SAFE JOB PROCEDURE **SJP-25**

Revised: March 28, 2025 **Tie into Existing Pipe System**

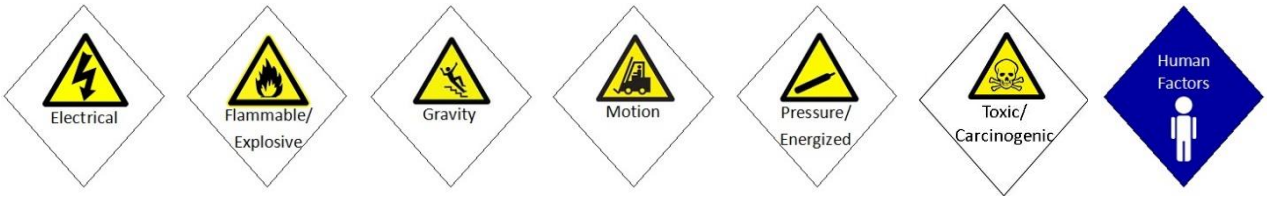
PURPOSE/APPLICATION

To ensure the potential hazards associated with working on existing pipelines are identified, assessed and controlled to ensure the safety of workers. This SJP is to provide direction on the key steps to perform a tie-in on a de-energized pipeline that has been in operation.

For the purpose of this SJP, "Existing Piping System" refers to pipelines and or facilities that have been in operation and have the potential to contain a hazardous product (i.e. produced liquids, gas, and produced water).

Note: This is not a procedure for a Hot Tie-in or Hot Tapping procedure.

COMMON HAZARD SOURCES AND CONCERNS



PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Strike Minimum Requirements
- Flame Resistant Clothing (FRC)
- Other PPE as per HIAC (Goggles for drilling, Hearing Protection, Reflective Vest, Face Shield, Fall Protection Equipment)

TRAINING

- Confined Space Entry (if required)
- Fall Protection Training (if required)
- Ground Disturbance Level 2
- H2S Alive
- Respiratory Fit Test (Where Required)
- Strike Orientation
- WHMIS 2015

TOOLS/EQUIPMENT

- Equipment (e.g. backhoe, welder) with a qualified operator
- Fire extinguishers
- Atmospheric monitors (area and/or personnel)
- SCBA or SABA (if required)
- Signage and barricades
- Step and extension ladders (if required)
- Spill Kits and catch trays

PRIOR ACTIVITIES

1. Ensure access to pipeline is completed following Strike Ground Disturbance and Trenching SWP's (including Ground Disturbance Permits and Checklists, and Line Locate reports).
2. Complete de-energizing, pigging and purging of piping systems.

PRE-JOB ACTIVITIES

1. Assess the work according to the HIAC process, completing the Pre-Job or Site HIAC, ensuring that site hazard sources have been controlled (i.e. Motion – vehicles and equipment controlled).

2. Complete inspection of area, confirm planned scope of work, and communicate hazards and controls during daily tailgate meeting.
3. Inspect all Tools and Equipment – Complete daily pre-use inspection of all tools and equipment.
4. Obtain Work Safe Work Permit and/or Agreement.
5. **Verify that you have the correct line and/or system.**

	Job Steps	Hazard Sources/ Hazards	Control Measures
1.	Area inspection, plan scope of work.	❖ Motion - congested work area ❖ Gravity - uneven ground	▪ Flag off work area – where working at heights ▪ Pre-job hazard assessment ▪ Pre-job safety meeting ▪ Task hazard assessment
2.	Prior to starting task prepare for potential emergency.	❖ Flammable/Explosion ❖ Hazardous Materials or Controlled Products	▪ Set up extinguishers ▪ Spill kits ▪ Atmospheric monitors
3.	Confirm that the piping system being worked on is prepared to be worked on, including pigging of lines.	❖ Pressure/Energized ❖ Flammable/Explosion ❖ Toxic/Carcinogenic	▪ Pig Lines ▪ If required, purge with nitrogen ▪ Lock Out/Tag Out where required ▪ Verify blanks are installed
4.	Sweep line, if required.	❖ Flammable/Explosion ❖ Toxic/Carcinogenic	▪ Verify purge is complete and sufficient continuous monitoring ▪ Never try to fix a leak while still under pressure ▪ Review SDS with crew ▪ Be aware of possible N2 ▪ Monitor work atmosphere oxygen deficiencies
5.	Confirm that the piping system is isolated.	❖ Pressure/Energized ❖ Flammable/Explosive ❖ Toxic/Carcinogenic	▪ Install blinds if not already installed ▪ Cover and tag disconnected end of piping system
If isolation on a piping system cannot be attained, do not perform the job/task. As per the Strike HIAC requirements, contact your Business Unit Manager.			
6.	Drill or punch hole in top of pipe in the section that is being removed (Dip welding rod of sufficient length to check for residual product).	❖ Pressure/Energized ❖ Flammable/Explosive ❖ Toxic/Carcinogenic	▪ Mark/flag drill/punch location prior to masking up ▪ Drill/Punching shall be completed while wearing SCBA or SABA (if required) ▪ Test and monitor atmosphere ▪ Use intrinsically safe process (Air actuated drills, cold/hot tap equipment)
7.	Cold cut line and mud plug.	❖ Motion – Equipment and Pipe ❖ Human Factors – strains, sharp edges	▪ Body position, ergonomics ▪ File inside of pipe at cold cut location

8.	Remove cut section.	❖ Motion – Moving equipment ❖ Gravity – Overhead loads ❖ Human Factors - Overhead lifting and strains	▪ Use tag lines ▪ Use equipment, if required
9.	Ensure punch or drill mark is in the removed section.	❖ Holes left in operating line	▪ Supervisor to verify and document drill/punch mark is on removed coupon ▪ Remove section from jobsite
10.	Perform tie-in weld.	❖ Motion – Equipment and Pipe ❖ Radiation – Welding Flash ❖ Temperature – Burns ❖ Motion - Pinch Points	▪ Spotter ▪ Body positioning ▪ Face shields, eye protection
11.	Perform NDE on tie-in.	❖ Radiation	▪ Post signs and only authorized personnel in area
12.	Install coating/ sleeves on tie in location.	❖ Temperature - Burns with Propane ❖ Motion – Equipment and Pipe ❖ Human Factor - Strains	▪ Use care working with open flames ▪ Body positioning ▪ Team work
13.	Back fill bell hole and/or clean-up work area.	❖ Motion – Equipment (contact with underground and surface facilities) ❖ Electrical – Above and Buried	▪ Utilize signal person in high-visibility vest and air horn ▪ Be in constant visual communication with the operator

ADDITIONAL PRECAUTIONS

While performing the Tie-in to an existing piping system, crew must continually monitor the atmosphere in the immediate area, site hazard sources and conditions.

REFERENCES / ADDITIONAL INFORMATION

Strike Safe Work Manual

- COP 03 - Respiratory Protective Equipment
- COP 05 - Lock Out/Tag Out
- SWP 17 - Chemical hazards, Biological Hazards and Harmful Substances
- SWP 18 - Tools/Equipment/Machinery
- SWP 20 - Working at Heights
- SWP 22 - Material Handling
- SWP 25 - Ladders
- SWP 34 - Cranes Hoisting and Lifting devices
- SWP 46 - Excavating and Trenching
- SWP 62 - Ground Disturbance
- SWP 84 - Pipe Coating Application
- SJP 07 - Cold Cutting
- SJP 29 - Tie-In Welding (Pipeline)
- SJP 45 - Installation of Mud Plug

Regulations:

Alberta OHS Code

- Part 4 Chemical Hazards, Biological Hazards, and Harmful Substances
- Part 10 Fire and Explosion Hazards
- Part 15 Managing the Control of Hazardous Energy
- Part 16 Noise Exposure
- Part 18 Personal Protective Equipment
- Part 20 Radiation Exposure
- Part 25 Tools, Equipment and Machinery

British Columbia OHS Regulation

- Part 12 Tools, Machinery and Equipment Welding, Cutting and Allied Processes

Manitoba OHS Regulations

- Part 16 Machines, Tools, and Robots
- Part 17 Welding and Allied Processes
- Part 18 Radiation Part 19 Fire and Explosive Hazards
- Part 36 Chemical and Biological Substances

Saskatchewan OHS Regulation

- Part 361 Fire Extinguishers
- Part 370 5 Hot Work

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