

NUCLEAR POWER STATION EMERGENCY GENERATOR REPLACEMENT

IN-PLACE MACHINING INSPECTION LEADS TO FULL ENGINE REPLACEMENT

Goltens received a call from a Nuclear Power Station in upstate New York to perform an inspection on one of their EMD 645-20 Emergency Diesel Backup Generators (EDBG) for Unit 2, one of the two nuclear reactors that generate a combined capacity of 1,907MW power.

The engine had suffered a bearing failure during operational testing and Goltens was inspecting for a possible in-place line boring job but the plant made the decision based upon the condition of the engine to perform a complete replacement.

GOLTENS' WORKSCOPE:

Goltens' tasking was quickly shifted to supporting the power plant team with mapping out and executing an efficient project plan and timeline to restore the EDBG to operation. Goltens deployed senior technical resources to map out all of the piping, record positions with photographs and video and recorded all alignment measurements as well as assisted with the development of the rigging plan prior to decoupling and disassembly.

Working with a very capable technical team from the power plant, Goltens' Engine Teams worked day and night shifts throughout the process to provide oversight and technical input to support the project. Goltens performed inspection of the newly delivered engine and worked with the team to properly place and connect all of the removed auxiliary equipment using the photographs and measurements taken prior to disassembly.

REPAIR RESULTS:

Once completed, Goltens installed the coupling to the generator and performed engine alignment prior to successful operational testing. The overall job was completed roughly 2 weeks ahead of schedule.

PROJECT FACTS: NUCLEAR EDBG REPLACEMENT

EDBG Make/Model:	EMD645-20
Output:	3,130 kW
Location:	Upstate NY
Plant Capacity:	1,907 MW



Figure 1: Rigging replacement EDBG from trailer to skid



Figure 2: EDBG being slid into powerhouse on skid



Figure 3: Installation of EDBG Exhaust Bellows



Figure 4: Replacement EDBG installed and operational