

Canadian Precast/Prestressed Concrete Institute

SUSTAINABLE

PLANT

PROGRAM



CPCI Canadian Precast Concrete Sustainable Plant Program

Canadian Precast/Prestressed Concrete Institute (CPCI) officially launched the new Sustainable Plant Program at CPCI's Summer Board Meeting in Whistler BC. May 14th – 17th, 2012. The goal of this optional program is to improve the environmental impact at the manufacturing level while creating a culture of sustainability within the industry. The benefits of sustainable business practices are well documented. As the leading technical resource for the precast concrete industry in Canada, CPCI is providing the tools for its member plants to measure and implement changes that will have a measurable improvement in their environmental and economic performance using a web based Software Tracking Program.

OVERVIEW:

The CPCI Canadian Precast Concrete Sustainable Plant Program is a program designed to encourage continuous improvement and compliance to environmental and sustainability regulations and standards. Environmental performance will be determined based on the intents of all applicable government environmental policies. Sustainability performance will build on the Canadian Precast Concrete LCA research currently underway by CPCI. The CPCI program is not intended to replace municipal, provincial or federal environmental acts and their requirements, it is a program designed to track the improvements implemented by each manufacturer and it is the responsibility of each individual manufacturer to understand and comply with the applicable government requirements. As part of this program, facilities will be required to submit confidential benchmark reports on a semi-annual basis. The aggregated results of the program will be communicated to the public every two years through the Canadian Precast/Prestressed Concrete Institute Sustainability Report.



The environmental and sustainability requirements are based on the following sub-categories:

- A. Environmental Performance Standards
 - a. Dust control
 - b. Process Water, Storm Water and Chemical Management
 - c. Noise Control

- B. Sustainability Performance Standards
 - a. Energy
 - b. Materials
 - c. Transportation

A. REQUIREMENTS FOR ENVIRONMENTAL PERFORMANCE STANDARDS

- a. Dust Control – The facility takes the following measures to control dust including any dust produced by traffic, storage activities or the handling of materials, and meets the requirements of local ordinances.
1. The facility maintains a best management practice plan for the control of fugitive dust emissions.
 2. All bulk cementitious materials are stored in silos equipped with bag houses/ dust collectors.
 3. Facility ensures that silo emissions are in compliance with their best management practices.
 4. All silo emissions meet relevant government requirements.
 5. All cementitious material bag houses are inspected a minimum of once per month.
 6. All outside aggregate storage is in three-walled enclosures.
 7. Aggregate is washed prior to receiving at plant.
 8. All exterior aggregate conveyor systems are equipped with protective wind enclosures.
 9. All weigh hoppers are located inside an enclosed building.
 10. All unpaved traffic areas on plant facility (including storage area traffic locations) use approved dust suppression techniques or environmentally friendly chemicals.
 11. Paved traffic areas (including storage area traffic locations) have a regular sweeping program in place.
 12. All sand blasting (or similar post-manufacture applied finish that creates dust) is done in an environment (indoors or outdoors) that controls and collects fugitive dust.
 13. Crushing of waste concrete is conducted in such a manner not to affect the environment as defined in their facility best management practices.
- b. Process Water, Storm Water and Chemical Management Requirements - The site does not discharge untreated process / waste water to the natural environment, and meets the requirements of local ordinances.
1. The facility maintains a best management practice plan for the control of process water, waste water and chemical management.
 2. Process / waste water is; directed to the storm sewer OR recycled in the process OR collected for transfer to an approved off-site facility OR if discharged to the ground the plant ensures that the runoff has acceptable levels of pH, acceptable levels of suspended solids, and acceptable hydrocarbon concentration.
 3. Process water discharged to the ground is sampled and analysed a minimum of once/month.
 4. Storm water run-off from the yard and traffic areas is; captured and recycled on site OR captured and discharged to the municipal storm sewer OR captured and transported off-site for disposal OR if discharged to a creek, has been reviewed and is in compliance with local authority approved drainage plans.
 5. All effluent from acid etching or retarding chemical washing procedures are captured on site and disposed of according to applicable requirements.
 6. All sealants, acids, chemical retarding agents or form release agents meet acceptable VOC requirements.



7. All chemicals stored in clearly marked containers with safety markings, and enclosed in spill containment areas where required by WHMIS.
 8. All fuel is stored on-site in approved containers and enclosures as required by applicable regulations.
- c. Noise Control Requirements** - The facility makes efforts to control noise to surrounding sensitive receptors (examples; residences, hotel/motels, nursing homes, hospitals, etc.), and meets the requirements of local ordinances.
1. The facility maintains a best management practice plan for the control of noise.
 2. The facility has a noise reduction plan such as; performing lower dBA activities, OR using acoustic enclosures OR enclosing noise sensitive operations when;
1. Manufacturing during non standard hours according to local ordinances and/or
2. When operating within “reasonably close” distance to sensitive receptors.
 3. The facility controls nuisance vibrations to surrounding sensitive receptors.



General - The facility documents in writing all environmental incidents that contravene applicable environmental regulations or CPCI Canadian Precast Concrete Sustainable Plant Program requirements. Such documentation includes resolution of complaints. The plant notifies regulatory authorities as required by legislation.

B. REQUIREMENTS FOR SUSTAINABILITY PERFORMANCE STANDARDS

a. Energy

1. The facility maintains a best management practice plan for energy consumption.
2. All energy consumption tied to the manufacturing process is measured and benchmarked; Energy consumption includes electricity, natural gas, and various fossil fuels.
3. All energy consumption tied to office and administration is measured and benchmarked.
4. The facility implements a reduction plan for plant and office energy consumption.
5. The facility reports (in confidence) energy consumption semi-annually to CPCI, which is then aggregated for industry averaging. The facility benchmarks against the industry and its plan.

b. Materials

1. The facility maintains a best management practice plan for material usage and disposal.
2. The facility tracks all waste streams and implements a plan to reduce non-recyclable waste. The facility recycles production waste and measures recycling activities.
3. The facility recycles waste from office and administrative activities.
4. The facility reports (in confidence) year over year waste reduction from operations to CPCI, which is then aggregated for industry averaging. The facility benchmarks against the industry and its plan.

For more information about CPCI's Sustainable Initiatives, visit :
www.sustainableprecast.ca

