Integrity
MUNICIPAL SYSTEMS

PROJECT PROFILE: LA MESA WTP, PHILIPPINES

Bauer International Philippines Installs IMS Emergency Chlorine Vapor Scrubbers to Protect Maynilad's World-Class Water Treatment Plants from Chlorine Leaks

In 2014, bids were solicited to design, supply, install, and commission two Emergency Chlorine Scrubber Systems at the La Mesa Treatment Plants 1 and 2 in Quezon City, Philippines. La Mesa Treatment Plant 1 is a conventional-type plant with a design capacity of 1,500 million liters per day (MLD) providing safe, potable drinking water to almost one million people in the East Zone Concession Area of Manila Water. La Mesa Treatment Plant 2 is a pulsator-type plant with a design capacity of 900 MLD. Both treatment plants are operated and maintained by Maynilad. Bauer International Philippines was awarded the contract and contracted with Integrity Municipal Systems (IMS) to supply and commission the two chlorine scrubbers.

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>
> Mario B. Tacbas
> President and CEO
> Bauer International

Safety is one of the main objectives in every water treatment plant, especially when chlorine gas storage and use are involved. Being familiar with the experience of IMS and the quality and reliability of the IMS chlorine scrubber systems, Bauer International did not hesitate to propose the IMS EVS-2000 Chlorine Scrubber System, which received Maynilad's approval based on IMS' proposed specifications.

IMS manufactured and supplied two three-stage chemical absorption systems, consisting of a horizontal crossflow spray system followed by two horizontal crossflow packed bed sections. The systems were designed to neutralize a one-ton, full-scale chlorine gas release at a minimum removal efficiency of 99.99%, surpassing the requirements of the Uniform Fire Code. Both systems were equipped with duty and standby seal-less, single-stage centrifugal vertical pumps and a centrifugal-type, backward-inclined wheel fan placed downstream of the scrubbers to ensure negative pressure until the gases are completely scrubbed. Both scrubbers were designed to treat leaks escaping the chlorine storage area, as well as the chlorine feed and evaporator rooms.

A pre-wired, factory-tested, FRP control panel was mounted locally on each system to ensure proper control and operation of the systems in both standby and manual mode. The process controls ensure that the system will start automatically in the event of a gas release. Remote chlorine gas sensors located in every area where chlorine gas could be present signal the scrubber control panel to automatically start the system when evidence of a leak is detected.

Following successful installation of the scrubbers by Bauer International, IMS performed commissioning and operator training. More than 40 Maynilad employees participated in the training, including observing system performance during a simulated release of chlorine gas. The trainees were also shown a video of a catastrophic release test conducted in 1992 at an independent laboratory by IMS CEO, Roop Jain.

Mario B. Tacbas, President and CEO of Bauer International, expressed his appreciation of IMS' support and professionalism: "IMS provides high-quality engineering and exhibits a commitment to customer satisfaction. IMS provided support throughout the process, right through commissioning and training of the operations team. We at Bauer International greatly appreciate their performance and we look forward to a long association with IMS."

La Mesa WTP 1

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