/components (i.e. rubbing against) •Disposable nitrile gloves • DO NOT eat, drink, or smoke, or apply cosmetics when working with lead. • Wash all exposed skin surfaces thoroughly after handling. • Store lead away from drainage areas (indoors, away from drains that empty into the sewage systems; outdoors, away from drainage ditches). • Isolate lead storage areas. • If stored outdoors, elevate lead and cover completely with tarps to preclude contact with water. • Lead stored indoors must be segregated and marked as “Lead”.
35. Drilling Holes in Silica-bearing Construction/Building Materials 	Contact with energized electrical/shock	• Follow the requirements outlined in DND-OS-PRO-00022, Excavation/Penetration procedure.

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
	Exposure to Crystalline Silica - Eyes - Skin - Respirable	• Operate and maintain the drill in accordance with the manufacturer's instructions. • Use a HEPA vacuum to clean out holes and silica dust from work area surfaces. • Use a drill equipped with a shroud or cowling with a dust collection system. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. • The frequency required to empty the dust collection box is specified in the drill operator's manual. • Wear protective eyewear and work gloves while performing work.
36. Utilizing Jump Box to jump start vehicle or equipment	Injury to Equipment User/Property Damage	• Do not jump a battery while it is charging from another source. Do not work with or charge battery in an area where open flames, sparks, cigarettes or any source of combustion is present. Inspect batteries for leaks and do not charge damaged batteries. Wear safety glasses with rigid side shields meeting ANSI Z87.1 standard (latest revision) whenever working with batteries. Confirm that the voltages and amp hour capacities are compatible and support the use if the type of portable jump/charge unit for the jump/charge application. Do not drive or operate equipment by using portable jumper/charge units in lieu of installed batteries. Ensure voltage is compatible and ensure proper connections to positive & negative battery posts. Follow the manufacturer's instructions, labeling and warnings. Make positive connection first for starting jumper/chargers, and when done jumping/charging, remove the positive connection after disconnecting the negative terminal, whenever possible.
37. Work Involving the Use of Class 2 and 3R Lasers (only covers the use of indoor lasers)	Eye Injury	• Follow Manufacturers guidelines. • No maintenance or servicing of lasers permitted. • No intentional intrabeam exposure applications. • Reference DND-IH-PRO-00027. • Employees are provided with and wear laser eye protection when working in areas in which a potential exposure to direct or reflected laser light greater than 0.005 watts (5 milliwatts) exist. • Beam shutters or caps are utilized or the laser turned off when laser transmission is NOT required. • The laser beam is NOT to be directed at employees. • Direct eye exposure to the laser beam is avoided. • Verify class/labeling of laser before use. • Employees are NOT to be exposed to light intensities above the following maximum permissible exposure (MPE) limits for the given conditions:

Work Activity, Task, or Job Step	Potential Hazard(s)	Hazard Control(s)
		-Direct staring: 1 micro-watt per square centimeter. -Incidental observing: 1 milliwatt per square centimeter -Diffused reflected light: 2 1/2 watts per square centimeter.

Job Hazard Analysis Approval			
Printed Name	**Signature**	**Functional Role**	**Approval Date**
Lindy Brewer	lindy.brewer@ports.pppo.gov	ESH&Q Field Section Manager [ELE,EXC,FLL,HR,OS,SCF]	10/1/2025 6:43 AM
Tim Lacy	Tim.Lacy@ports.pppo.gov	ESH&Q Field Section Manager [ELE,EXC,FLL,HR,OS,SCF]	10/1/2025 6:53 AM
Kip Archer	Kip.Archer2@ports.pppo.gov	Construction Safety Manager (HE)	10/1/2025 8:02 AM
Jason Montavon	Jason.Montavon@ports.pppo.gov	Engineer [E,CSE]	10/1/2025 6:47 AM
Ken Horsley	Kenneth.Horsley@ports.pppo.gov	Environmental Engineer Senior [ENV]	10/1/2025 10:37 AM
Greg Fouch	Greg.Fouch@ports.pppo.gov	USW Safety Representative	10/1/2025 11:57 AM
Tim Williams	Tim.Williams@ports.pppo.gov	Hoisting & Rigging / D&D Equip. Mgr. [HR]	10/2/2025 8:54 AM
Kimberly Brown	Kimberly.Brown@ports.pppo.gov	Occupational Safety Manager [ELE,EXC,FLL,HR,OS,SCF]	10/1/2025 7:37 AM
Steele Deringer	steele.deringer@ports.pppo.gov	Radiation Protection Section Manager [RAD]	10/1/2025 11:35 AM
Christian Horsley	Christian.Horsley@ports.pppo.gov	IH Section Manager [IH,LSO,IH-BE]	10/1/2025 10:40 AM