

02.06.2023

# CONCRETE PLANT OPERATION AND SAFETY

## CEMENT THIS IN YOUR MEMORY.

Concrete plants are a key component of the Company's business model and keeping these facilities and equipment safe and operational is critical to our success. Each plant has unique hazards specific to that plant. High voltage, moving parts, vehicular traffic and "caught-in between" hazards are present at each plant. Until you have been properly trained and learned the process of operations of the plant, you should be escorted by a trained employee-owner. Improper use of machinery such as loading bins and conveyors and mishandling of materials such as cement and aggregate can lead to serious injuries.

### SITE ACCESS

- Access is restricted to authorized personnel only.
- Visitors must report to the plant office and sign in and out.

### SITE PLANNING

- Traffic Flow
  - + Site selection and plant setup should be planned to provide safe access and egress to the site, employee-owner parking, plant location, and storage of materials.
  - + Where possible provide one way traffic to avoid head-to-head traffic conflicts and reduce the need for backing.
  - + Provide appropriate signage to direct employee-owners, concrete trucks, and delivery vehicles around the site.
- Drainage
  - + Plants sites should have a standalone Stormwater Pollution Prevention Plan (SWPPP) or be part of a project specific SWPPP.
  - + Permitting and inspection requirements to be met / maintained.
  - + Spill Prevention, Control, and Countermeasure Plan (SPCC) is in place prior to plant operation.
  - + Correct drainage, as needed, to removed ponding / sitting water due to rain or flooding.
  - + Use tracking pads as needed to prevent tracking off the plant site.

### PLANT ERECTION AND DISASSEMBLY

- Refer to the Crane Safety and Rigging a Load policies for additional information relative to plant erection and disassembly, including critical pick planning.
- Ensure chains and slings are labeled, rated, in good repair and are stored properly.
- Ensure you know the Working Load Limit (WLL) prior to any lift.
- Ensure a competent signal person is used when required.
- Ensure come along chains and safety latches on hooks are in good repair.

### LIGHTING

- Install adequate lighting throughout plant site for night work operations.

### VEHICLE ACCESS / EGRESS / OPERATION

- Maximum speed limit while on the concrete plant property is 10 mph.
- All required signage including one-way traffic signage is in place and must be followed. Trucks will give way for front end loaders.
- Truck drivers must remain in the cab of the truck and visible to the loader operator at all times during loading.
- Ensure back up alarms are functioning.
- Signalers are required for backing vehicles when the operator's view of the path of travel is obstructed.
- Signalers are required when the dump truck with a raised box is within twenty (20) feet of overhead power lines/structures.
- Use three points of contact when mounting and dismounting the machine.
- Workers and equipment operators will follow the Safe Limit of Approach – not entering within twenty (20) feet of mobile equipment.

### GROUND PERSONNEL ACCESS / EGRESS

- Be aware of the sequence of operation and stay out of the Path of Travel of moving vehicles and equipment.
- All walkways, stairways, access / egress points, and access to emergency equipment are to be kept clean and free of obstructions at all times (remove any build up of debris or snow / ice that may accumulate)
- Keep walkways, halls, and stairs clear of tripping hazards (i.e., electrical cords, hoses)
- "Authorized Entry Only" "Danger" & "Warning" Signs as required.
- Use de-icing salt in areas where ice can build up potentially causing a slip hazard

### INSPECTIONS

- A pre-operational safety inspection is to be completed prior to using equipment.
- Do not use defective equipment or machinery, inform your foreman or superintendent, and note the defect on the Equipment Inspection Form
- Before starting machines or equipment, ensure guards and safety devices are in place, adjusted and functioning properly.
- Before using PPE inspect it for defects / wear-and-tear – do not use unless it is in acceptable condition.

### MACHINE GUARDS

- Moving parts within seven feet of ground level must be guarded.
- All guarding provided by manufacturer must be in place during operations.
- Ensure all moving components are guarded during operations.
- Ensure guarding is per the manufacturer's specifications.
- Ensure guarding is present at all pinch points and beneath conveyors.

### AGGREGATE PILE MANAGEMENT

- Freezing/thawing, changing moisture content and other conditions can affect pile stability.
- Piles shall be kept at the 'angle of repose' and not be 'undercut.'
- Pile stability will be maintained using excavators. loaders and bulldozers, as required.
- Pile haul roads and ramps must have berms or barriers to prevent vehicle tipping.
- Pile dumping areas should be kept level to prevent truck tipping when dumping.

### LOADING / UNLOADING OF BULK CEMENT

- Each plant has written safety procedures posted at each loading station; it is imperative that these procedures are followed.
- Do not overfill storage silos / portable cement storage pigs to avoid ventilation of cement dust.
- All PPE must be worn while loading and unloading cement.

### CONFINED SPACE ENTRY

- Only confined space entry trained personnel are permitted to enter the confined space.
- Confined spaces must have signage indicating the hazard and be secured from access.
- Refer to the Confined Space Policy for more information.

### FIRE SAFETY

- Fire extinguishers will be readily available during plant operations.
- Propane, Oxygen and Acetylene cylinders, regulators, valves, connections, and hoses shall be regularly inspected to ensure proper function and that there are no leaks.

### WORKING AT HEIGHTS

- Only use ladders suited for the job (extension / step).
- Only use ladders that pass inspection prior to use. Ladders must be fiberglass or wood. Do not use aluminum ladders.
- Ensure Catwalks and Ramps have adequate fall protection in place.
- Guardrails must have a toe board, mid rail and top rail and be securely fastened in place.

### ELECTRICAL

- Follow Single Wire Protocols (SWP's) when working on or near plant electrical. Lock Out Tag Out must be used. Refer to Lock Out Tag Out policy for more information.
- Use GFCIs in outdoors / damp locations.
- Electrical Rooms must be kept clean and free from debris and dust. Only authorized personnel should be allowed into the electrical rooms.
- Electrical cords must not have any cuts or exposed wires.
- The ground pin on the plug must be intact.

### STORAGE

- Keep designated storage areas free from clutter.
- Keep stacked items accessible.
- Ensure material is stored so that it cannot topple or fall (and is protected from wind if outside).

### HAZARDOUS MATERIAL LABELING

- Ensure all chemicals are clearly labeled and stored correctly (i.e., away from overhead power lines &/or trenches)
- Consult Safety Data Sheets (SDS) for specific material considerations.
- SDS' are present on site for every hazardous product.
- If any SDS are missing your Branch Safety Manager can locate them for you or they can be found on the manufacturer's website.
- Have an appropriate spill kit ready and available for use.

### DUST CONTROL

- Silica dust is hazardous.
- Airborne dust is controlled using water distributed by the mister machine, water tank trucks and wet sweeping.
- Follow appropriate operation and maintenance procedures to ensure storage facilities are operating efficiently.

### RUNOFF CONTROL

- Runoff from the concrete plant should be minimized to prevent contamination.
- Clean up spills of cement and concrete as soon as possible.
- Install washout pits to collect runoff from concrete truck cleaning operations.

### HOUSEKEEPING

- Refer to Housekeeping Policy for more information.
- Housekeeping shall be ongoing during plant operations.
- Each employee is responsible for maintaining and cleaning their work area daily (or more frequently if necessary)
- Aggregate fallout shall not be allowed to accumulate to the point of becoming a hazard.

### TRAINING

- Employee-owner orientation to include roles, responsibilities, hazards, incident reporting, applicable workplace task standards, Hazard Communication, etc.)
- Workers exposed to, required to work with, or required to clean up / dispose of Workplace Hazardous Materials Information System (WHMIS) controlled hazardous products, must be trained in WHMIS, and have supplemental task specific training.
- Workers exposed to fall hazards, must be trained in 'Working at Heights.'
- All workers must be trained in the use and maintenance of any PPE they are required to wear including fall protection.
- Ensure workers entering a confined space have adequate training and that the rescue workers are trained in confined space rescue, and on how to operate the rescue equipment.
- Only trained, authorized personnel are allowed to operate or perform maintenance on vehicles / machinery / equipment.