



Bruce Nuclear Oil Fired Steam Boiler Plant Installation

Location: Bruce Nuclear Power Plant, Ontario, Canada

Client: BFC Industrial

Gryphon Contact: Paul Durkin

Project Summary Construction of a new steam plant facility consisting of three (3) oil fired 150,000 lb/hr boilers, water treatment plant, fuel oil handling and unloading, three (3) deaerators, and all equipment and systems to form a complete and independent steam and glycol heating plant. Contract also included a new Bruce site wide SCADA system replacement with a Bailey Freelance System.

Project Services Gryphon provided conceptual and detailed design of electrical, controls, mechanical, civil, and environmental systems as part of the design/build contract including:

- Preparation of main equipment bid specifications, bid reviews, and procurement recommendations.
- Detailed engineering and designs for all installation/modification work (architectural, civil, mechanical, electrical, and instrumentation and controls.
- Review of all vendor drawings and documents.
- Engineering and design to support the environmental assessments and permitting applications prepared by the environmental consultant.
- Further project development included design of effluent treatment and holding system for Bruce Steam Plant boiler blowdowns, condensate, and water treatment plant effluent. Steam plant effluent is neutralized, diluted, and cooled to discharge directly to the lake. The normal operation of the system is continuous discharge. However, provisions were made for effluent quality excursions to include a two-tank system to hold and treat waste water in a batch process that is sustainable at full plant load.
- Establishment of the new standby power diesel generator facility and distributed control system. Integration of the diesel generator controls and all 13.8kV breakers associated with the standby power facility at the Condensate Plant substation.
- Upgrade Sewage Lift Station D to handle increased instantaneous flow from steam plant sand filter backwash.



Gryphon International Engineering Services Inc.

80 King Street, Suite 404, St. Catharines, Ontario, Canada L2R 7G1
Phone: (905) 984-8383 Fax: (905) 984-8394
e-mail: gryphon@gryphoneng.com www.gryphoneng.com