Portable Treatment

Remote camps in Iraq use portable wastewater system

By Tristian Bounds

BGP Intl., a seismic surveying firm, needed portable wastewater treatment systems for a series of 500-person remote camps in Kurdistan, Iraq. Units needed to be robust enough to meet treatment limits with minimal maintenance and simple operation.

After viewing a similar system in operation at a mining site in Texas, BGP chose two portable wastewater treatment systems. The plug-and-play system produces effluent suitable for reuse (subject to local regulations) and is easy to ship, set, operate and move.

Technology Selection

Erbil, the capital of Iraq's autonomous province of Kurdistan, is known as one of the oldest continuously inhabited places in the world. Until recently, the region had been comparatively free of the strife that has plagued most of Iraq. The government has worked hard to stabilize the area and has signed contracts with international companies to develop Erbil's oil and gas reserves. One such company is ExxonMobil, which contracted with BGP Intl. to conduct seismic surveys.

In October 2012, BGP's Houston office contacted Orenco looking for mobile wastewater treatment systems for a series of surveying camps around Erbil. These camps each would serve about 500 people and would include residence trailers, laundry and kitchen facilities, and toilets for day laborers.

Orenco research and development engineers suggested that BGP visit an Orenco AX-Mobile installation at a mining site in Catarina, Texas, to learn more about the company's technologies and products. After seeing the system, BGP gave Orenco the go-ahead to begin configuring the systems for its camps in the Erbil province.

System Customization

The company's engineer spoke with BGP's consulting engineer and personnel in-country about the design parameters for each installation. The engineer said that what they really needed was a "black box": a turnkey system that could be started up and left for three to 18 months with minimal operation and maintenance, yet still meet required treatment level limits.

Because none of the sites had personnel available who were experienced in maintaining wastewater treatment equipment, Orenco had to build a system that was basically hands off after startup. The company developed a customized AX-Mobile treatment package to meet BGP's needs for a simple-to-operate, relatively maintenance-free solution. The system includes gravity collection to an Orenco lift station with a 36-in. filament-wound basin. Effluent is pumped from the lift station to a Bluewater Technologies Eco MAT dewatering unit, then to two T-Max collection tanks, followed

These portable wastewater treatment systems are used at industrial sites like this seismic surveying camp in Erbil, Kurdistan, Iraq.

by three AX-Mobile treatment units. Finally, treated effluent runs through a UV Pure ultraviolet disinfection unit and is pumped out for subsurface dispersal. The resulting effluent is clear and odorless. The camps are on generator power entirely, so components were selected for their ability to withstand power fluctuations.

BGP conducts seismic surveys in a variety of areas around the Erbil province, so the company needed to make sure each system could be quickly and easily disconnected, then transported to a new camp when necessary. Orenco used quick-disconnect fittings and removable access equipment for rapid deployment and setup. These features helped make moving the system as simple as possible.

BGP has successfully moved two of the systems from their initial locations to other camps. Other companies in the region that need a robust, low-maintenance, portable solution also are looking into the AX-Mobile system.

"The [AX-Mobile] sewage treatment plant is a very good system, especially for a seismic crew camp," said Huangfu Lizhi of BGP. "As long as you take good care of it, it will work normally and you don't have to worry about anything. I would highly recommend the system to my colleagues." iWWD

Tristian Bounds is an R&D engineer for Orenco. Bounds can be reached at tristianb@orenco.com or 800.348.9843.

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