Adedge Technologies
Mining Projects Summary

Newmont Mining - TS Power Plant

In 2005, AdEdge Technologies Inc. (AdEdge) was contacted to provide equipment related design and implementation services to the Newmont Mining site located near Battle Mountain, NV. AdEdge worked with RTW/Tetratech to evaluate arsenic treatment options, and selected adsorption for the Newmont TS power plant potable water system. AdEdge fabricated an APU-25 lead/lag arsenic removal system designed for up to 25 gpm maximum flow. The adsorption system utilizes granular ferric oxide media. The small footprint system features a twin vessel configuration with automatic controls, series flow configuration, and a chlorine injection system.

Newmont Mining - Mill # 1

In 2004, AdEdge was selected by RTW/Tetratech and Newmont for implementing an arsenic treatment system for a Newmont Mining site located in Carlin, Nevada. Site personnel and engineers evaluated arsenic treatment options, and eventually selected adsorption for their Low Sheep Well site. AdEdge installed an APU-25 lead/lag arsenic removal system designed for up to 25 gpm maximum flow. The system utilizes Bayoxide E33 adsorption media. The treatment unit features a twin vessel series configuration with automatic controls.

PT - Newmont Mining - Indonesia

In late 2006, AdEdge was contacted by CH2MHill to assist Newmont Mining with a water treatment system for arsenic removal in Indonesia. AdEdge was selected among others as the vendor of choice to implement a 300 gpm design flow system to treat potable water in North Sulawesi. This project was initiated as part of closure activities for Newmont Minahasa Raya operations near the Bayut Bay. The proposed plant was designed, fabricated, and shipped by AdEdge in January, 2007 with installation by local Newmont personnel. AdEdge completed the startup, commissioning and training and commenced operations in February, 2007. Granular ferric oxide adsorption technology is used to remove the arsenic from 30 ppb to well below the 10 ppb treatment goals. The system is being operated and maintained by local representatives.

Barrick Gold – Turquoise Ridge JV, Nevada

In 2008, AdEdge was selected to design, fabricate and startup a potable water treatment system for Barrick Gold's Turquoise Ridge JV operation. The APU packaged unit will serve operations personnel and support facilities. AdEdge worked closely with RTW/TetraTech to provide the 25 gpm system for arsenic removal. The APU unit utilizes AdEdge's Bayoxide E33 (granular ferric oxide) media for adsorption and is configured series (lead/lag) flow design with automation and PLC controls. Design features include a remote monitoring module for operations personnel. Installation and startup is scheduled for January, 2009.

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Barrick Gold – Bald Mountain NV

In late 2008, AdEdge was selected again by RTW/Tetratech to design, fabricate and startup another potable water treatment system for Barrick Gold's Turquoise Ridge JV operation similar to Barrick's Turquoise Ridge system. This design was based on the successfully operating systems deployed previously at other mines. The AdEdge system utilizes AdEdge's Bayoxide E33 (granular ferric oxide) media for adsorption and is configured in series (lead/lag) flow design with automation and PLC controls. The system distribution serves operations personnel and support facilities. The AdEdge skid mounted, pre-packaged system installation and startup is scheduled for March, 2009.

Atlanta Gold – Idaho - Pilot Plant
Mine Drainage for Arsenic, Iron, and Manganese

Atlanta Gold (Idaho Operations) has plans to expand their Atlanta, Idaho mining operations and to address environmental related issues associated with non-point source runoff / discharges at the site containing arsenic and heavy metals. AdEdge was contacted along with other treatment vendors to submit proposals to address the mine drainage sources at the site. In October, 2008, based on demonstrated experience, AdEdge was selected and contracted to conduct piloting for Atlanta Gold to demonstrate removal of high levels of arsenic, iron, and manganese from inactive mine drainage areas referred to as the Adit 900 Area. A modular 3 gpm pilot plant consisting of two stages of treatment: AD26 oxidation/filtration followed by Granular Ferric Oxide Adsorption (Bayoxide E33) was deployed by AdEdge as a small scale version of the full scale process proposed. Over the 30 day pilot testing, AdEdge was very successful in reducing the target contaminants below the treatment criteria. Based on the success of the pilot, full scale plans are expected to commence for 2009 to provide a packaged treatment plant for this waste stream.

Gold Corp - Guatemala
Pilot plant and 500 gpm system.

Gold Corp's (Vancouver BC) operation in Guatemala is underway in developing and exploiting a gold ore body deposit in central Guatemala. For mining operations to ensue, the high yielding ore body is being dewatered, which is generating large volumes of extracted water which must be managed to meet environmental standards before discharge. AdEdge, via our Latin America partner, was contacted and engaged to provide a conceptual design, process, and plan for full scale treatment to address high levels of arsenic, iron, and manganese from dewatering operations. The first phase of the project following piloting will involve treatment for approximately 500 gpm design flow. Piloting will begin in February, 2009 as the first step to confirm technology effectiveness and gather specific design data for subsequent full scale implementation. A small scale 3 gpm pilot plant consisting of two stages of treatment: AD26 oxidation/filtration followed by Granular Ferric Oxide Adsorption (Bayoxide E33) will be deployed by AdEdge version of the full scale process proposed. Other design features will include chemical modules and solids management. Following successful piloting, full scale implementation is expected to commence in 2009.

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