ASSISTING A COLUMBIAN COMMUNITY RESPOND TO TOUGHER WATER REGULATIONS

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ABSTRACT

Colombia is strengthening the standards for treatment processes to protect public health from chlorine-resistant pathogens such as Giardia and Cryptosporidium. UV Pure recently assisted Progresar E.S.P., a water services company by adding disinfection to a potable water supply serving 5,000 residents outside Bogota.

This project marks the first installation of UV Pure systems for potable water disinfection in Colombia.

UV Pure Upstream systems, with Crossfire™ technology, is ideal for this challenging application providing a minimum UV dose of 40mJ/cm^2, even when UVT is as low as 75%. The plant operates with an average flow of about 12L/sec (190 gpm) and draws water from a nearby river, with water quality impacted by agricultural and wastewater effluent. Ten UV Pure Upstream 30-75 systems are now working to inactivate pathogenic organisms such as Giardia, Cryptosporidium, bacteria and viruses, before chlorine is added to protect the water.

This approach can help reduce the use of chlorine gas with a safer alternative. UV Pure systems can be remotely monitored and controlled without the need for the demanding safety protocols and management that chlorine disinfection systems require.

The Upstream units are installed in a modular manifold system, which provides significant operational flexibility and system reliability. During peak demand, the units can work together to achieve treatment requirements, but during low demand individual units can be shut down. This flexibility is ideal for conserving energy and extending system life and also simplifies maintenance.

The modular design helps accommodate growth to 12,000 residents in the future. Increased treatment capacity can be achieved by simply adding more elements to the plant's control room.

The facility will also benefit from the robust automatic cleaning system that prevents fouling of the quartz sleeve. This simple process helps to make UV Pure systems virtually maintenance free. The presentation will include photos & details of this innovative, new case study.

Keywords: UV disinfection, water treatment, purification, bacteria removal, wastewater