

Concrete Pumping Safety Program

Guy's Construction
123 Main Street, Anytown, CA 90210

29 CFR 1926.702(a) / ACI 304

Effective Date: June 08, 2026

SAMPLE DOCUMENT - NOT FOR COMPLIANCE USE

JURISDICTION AND REGULATORY FRAMEWORK

- 29 CFR 1926.702(a): concrete pump truck outrigger and stability requirements
- 29 CFR 1926.1408: power line clearance for boom pump operations
- ACI 304: guide for measuring, mixing, transporting, and placing concrete
- Manufacturer operation manual: specific to pump model

STATE-SPECIFIC: California has additional requirements:

- stroke of not less than 1 1/2 inches
- at a point no greater than 50 feet upwind from the section loading point in the belt entry when the belt air flows over the loading point or
- carbon monoxide poisoning or asphyxiation
- guy or brace to support framed panels or concrete forms
- high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels
- A string of outdoor lights suspended between two points more than 15 feet (4.57 m) apart
- must simultaneously open all ungrounded conductors
- a guy or brace to support framed panels or concrete forms from falling
- must be enclosed to prevent accidental contact with energized parts
- impalement hazard from protruding rebar
- not used for emplacement of fluids underground
- at least three feet [91.44 centimeters] below the final surface contour, and a cap with file number shall be welded thereon
- wire ropes in service used to hoist (1) Persons in shafts and slopes underground; (2) Persons with an incline hoist on the surface; or (3) L
- the appropriate Conservation Division District Office before work is started
- a tank used to (a) relieve surges in a hazardous liquid pipeline system or (b) receive and store hazardous liquid transported by a pipeline

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1.0 PURPOSE AND SCOPE

This Concrete Pumping Safety Program covers boom pump and line pump operations on Guy's Construction projects.

29 CFR 1926.700-706

- formwork designed by qualified person, shoring inspection, reinforcing steel impalement protection, post-tensioning safety, concrete bucket/pump safety per 1926.700-706

29 CFR 1926.700-706

- formwork designed by qualified engineer or built per ACI 347; shoring/reshoring calculated for full load; inspection before during and after pour

29 CFR 1926.703

- impalement protection: rebar caps, troughs, or wooden caps on all protruding reinforcing steel where workers could fall onto it

29 CFR 1926.701(b)

2.0 PUMP TRUCK SETUP AND STABILITY

Concrete pump trucks have tipped over and killed workers. Proper setup is critical.

- Outriggers fully extended and on firm footing (pads or cribbing on soft ground)
- Level the truck before deploying the boom
- Ground conditions: verify bearing capacity. Do not set up near excavation edges or slopes.
- Lock outrigger pins before boom operation
- No outrigger retraction while boom is extended
- Chock wheels on the delivery side if truck is on a slope

3.0 BOOM PUMP OPERATIONS

- Operator: trained and authorized by the pump company on the specific model
- Boom extension: unfold in the sequence specified by the manufacturer
- Swing radius: clear all personnel from the boom swing path
- No climbing on the boom. Use the end hose holder for positioning the hose at the pour point.
- Wind: stop boom operations when wind exceeds manufacturer limits (typically 30 mph)
- Pipeline blockage: relieve pressure before attempting to clear. Never stand in front of the hose end during clearing.

4.0 LINE PUMP OPERATIONS

- Pipeline: properly clamped and secured at all joints and direction changes
- Pipe supports: pipeline does not bear directly on rebar, formwork, or structural elements without protection
- Reducers: properly connected, no leaks under pressure
- End hose: controlled by an experienced nozzle person. Never let go of the hose during pumping.
- Pressure relief: know the location and operation of the pressure relief system

5.0 POWER LINE CLEARANCE

Boom pump operators must maintain minimum clearances from overhead power lines per Table A (1926.1408). A concrete pump boom is a crane boom under Subpart CC when near power lines.

- Pre-pour survey: identify all overhead power lines within boom reach + 20 feet
- If lines cannot be de-energized: use a dedicated spotter and maintain Table A clearances
- Minimum 20 feet from lines up to 350 kV (OSHA default when voltage is unknown)

6.0 PIPELINE AND HOSE SAFETY

- Inspect all pipe, couplings, and clamps before each use
- Replace worn or damaged pipe sections, clamps, and gaskets
- Secure pipeline at all bends and vertical runs to prevent whipping if a coupling fails
- Blowout of a coupling under pressure can propel concrete and pipe fragments - keep personnel clear of joints during pumping
- End hose: heavy-duty rubber rated for the pump's maximum pressure

7.0 CONCRETE WASHOUT

- Designated washout area: lined pit or portable containment
- Washout water pH 11-13 (corrosive) - do not discharge to storm drains
- Pump operator responsible for cleaning boom and hopper at the designated washout, not on the ground
- PPE during washout: rubber gloves, safety glasses (concrete is caustic)

8.0 PERSONNEL HAZARDS DURING PUMPING

- Struck-by: boom movement, hose whip, pipeline blowout
- Concrete burns: prolonged skin contact with wet concrete causes alkali burns (pH 12-13). Wash immediately.
- Silica exposure: dry concrete dust during hopper loading or cleanup
- Noise: pump operation generates 85-95 dBA. Hearing protection for operator and nearby workers.
- Caught-in: never reach into the hopper, agitator, or piston area. Full lockout before maintenance.

9.0 TRAINING REQUIREMENTS

- Pump operators: manufacturer-specific training on the pump model
- Nozzle persons: end hose handling, blockage procedures, communication with operator
- All workers near pump: setup exclusion zones, boom swing awareness, pipeline safety
- Concrete burn prevention for all concrete workers

10.0 RECORDKEEPING

Record	Retention	Notes
Pump inspection records	1 year	Pre-operation daily
Operator training/authorization	Duration of employment	Per pump model
Incident reports	5 years	Near-misses included
Power line survey records	Project duration	Per setup location

California STATE-SPECIFIC REQUIREMENTS

- stroke of not less than 1 1/2 inches
- at a point no greater than 50 feet upwind from the section loading point in the belt entry when the belt air flows over the loading point or no greater than 50 feet upwind from the point where belt air
- carbon monoxide poisoning or asphyxiation
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- the appropriate Conservation Division District Office before work is started
- a tank used to (a) relieve surges in a hazardous liquid pipeline system or (b) receive and store hazardous liquid transported by a pipeline for reinjection and continued transportation by pipeline

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APPENDIX A: CONCRETE PUMP PRE-OPERATION CHECKLIST

Date: _____

Project/Pour Location: _____

Operator: _____

Pump Model/ID: _____

Item	Notes	OK	N/A
Outriggers fully extended on solid ground/pads			
Truck level (check bubble level)			
Boom pins and locks in place			
Pipeline clamps and couplings tight			
End hose in good condition			
Pressure relief system functional			
Overhead power lines identified	Clearance: ____ ft		
Swing radius clear of personnel			
Communication established (operator <-> nozzle person)			
Washout area designated			
Concrete burn PPE available (gloves, glasses)			
Emergency stop location known			

Pump Operator: _____

Date: _____

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