Formwork—Placing concrete

Explain dangers

When it comes to placing concrete, the most important consideration is to ensure that formwork and falsework are complete.

Some of the major hazards associated with placing concrete include

- **Overloading formwork and falsework**, especially if concrete piles up in one location or is poured too fast
- **Working at dangerous heights** near perimeters of decks, stairs, and shaft openings, or accessing platforms on wall and column forms
- **Electrocution and shock** if power tools, extension cords, and other electrical equipment are used near wet concrete or other wet areas. Concrete buckets and concrete pumps can also make contact with overhead powerlines.
- **Overhead powerlines, being struck by equipment, and pinch points** when receiving concrete pumps or buckets
- **Skin burns, severe allergic reactions, and dryness** if skin is exposed to wet concrete, if clothing becomes soaked, or if concrete enters your boots
- **Slips and trips** due to poor housekeeping
- **Cuts and impalement** when rebar is not properly protected with caps.

Identify controls

- Have guardrails in place around perimeters, stairs and shafts, and work platforms on walls and column forms.
- Ensure that formwork has been inspected by a professional engineer or by a competent worker designated by the professional engineer before the placement of concrete.
- Make sure all rebar that is not part of the pour is properly capped to avoid cuts, abrasions, and impalement.
- Before pouring, have extra shores and other materials readily available in case of an emergency.

- Inspect forms before the pour to ensure they are free of debris.
- Ensure the area around the pour is clean to avoid slips and trips.
- Always follow the specified pour rate, techniques, and procedures.
- Monitor the condition of forms before pouring and as concrete is placed. Bulging, slipping, uplifting, sagging, etc., are signs that the pour should be stopped immediately.
- If using a scaffold to access the top of a form, ensure it has been properly inspected by a designated competent worker or engineer.
- Always use 3-point contact to climb the scaffold ladder.
- If guardrails are missing from the scaffold, you must use a travel restraint system.
- Power supplies and extension cords should not be used unless they are equipped with ground fault circuit interrupters (GFCIs).
- Tape the top of your boots to your pants to prevent wet concrete from getting in.
- If your clothing becomes soaked, change clothes and clean your skin immediately.
- Workers not involved in the pour should be kept away from the area.

Demonstrate

If the situation allows, take the crew to an area where forms are being installed to observe the process. Identify GFCI-equipped circuits.