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PROJECT BRIEF

GNL Mejillones - Chile

CONDOR SEISMIC MONITORING SYSTEM

PROJECT OBJECTIVE

Post earthquake assessment of the GNL Mejillones Liquefied Natural Gas (LNG) Plant upon the occurrence of a seismic event.

PROJECT ACHIEVEMENT

The project objective was achieved by implementing the Condor Seismic Monitoring System solution, which collects data from two free-field seismic stations and determines, in real-time, whether the earthquake's effects on the plant have or have not exceeded its Operating Basis Earthquake (OBE) design requirements.

GNL MEJILLONES - CHILE

CONDOR SEISMIC MONITORING SYSTEM

GNL Mejillones was established by GDF SUEZ and the Chilean State Copper Company CODELCO with the aim of contributing to energy security and reliability of natural gas supply to the mining industry in Northern Chile.

The plant, located in the Bay of Mejillones - Antofagasta Region, has the function of regasification of liquefied natural gas, which is transported to customers through pipelines throughout the region.

Due to it's location, GNL Mejillones design included special provisions for earthquakes and required a seismic monitoring system that in the event of an earthquake could quickly provide information whether or not the design Operating Basis Earthquake (OBE) limits were exceeded to launch the emergency response plan and assess conditions for plant safe shutdown.

The Condor System is the most comprehensive earthquake monitoring solution originally designed for the nuclear industry -- including seismic-event data recording, retrieval, analysis and notification via hardware alarms and hard-copy reports -- all in one system, and in full compliance with industry standards and regulations (IEEE, ANSI, NRC); and, in addition to the Event and SOH alarms, it provides plant operators and I&C personnel with extensive built-in utilities for easy maintenance.

Our implementation of the Condor System solution for GNL included two independent free-field stations and a full Condor Central Controller cabinet with Computer, Alarm, Printer and UPS panels. The two free-field seismic stations are continuously monitored by a dedicated controller, which upon the occurrence of a seismic event, collects the records and automatically process them to determine OBE exceedance, providing alarms, reports, and notifications to the plant operators.

The Condor System was successfully commissioned by OSS personnel in April, 2010. Ever since we have provided training to operators and maintenance technicians, as well as system calibration services during the first plant's maintenance shutdown cycle.

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