

Concrete Pumping – Supplemental Field Guide		Task Risk	X	High
				Medium
				Low
				NA
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Scope

This field guide applies to all employees and contractors across FCX facilities involved in concrete supply and placement activities using telescopic pumps, stationary pumps, or similar pumps. It is intended to complement the **Concrete Handling Standard**, as well as all site-specific and manufacturer-provided work instructions and standard operating procedures.

Roles and Responsibilities

Pump Operator: Operates the pump, monitors pressure, ensures the danger zone is clear, and stops work if unsafe conditions arise.

End Hose Operator: Guides the hose, stays in visual contact with the pump operator, and only enters the danger zone when authorized.

Machine Assistant: Monitors hopper levels and pressure gauges and activates the emergency stop if needed.

Placement Crew: Waits for authorization before entering the danger zone and follows all instructions from the Civil Works Supervisor.

Before Starting Work

- ✓ Complete the Concrete Placement Plan for every job.
- ✓ Conduct a daily inspection of all equipment using the checklist. If any critical element is missing or damaged, stop work and report it.
- ✓ ☐ The end hose danger zone (whiplash zone) needs to be clearly identified prior to the start of work and access restricted to authorized personnel only.
- ✓ Confirm that all operators and crew are appropriately trained for their roles (pump operator, end hose operator, mixer truck driver).
- ✓ Check that the ground is level and stable. The slope must not exceed 3° unless otherwise specified by the manufacturer.
- ✓ Define and agree on a communication method (radio, hand signals, etc.) before starting.

During Concrete Placement

- ✓ ☐ Never let the material level fall too low, which could allow air to enter the delivery system.
- ✓ Stop pumping when switching mixer trucks until continuous flow is confirmed.
- ✓ Use only manufacturer approved hoses, pipes, and fittings in good ...

- ✓ Do not bend the end hose or attach unauthorized devices.
- ✓ Use guide ropes to control the end hose—never use hands directly.
- ✓ Stay out of the danger zone unless cleared and authorized by the operator.

Danger Zones

End Hose Zone: Twice the length of the hose. Stay clear during startup, cleaning, blockages, or if air enters the system.

Under the Boom: Risk of falling material.

Hopper Area: Risk of injury during cleaning and filling. Coordinate with the machine operator.

Transport Piping: Risk of burst or crushing, especially near shut-off gates.

Supporting Legs and Machine Base: Risk of crushing during deployment or retraction.

Stop Work Triggers

Stop work immediately if any unsafe condition is observed and notify your supervisor.

Use the emergency stop if:

- Unauthorized personnel enter the danger zone.
- Air or foreign material is detected in the hopper.
- System pressure exceeds safe limits.
- Concrete level in the hopper drops below the permitted limit or is not being monitored.

After the Job

- ✓ Depressurize the system before removing any piping or performing maintenance.
- ✓ Clean the system (pipes and hopper) following the manufacturer's instructions.
- ✓ Do not wash the mixer truck in the pump hopper.

Additional Safety Requirements

Lighting must be adequate for night work, especially around the hopper and placement area.

Protective guards must be in place around moving parts and hot surfaces.

No one is permitted on or beneath unauthorized areas, such as the machine, while it is in operation.

Do not manipulate the discharge chute while the mixer truck is moving.

Never move the mixer truck with chutes extended.



FCX Concrete
Handling SOP.pdf



FCX Concrete
Placement Plan.pdf



FCX Do's and Dont's
of Concrete Pumping