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| Chubb Exposure Assessment Form Mechanical, Electrical and Plumbing (M.E.P.) Trades |
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|  |  | **Date of Assessment** |       |
|  |  | **Completed By** |       |

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| Project |       |
| Contract Number |       |
| Contractor |       |
| Supervisor |       |
| Activity Start Date  |       |
| Expected Completion Date |       |
| No. of Workers  |       |

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| Operation | Item # | Exposure | Mitigation / Controls |
| 1. Delivery and storage of material.
 | 1A | Traffic related entry and exit of delivery trucks into and out of project site. |       |
|  | 1B | Worker access and egress from trailer bed when off-loading material. |       |
|  | 1C | Rigging failures resulting from improper rigging of loads to be hoisted by qualified riggers. |       |
|  | 1D | Damaged or improper selection of appropriate rigging equipment.  |       |
|  | 1E | Unexpected shifting or rolling of material when removing shipping bands.  |       |
|  | 1F | Failure to ensure chocks or other approved blocking in place to prevent piping from rolling or lurching from stacks. |       |
|  | 1G | Placing lose material on ground or slab in lieu of movable equipment such as pipe rack dollies, pallets or A-frame dollies that can be easily moved when necessary. |       |
|  | 1H | Point loading slab with material instead of evenly distributing loads on the floor. |       |
|  | **1I** | Failure to store material in a manner that maintains a clear an unobstructed walkway for workers. |       |
|  | 1J | Blocking emergency exit ways with material. |       |
|  | 1K | Failure to ensure JHA completed, approved, and reviewed with crew performing work. |       |
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| 1. Pipe and Duct Riser installation.
 | 2A | Fall from height when installing risers along unprotected open perimeter of floor slab and adjacent to shaft ways. |       |
|  | 2B | Failure to provide workers with required Personal Fall Arrest Systems (PFAS), lifelines and anchor points meeting federal fall protection standards. |       |
|  | 2C | Failure to establish, monitor and maintain Controlled Access Zones (CAZ) when installing risers above floors below. |       |
|  | 2D | Removing floor covers or guardrails to install risers in slab penetration without use of PFAS. |       |
|  | 2E | Failure to reinstall floor covers or guardrails when leaving the work area and/or at the end of the work shift. |       |
|  | 2F | Conducting hot work activities on risers without qualified fire watch in place equipped with charged fire extinguisher. |       |
|  | 2G | Conduct hot work activities without obtaining required hot work permit. |       |
|  | 2H | Failure to properly secure riser piping or duct work to prevent material from falling to lower level. |       |
|  | 2I | Failure to select and utilize appropriate rigging equipment and/or chain falls for riser operation. |       |
|  | 2J | Rigging failures resulting from damaged rigging equipment and cables. |       |
|  | 2K | Failure to secure rigging equipment or chain falls to anchor point designed to safely support load. |       |
|  | 2L | Failure to utilize certified welders for all pipe welding operations. |       |
|  | 2M | Utilizing ladders in lieu of scissor or aerial lifts when working at heights. |       |
|  | 2N | Failure to utilize ladders properly as per manufacturer instruction (i.e., “A” frame ladder in close position, standing on top rung, carrying tools or material when climbing). |       |
|  | 2O | Standing on ladders that result in workers being above the safety cables or guardrail systems along leading edges of shaft ways and perimeter edge of slabs. |       |
|  | 2P | Failure to tether tools and/or equipment when working along leading edges to prevent from cascading off the building. |       |
|  | 2Q | Utilizing scissor or aerial lifts without certified training on use of equipment. |       |
|  | 2R | Workers standing on railings of lifts. |       |
|  | 2S | Scissor or aerial lifts not tethered or secured to anchor point when working along open sided perimeter of floors and/or leading edges of shaft openings.  |       |
|  | 2T | Failure to have qualified fire watch, with proper fire extinguisher assigned to hot work activity. |       |
|  | 2U | Failure to obtain permit for hot work operations. |       |
|  | 2V | Failure to ensure JHA completed, approved, and reviewed with crew performing work. |       |
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| 1. Pipe and Duct horizontal installation.
 | 3A | Fall from height associated with overhead installation work. |       |
|  | 3B | Utilizing ladders in lieu of scissor or aerial lifts when working at heights. |       |
|  | 3C | Failure to utilize ladders properly as per manufacturer instruction (i.e., “A” frame ladder in close position, standing on top rung, carrying tools or material when climbing). |       |
|  | 3D | Standing on ladders that result in workers being above the safety cables or guardrail systems along leading edges of shaft ways and perimeter edge of slabs. |       |
|  | 3E | Failure to tether tools and/or equipment when working along leading edges to prevent from cascading off the building. |       |
|  | 3F | Utilizing scissor or aerial lifts without certified training on use of equipment. |       |
|  | 3G | Workers standing on railings of lifts. |       |
|  | 3H | Scissor or aerial lifts not tethered or secured to anchor point when working along open sided perimeter of floors and/or leading edges of shaft openings.  |       |
|  | 3I | Failure to utilize certified welders for all pipe welding operations. |       |
|  | 3J | Defective joint connection resulting in water leaks due to improper brazing or crimping.  |       |
|  | 3K | Improper selection and utilization of genie material lifts and roustabouts to lift piping and duct work. |       |
|  | 3L | Improper selection and installation of extension arms (i.e., Kindorf, strut channel) for material lifts. |       |
|  | 3M | Eye/face injury during pipe cutting activities.  |       |
|  | 3N | Failure to exercise proper QA/QC procedures and testing measures.  |       |
|  | 3O | Mold buildup due to improper sealing of open duct ends at branch terminations.  |       |
|  | 3P | Failure to have qualified fire watch, with proper fire extinguisher assigned to hot work activity. |       |
|  | 3Q | Failure to obtain permit for hot work operations. |       |
|  | 3R | Failure to ensure JHA completed, approved, and reviewed with crew performing work. |       |
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| 1. Mechanical equipment installation.
 | 4A | Rigging failures due to improper selection and/or damaged rigging equipment. |       |
|  | 4B | Crane stability/structural failure due to improper selection and/or set up of crane. |       |
|  | 4C | Failure to engineer and calculate hoisting and rigging related operations. |       |
|  | 4D | Crane contact with overhead power lines. |       |
|  | 4E | Failure to utilize certified welders for all pipe welding operations. |       |
|  | 4F | Failure to exercise proper QA/QC procedures and testing measures. |       |
|  | 4G | Failure to lock out or protect energized equipment. |       |
|  | 4H | Fall from height working on or on top of equipment. |       |
|  | 4I | Improper selection and utilization of ladder. |       |
|  | 4J | Improper selection and utilization of aerial and scissor lifts. |       |
|  | 4K | Failure to ensure workers utilizing aerial and scissor lifts have received and provided documented training on the use of the mechanical lifts.  |       |
|  | 4L | Difficult access and tight work areas when working on equipment installation. |       |
|  | 4M | Storing material on floor rather than on moveable equipment (i.e., pipe racks, A-frame dollies). |       |
|  | 4N | Failure to obtain permit for hot work operations. |       |
|  | 4O | Failure to have qualified fire watch, with proper fire extinguisher assigned to hot work activity. |       |
|  | 4P | Failure to ensure JHA completed, approved, and reviewed with crew performing work. |       |
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| 1. Roof top mechanical equipment installation.
 | 5A | Rigging failures due to improper selection and/or damaged rigging equipment. |       |
|  | 5B | Crane stability/structural failure due to improper selection and/or set up of crane. |       |
|  | 5C | Failure to engineer and calculate hoisting and rigging related operations.  |       |
|  | 5D | Crane contact with overhead power lines. |       |
|  | 5E | Failure to utilize certified welders for all pipe welding operations. |       |
|  | 5F | Failure to exercise proper QA/QC procedures and testing measures. |       |
|  | 5G | Failure to lock out or protect energized equipment. |       |
|  | 5H | Fall from height including but not limited to, working along leading edge, working on or on top of equipment. |       |
|  | 5I | Improper selection and utilization of ladder. |       |
|  | 5J | Improper selection and utilization of aerial and scissor lifts.  |       |
|  | 5K | Failure to ensure workers utilizing aerial and scissor lifts have received and provided documented training on the use of the mechanical lifts.  |       |
|  | 5L | Difficult access and tight work areas when working on equipment installation. |       |
|  | 5M | Confined space conditions working inside of tanks or other equipment. |       |
|  | 5N | Dunnage steel inadequately designed or secured to support weight of equipment. |       |
|  | 5O | Damage to exterior of building or adjacent building structures during hoisting operation. |       |
|  | 5P | Failure to obtain permit for hot work operations. |       |
|  | 5Q | Failure to have qualified fire watch, with proper fire extinguisher assigned to hot work activity. |       |
|  | 5R | Failure to ensure JHA completed, approved, and reviewed with crew performing work. |       |
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| 1. Excavate soil down to subgrade elevation.
 | 6A | Fall from height including but not limited to, working along leading edge, working on or on top of equipment. |       |
|  | 6B | Improper selection and utilization of ladder. |       |
|  | 6C | Improper selection and utilization of aerial and scissor lifts.  |       |
|  | 6D | Failure to ensure workers utilizing aerial and scissor lifts have received and provided documented training on the use of the mechanical lifts.  |       |
|  | 6E | Workers standing on railings of lifts. |       |
|  | 6F | Scissor or aerial lifts not tethered or secured to anchor point when working along open sided perimeter of floors and/or leading edges of shaft openings.  |       |
|  | 6G | Standing on ladders that result in workers being above the safety cables or guardrail systems along leading edges of shaft ways and perimeter edge of slabs. |       |
|  | 6H | Failure to tether tools and/or equipment when working along leading edges to prevent from cascading off the building.  |       |
|  | 6I | Storing material on floor rather than on moveable equipment (i.e., pipe racks, A-frame dollies). |       |
|  | 6J | Failure to de-energize electrical service prior to commencing work. |       |
|  | 6K | Failure to close and lock doors to energized electrical closets or rooms. |       |
|  | 6L | Electrical panel boxes missing cover doors. |       |
|  | 6M | Energized electrical panel boxes missing cover plants and/or breakers resulting in exposed energized components.  |       |
|  | 6N | Electrical rooms and closets missing doors and hardware. |       |
|  | 6O | Electrical rooms and closets missing energized or high voltage signage.  |       |
|  | 6P | Rigging failures due to improper selection and/or damaged rigging equipment. |       |
|  | 6Q | Crane stability/structural failure due to improper selection and/or set up of crane. |       |
|  | 6R | Failure to engineer and calculate hoisting and rigging related operations.  |       |
|  | 6S | Crane contact with overhead power lines. |       |
|  | 6T | Failure to ensure JHA completed, approved, and reviewed with crew performing work. |       |
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