

HEAPREC

A METHODOLOGY FOR DETERMINING CYANIDE HEAP LEACH RECLAMATION PERFORMANCE BONDS

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ABSTRACT

This U.S. Bureau of Mines report presents the documentation for HEAPREC, a methodology for calculating reclamation performance bonds for cyanide heap leach operations. HEAPREC is a template developed for use with Lotus 1-2-3 release 2.01 or newer software. The report is presented in step-by-step "user's manual" format. Appendices contain detailed background and reference material on performance bonding, cyanide detoxification regulation, cyanide detoxification methods, general mine reclamation procedures, and an example bond calculation.

INTRODUCTION

HEAPREC was developed as part of the U.S. Bureau of Mines' program to provide Federal, State, and local governments with assistance on minerals-related issues. Requirements for reclamation performance bonding of hardrock mining operations are evolving for most jurisdictions, as are the methods and procedures for determining bond amounts. Reclamation bonds are increasingly being required to ensure monies are available for reclamation if an operator abandons a property or for some reason does not complete satisfactory reclamation. HEAPREC, a template for Lotus 1-2-3 software, is a standardized methodology that can be used by Federal and State land-managing agencies to determine justifiable reclamation performance bonds for cyanide heap leach facilities.

A copy of the HEAPREC computer program can be obtained by sending one double-sided, high-density, 5-1/4 in floppy diskette to the Western Field Operations Center, U.S. Bureau of Mines, East 360 Third Avenue, Spokane, WA 99202. Requests for the program should reference this report (IC 9328).

HEAPREC was patterned after BONDALC, a program developed by the South Dakota Department of Water and Natural Resources, Office of Minerals and Mining. The primary differences between BONDALC and HEAPREC are that HEAPREC includes procedures for determining and accounting for costs related to cyanide detoxification of heaps and solutions and HEAPREC can be readily adapted to account for specific reclamation requirements.