

JOB PHASE

re-Construction Site Tour

Site Survey / Layout

Site Preparation

Clear ROW / Lease

Prepare ROW / Lease

Snow / Ice Management

ilization (MOB)





TASKS

Travel with ATV / UTV

Walk around location

Measure for fabrication

Attach dozer blade

Staking out site and locates

oading / unloading trucks and trailers

Offloading equipment and materials

orking around mobile equipment

unding posts (manually)

ounding posts (equipment)

stalling goal posts

Chain saw operations

Felling with excavator

Top soil / sub grade stripping with dozer

Mounting and dismounting (equipment &

Matting install with excavator

preading gravel with skid steer

preading gravel with loader

Spreading gravel with dozer

Spreading gravel with shovel

Using dozer to remove snow

Using skid steer to remove snow

Ising excavator to remove snow

Attaching signs

Stumping

Piling brush

Burning

vehicles) ip rap install

Finish grade

TASK INVENTORY

HAZARDS

3

2

3

3

llision with traffic/wildlife/equipment, rollover, vehicle breakdowns, inadequate communication method

even/slippery ground, wildlife, severe weather, inadequate communication method

sharp edges, working alone / delayed response to injury/incident

working in hot/cold (heat stroke/frost nip/frost bite/hypothermia)

ontact with overhead lines, bending/twisting/lifting overhead

potential for trees to have grown over underground facility

have grown over underground facility

have grown over underground facility

ouried facilities

rush potential from moving mobile equipment, excessive exposure to noise

uts from sharp edges or slippping tools, non-intrinsically safe tool (if applicable)

Rotating sharp chain, flying debris, crush potential from falling trees/brush

Direct or referred contact with fire, dry or excessively flammable vegetation

Crush by dozer, contact with overhead or underground facilities

ush by excavator, contact with overhead or underground facilities

rush/contact from mobile equipment, wear & tear on equipment components

rush/contact from mobile equipment, wear & tear on equipment components

ush/contact from mobile equipment, wear & tear on equipment components

uipment components, blocking emergency routes, run-off/flooding potential

equipment components, blocking emergency routes, run-off/flooding potential

equipment components, blocking emergency routes, run-off/flooding potential

rost nip. hypothermia

lision with traffic/wildlife/equipment, rollover, equipment breakdowns, inadequate communication metho

Fall from heights, uneven/slippery ground conditions, over reaching/extending, exposure to toxic substances, cuts from

neven/slippery ground conditions, crush points/flying debris/muscle strains from hammer/post pounder/etc, wildlife

Cuts from sharp edges/banding/tensioned load securement, crush or property/equipment damage potential from fallir naterial/equipment or from mobile equipment, falls from height, strains from reaching/extending/heavy lifting

Equipment rollover/fall, crush potential, equipment/property damage, working alone, tension released from load

Crush potential between dozer and blade, pinch point between connecting parts of dozer and blade, overexertion/r

Cuts from sharp edges, hand/finger crush, flying debris, overexertion, awkward/repetitive movement, contact with

uts from sharp edges, hand/finger crush, body crush from equipment, flying debris, contact with buried facilities

Contact facility, equipment, or personnel from falling trees/brush, crush from mobile equipment, potential for trees to

Crush from mobile equipment or trees/brush being moved, entanglement with equipment components (spill/equipm

Slippery or sharp edged components on equipment, missed footing, raised surfaces with no guardrail (tall tracks, truc

rush from mobile equipment or rocks, hard contact with equipment components (spill/equipment failure)

Crush from mobile equipment or under a dropped mat, incorrect and/or overly aggressive handling of mat

verexertion/heavy lifting, repetive motion, bending/twisting, sharp edges, burs, or slivers on shovel/handle

Hidden objects/lines/power sources under snow, crush/contact from mobile equipment, cold weather wear & tear on

didden objects/lines/power sources under snow, crush/contact from mobile equipment, cold weather wear & tear on

lidden objects/lines/power sources under snow, crush/contact from mobile equipment, cold weather wear & tear on

verexertion/heavy lifting, repetive motion, bending/twisting, sharp edges, burs, or slivers on shovel/handle, frost bite

rush by mobile equipment, contact with overhead or underground facilities, inadequate sloping/run-off grading

Division: Major Projects, Industrial Services, Field Services

Vehicle and Equipment Spotting (SWP-75), Hi-Vis PPE (HSEMS - 6), Working in Cold (SWP 06)

SEMS Section 6 - PPE, Ergonomics - Manual Material Handling (SWP 22), Working in Cold (SWP 06

Date: June 20, 2015 Participants: Brian Bruce, Allen Monk, Brian McConnell, Scott Capaniuk Revision: July 2025 Risk Before Risk After Risk (1-20) Risk (1-20) Green = Low CONTROLS / STANDARDS Green = Low Red = Extrer Red = Extren Fleet Safety Journey Management (HSEMS - 21), Driving & Journey Management (SWP-28), Working Traveling alone (SWP-21) ATV Safety (SWP-01), Personal Protective Equipment (HSEMS-6), ATV/UTV training and/or competency, Manufacturers Operating Recommendations PE (HSEMS - 6) - Proper footwear, traction aids where required, Using Non-Intrinsically Safe Tools (SJP-20) 1 1 PPE (HSEMS - 6), Fall Protection (COP-06), Ladders (SWP-25), Working Alone (SWP-21) 1 2 1 PPE (HSEMS - 6, E.G.: Proper footwear, traction aids), Contractor Management (HSEMS - 18) 3 Lifting Equipment (SJP-23), Ladders (SWP-25), Cargo Management Hazard Assessment Loading / Hauling / Unloading Equipment (SWP-29), Cargo Securement & Trailer Use (SWP-04), Ergonomics 1 -Manual Material Handling (SWP-22), Equipment Competency Assessment Installing Blade onto D6 (SJP-16), Removing Blade from Dozer (SJP-15) Mechanical Mobile Equipment Operations (SWP-44), Excavating and Trenching (SJP-30), Vehicle and Equipment 1 1 Spotting (SWP-75) PPE (HSEMS - 6), Ground Disturbance (COP-07), Installing T-Post and Snow Fence (SJP-43) PE (HSEMS - 6), Ladders (SWP 25), Ground Disturbance (COP-07), Installing T-Post and Snow Fence (SJP 43 PPE (HSEMS - 6), Ground Disturbance (COP-07), Installing T-Post and Snow Fence (SJP-43), Overhead Power Lines (Working Near) (SWP-24) PE (HSEMS - 6) Chain Saw Operations (SWP-13), Forestry Logging Operations (SWP-65), PPE (HSEMS - 6) Forestry Logging Operations (SWP-65), Ground Disturbance (COP-07), workers to avoid line of fire, Vehicle and Equipment Spotting (SWP-75) Forestry Logging Operations (SWP-65), Ground Disturbance (COP-07), workers to avoid line of fire, Vehicle an Equipment Spotting (SWP-75) ROW Preparation (SJP-28), Ground Disturbance (COP-07 2 PPE (HSEMS - 6), Mechanical Mobile Equipment Operation (SWP-44) 1 1 ROW Preparation (SJP-28), Brush Pile Burning (SWP-86), Fire Extinguishers (SWP-05), Forest and Prairie ROW Preparation (SJP-28), Ground Disturbance (COP-07), Mechanical Mobile Equipment Operation (SWP-44) 2 ROW Preparation (SJP-28), Ground Disturbance (COP-07), Mechanical Mobile Equipment Operation (SWP-44) 2 Maintain three point contact, clean off boots, avoid parking on slope or ice where possible 1 1 ROW Preparation (SJP-28), Ground Disturbance (COP-07), Mechanical Mobile Equipment Operation (SWP-44) Mats / Matting (SWP-70), Vehicle and Equipment Spotting (SWP-75), Hi-Vis PPE (HSEMS - 6) Mechanical Mobile Equipment Operation (SWP-44), As per site direction Mechanical Mobile Equipment Operations (SWP-44), Manufacturers Operations Manual, Competency Assessment Vehicle and Equipment Spotting (SWP-75), Hi-Vis PPE (HSEMS - 6) Mechanical Mobile Equipment Operations (SWP-44), Manufacturers Operations Manual, Competency Assessm 2 Vehicle and Equipment Spotting (SWP-75), Hi-Vis PPE (HSEMS - 6) Mechanical Mobile Equipment Operations (SWP-44), Manufacturers Operations Manual, Competency Assessmer Vehicle and Equipment Spotting (SWP-75), Hi-Vis PPE (HSEMS - 6) HSEMS Section 6 - PPE, Ergonomics - Manual Material Handling (SWP 22) Mechanical Mobile Equipment Operations (SWP-44), Manufacturers Operations Manual, Competency Assessment Vehicle and Equipment Spotting (SWP-75), Hi-Vis PPE (HSEMS - 6), Working in Cold (SWP 06) Mechanical Mobile Equipment Operations (SWP-44), Manufacturers Operations Manual, Competency Ass /ehicle and Equipment Spotting (SWP-75), Hi-Vis PPE (HSEMS - 6), Working in Cold (SWP 06) Mechanical Mobile Equipment Operations (SWP-44), Manufacturers Operations Manual, Competency Assessi 2

	I		-	1	HSEMS Section 6 - PPE, Ergonomics - Manual Material Handling (SWP 22), Working in Cold (SWP 06)	_					-					
	Manual spreading of gravel and/or ice salt	Overexertion/heavy lifting, repetive motion, bending/twisting, sharp edges, burs, or slivers on shovel/handle, flying debris, frozen lumps/uneven ground conditions	2	4		2	1	1	1 1		1	1 1			1	
Fencing	Install fencing around open excavations	Cuts or eye injury from sharp edges, handflinger crush, flying debris, overexertion, awkwardfrepetitive movement, contact with buried facilities, working near edge of excavation, lack of public awareness of excavation	2	4	Ground Disturbance (COP-07), Excavating and or Trenching (SWP-46/SJP-30), Installing T-Post and Snow Fence (SJP-43), PPE (HSEMS - 6)	2	2								1	
Concrete	Concrete layout	Cuts, awkward body position, uneven ground, falls, crushes, pinch points	2	3	Third Party, Contractor Management (HSEMS - 18)	2	1		1 1							
	Forms and rebar	Cuts, awkward body position, uneven ground, falls, crushes, flying debris, strains, noise	2	3	Third Party, Contractor Management (HSEMS - 18)	2	1		1 1							
	Place / pour concrete	Cuts, awkward body position, uneven ground, falls, crushes, strains, chemical exposure, vibration, noise	2	3	Third Party, Contractor Management (HSEMS - 18)	2	1		1 1							
	Finish concrete	Chemical exposure, heavy lifting/twisting, awkward body position, strains,	2	3	Third Party, Contractor Management (HSEMS - 18)	2	1		1 1							
Demolition	Dissaemble/demo process piping, structural steel, banding, insulation/cladding, tubing, electrical, etc	Contact with pressure/tension/electricity, sharp edges, overexertion/heavy lifting, repetive motion, bending/twisting, falling/dropped objects, flying debris, dust, mould, biological exposure	4	4	Demolition (SWP-63), Cable Demolition (SJP-EI-15), Respiratory Protective Equipment (COP-02), PPE (HSEMS - 6 Lock-Oul - Tag-Oul (COP-05), Breaking System Integrity (SWP-03), Hydrogen Sulphide (COP-01), Dropped Object Hazard Management (SWP-95), Fire & Explosion (SWP-95), Orificed Operation (SWP-26), Monitoring for the Escap of Hydrocarbons (SWP-36), Gas Detection Training, Cold Cutting Existing Pipe (SJP-07), Purging With Nitrogen (SJ 04), Removing Piles (SIP-07).	e 2	2	~		~		-	~		-	·
	Hazardous Material Demolition	NORMS, asbestos, mould, toxic substances, BTEX exposure, inadeqaute containment of hazardous liquids	4	4	NORMS (SWP-73), Hazardous Materials/Products/Substances (SWP-33), Asbestos (SWP-16), Chemical Hazards, Biological Hazards, and Harmful Substances (SWP-17), Hantivirus (SWP-90), Lead (SWP-67)	2	2	1	1 1	1		1	4		1	1
Pile Layout & Elevations	Install pins, pull string lines	Uneven ground conditions, awkward body positioning, bending/twisting, hard or frozen ground conditions (pounding pin into ground)	1	4	Contractor Management (HSEMS - 18), PPE (HSEMS - 6)	1	3		1 1	1					~	
Excavations	Hand digging	Overexertion/heavy lifting, repetive motion, bending/twisting, sharp edges/burs/silivers on shovel/handle, frozen lumps/uneven ground conditions, contact with buried facilities	2	4	Ground Disturbance (COP 07), GD Checklist (CF-S-15), Excavation and or Trenching (SJP-30 / SWP-46), Excavating Around Operating Pipelines (SJP-39), Ergonomics - Manual Material Handling (SWP-22), PPE (HSEMS 6)	- 2	2								~	
	Working around hydro-vac	Noise, flying debris, high pressure/hot water, open excavation, depleted integrity on underground facilities	2	3	Ground Disturbance (COP 07), PPE (HSEMS - 6)	1	2								1	
	Mechanical excavation	Crush by excavator, contact with underground facilities, unstable bank/ditch walls	4	4	Ground Disturbance (COP 07), GD Checklist (CF-S-15), Excavation and or Trenching (SJP-30 / SWP-46), Excavating Around Operating Pipelines (SJP-39), Eropnomics - Manual Material Handling (SWP-22), PPE (HSEMS 6), Vehicle and Equipment Spotting (SWP-75), Use of Digging Spoon in Proximity to Pipeline (SJP-40)	- 3	2					1			1	
	Entry into & work within excavation	Crush by equipment/wehicles, water ingress, toxic gas build up, unstable bank/ditch walls, slippery/uneven ground conditions, limited means of access egress. Fire/explosion	4	4	Ground Disturbance (COP 07), Safe Ditch Entry Form, Confined Space Entry (COP 03), Tie In To Existing Pipe Systems (SL) 95, The In Welding (SLP-92), Cod Cutting Existing Pipe (SLP-07), Hot Tapping (SLP-08). Respiratory Protective Equipment (COP 02), Breaking System Integrity (SWP 03), Monitoring for the Escape of Hydrocarbons (SWP 36), Ergonomics - Hamual Material Handling (SWP-22), Safe Ditch Entry Assessment/Form, Abrasive Blasting (SLP-22 & SWP-78), Installation of Mud Puge (SLP-45)	2	2	*	1 1					1		~
	Shading / backfilling	Rough sharp objects contacting pipe/coating, mismanagement of fill/top soil, crush from mobile equipment, potential for fall or engulfment if needing to remove objects from ditch	3	4	Ground Disturbance (COP 07) & (SWP-62), GD Check List (CF-S-15), Backfilling (SWP-02), Vehicle and Equipmer Spotting (SWP-75)	nt 2	2				1	1 1			1	
	Shoring	Water ingress, toxic gas build up, slippery/uneven ground conditions, limited means of access egress, fall from ladders, inadequate means of rescue, inadequately assembled/installed shoring	4	3	Ground Disturbance (COP-07), Safe Ditch Entry Assessment/Form, GD Checklist (CF-S-15), Confined Space Entry (COP-03), Trench Boxes (SWP-82)	2	2		1						1	
	Hoarding	Water ingress, toxic gas build up, slippery/uneven ground conditions, limited means of access egress, fall from ladders, inadequate means of rescue, inadequately assembled/installed hoarding	4	2	Safe Ditch Entry Assessment/Form, GD Checklist (CF-S-15), Confined Space Entry (COP-03), Setting Up Wood Framed Hoarding (SJP-38), Abrasive Blasting (SJP-22 & SWP-78)	2	2		1						1	
Drive Piles	Pre-drill	Noise, flying debris, open excavation, contact with underground facilities, faulty or overpressured equipment hydraulics	4	3	Ground Disturbance (COP-07), GD Checklist (CF-S-15), Noise Control and Hearing Conservation (COP-04), Contractor Management (HSEMS-18), PPE (HSEMS - 6)	2	2								1	
	Using hoe pack to push piles	Noise, flying debris, contact with underground facilities, high vibration on pile pipe, suspended pile pipe, dropped objects from excavator attachment, faulty or overpressured equipment hydraulics, crush from mobile equipment	4	3	Ground Disturbance (COP-07), GD Checklist (CF-S-15), Pile Installation with Excavator (SUP-05), Rigging (SWP-54 Noise Control and Hearing Conservation (COP-04), PPE (HSEMS - 6). Exclusion zone, stay back a reasonable distance when vibrating piles into ground	2	2					1			~	
	Working around pile driving rig	Falling objects, high tension cables, crush, noise, contact with underground facilities	4	2	Ground Disturbance (COP-07), GD Checklist (CF-S-15), Pile Installation with Excavator (SJP-05), Noise Control and Hearing Conservation (COP-04), Contractor Management (HSEMS-18), PPE (HSEMS - 6)	2	1		1						1	
Cut & Cap Piles	Mark pile	Repetitive motion, awkward body position/bending/twisting, uneven ground conditions, hard or frozen ground conditions (pounding pin into ground)	1	4	PPE (HSEMS - 6)	2	2		1 1	~						
	Cut pile	Awkward body position, high heat from torch / hot surfaces, compressed gas, falling objects, incorrect tool choice	3	3	Material Handling (SWP-22), Grinder Use (SWP-26), Rigging (SWP-54), Cranes, Hoists and Lifting Devices (SWP-34),	2	2			1				1	1	
	Prepare and weld cap onto pile	Awkward body position, hot surfaces, bright arc, flying debris, tool inadequacy, dry vegetation/combustibles	2	3	Material Handling (SWP-22), Grinder Use (SWP 26), Rigging (SWP-54), Cranes, Hoists and Lifting Devices (SWP-34), Compressed and Liquified Gases (SWP-12), Dropped Object Hazard Management (SWP-85)	1	2							1		
Process Equipment Loading / Offloading	Crane lift	Falling objects, crush from dropped loads, equipment/property damagerfailure/upset	4	4	Cranes, Hoists and Lifting Devices (SWP-34), Critical Hoisting (SWP-41), Rigging (SWP-54), Material Handling (SWP-22), Load Chart and Manufacturer's Specifications for Crane, Contractor Management (HSEMS - 18)	3	3		1			,			1	
	Use of loader/forklift/zoom boom	Falling objects, crush from dropped loads, equipment/property damage/failure/upset	4	4	Material Handling (SWP-22), Rigging (SWP-54), Vehicle & Equipment Spotting (SWP-75), Mechanical Mobile Equipment Operation (SWP-44), Forked Lifting Equipment (SJP-23), Load Chart and Manufacturer's Specifications	3	3					•			1	
Set / Install Buildings & Equipment	Set equipment	Falling objects, crush from suspended loads, crush points between equipment and base, equipment/property damage/failure/upset, heavy lifting, strains	4	4	Cranes, Hoists and Lifting Devices (SWP-34), Critical Hoisting (SWP-41), Rigging (SWP-54), Mechanical Mobile Equipment Operation (SWP-44), Contractor Management (HSEMS - 18)	4	2		1				~	1	7	
	Assist with Jack & Roll	Falling objects, crushes, suspended loads, equipment/property damage/failure/upset, heavy lifting, strains	3	3	Contractor Management (HSEMS-18)	3	2		1 1						1	
	Assemble equipment	Crushes, heavy lifting, cuts, falls from heights, dropped objects	3	3	Material Handling (SWP-22), Rigging (SWP-54), Cranes, Hoists and Lifting Devices (SWP-34), Critical Hoisting (SWP-41), PPE (HSEMS - 6), Ladders (SWP-25), Aerial Work Platforms (SWP-93), Scaffolds and Temporary Platforms (SWP-66), Dropped Object Hazard Management (SWP-85), Ergonomics - Manual Material Handling (SWF-22), Safe Knifle Use (SWP-76), Wrench Use (SWP-74)	2	2			1			1	~		
	Install loose shipped items	Crushes, heavy lifting, cuts, falls from heights, dropped objects, equipment/property damage	3	3	Material Handling (SWP-22), Rigging (SWP-54), Cranes, Hoists and Lifting Devices (SWP-34), Critical Hoisting (SWP-41), PPE (HSEMS - 6), Ladders (SWP-25), Aerial Work Platforms (SWP-93), Scaffolds and Temporary Platforms (SWP-56), Droped Object Hazard Management (SWP-85), Ergonomics - Manual Material Handling (SWF)	2	2			1			~	1	7	
	Modify existing equipment	Crushes, heavy lifting, cuts, falls from heights, dropped objects, equipment/property damage, stored energy	3	3	22) Safe Knife Lise (SWP-76) Wrench Lise (SWP-74) Change Management (SWP-37), Material Handling (SWP-22), Rigging (SWP-54), Cranes, Hoists and Lifting Device (SWP-34), Critical Hoisting (SWP-41), PPE (HSEMS - 6), Ladders (SWP-25), Aerial Work Platforms (SWP-93), Scaffolds and Temporary Platforms (SWP-96), Dropped Object Hazard Management (SWP-85), Ergonomics - Manu Material Handling (SWP-22), Safe Knife Use (SWP-76), Wrench Use (SWP-74).	es ial 2	2			1			1	~	1	
	Install vessel internals	Confined spaces, hazardous atmosphere, congested work space, cuts, crushes, low light/visibility	3	2	Confined Space Entry (COP-03), Respiratory Protective Equipment (COP-02), Material Handling (SWP-22), Rigging (SWP-54), Cranes, Hoists and Lifting Devices (SWP-34), Critical Hoisting (SWP-41), PPE (HSEMS - 6), Ladders (SWP-25), Scaffolds and Temporary Platforms (SWP-56), Droged Object Hazard Management (SWP-85), Ergonomics - Manual Material Handling (SWP-22), Safe Knife Use (SWP-76), Wrench Use (SWP-74)	2	2			1			~	~	-	
	Equipment Alignment	Crushes points (moving/sliding equipment, tool slips), stored energy (E.G.: come-a-long)	3	3	As per Manufacture's Specifications, PPE (HSEMS - 6)	2	2		+	1			1,	-		
	Pre-service equipment	Cuts, electric shock, pinch points, spills	2	3	As per Manufacture's Specifications, PPE (HSEMS - 6)	2	1	\vdash	+	1			+	+	+	+
1			_			1 -	1 .								1 1	l

Scaffolding	Erect/dismantle/modify scaffolding	Pinch/crush, strains, splinters, falling objects, falls from heights, rescue limitations	4	3	Scaffolds and Temporary Platforms (SWP-56), Fall Protection (COP-06), Dropped Object Hazard Management (SWP-	3	1	· ·							\Box	\top
	Working from scaffolding	Falling objects, falls from heights, overloaded scaffold, uneven ground, limited egress, limited rescue capabilities, congested work area	4	3	Scaffolds and Temporary Platforms (SWP-56), Fall Protection (COP-06), Dropped Object Hazard Management (SWP- ac)	. 2	2	-	1	4			1 1	1	7	, ,
Fabricate Structural & Piping	Refer to "Fabricating" THA	Refer to "Fabricating" THA	4	3	Refer to "Fabricating" THA, + environmental specific hazards if completing on site			-							, +	+
Stress Relieving	Working around Stress relief	Hot surfaces	2	1	Contractor Management (HSEMS-18)	2	1		1	1					+	+
NDE	Working around Radiography	Radiation exposure	2	1	Radiation (SWP-15), Contractor Management (HSEMS-18)	2	1		\	1	+ +				+	+
	Working around Magnetic particle	Chemical exposure, equipment damage	1	1	Contractor Management (HSEMS-18)	1	1		+	1	+ +				+	+
	Demagnetizing pipe	Electrical shock, equipment damage (E.G.: phones in viscinity of demag-machine), heavy/awkward lifting	2	3	Contractor Management (HSEMS-18), Manufacturers Instructions, PPE (HSEMS - 6), Ergonomics - Manual Material	2	2		·						+	+
	Working around Ultrasound	Line of fire	4	4	Handling (SWP-22) Contractor Management (HSEMS-18)	1	4	<u></u>	·		-			L' H	+	-
Bolt Up & Torquing (process	Bolt up	Heavy lifting, strains, cuts, line of fire, pinch points (tool slips, flanges coming together, etc.), chemical exposure,	- +	_	Lock-Out - Tag-Out (COP-05), Dropped Object Hazard Management (SWP-85), Wrench Use (SWP-74), PPE		'		+		-				+	-
piping systems)		dropped objects, bolt-ups at heights	3	4	(HSEMS - 6), Pipefitter Apprenticeship, Ladders (SWP-25) Scaffolds and Temporary Platform (SWP-56), Fall Protection (COP-06)	2	2			1						
	Torquing (Hand Tools)	Heavy lifting, strains, cuts, line of fire, pinch points (tools slips, incorrect tool for job causing tool to faulter)	2	4	Wrench Use (SWP-74), Contractor Management (HSEMS-18), Pipefitter Apprenticeship, Ladders (SWP-25) Scaffolds and Temporary Platform (SWP-56), Fall Protection (COP-06)	2	2		1	1					1	1
	Hammer wrenching	Crush points, noise, line of fire, tool failure, flying debris	3	4	PPE (HSEMS - 6)	3	3			1					1	
	Impact Gun	Tool failure, stored (pneumatic) energy, unsecured air hose, improper fitting rating, improper tool use, noise	2	3	Wrench Use (SWP-74), Noise Control and Hearing Conservation (COP-04), PPE (HSEMS - 6)	2	2			1					1	1
	Mechanical torquing (HY-TORQ)	Hand crush between HY-TORQ and flange/bolt/steel, ergonomic strain	3	4	Competent for equipment being used, Hydraulic Torque Wrench Use (SWP-83), Wrench Use (SWP-74), PPE (HSEMS - 6), Noise Control and Hearing Conservation (COP-04)	2	2	1	1	1						
Pressure Testing	Pressure testing hydrostatic	Spill, equipment/material failure, stored pressure, chemical exposure, strains, missed check valves, improperly isolated system	4	4	Pressure Testing - Hydrostatic (SJP-09), Breaking System Integrity (SWP-03), Rigging (SWP-54), QC/QA Procedures, Appropriate Governing Bodies Standards (ABSA, CWB, etc), PPE (HSEMS - 6), Wrench Use (SWP-74)	3	2	1 1		-					1	1 1
	Pressure testing pneumatic	Equipment/material failure, stored pressure, explosion, flying debris, unsecured air hose, chemical exposure	4	4	Pressure Testing Pneumatic (SJP-10), Breaking System Integrity (SWP-03), Rigging (SWP-54), QC/0A Procedures, Appropriate Governing Bodies Standards (ABSA, CWB, etc.), PPE (HSEMS - 6), Wrench Use (SWP-74)	4	2	1 1		1					7	1 1
Coatings	Abrasive blasting	Chemical/respiratory exposure, noise, high pressure, line of fire, flying debris, environmental	3	3	PPE (HSEMS - 6), Abrasive Blasting (SJP-22 & SWP-78), Contractor Management (HSEMS-18)	2	3		1						+	1
	Buffing/coating removal	Chemical/respiratory exposure, noise, high pressure, line of fire, flying debris, respiratory, environmental	2	4	PPE (HSEMS - 6), Grinder Operations (SWP-26), Respiratory Protective Equipment (COP-02), Noise Control and Hearing Conservation (COP-04), Pipeline Coating Removal (SJP-37)	2	2			4					7	+
	Applying Internal coatings	Chemical exposure, cuts, flammable gases/mists	2	1	Contractor Management (HSEMS-18)	2	1		1							+
	Pipe Prime Coat and Paint	Chemical exposure, cuts, flammable gases/mists	2	2	Product Specific Training, Contractor Management (HSEMS-18), Respiratory Protective Equipment (COP-02), Pipe Coating (SWP-34), Propane Cylinders and Torches (Use, Care, Handling) (SWP-35), Confined Space Entry (COP-03)	2	2		1							
	Pipe Wrapping & Coating	Chemical exposure, cuts, flammable gases, hot surfaces	2	3	Product Specific Training, Contractor Management (HSEMS-18), Respiratory Protective Equipment (COP-02), Pipe Coating (SWP-84), Propane Cylinders and Torches (Use, Care, Handling) (SWP-35), Confined Space Entry (COP-03), Joint Protection / Sleeving (SIP-27), Jeeping/ Holiday Detection (Pipeling) (SIP-03)	2	2		1							
	Pipe Pickling	Chemical exposure, acid/caustic burns, respiratory	3	4	Respiratory protective Equipment (COP-02), SDS for product (SDS Binders), PPE (HSEMS - 6)	3	2			4					~	
Install Structural	Erect structural steel	Pinch/crush points (steel on steel, rigging tension/slips, etc.), dropped loads/objects, Falls from Heights	4	4	Cranes, Hoists and Lifting Devices (SWP-34), Critical Hoisting (SWP-41), Rigging (SWP-54), Dropped Object Hazard Management (SWP-85), Fall Protection (COP-06), Ladders (SWP-25), Scaffolds and Temporary Platforms (SWP-56)	4	2						1			
	Bolt up structural steel	Pinch/crush points (steel on steel, tool slips, blind install of bolts/fasteners, etc.), dropped loads, noise, Falls from Height	3	3	PPE (HSEMS - 6), Wrench Use (SWP-74), Noise Control and Hearing Conservation (COP-04), Fall Protection (COP-06), Ladders (SWP-25), Scaffolds and Temporary Platforms (SWP-56)	2	2						1			
	Impact Gun	Tool failure, stored (pneumatic) energy, unsecured air hose, improper fitting rating, improper tool use, noise	2	3	Wrench Use (SWP-74), Noise Control and Hearing Conservation (COP-04), PPE (HSEMS - 6)	2	2						1		\top	
	Grout structural steel	Chemical exposure, awkward body position	2	2	Contractor Management (HSEMS-18), SDS for Product (SDS Binders)	2	1		1				1		\top	
Install Pipe Systems	Pipe shoes/Brackets/clamps	Pinch/crush points (steel on steel, tool slips, blind install of bolts/fasteners, etc.), strains, line of fire	2	3	Wrench Use (SWP-74), PPE (HSEMS - 6)	2	2	1		1			1		\top	
	Pipe spool & valve installs	Pinch/crush points (steel on steel, tool slips, etc.), suspended loads, noise	3	4	Wrench Use (SWP-74), Rigging (SWP-54), Critical Hoisting (SWP-41), Pipeline Set-In (Above Ground) (SJP-31), Staging Large Valves and Components (SJP-41), Aerial Work Platforms (SWP-93), Ladders (SWP-25), Scaffolds and Temporary Platforms (SWP-56), Fall Protection (COP-06)	2	2	-		-						+
	Threading Pipe / Cutting Pipe	Rotating Components, cuts/scrapes/finger crushers, strains, equipment under tension, falling objects, flying debris	2	4	PPE (HSEMS - 6), Threading Pipe (SJP-21), Using Jacks and Stands (SWP-89)	2	2	√		~					\top	
Equipment / Vessel Insulation	Install insulation	Strains/overexertion, pinch points (cutting/clamping tools), cuts, wind	3	3	Contractor Management (HSEMS-18), PPE (HSEMS - 6)	2	2		1						\exists	\top
Pipe Hauling	Use of crane and/or rigging methods	Crushes (rigging tension), contact with equipment, de-gloving, dropped loads/objects, equipment failure/damage	4	3	Cranes, Hoists and Lifting Devices (SWP-34), Critical Hoisting (SWP-41), Rigging (SWP-54), Material Handling (SWP-22), Load Chart and Manufacturer's Specifications for Crane, Contractor Management (HSEMS - 18)	4	2	-		-					7	
	Moving pipe with zoom boom and/or forked equipment	Swinging loads, cuts, line of fire, being run over by zoom boom, equipment upset, falling materials from trailer	4	4	Material Handling (SWP-22), Rigging (SWP-54), Vehicle & Equipment Spotting (SWP-75), Mechanical Mobile Equipment Operation (SWP-44), Forked Lifting Equipment (SJP-23), Load Chart and Manufacturer's Specifications	4	2			~		~			7	
	Using Trailers	Equipment damage, fall from deck, hand injuries, crush from moving truck/trailer, public safety (lost trailer or material)	4	4	Cargo Securement (SWP-04), Loading Unloading Hauling Equipment (SWP-29), Fleet Safety Journey Management (HSEMS-21)	4	3	-		~					7	
	Transporting pipe on Truck	Crush from moving truck/trailer, public safety (lost trailer or material)	4	4	Cargo Securement (SWP-04), Fleet Safety Journey Management (HSEMS-21), Contractor Management (HSEMS - 18)	4	3	1		~				1	~	
Equipment Towing	Towing or recovery of equipment with another piece of equipment	Equipment damage, failure of components, crush, line of fire, being run over	4	4	Towing (SJP-19)	3	2			,		1		1	\top	
Line Tie-Ins	Tie-In Welds	Crushing, equipment damage, burns, fire/explosion, engulfment, eye injury, cuts, spring tensions	3	4	Tie-In Welding (SJP-29), Cold Cutting Existing Pipe (SJP-07), Tie In To Existing Pipe System (SJP-25), Monitoring the Escape of Hydrocarbons (SWP-36), Installation of Mud Plugs (SJP-45)	2	2	-						1	7	\top
Hot Tapping	Hot Tapping	Spills, gas release, fire/explosion, injuries, facility/property damage	4	4	Tie in to Existing Pipe System (SJP-25), Hot Tapping (SJP-08), Monitoring the Escape of Hydrocarbons (SWP-36)	4	3	-						1	7	\top
Riser Installs	Install riser	Crushing, suspended loads, equipment damage, burns, engulfment, eye injury, cuts, falls	3	3	Material Handling (SWP-22), Cranes, Hoists & Lifting Devices (SWP-34), Rigging (SWP-54), Critical Hoisting (SWP-41), Tie In To Existing Pipe System (SJP-25), Tie-In Welding (SJP-29)	2	2	-	1					1	7	+

Start-Up Assistance	Commissioning systems	Live systems, pressurized systems, electrical shock, fire/explosion	4	2	As per specific task being performed, Hazard Assessment (HSEMS - 2)	4	1		1	1					1	~
DE-MOB	Loading/unloading trucks	Cuts, crushes, falls, strains, equipment damage	4	2	Loading Unloading Hauling Equipment (SWP-29), Cargo Securement (SWP-04), Material Handling (SWP-22), Forked Lifting Equipment (SJP-23), Ladders (SWP-25)	2	2	1	1	1	1	7	1	1	7	