

| JHA NO.: | JHA-0074 | 14 | REV: | | 2 | ISSUE DATE: | 2-28-25 |
|------------------------|--|---|---|---|--|--|-------------------------|
| JHA TITLE: | | ion of Piping, s, and in-line ents | | | N/A | SPECIFIC LOCATION: | N/A |
| Activity | Sub-Activity | Hazard | Control | | | | |
| Hand & Power Tools | Hand, Air and Electrical Tools | Improper Use Tools & Equipment Laceration & Grinding When Failure Fire Electric Shock Inhalation of Carbon Monoxide, Nitrogen Dioxide, and/o Other Combustion Gases, Chemical Asphyxiation Struck-by Abrasion | 00721 , <i>Hand</i> and | Power Tools. | | ent the associated work o | |
| Grinding Activities | Grinding Activities on Uncoated Metal | Flying Particle (Debris) Grinding When Failure Loss of Tool Control - Laceration (Grinding Activities) | Ensure the Ensure the guard Use the too Hand-held (| grinding whee is on the grind I handle(s) to grinders shall t, jacket (or e | el is rated for highe der. maneuver the grin be equipped with a | a constant pressure switcom heavier materials (e.g | (RPM) than the grinder. |



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| JHA TITLE: | | on of Piping, s, and in-line ents | WORK PACKAGE NUM | ORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | |
| Activity | Sub-Activity | Hazard | Control | | | • | | | |
| | | Burn Fire | Wear pants/t footwear to prevent | | | erials (e.g., heavy cottor | n, denim) that overlap | | |
| | | (Hot Work) | Wear clothing sleeves and collars | | from pockets, hood | s, or cuffs that can trap | sparks or slag. Keep | | |
| | | | · Ensure the m | aterial being | cut is secured via | approved methods (i.e., | bench vise, c-clamp) | | |
| | | | NOTE: Never hold | the material | that is being cut! | | | | |
| | | | | rk Area, con | tact the Permit Auth | closeable flaps are acce norizing Individual (PAI) | | | |
| Drill Presses | , | | · Always be su | re the machi | ine support is secur | ely anchored to the floo | r or the work bench | | |
| | Bench, and Magnetic) | Striking Entanglement Hot Objects and Components | Do not overre | ach. Keep p | proper footing and b | alance at all times | | | |
| | Manufactures Recommendations | | nd · Never leave before starting | chuck keys, v | wrenches, or any of | her tools on machine. A | lways verify removal | | |
| | | Flying Particle | Keep guards removed | in place and | l in proper working o | order. Do not operate th | e machine with guards | | |
| | | | Never leave not in operation | he machine | running while unatt | ended. Machine shall b | e shut off whenever it is | | |
| | | | All work shall use your hands to hands. | | | or a vise to the drill pre | ess table. It is unsafe to | | |
| | | | | Never brush away any chips while the machine is in operation. All clean up should be done when the machine is stopped | | | | | |
| | | | Keep hands fingers around, on, | | | earts and cutting surface | es. Do not put hands or | | |
| | | | · Reference M | L-SH-80176- | -A002, <i>UPF Eye an</i> | d Face Protection List | | | |



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| Activity | Sub-Activity | Hazard | Control | | | | | |
| | | | Ensure drill and ordinances | press is gro | ounded in accordance | e with the National Elect | rical Code and local codes | |
| Portable Band Saws | Portable Band Saws | Laceration | | | | guarded, except for the table Band saw wheel | | |
| | | | Always adhere to | the followin | g requirements: | | | |
| | | | · Keep hands | away from | cutting area and blad | de. | | |
| | | | · Always kee | o both hand | s on the tool handles | | | |
| | | | Always kee | Always keep your hands out of the line of the band saw blade. | | | | |
| | | | · Ensure the | material be | ng cut is secured via | approved methods (i.e. | bench vise, c-clamp). | |
| | | | NOTE: Never ho | d the mate | rial that is being cut | ! | | |
| | | | · Always wai | until the m | otor has reached full | speed before starting a | cut. | |
| | | | Prevent uni power source and | ntentional s or battery | tarting. Ensure the sw pack, picking up or ca | vitch is in the off position arrying the tool. | before connecting to | |
| | | | · Remove an | y adjusting | key or wrench before | turning the power tool of | n. | |
| | | | · Do not over | reach. Kee _l | proper footing and b | palance at all times. | | |
| | | | Do not wear parts. | r loose cloth | ning or jewelry. Keep | your hair, clothing and g | loves away from moving | |
| | | | Do not force | the power | tool. Use the correct | power tool for your appl | ication. | |
| Jacks | JacksLever, Screw, | Potential Ener | gy When using jacks | perform th | e following: | | | |
| Lever, Screw, | Hydraulic, and Ratchet | Release (Mechanical) | Verify the n | anufacture | 's rated capacity is m | narked legibly on each u | nit | |
| , | | | Verify the p | resence of a | a positive stop to prev | ent over-travel on all jac | cks | |



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| JHA TITLE: Installation of Piping, Supports, and in-line Components | | | WORK PACKAGE | ORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | |
| Activity | Sub-Activity | Hazard | Control | | | <u>,</u> | | | |
| Hydraulic, and Ratchet | | | | ng a lift by set | ting in place blocking | the metal cap of the jack and cribbing at the base | | | |
| | | | · Crib, bloo | ck, or otherwis | e secure a load imm | ediately after it has been | raised | | |
| | | | Lubricate the following: | e jacks at regu | lar intervals and insp | ect them frequently, but | not less frequently than | | |
| | | | o Once every | six months fo | r constant or intermit | tent use | | | |
| | | | o When jacks | are sent out | of shop for special wo | ork or when returned | | | |
| | | | o When a jac | k is subjected | to abnormal load or s | shock, immediately inspe | ect before and after use | | |
| | | | Examine | repaired jacks | s and associated repl | lacement parts for possib | ole defects | | |
| | | | Tag defective ja | acks and take | out of service until re | paired | | | |
| Manual Material | Pallet Jack Use | Muscle Strain/Sprain | | | achine. Be aware of our sing product failure | dynamic loading! Sudder | load movement may | | |
| Handling | | Ergonomics Pinch Points | Use as ir | ntended only. | Do not use machine t | to support personnel | | | |
| | | Crushed By | · Always lo | oad the machi | ne evenly and centra | lly | | | |
| | | Struck By Caught Between | · Keep cle | ar of fork and | load while raised | | | | |
| | | oudgin Bothot | | on flat, level s | surface able to withst | and weight of machine a | nd load | | |
| | | | · Never lea | ave a loaded r | nachine unattended t | the load must always be | lowered when not in use | | |
| | | | Inspect b | efore every us | se do not use if parts | are loose or damaged. | | | |
| | Manual Material Handling | Muscle Strain/Sprain | | | | manual material handling or material handling work | | | |



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| Activity | Sub-Activity | Hazard | Control | | | • | | |
| Manual Material | | Ergonomics Pinch Points | | | | ne supervisor will conduct a low up with employees bef | | |
| Handling | | | Inspect for sh | ifted loads, | stored energy, or | r loose items prior to unload | ding | |
| | | | Keep hands a | and arms cl | ear when stacking | g material | | |
| | | | · Remove/prote | ect sharp e | dges with "softene | ers" prior to lifting | | |
| | | | To understand A128, UPF Ergonor | | | nual material handling, refe | er to OT-SH-801768- | |
| Hazardous Material Use | Hazardous Material Storage | Improper Storage of Hazardous Materials | | health and | | ntainers compatible with th from unintended exposure | | |
| | | Spill Fire | A "first in, first become a waste pro | | ge strategy must l | oe used to help Ensure ma | terial does not expire and | |
| | | | | | | e with the completed UCN- ratures, to prevent product | | |
| | | | Storage area and segregated cor | | | materials can be properly i | nspected, inventoried, | |
| Hazardous Material Use | Labeling of Hazardous Materials | Inadequate Hazard | Instructions | azardous m | aterials shall be i | n accordance with Append | ix B, Container Labeling | |
| | | Communication | thereof that can pro | Labels shall have the Product Identifier and words, pictures, symbols, or a combination thereof that can provide employees with the specific information regarding the physical and hea hazards of the hazardous chemical | | | | |
| | | | Project Perso portable container for | | | s materials from a bulk con r shift only | tainer to a suitable | |



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| Activity | Sub-Activity | Hazard | Control | | · | | | | |
| | | | Individual station appropriate signage at label | nary containers (e.g., stora ttached to them that conta | age tanks) must have signs in the same information as | s, placards, or other s a manufacture's original | | | |
| Hazardous Material Use | Use and Disposal of Hazardous Materials | Contact with Chemicals | | S&H Representative if UC product that you are working | N-23353 SDS Evaluation Ing with | Form is not completed for | | | |
| | | (adsorption, inhalation, ingestion, | Review UCN-23 the work | Review UCN-23353 and the Safety Data Sheet (SDS) of the chemical/product prior to starting the work | | | | | |
| | | Asphyxiation) | xiation) Follow the assigned work controls specified in the SDS Evaluation Form | | | | | | |
| | | Improper Disposal of Hazardous Materials | roper cosal of the given product/chemical and in accordance with PL-SH-801768- A002, Constand the given product the Liranium Processing Facility. | | | | | | |
| Dropped Object Prevention | General Requirements | Dropped Object | Review the applicable 00715 , <i>Dropped Object</i> | • | nent the associated work o | controls listed in JHA- | | | |
| Personal Protective Equipment (PPE) | Rotating Equipment | Caught Betwe | ES&H Representative | and Responsible Supering | g equipment can pose a ris tendent will evaluate the ta ommendations for the task | ask, equipment function, | | | |
| Personal | Hearing Protection - | Noise | · Refer to ML-SH- | -801768-A011, Sound Lev | vels of Common Construct | ion Power Tools | | | |
| Protective Equipment | Noise Levels Between Eighty-Five | Noise Levels Between Eighty-Five | | single hearing protection | devices with a minimum N | RR of 21 | | | |
| (PPE) | (85) and Ninety-Nine | | Barricade and S | Signage: | | | | | |
| | (99) dBA. | | | | e with caution signs or tags ty-five (85) dBA boundary : | | | | |



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| Activity | Sub-Activity | Hazard | Control | | <u>.</u> | | | | |
| | | | o Contact Industria working in enclosed | | e levels for new/changed we | ork activities or when | | | |
| Personal | Hearing Protection - | Noise | · Reference ML | -SH-801768-A011 Sound | Levels of Common Constru | ction Power Tools | | | |
| Protective Equipment (PPE) | Noise Levels over One-Hundred (100) dBA | | At a minimum foam earbuds) AND | | ction devices with NRR of 3 | 3 (i.e. red, white and blue | | | |
| (/ | | | Contact IH or prior to engaging in t | | e anticipated noise levels ar | e greater than 114dBA | | | |
| | | | in enclosed spaces s | such as enclosed cells, pits | uce the time of exposure. We so, vaults or other similar spances are present contact ESo | ces that may adversely | | | |
| | | | Barricade and | l Signage: | | | | | |
| | | | o Install danger ba boundary area | rricade tape with danger s | igns or tags to identify the o | ne hundred (100) dBA | | | |
| | | | | side of danger barricade wate size of these boundaries | ith caution single hearing pr s | otection required signs. | | | |
| | | | o Contact IH to eva | aluate noise levels for new | /changed work activities or v | when working in enclosed | | | |
| Fire Prevention and | Fire Occurrence | Fire | | | sponsible for evacuating the fire shall perform or direct th | | | | |
| Protection | | | · Step 1 – Yell ' | "FIRE" to notify those in the | e immediate vicinity. | | | | |
| | | | Step 2 – Notify the Y | 7-12 Operations Center (O | C) by: | | | | |
| | | | o Activating a fire a | alarm (pull box), if available | 9 | | | | |



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| Activity | Sub-Activity | Hazard | Control | | | | | |
| | | | o Calling 911 fro | m a Y-12 la | ndline | | | |
| | | | o Calling Y-12 C | C at (865) | 574-7172 from a cel | phone | | |
| | | | o Contacting the | OC via Ch | annel 1 from a Proje | ct radio | | |
| | | | o Contacting the location (to be for | | | providing any information | n regarding the fire and its | |
| | | | NOTE: Use the policy location. | nonetic alph | abet when calling th | e OC to avoid confusion | identifying the building | |
| | | | Step 3 – Only after reporting the fire, personnel may voluntarily attempt to fight a small, eastage fire using an available portable fire extinguisher. This voluntary action should be taken only personnel believe it is within their capability to safely extinguish or contain the fire, a safe escape route is readily available, and there is no immediate danger. | | | | | |
| Fire Prevention | Use of Flammable and Combustible | Fire | USE only a combustible liquid | | tainers and portable | e tanks for storage and ha | andling of flammable and | |
| and Protection | Liquids | | handling and use requirement is for | of flammabl flammable l | e liquids in quantitie | s of five gallons or less. I are thick and highly viscion | proved containers for the The only exception to this d (extremely hard to pour), | |
| | | | IF quantitie safety cans for sto | | | JSE the original containe | er or approved metal | |
| | | | normally used for | the safe pas | ssage of people. Age | e liquids in areas used for gregate incidental in-use er construction shall not e | | |
| | | | o 25 gallons (95 | liters) of Cl | ass IA liquids in app | roved containers | | |



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| Activity | Sub-Activity | Hazard | Control | | | | | | |
| | | | USE Class I enclosed space ON the approvals of the 25% of the applicate. PROTECT fluelectricity PROVIDE acc. ENSURE add. | flammable lid ILY with an a e plan, evaluable flammable ammable and dequate spill equate natur | ass IB, Class IC, Class I quids within a building un approved and implemente ating whether the atmosp es Lower Flammable Lim d combustible liquids bei preventing and control m al or mechanical ventilation and dispensing devices ar | nder construction of ed plan. The BNI F ohere will be adequal nit (LFL)/Lower Exp ng transferred/disp neans | FPE shall provide one of uately maintained below blosive Level (LEL) | | |
| Fire Prevention and Protection | Storage of Flammable and Combustible Liquids | Fire | approved by the BN PROVIDE or Flammable and Co LABEL cabin LABEL porta the Identification of STORE no m | II FPE Ily approved mbustible Licets with consible bulk tank the Hazards nore than 60 | metal storage cabinets to quids Code, 2012 Edition spicuous lettering "Flamms and containers with the of Materials for Emerge gallons of Class I and Class I and Class I and proved metal sto | hat meet the requinable—Keep Fire applicable NFPA ncy Response, platass II liquids inside | rements of NFPA 30, Away" 704, Standard System for acard | | |



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| JHA TITLE: | Suppo | ation of Piping, orts, and in-line onents | WORK PACKAGE N | NORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | |
| Activity | Sub-Activity | Hazard | Control | | | <u> </u> | | | |
| | | | greater from build approved flamma . KEEP app | dings under constrable and combustil | uction. Hot word ble liquid storage and combustible | e liquid storage areas free | | | |
| Barricades and Signs (Life Critical Activity) | General Requirements | Improper Haz Control and Communication | 00712, Barricade | | es and impleme | ent the associated work co | ontrols listed in JHA - | | |
| Compressed Gas Cylinder; Liquefied Petroleum Gas; and Liquefied Inert Gas Use | General Requirements | Spills Asphyxiation Muscle Strain Ergonomic Cryogenic Bu Fire | 00713 , Compress | cable work activitie sed Gas, LPG, and | | ent the associated work o | ontrols listed in JHA - | | |
| Safety Watch | Process | Emergency | | | | ing Safety Watch duties a uired (e.g., Take Cover, E | | | |
| Safety | Fire Watch | Fire | A worker assigne | ed as a Fire Watch | : | | | | |
| Watch | | Hot Work | | Must wear an orange vest in accordance with UPF-CP-205, Personal Protective Equipment and Safe Work Apparel | | | | | |
| | | | Work permit, are | maintained. Such | observations v | sure fire safe conditions, a vill continue while Hot Wo ed by another qualified Fi | ork is in progress or until | | |



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| Activity | Sub-Activity | Hazard | Control | | | · | | | |
| | | | Ensure no smolde | ering embers | area for at least 30 min or slag exist. Fire Wato er workers in the event | ches will watch for fire | ectivities have stopped to es in all exposed areas | | |
| | | | | | that the Hot Work area ntering the barricaded w | | uired by the permit, and | | |
| | | | · More than | one Fire Wat | ch is required if: | | | | |
| | | | | by the initial | t could be ignited by the Fire Watch are present wall openings) | | | | |
| | | | | sible for the | re not sufficient to adec welding and/or cutting | | evention of fires. The sadditional Fire Watches | | |
| | | | o The Fire Wate conditions develo | | ne authority to stop wel | ding and/or cutting w | ork activities if unsafe | | |
| | | | In the event of a f | ire, the Fire | Watch: | | | | |
| | | | · Follow the | Fire Occurre | nce steps outlined abov | e for proper notificati | on | | |
| | | | May attempt | ot to extingui | sh the fire | | | | |
| | | | | | tify the ESH-R if any fir up and disposal of the r | | ischarged so they may be leted. | | |
| | | | | | d after it has been dete s the fire protection equ | | or smoldering materials are location | | |



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| Activity | Sub-Activity | Hazard | Control | | | | | |
| Safety Watch | Equipment Watch (Spotter) | Moving Equipment | The sole purpose of clearance between the endiscuss responsibilities, no resources needed to execute (FLHA) process | nethod of communication | ne operator and Spotter(s , location of the Spotter(s | s) will jointly identify and s), blind spots, and | | |
| İ | | | · The following pract | tices should be considere | d when planning the acti | vity: | | |
| | | | o Achieving eye contac or around heavy equipme | | t from the equipment ope | erator before walking near | | |
| | | | o Never having Spotters | s stand within the blind sp | oot of equipment operato | rs or truckers | | |
| | | | o Never allowing person | nnel to stand within the s | wing radius of equipment | while it is operating | | |
| | | | o Checking around and | underneath trucks and e | quipment for personnel b | pefore operating them | | |
| Safety Watch | Overhead Safety Watch | Dropped Object | ts An Overhead Safety Wate work. Examples include: | ch is utilized to protect pe | ersonnel from hazards cro | eated during elevated | | |
| | | | Short duration task moving cords, layout/mea | s with low-risk for droppe asurements) | ed objects or similar haza | rds (e.g., inspections, | | |
| | | | Work activities in re pedestrians/personnel an laydown areas, etc.) | emote areas that are not ad will not be impacted by | | | | |
| | | | | In conjunction with a barricade for elevated work/overhead hazards (e.g., when 2:1 ratio of barricade cannot be achieved) | | | | |
| | | | Prior to implementing an Overhead Safety Watch, the task/application must be evaluated by the Responsible Superintendent (Discipline Superintendent) and documented on the applicable FLHA for the activity | | | | | |



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| Activity | Sub-Activity | Hazard | Control | | • | | | | |
| | | | o The Overhead Safe personnel and vehicular required for activities who was a construction of the Overhead Safe prevent access to area of the Overhead Safe fire hazards created by of the Overhead Safe fire hazards created by the overhead Sa | ead Safety Watch is used, to ety Watch must be strategic ar traffic from entering the or with a larger hazard area or ety Watch will notify approars below overhead work for ety Watch will perform tasks of the elevated work activities area below the elevated work area. | cally located to control and verhead work area. Multiwork areas with blind specthing personnel of the or the duration of the work as from a safe location and soork is required, the Overhead of the overhead of the control of the work as from a safe location and soork is required, the Overhead of the ov | ple Watches may be ots verhead hazard and d remain clear of line-of- | | | |
| Working with Materials Containing Respirable Crystalline Silica (RCS) | Housekeeping | Inhalation of Particulates (Silica) | Compressed air conjunction with a vent compressed air. Worke filter or other approved Dry sweeping or project personnel expocleaner Concrete slurry | cleaning of surfaces or clot tilation system that effective ers shall use a ventilation sy method to clean surfaces of dry brushing is prohibited we sure to silica. Use wet sweet (e.g., from dust control method | hing is not allowed unlestly captures the dust clourstem with a high-efficient or clothing if necessary where such activity could eping or shoveling, or a hoods or excess water from | s this method is used in d created by the cy particulate air (HEPA) contribute to applicable HEPA-filtered vacuum | | | |
| | | | | oved from work areas by we ete washout bins, containers faces | | | | | |
| | | Flying Particle | es · Reference ML-S | SH-801768-A002, UPF Eye | and Face Protection List | | | | |



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| Activity | Sub-Activity | Hazard | Control | | · | |
| Working with Materials Containing Respirable Crystalline Silica (RCS) | i.e., Drilling into Concrete | Inhalation of Particulates (Silica) Environmenta Waste | protection requirements performed using wet m For tasks using local exmanufacturer's recommunity recommends and set of the set of th | ned indoors or in enclosed tion of visible airborne dust respirator (APF 10) with P ² g periodic maintenance of the a half-face respirator (APF 20) suspend the material accessions. | areas, provide a means areas, provide a means. If a respirator is require 100/HEPA cartridges shather HEPA vacuums (i.e., F 10). Handle parts and umulated on the surfaces around a diagram or other removal procest to the BNI concrete was adds should be collected voiced. | ed by Industrial Hygiene. according to the of exhaust as needed to d per Table 2, then a all be worn changing the bags, filters, components of the s and the activity that esses to identified "Special shout area) |
| Hot Work | Fire Watch | Fire | • • • | work activities and impleme , Protection, Hot Work and | | controls listed in JHA- |



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| Field Level Hazard Assessment (FLHA) | Field Level Hazard Assessment Process | Unidentified a Unmitigated Hazards | shift or when mitigate envi | FLHA is a pre-task briefing that must be used daily by crews at the beginning of their values of the shift or when new tasks are undertaken. It is a process of employee participation to identify a mitigate environmental, safety, and health risks and hazards associated with their planned w day. The JHA process must not replace, or be a substitute for, the daily FLHA process. | | | | | | |
| Field Level Hazard | Implementing Field Level Hazard | Unidentified a | | Prior to beginning work activities each day or after an extended break or interruption (e.g., shift change, weekend), perform the following: | | | | | | |
| Assessment (FLHA) | Assessment | Hazards | · Perfor | m a Walkdown a | and review the work l | ocation with involved pers | sonnel | | | |
| (=) | | | | Review area hazards to ensure they are identified and hazard controls/mitigations are in particle eliminate/reduce them | | | | | | |
| | | | · Ensure | e there are no ne | ew hazards unidentifi | ed and uncontrolled by th | e approved JHA | | | |
| | | | Using UCN-2 | 23552, perform t | he following: | | | | | |
| | | | o Conduct | a FLHA briefing | with the work crew a | nd support disciplines | | | | |
| | | | o Resolve | any issues/conc | erns with the work cr | ew | | | | |
| | | | o List and o | | e of work, anticipated | d hazards, and controls/m | nitigation measures for the | | | |
| | | | o Ensure p | ersonnel docum | ent participation in th | e "Employee" section of | JCN-23552 | | | |
| | | | o Conduct | appropriate FLH | IA briefings when any | of the following condition | ns exist: | | | |
| | | | · The w | ork area change | S | | | | | |
| | | | · Person | Personnel with different classifications will be working in close proximity | | | | | | |
| | | | · Differii | ng types of work | are performed in clo | se proximity | | | | |
| | | | · The w | The work activity changes | | | | | | |
| | | | · The R | esponsible Supe | erintendent deems it i | necessary | | | | |



| JHA NO.: | JHA-00 | 744 | REV: | 2 | ISSUE DATE: | 2-28-25 | | | |
|--------------------------------|---------------|--|---|--|---|----------------------------|--|--|--|
| JHA TITLE: | | ation of Piping, rts, and in-line onents | WORK PACKAGE NUM | ORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | |
| Activity | Sub-Activity | Hazard | Control | | | | | | |
| | | | applicable at the er | nd of each shift at the des | 552, UCN-23464, UCN-23544 ignated collection points. The ubmitting these forms to UPF I | end of shift review/de- | | | |
| Scaffold Use (Life Critical | Scaffold User | Unauthorized Use | Competent Person | s any scaffold without do for scaffolding before ea | cumented evidence of inspecti ch work shift | on by a designated | | | |
| Activity) | | Fall to Elevation | Obey the sca | affold requirements at all | imes | | | | |
| | | Slips and Trip | requirements include | Never use any scaffold without a proper tag that displays the current day's date. Scaffold requirements include strict adherence to the color-coded tagging system of red (Danger—Unstudie), yellow (Caution), and green (Safe for Use) tags, as appropriate | | | | | |
| | | | | s a red-tagged scaffold. Old, and they are required | Only authorized scaffold builde to wear fall protection | rs are permitted to access | | | |
| | | | Never access | s a yellow-tagged scaffol | d without proper fall protection | | | | |
| | | | · Consider all | scaffolds without tags as | red-tagged scaffolds | | | | |
| | | | Never alter of qualified and author | | s you are a designated Comp | etent Person, who is | | | |
| | | | · Touching-the shift | Touching-the-tag before each use to ensure a scaffold inspection has been completed for shift | | | | | |
| | | | | Never access any scaffold without a documented and tagged daily inspection. Inspect the scaffold prior to use, looking for holes in the platform, missing handrails and other potential hazards | | | | | |
| | | | Never access must wear required | | Only authorized scaffold builde | rs are permitted, and they | | | |
| | | | Never access | s a yellow-tagged scaffol | d without 100% tie-off or fall pr | otection | | | |



| JHA NO.: | JHA-007 | 744 | REV: | | 2 | ISSUE DATE: | 2-28-25 | | |
|--|-------------------------|--|--|---|--|--|--------------------------|--|--|
| JHA TITLE: Installation of Pipi Supports, and in-li Components | | | WORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | | |
| Activity | Sub-Activity | Hazard | Control | | | • | | | |
| | | | Indicating than light duty (i. | on the scaffol e., 25 pounds | d request when int per square foot [p | tended use will require sca psf]) | ffold capacity greater | | |
| | | | Ensuring s | scaffold is not | loaded in excess of | of its duty rating | | | |
| | | | Maintainin | g housekeepi | ng and accumulati | on of materials to prevent | dropped objects | | |
| | | | Notifying s controls need rep | | ors when pearlwear | ve, toe board, or other dro | pped object prevention | | |
| | | | Utilizing barricading, as required, when scaffold dropped object controls (e.g., me boards) are incomplete OR when hoisting material outside of the dropped object confin scaffold | | | | | | |
| Scaffold Use | Scaffold Safety | Unauthorized | · Climbing o | Climbing on scaffolding components (e.g., cups, rings, diagonal members) is not allowed | | | | | |
| (Life Critical Activity) | | Use Fall to Elevation Below Slips and Trips | using a Personal | Fall Arrest S | | rection above a height gre ss and retractable lifeline) | | | |
| | | | · Ensure an | adequate wo | rking surface durin | ng erection/dismantlement | activities | | |
| Hoisting and Rigging | General Requirements | Loss of Contro of Material | competence. Ne | | erations, unless your a suspended loa | ou are an authorized opera | tor with verified | | |
| Work Operations (Life Critical | | Tipping Loads Crushing Injur Falling Materia | es and quidelines w | | s of hoisting and rig | gging procedures and man s | ufacturer's instructions | | |
| Activity) | | i aming materia | | gging equipm | ent prior to use | | | | |
| | | | Never hois | st loads over o | other people | | | | |
| | | | Never wor | k within a load | d shadow (i.e., any | where the load can fall) | | | |
| | | | | | | rea with a suspended load o enter the controlled area | | | |



| JHA NO.: | JHA-007 | 744 | REV: | | 2 | ISSUE DATE: | 2-28-25 | | |
|---|---|--|---|--|--|-----------------------|---|--|--|
| JHA TITLE: | | ion of Piping, s, and in-line nents | WORK PACKAGE N | UMBER: | N/A | SPECIFIC LOCATION: | N/A | | |
| Activity | Sub-Activity | Hazard | Control | | | • | | | |
| Bull Rigging (Life Critical Activity) | Training and Competent Personnel | Loss of Contro of Material Tipping Loads Crushing Injui Falling Materi | shall be trained a UPF Bull Rigger ries | and qualified to p | executing Bull Rigging erform their assigned | | n construction projects with Y17-95-64-900, | | |
| Bull Rigging (Life Critical Activity) | Categorization of Bull Rigging Operations | Loss of Contro of Material Tipping Loads Crushing Injui Falling Materi | each Bull Riggin being either "Cri ries the guidelines co | In order to prescribe the extent of planning, review, and skilled oversight appropriate to the risk of each Bull Rigging operation, all Bull Rigging operations shall be categorized by the RS/BR PIC as being either "Critical" or "General" based on the operational risk characteristics in accordance with the guidelines contained in Table 1. | | | | | |
| Bull Rigging (Life Critical | Equipment | Loss of Contro of Material | specifications ar | | the manner intended b | by the manufacture | r and within their | | |
| Activity) | | Tipping Loads Crushing Injuing Falling Materia | ries applying approp | All elements of the rigging arrangement shall always be used within their rated capacities after applying appropriate rating reduction factors for the mode of use (D/d ratio, side loading capacity, hitch configuration used, etc.) | | | | | |
| | | | A qualified to Ensure it is sa | | ect rigging equipment | prior to use and as | necessary during its use | | |
| | | | be attached to it repair or replace | If a piece of lifting or load restraint equipment is deemed to be defective, an Out of Service tag shall be attached to it and the equipment shall be returned to the Rigging Superintendent or designee for repair or replacement. Defective equipment deemed beyond practical or economic repair shall be rendered unusable and properly disposed of the register of Lifting Equipment shall be updated accordingly. | | | | | |
| | | | | Periodic and annual inspections shall be performed in accordance with Y17-95-64-875, UPF Control of Hoisting and Rigging Equipment. | | | | | |
| | | | All lifting and loa | d restraint equip | ment and accessories | must be stored in a | controlled area. | | |



| JHA NO.: | JHA-007 | 44 | REV: | 2 | ISSUE DATE: | 2-28-25 | | | |
|---|---------------------------------|---|--|--|---|---|--|--|--|
| JHA TITLE: | | on of Piping, s, and in-line ents | WORK PACKAGE NUME | ORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | |
| Activity | Sub-Activity | Hazard | Control | | <u> </u> | | | | |
| Bull Rigging (Life Critical Activity) | Structural Steel Limitations | Loss of Contro of Material Tipping Loads Crushing Injur Falling Materia | shall be adequate for impose ries al Loading of a st | Suitable structural anchor points shall be chosen for the attachment of rigging those points shall be adequate for the most onerous load condition (magnitude and direction) the rigging will impose Loading of a structural steel member shall not be permitted unless the member is designed to be of load bearing capacity or is designed as a primary pipe and/or mechanical support | | | | | |
| | | | proposed anchor poir any potential discrepa weight of the load, the | nt, the BR PIC shall eleve ancies are noted between en the process will be sto | ives any concern regarding the the concern to PFE for referent the capacity of the rigging apped and the Project Field Econduit, and piping shall not | view and confirmation. If anchor point and the ingineer consulted | | | |
| | | | to support rigging har | dware. All anchors shall | be verified by Project Field E hardware and subsequent lo | ngineering for proper | | | |
| Bull Rigging (Life Critical Activity) | Temporary Load Support | Loss of Contro of Material Tipping Loads Crushing Injur Falling Materia | conjunction with the F practices necessary to the load being lifted | Rigging Superintendent on positively secure and controls. | sting position within one work or designee, shall determine to control the load in a temporar | he equipment and rigging | | | |
| | | | Temporary rigging, pa should not be used to for any period longer hour period, the Bull I shift however, mecha | Temporary rigging, particularly synthetic slings and mechanical lifting devices (e.g., chain hoist), should not be used to hold up, or hold in place, any structural components, material, or equipment for any period longer than the end of the shift in which the use began. For multiple shifts within a 24 hour period, the Bull Rigging being used as a temporary support can be transferred to the next wor shift however, mechanical lifting devices and synthetic slings should not remain as a temporary hanger longer than 24 hours | | | | | |



| JHA NO.: | JHA- | 00744 | REV: | | 2 | ISSUE DATE: | 2-28-25 | | |
|---|-----------------------------|--|--|---|--|---|---|--|--|
| JHA TITLE: | Supp | llation of Piping, orts, and in-line ponents | WORK PACKAGE | WORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | |
| Activity | Sub-Activity | Hazard | Control | | | | | | |
| | | | position shoul | | ecured with pipe han | lifting device and not imm gers, pipe shoes, and/or | | | |
| | | | | ull Rigger must g Superintender | | tion of temporary pipe su | pports under the direction | | |
| | | | barricade that | t secures the dr | op zone hazard area | ull Rigging team shall esta The barricade shall be e y authorized personnel o | equipped with signage | | |
| Bull Rigging (Life Critical Activity) | Monitoring the Operation | Loss of Contro of Material Tipping Loads | that conditions themselves | | | Bull Rigging operation to e ers, and no unanticipated | ensure it remains on track, I hazards are presenting | | |
| | | Crushing Injur Falling Materia | al The BR PIC e operation is p monitoring is weight occurs understood ar | orogressing as p particularly imp s, the operation nd the BR PIC a | planned and the riggir ortant when upending shall be stopped unti and Bull Rigging tean | t, etc., are always moniton ng equipment remains wit g or flipping loads. If any il the reason for the weigh n are satisfied it is safe to hall be sought to investiga | hin capacity. This unanticipated shifting of at shift is adequately resume operations. If | | |
| | | | The BR PIC e | ensures the load at the load is lev | d is not completely re reled/aligned as requi | leased from the rigging e ired, is stable, and is secu | quipment until it is urely supported. | | |
| Work at Heights (Life Critical Activity) | General Requirements | Fall to Elevation | Review the ap 00717, Eleva | | activities and impleme | ent the associated work c | ontrols listed in JHA - | | |
| Mobile Elevated | General Requirements | Contact with Surrounding | · Never o | operate any me | chanical elevated wo | ork platform without docur | mented training | | |



| JHA NO.: | JHA-007 | 44 | REV: | 2 | | ISSUE DATE: | 2-28-25 | | |
|---|--------------|---|---|--|-------------------------|----------------------|--------------------------|--|--|
| JHA TITLE: Installation of Piping, W Supports, and in-line Components | | | WORK PACKAGE NUM | ORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | |
| Activity | Sub-Activity | Hazard | Control | | | | | | |
| Work | | Structure, | Never stand of | on the toe board, m | id-rail, or top rail of | f the basket | | | |
| Platforms (MEWPs) (Life Critical | | Equipment, or Commodities Fire | | Never work from the basket without being tied off to the manufacturer's designated anchor point, even during ground positioning | | | | | |
| Activity) | | Entrapment Limited | obtained from Proje | | | ented approval fo | r the deviation has been | | |
| | | Access/Egress Dropped Object Electrical Shock Fall to Elevation | cts Operations, which a | Follow the operating requirements defined in UPF-CP-224, <i>UPF Aerial/Scissor Lift Operations</i> , which apply to all construction site and support area personnel, including subcontractors | | | | | |
| | | Below | accordance with the each use, a trained | Never operate an aerial/scissor lift that has not been inspected by a trained operator, in accordance with the requirements specified in UPF-CP-224. At the beginning of each shift or before each use, a trained operator will visually inspect and functionally test the lift and document the results on an approved form | | | | | |
| | | | Ensure the lift outdoors) | t style in use is app | ropriate for the wo | rk task and location | on (e.g., indoors versus | | |
| | | | Follow all dire speeds | ections related to a | dverse weather cor | nditions, including | lightning and high wind | | |
| | | protected from the | The operator/safety manual(s) are to be maintained with the equipment provided they can be protected from the elements. If this cannot be accomplished, a hard copy may be stored in a central location as determined by the Project Distributable Superintendent | | | | | | |
| | | | · All controls m | All controls must be plainly marked as to their function | | | | | |
| | | | All capacity a platform/basket and | nd warning decals I ground stations | will be in place, se | cure, and legible, | at both the | | |



| JHA NO.: | JHA-00 | 0744 | REV: | | 2 | ISSUE DATE: | 2-28-25 | | |
|-----------------------------|---|--|--|---|--|---|----------------------------|--|--|
| JHA TITLE: | A TITLE: Installation of Piping, Supports, and in-line Components | | | ORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | |
| Activity | Sub-Activity | Hazard | Control | | | • | | | |
| | | | platform/basket. the extinguisher. | The fire exti Scissor lifts | nguisher shall be secu | an ABC-rated fire exting red in a manner as to p n a fire extinguisher 2.5 er 10 lbs. or greater | revent displacement of | | |
| | | | Boom-type aerial lifts must be equipped with anti-entrapment devices Aerial/scissor lifts are to be inspected daily before use or at crew/shift change and documented on a UCN-23248, Aerial/Scissor Lift Daily Checklist | | | | | | |
| | | | | | | | | | |
| Mobile Elevated | Operating Requirements | Contact with Surrounding | Only trained and following: | qualified pe | ersonnel shall operate a | erial or scissor lift devi | ces in accordance with the | | |
| Work Platforms (MEWPs) | | Structure, Equipment, or Commodities | All person 3.0, Fall Prevent | | | in accordance with the | requirements of Section | | |
| (Life Critical Activity) | | Fire Entrapment Limited Access/Egres Dropped Obje Electrical Sho | load capacity. The will be included a aerial/scissor lift Representative, | e weight of s part of the pasket or pl | personnel, tools, and ne total load capacity. If a atform, obtain approval | naterials in aerial/scisso material cannot be cont | Supervisor and an ES&H | | |
| | | Fall to Elevation | on . Aerial/scis | Aerial/scissor lift platform or basket will not be secured to any structure for any reason nor be allowed to rest on any structure | | | | | |
| | | | · When aeri solid surface | · When aerial/scissor lift equipment is used with outriggers, outriggers shall be positioned on a solid surface | | | | | |
| | | | | Personnel shall stand firmly on the floor of the basket/platform and shall not sit or climb on the edge of the basket/platform or use planks, ladders, or other unapproved devices for work positioning | | | | | |
| | | | | | e equipment should kee rior grab rail for balance | ep their hands off the ha e when provided | ndrail when raising or | | |



| JHA NO.: | JHA-0074 | 14 | REV: | | 2 | ISSUE DATE: | 2-28-25 | | | |
|---|--|---|---|---|-------------------------|----------------------------|----------------------------|--|--|--|
| JHA TITLE: | | on of Piping, s, and in-line ents | WORK PACKAGE | ORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | | |
| Activity | Sub-Activity | Hazard | Control | | | | | | | |
| | | | Do not tie electrical cords, welding leads, or hoses to an aerial/scissor lift when op (traveling horizontally or vertically) | | | | | | | |
| | | | the platform mo | When at the work location, the operator should engage the emergency stop function and the platform mounted control panel cover (if equipped) to prevent accidental movement | | | | | | |
| Mobile Elevated Work Platforms (MEWPs) (Life Critical Activity) | Exiting Aerial/Scissor Lifts at Elevation | Limited Access/Egres Dropped Obje Electrical Sho Fall to Elevati Below | s lift platform und ects ck The journal the elector on The R activity Personnel mus | The job must be evaluated to ensure the use of an aerial lift is the safest means to access the elevated area or structure The Responsible Supervisor for the work and an ES&H Representative must approve the activity and document the approval on CFN-1323 Personnel must use the lift manufacturer's access point (e.g., gate, slide bar) when entering or exiting the lift Personnel must ensure 100% tie-off is maintained throughout the transition from the lift to the elevated area or structure, from the elevated area or structure to the lift, and while performing work | | | | | | |
| Ladders | General Requirements | Fall to Elevati Below | | | | | specifications, including: | | | |
| | | Dropped Obje | greater | | | | nstitute (ANSI) Type 1A or | | | |
| | | | Only nor recommended) | | ers will be purchased | and used on the site (fibe | erglass ladders are | | | |
| | | | · Tripod ladders (ladders with three legs) are prohibited | | | | | | | |
| | | | Straight | adders longe | r than 20 feet are prof | nibited | | | | |
| | | | Extensio | n ladders lon | ger than 36 feet are pr | rohibited | | | | |
| | | | Stepladders and platform ladders longer than 12 feet are prohibited | | | | | | | |
| | | | All portal | ole ladders wi | II be equipped with no | nskid feet | | | | |



| JHA NO.: | JHA-0074 | 14 | REV | : | 2 | ISSUE DATE: | 2-28-25 | | |
|------------|--|-----------------------|--|--|--|---|--|--|--|
| JHA TITLE: | Installation of Piping, Supports, and in-line Components | | | ORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | |
| Activity | Sub-Activity | Hazard | | Control | | | | | |
| Ladders | Ladder Use | Fall to Elevati | on | Inspect ladders prior to use to | verify: | | | | |
| | | Below Dropped Obje | ects | All hardware and fittings binding or undue play | are securely attache | ed and the movable par | rts operate freely without | | |
| | | | · Ladder rungs are free from grease, oil, mud, and other materials | | | | | | |
| | | | | Ladder safety feet and other auxiliary equipment are in good condition | | | | | |
| | | | | · Ladder does not have any broken or missing steps, rungs, cleats, broken side rails, or any other faulty equipment | | | | | |
| | | | | When using a ladder: - Do not use ladders in any ma - Two or more people will not v people - Place portable ladders on a leanother person to prevent slipp - Personnel shall face the ladd ladder - Do not carry materials or tool - If working from portable ladde - Prevent unauthorized entry in hazards are present during ladde - Do not stand on the platform - Do not sit on or straddle a ste - When accessing another elevel landing surface. If this is not poinches above the landing to he | evel and stable surfacting ler when ascending of the when ascending of the when ascending of the when the area below the dider use or top step of a step epladder to perform wation, extend the top ossible because of the | adder unless it is speci- ace and secure them or or descending and use ending or descending lain the confines (side ra ladder with barricades ladder (i.e., top two ster work of the ladder 36 inches he ladder's configuration | have them held by both hands to grasp the adders ils) of the ladder or flagging when overhead ps) es beyond the upper n, install a grab rail(s) 36 | | |



| JHA NO.: | JHA-007 | 44 | REV: | | 2 | ISSUE DATE: | 2-28-25 | |
|---|----------------------------------|---|---|--|--|--------------------------------------|--------------------------------|--|
| JHA TITLE: | Installati Supports Compon | WORK PACKA | GE NUMBER: | N/A | SPECIFIC LOCATION: | N/A | | |
| Activity | Sub-Activity | Hazard | Control | | | | | |
| Ladders | Ladder Inspection | Fall to Elevation Below Dropped Objects - Ladders that do not have the current quarterly color code marking shall be tagged out service at the point of discovery using a "Do Not Use" tag until inspected and color coded - Ladders that are damaged or defective shall be immediately tagged out of service at a figure of discovery using a "Do Not Use" tag and returned to the Tool Crib | | | | nd color coded | | |
| Ladders | Ladder Storage | Fall to Elevation Below Dropped Objection | on · Whe store ladde | of discovery using a "Do Not Use" tag and returned to the Tool Crib When not in use, store portable ladders to protect them from the elements and direct sunli store ladders away from excessive heat and in areas with good ventilation Other materials are not to be stored on ladders | | | | |
| Orbital Sanding on Coated Metals | General Requirements | Ingestion Inhalation of Particulates | eating, or s Use feasible, at required If loc | If local exhaust ventilation requirement cannot be met, install danger barricade tape with completed danger signs or tags around the coatings removal activity to adequately protect adjace. | | | | |
| Welding, Cutting, and Brazing | General Requirements | Inhalation of Coating Fume Burns Flying Particle Arc Flash Shock Fire (Hot Worlingestion | 00719 , Fire | | activities and implemer rection, Hot Work and N | nt the associated work o Welding. | ontrols listed in JHA - | |
| Welding, Cutting, and | Soldering & Brazing | UV Exposure Fire | | | velding hood with a len | s shade as follows: | | |
| Brazing | | Burn | | ering – 2 | | | | |
| | | | · Braz | ing – 3 | | | | |



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| JHA TITLE: Installation of Piping, Supports, and in-line Components | | | WORK PACKAGE N | UMBER: | N/A | SPECIFIC LOCATION: | N/A | |
| Activity | Sub-Activity | Hazard | Control | | | | | |
| | | | · Outdoors: | : Ensure ade | quate natural ventil | ation, no additional contro | ls. | |
| | | | Indoors: Ensure | adequate ge | eneral/mechanical v | entilation, no additional co | ontrols required. | |
| | | | Enclosed Areas conditions at han | | paces: Contact IH | for additional and specific | controls for the | |
| Welding, Cutting, and Brazing | Material Fit-up/Tack Weld Activities | Arc – Flash Burns | Support personnel in the immediate area assisting with the weld/hotwork activities (i.e., tacking supports) must wear PPE appropriate to the hazard (e.g., gloves, category 2 weld shirt/jacket, shaded glasses, face shield, etc.) | | | | | |
| | | | NOTE: The "immediate area" consists of the direct work face, weld screened area, aerial lift platform/basket, etc. | | | | | |
| | | | | | | om secondary hazards cre tended to protect personn | | |
| Welding, Cutting, and Brazing | Shielded Metal Arc Welding (SMAW) on Carbon Steel (Stick Welding) | Inhalation of Welding Fum Arc Flash | e welder/operator v | with an inline st air outdooi | high efficiency part rs to a location that | a capacity of 100 linear fe iculate air (HEPA) filter (i. does not affect other work | | |
| | | | When ventilation HEPA/P 100 filte | | | half-face Air Purifying Res | spirator (APF 10) with a | |
| | | | Indoors or Enclosed Areas: Provide local exhaust ventilation with a capacity of 100 linear feet porminute per welder/operator with an inline high efficiency particulate air (HEPA) filter (i.e., fume extractor) OR discharge exhaust air outdoors to a location that does not affect other workers or all exhaust air to be drawn back into the work area. | | | | | |
| | | | | | | tablish means of adequate r Purifying Respirator (API | | |



| JHA NO.: | JHA-007 | 744 | REV: | 2 | ISS | SUE DATE: 2-28-2 | :5 | | |
|--------------|---------------------------------------|---------------|---|--|---------------------------|---------------------------|---------------|--|--|
| JHA TITLE: | Supports, and in- Components | | WORK PACKAGE NUM | | SPECIFIC N/A LOCATION: | | | | |
| Activity | Sub-Activity | Hazard | Control | | | | | | |
| | | | | nage: If local exhaust vocampleted danger sign | | | | | |
| | | | Wear safety glasses | and a welding hood v | vith a lens shade as | follows: | | | |
| | | | Electrode | | Minimum | Suggested* | | | |
| | | | Size - in. | Arc Current | Protective | Shade No. | | | |
| | | | (mm) Less than 3/32 (2.4) | (Amperes) Less than 60 | Shade 7 | (Comfort) 10 (*) | | | |
| | | | 3/32 - 5/32 (2.4 - 4.0) | 60 - 160 | 8 | 10() | _ | | |
| | | | 5/32 - 1/4 (4.0 - 6.4) | 160 - 250 | 10 | 12 | | | |
| | | | More than 1/4 (6.4) | 250 - 550 | 11 | 14 | | | |
| Welding, | Gas Tungsten Arc | Arc Flash | Wear safety glasses | s and a welding hood v | vith a lens shade as | follows: | | | |
| Cutting, and | Welding | Inhalation of | | Minim | um : | Suggested* | | | |
| Brazing | (GTAW)/Tungsten Inert Gas (TIG) on | Welding Fume | Arc Current | Protec | tive | Shade No. | | | |
| | Carbon Steel | | (Amperes) | Shad | le | (Comfort) | | | |
| | | | Less than 50 | 8 | | 10 | | | |
| | | | 50 - 150 | 8 | | 12 | | | |
| | | | 150 - 500 | 10 | _ | 14 | | | |
| | | | Outdoors Fr | | | itional controls | _ | | |
| | | | Outdoors: Ensure adequate natural ventilation, no additional controls. | | | | | | |
| | | | Indoors: Ensure adequate general/mechanical ventilation, no additional controls required. | | | | | | |
| | | | Enclosed/Confined hand. | Areas: Contact IH fo | or additional and spe | ecific controls for the o | conditions at | | |



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|--------------------------|--|---|--|---|-----------------------------|-----------------------------|--|--|--|
| JHA TITLE: | | on of Piping, s, and in-line ents | WORK PACKAGE NU | JMBER: N/A | SPECIFIC LOCATION: | N/A | | | |
| Activity | Sub-Activity | Hazard | Control | | • | | | | |
| Welding, Cutting, and | Gas Tungsten Arc Welding (GTAW) / | Hexavalent Chromium | | residue and debris from work clo area for scheduled breaks and at | | | | | |
| Brazing | Orbital Welding on Stainless Steel, Hastelloys and | Inhalation of Welding Fuma Arc Flash | | Clean the welding work area using a HEPA vacuum or a method to minimize dust generation (e.g., wet the debris or use floor sweep) at the termination of the welding activity. | | | | | |
| | Inconels | | Outdoors: Ensur | e adequate natural ventilation, no | additional controls. | | | | |
| | | | Indoors: Ensure adequate general/mechanical ventilation, no additional controls. | | | | | | |
| | | | Enclosed/Confin | ed Areas: Contact IH for addition | nal and specific controls t | for the conditions at hand. | | | |
| | | | Wear safety glass | ses and a welding hood with a ler | ns shade as follows: | | | | |
| | | | | Minimum | Suggested* | | | | |
| | | | Arc Curre | nt Protective | Shade No. | | | | |
| | | | (Amperes | Shade | (Comfort) | | | | |
| | | | Less than | 50 8 | 10 | | | | |
| | | | 50 - 150 | 8 | 12 | | | | |
| | | | 150 - 500 | 10 | 14 | | | | |
| Welding, Cutting, and | Gas Metal Arc Welding | Hexavalent Chromium | | residue and debris from work clo area for scheduled breaks and at | | | | | |
| Brazing | (GMAW/Metal Inert Gas (MIG) on Stainless and | Inhalation of Welding Fuma Arc Flash | | Clean the welding work area using a HEPA vacuum or a method to minimize dust generation wet the debris or use floor sweep) at the termination of the welding activity. | | | | | |
| | Carbon Steel | | welder/operator w | Outdoors: Provide local exhaust ventilation with a capacity of 100 linear feet per minute per welder/operator with an inline high efficiency particulate air (HEPA) filter (i.e., fume extractor) AND at a minimum, a half-face Air Purifying Respirator (APF 10) with a HEPA/P 100 filter is required. | | | | | |
| | | | | ist ventilation is not feasible, provalf-face Air Purifying Respirator (| | | | | |



| JHA NO.: | JHA-007 | 44 | REV: | 2 | ISSUE DATE | : 2-28-25 | | | |
|-------------------------|---|--|---|--|---|---|--|--|--|
| JHA TITLE: | | ion of Piping, s, and in-line ents | WORK PACKAGE NUME | BER: N/A | SPECIFIC LOCATION: | N/A | | | |
| Activity | Sub-Activity | Hazard | Control | | <u> </u> | | | | |
| | | | minute per welder/ope | erator and with an inline | high efficiency particulate | apacity of 10 linear feet per air (HEPA) filter (i.e., fume 10) with a HEPA/P 100 filter | | | |
| | | | Barricade and Signa | age: Install danger barrio adequately protect adja | | danger signs or tags around | | | |
| | | | Wear safety glasses and a welding hood with a lens shade as follows: | | | | | | |
| | | | | Minimum | Suggested* | | | | |
| | | | Arc Current | Protective | Shade No. | | | | |
| | | | (Amperes) Less than 60 | Shade 7 | (Comfort) | | | | |
| | | | 60 - 160 | 10 | 11 | | | | |
| | | | 160 - 250 | 10 | 12 | | | | |
| | | | 250 - 500 | 10 | 14 | | | | |
| | | | | | | | | | |
| Removal of Fireproofing | Cementitious Fireproofing (via non-powered tools) | Environmenta Waste Inhalation | Place debris in clear I Special Waste Stagin | bags and seal with zip tieng Area (for silica contain | e, duct tape, or knots and ing waste) | means (i.e., vacuum, etc.). transport to the appropriate | | | |
| Removal of Fireproofing | Intumescent Fireproofing (via powered tools) | Environmenta Waste | I · Collect remove | Wet the cementitious fireproofing with water to reduce the generation of dust Collect removed fireproofing chips, dust or filings by appropriate means (i.e., vacuum, etc.). Place debris in clear bags and seal with zip tie, duct tape, or knots and transport to the appropriate Waste Staging Area | | | | | |
| | | Inhalation | intumescent fireproof heat application. The and any adjacent surf | coatings shall be stripped area of heat application | means the surface area the perature may be apprecial. | es of planned welding, all (4) inches from the area of nat the flame or arc contacts oly raised by heat transfer. | | | |



| JHA NO.: | JHA-007 | 44 F | REV: | 2 | ISSUE DATE: | 2-28-25 | | | |
|---|--------------|-------------------|--|---|-----------------------|---------------------------|--|--|--|
| JHA TITLE: | | s, and in-line | VORK PACKAGE NUMBER: | N/A | SPECIFIC LOCATION: | N/A | | | |
| Activity | Sub-Activity | Hazard | Control | | | | | | |
| | | | A minimum of a half-face Air Purifying Respirator (APF 10) with a HEPA/P 100 filter is required | | | | | | |
| | | | P100 Particulate filters | need to be replaced when | : | | | | |
| | | | o The user has difficulty breathing comfortably or notices an increase of breathing resistance resulting from particle buildup | | | | | | |
| | | | o The filter becomes visibly dirty | | | | | | |
| 1 | | | o The filter is physically damaged | | | | | | |
| | | | Or at a minimum of every 30 days inclusive of the above requirements. | | | | | | |
| Vibration General Hand/Arm Do not exceed the trigger-time limits listed in ML-SH Vibration Levels. Note that these limits are cumulative ove you are using several different power tools continuously with the several different power tools continuously with the several different power tools. | | | | | | work shift. Contact IH if | | | |
| and Activities | | | Take breaks from the s with a co-worker | ource of the vibration ever | y hour – perform a | different task or rotate | | | |
| | | | Check tools before using avoid increased vibration cau | ng them to Ensure they have sed by faults or general we | | aintained and repaired to | | | |
| | | | Avoid over-gripping or | forcing a tool or work-piece | e more than is nece | essary | | | |
| | | | Encourage good blood | circulation by: | | | | | |
| | | | o Keeping warm and dry by | dressing appropriately | | | | | |
| | | | Massaging and exercis | ing the fingers during work | breaks. | | | | |
| HDPE | General | Improper Use of | Only trained and autho | rized personnel shall opera | ate pipe fusion weld | ding machine | | | |
| Piping - Pipe Fusion | Requirements | Tools/Equipmen | Remove or secure all loose-fitting clothing, etc. around moving machine parts Wear heat resistant gloves as listed on ML-SH-801768-A003, <i>UPF Glove Matrix</i>. | | | | | | |
| Activities | | Equipment Burn | | | | | | | |



| JHA NO.: | JHA-007 | 744 | REV: 2 | ISSUE DATE: 2-28-25 | | | |
|---------------------------|---------------------------------------|---|--|---|--|--|--|
| JHA TITLE: | | ion of Piping, s, and in-line nents | WORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | |
| Activity | Sub-Activity | Hazard | Control | | | | |
| Defeating Safety | Guards / Safety Protection Devices | Unsafe Conditions | Never Disable, bypass, modify, or remove from the Site Manager and ES&H Manager | any safety protection devices without written authorization er. This includes, but it's not limited to: | | | |
| Devices (Life Critical | | | Disconnect load indicators | | | | |
| Activity) | | | Remove Guards or handles from rotal | tating equipment or tools | | | |
| | | | · Fix or lock triggers and power switch | hes to keep them in the "on" position | | | |
| | | | Hardwire electrical wires into outlets | | | | |
| | | | Use damaged or defective equipment and/or tools | | | | |
| | | | Skip or bypass required inspections before using equipment and/or tools | | | | |
| | | | Operate equipment without deploying outrigger pads when they are required | | | | |
| Post- Installed | General Requirements | Release of Hazardous | Personnel shall be trained and qualif PICA installations. | ified (as required by the Project specifications) to perform | | | |
| Concrete Anchors | | Energy Electrical | 27 I DIL /\ activities shall be declimented on L ENI-1181 | | | | |
| | | Hazard | Regarding embedded item reviews: | | | | |
| | | Property Damage | Reviews are required for the following concrete excavations: | | | | |
| | | Zamage | Depths greater than 1-inch from the concrete surface when non-carbide tooling is used | | | | |
| | | | · Depths greater than 4-inches from the | he concrete surface when carbide tooling is used | | | |
| | | | NOTE : For non-permanent installations, an Inspection Report (IR) is not required when the Lead Civil Field Engineer (LCFE) has evaluated the scope. Once the evaluation is complete and the concrete excavation approved, a drill stop must be used. | | | | |
| | | | A drill stop (or similar device) shall be | be used to prevent damage to embedded items as follows: | | | |



| JHA NO.: | JHA-00744 Installation of Piping, Supports, and in-line Components | | REV: | 2 | ISSUE DATE: | 2-28-25 | | | | |
|---|--|---|--|--|---------------------------|-----------------------------|--|--|--|--|
| JHA TITLE: | | | WORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | | | |
| Activity | Sub-Activity | Hazard | Control | | · | | | | | |
| | | | Non-carbide tooling and carbide tooling with 4 or more cutter head (including full carbid head) shall utilize a drill stop at all times. Tooling shall be controlled by the FE to prevent unauthorized use 2 Cutter head carbide tooling shall utilize a drill stop for concrete excavation depths > 4 from the concrete surface | | | | | | | |
| | | | | | | | | | | |
| | | | Drill stops may b | Drill stops may be turned off (for both non-carbide and carbide tooling): | | | | | | |
| | | | o When permitted by | o When permitted by design | | | | | | |
| | | | | on has been evaluated by to is required prior to installin | | | | | | |
| Post- Installed Concrete Anchors | Pre-Drilling Pre-Excavation | Release of Hazardous Energy Electrical | Craft personnel shall lay out the concrete excavations and anchor locations specified on the design documents using survey controls. For complex installations or installations with tight tolerances, templates are recommended to facilitate the layout. | | | | | | | |
| Anchors | | Hazard Property | | ce (i.e., rebar scanner or g 1/4-inch diameter pilot hol | | cannot be utilized due to | | | | |
| | | Damage | rebar scanner or groun | it is recommended for the F d penetrating radar) for loc ot holes to establish a patte | ating embedded items (i. | e., reinforcing, pipe, | | | | |
| Post- Installed | Drilling Excavation | Release of Hazardous | Ensure that drill serequirements. | Ensure that drill stops are obtained and used when required in accordance with the requirements. | | | | | | |
| Concrete Anchors | | Energy Electrical Hazard Property Damage | o If an embedded iter to continuation. | m is encountered, stop drill | ing/excavating and notify | the FE for resolution prior | | | | |



| JHA NO.: | JHA-00 | 744 | REV: | 2 | ISSUE DATE: | 2-28-25 | | | |
|-----------------------|-------------------------|---|--|--|-------------------------|---|--|--|--|
| JHA TITLE: | | tion of Piping, ts, and in-line nents | WORK PACKAGE NUMBE | R: N/A | SPECIFIC LOCATION: | N/A | | | |
| Activity | Sub-Activity | Hazard | Control | | _ | | | | |
| Construction Blind | General Requirements | Release of Hazardous | | any aboveground constructions two conditions | | core drilling of concrete | | | |
| Penetrations | | Energy Electrical Hazard | 1. The potential e (including drywall studs) | exists for contacting utilities). | s or damaging permanent | t plant commodities | | | |
| | | Property Damage | | | | accessing areas where ergy sources or permanent | | | |
| | | | Exceptions: | | | | | | |
| | | | cavity do not require a b | Penetrations limited to the thickness of the gypsum board sheet(s) without entering the blind cavity do not require a blind penetration permit (BPP). Examples include self-drilling screws or using a drill stop to limit the depth of penetration. | | | | | |
| | | | Construction Blind Pene | approved in accordance vorcements of the completing blind penetrant damage or personal inj | | | | | |
| Ergonomic Hazard | Various Activities | Musculoskelet Disorder Injury | , | , | | | | | |
| Activities | | | Risk Factors | Risk Factors | | | | | |
| | | | often the task is perform | The risk of musculoskeletal disorder (MSD) injury depends on work positions and postures, how often the task is performed, the level of required effort and how long the task lasts. Risk factors that may lead to the development of MSDs include: | | | | | |



| JHA NO.: | JHA-007 | 44 | REV: | 2 | ISSUE DATE: | 2-28-25 | | | | |
|---------------------|---------------------------------|---|---|---|---|--|--|--|--|--|
| JHA TITLE: | | on of Piping, s, and in-line ents | WORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | | | |
| Activity | Sub-Activity | Hazard | Control | | <u>.</u> | | | | | |
| | | | | | clude lifting heavy objects o s, or maintaining control of e | | | | | |
| | | | | Performing the same or similar tasks repetitively. Performing the same motion or series of motions continually or frequently for an extended period of time. | | | | | | |
| | | | Using positions that pla | Working in awkward postures or being in the same posture for long periods of time. Using positions that place stress on the body, such as prolonged or repetitive reaching above shoulder height, kneeling, squatting, leaning over a counter, using a knife with wrists bent, or twistin the torso while lifting. | | | | | | |
| | | | | sure into the body part. sharp edges, or using the | Pressing the body or part of hand as a hammer. | of the body (such as the | | | | |
| | | | the potential for MSDs | | any one of the above risk factors, many of the operations in cold environment. | | | | | |
| | | | arm vibration can dam difficult to control. Han resulting in increased t grinders, chainsaws) ir | nage small capillaries that nd-arm vibration may caus force exertion to control h n much the same way glo | arm, can cause a number supply nutrients and can me se a worker to lose feeling in land-powered tools (e.g., he loves limit feeling in the hand force which must be exerted | nake hand tools more In the hands and arms In the hands and arms In the hands and arms In the hands ar | | | | |
| | | | Combined expethan does exposure to | | ctors. May place workers a | t a higher risk for MSDs | | | | |
| Orbital Welding | Orbital (autogenous) Welding | Electric Shoc | k Orbital gas tungsten a equipment. | rc welding (GTAW) can b | e hazardous. Only qualified | d persons should use this | | | | |
| (i.e., Swagelok) | | Burns Fire | After welding, the work and may cause burns. | | ode, fixture block, and colle | ets can be extremely hot | | | | |



| JHA NO.: | JHA-007 | '44 | REV: | 2 | ISSUE DATE: | 2-28-25 | | | | |
|-----------------------------|---------------------------------------|-------------------------------|--|---|---------------------------|----------------------------|--|--|--|--|
| JHA TITLE: | | s, and in-line | WORK PACKAGE NUMBER | ORK PACKAGE NUMBER: N/A SPECIFIC N/A LOCATION: | | | | | | |
| Activity | Sub-Activity | Hazard | Control | | | | | | | |
| | | Eye Damage | The M200 power supply | has no internal serviceab | le parts and must not be | disassembled. | | | | |
| | | | | Keep all panels and covers securely in place. Do not touch electrode connector, electrode, or roto after pressing start. The electrode is electrically charged during the weld process. | | | | | | |
| 1 | | | Frequently inspect input | Frequently inspect input power cord for damage or bare wiring—replace immediately if damaged. | | | | | | |
| | | | Properly unplug the pow | Properly unplug the power cord. Grasp the plug to remove it from the receptacle. | | | | | | |
| | | | Shut off gas supply when not in use. | | | | | | | |
| | | | rays. | Swagelok weld heads, whi | · | | | | | |
| | | | Do not use extension con Failure to do so can pose | rds that are in poor physic e fire and shock hazards. | al condition or have insu | fficient current capacity. | | | | |
| Tungsten Grinder (i.e., | Sharpening non- thoriated Tungsten | Electric Shock Lacerations | are all in good working c | | ower cord, grinding head | and related components | | | | |
| Sharpie DX, Piranha III) | Electrodes | Caught Betwee | Ensure the proper collect | Ensure the proper collet size is selected for the diameter of tungsten to be ground; two collets are stored in the top of the head assembly. | | | | | | |
| | | | grinding dust. | ith care especially when c | | al and inhalation of | | | | |
| | | | Grinder is designed to grind tungsten electrodes only. | | | | | | | |
| | | | Do not plug grinder into | an electrical outlet if cord | s frayed or cut. | | | | | |
| | | | Do not unscrew grinder head while the machine is in operation. | | | | | | | |
| | | | Remove plug from electr | ical outlet when changing | the diamond wheel or c | eaning the grinder. | | | | |
| | | | Keep hands away from r | noving parts. | | | | | | |



| JHA NO.: | JHA-00744 | | RE | / : | 2 | | ISSUE DATE: | 2-28-25 |
|------------|--|--------|----|--|-----|--|--------------------|---------|
| JHA TITLE: | Installation of Piping, Supports, and in-line Components | | wo | RK PACKAGE NUMBER: | N/A | | SPECIFIC LOCATION: | N/A |
| Activity | Sub-Activity | Hazard | | Control | | | | |
| | | | | Wear protective hair covering to contain long hair. | | | | |
| | | | - | Do not wear loose clothing neckties, rings, bracelets, or other jewelry, which may get caught, in moving parts of the machine. | | | | |



| JHA NO.: | JHA-00744 | REV: | 2 | ISSUE DATE: | 2-28-25 |
|---|--|---------------------------|--------------------------|-----------------------|------------------|
| JHA TITLE: | Piping Installation of Piping, Supports, and in-line Components | WORK PACKAGE NUMBER: | N/A | SPECIFIC LOCATION: | N/A |
| Ensure a new corresponding CFN-1251, UPF Construction Attendance Sheet, is signed and inserted in the CWP to document JHA briefing. | | | | | |
| PREPARER: | | Anton Panev Printed | Am Pml Name/Signature | / | 02/28/25 Date |
| APPROVAL: | | | | | |
| ES&H: | | Robert Drake | Rout C Q | 1_ | 02/28/25 |
| | | Printed Name/Signature | | | Date |
| SITE MANAGER: (DOA-CM-801768-A214) | | Christopher Hogan Printed | Name/Signature | | 03/31/25 Date |