



OBJECTIVE

Cu recovery from acid mine drainage

TECHNOLOGY

ChemSulphide®

PLANT CAPACITY

24,000 m³/day – 2008 plant

24,000 m³/day – 2014 plant

LOCATION

Dexing, China

BQE WATER SCOPE

Process design, oversight plant construction, commission and training, and ongoing operating services

AWARD

2008 China Mining Environmental Protection Award

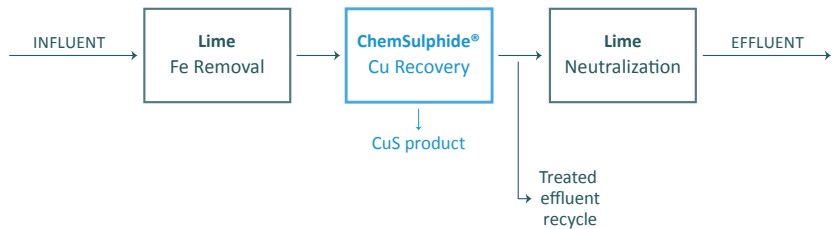
Project Overview

BQE Water established a joint venture with Jiangxi Copper Company to build and operate water treatment plants using BQE Water technologies. At the Dexing Mine, low-grade ore waste dumps generate copper-laden acid mine drainage.

To treat the mine water, a ChemSulphide® plant was built and commissioned in 2008. The plant flowsheet consists of a ferric iron removal stage followed by copper recovery and a final HDS (High Density Sludge) lime neutralization step. The copper is recovered as a high-grade concentrate and the treated effluent is either discharged to the environment or recycled onsite. In August 2014, a second ChemSulphide® water treatment plant was commissioned to provide excess water treatment capacity and to support future mine expansion activities.

The plants generate revenues from copper concentrate sales, ensuring that mine water treatment is both economically and environmentally sustainable. Revenues from copper recovery resulted in a payback on the first ChemSulphide® plant in less than three years.

Process Flowsheet



ChemSulphide® Plant Operation Results

	2014	2015	2016	2017	2018
Volume treated (m ³)	10,222,000	16,736,000	14,184,000	14,399,000	15,820,000
Cu recovered (lbs)	2,334,000	2,533,000	2,767,000	2,705,000	2,578,000
Cu production cost (US\$/lb)*	1.65	1.60	1.70	1.75	1.72

*Includes VAT