BETHESDA MINING COMPANY

Background:

Bethesda Mining is a midsized coal mining company with 20 mines located in Ohio, Pennsylvania, West Virginia, and Kentucky.

The company operates deep mines as well as strip mines. Most of the coal mined is sold under contract, with excess production sold on the spot market. The coal mining industry, especially high sulfur coal operations such as Bethesda, has been hard hit by environmental regulations. Recently, however, a combination of increased demand for coal and new pollution reduction technologies has led to an improved market demand for high sulfur coal.

Bethesda has just been approached by Mid-Ohio Electric Company with a request to supply coal for its electric generators for the next four years. Bethesda Mining does not have enough excess capacity at its existing mines to guarantee the contract. The company is considering opening a strip mine in Ohio on 5,000 acres of land purchased 10 years ago for $5.4 million.

Based on a recent appraisal, the company feels it could receive $7.3 million on an after tax basis if it sold the land today.

Strip mining is a process where the layers of topsoil above a coal vein are removed and the exposed coal is removed. Some time ago, the company would simply remove the coal and leave the land in an unusable condition.

Changes in mining regulations now force a company to reclaim the land; that is, when the mining is completed, the land must be restored to near its original condition. The land can then be used for other purposes. As they are currently operating at full capacity, Bethesda will need to purchase additional equipment, which will cost $49 million. The equipment will be depreciated on a seven year MACRS schedule. The contract only runs for four years. At that time the coal from the site will be entirely mined. The company feels that the equipment can be sold for 60 percent of its initial purchase price.

However, Bethesda plans to open another strip mine at that time and will use the equipment at the new mine. The contract calls for the delivery of 500,000 tons of coal per year at a price of $70 per ton. Bethesda Mining feels that coal production will be 750,000 tons, 810,000 tons, 830,000 tons, and 720,000 tons, respectively, over the next four years. The excess production will be sold in the spot market at an average of $64 per ton, Variable costs amount to $29 per ton and fixed costs are $4.2 million per year. The mine will require a net working capital investment of 5 percent of sales.

The NWC will be built up in the year prior to the sales. Bethesda will be responsible for reclaiming the land at termination of the mining. This will occur in Year 5. The company uses an outside company for reclamation of all the company's strip mines. It is estimated the cost of reclamation will be $3.9 million. After the land is reclaimed, the company plans to donate the

land to the state for use as a public park and recreation area as a condition to receive the necessary mining permits. This will occur in Year 5 and result in a charitable expense deduction of $7.3 million. Bethesda faces a 38 percent tax rate and has a 12 percent required return on new strip mine projects. Assume a loss in any year will result in a tax credit.

Action:

You have been approached by the president of the company with a request to analyze the project. Calculate the payback period, profitability index, net present value, and internal rate of return for the new strip mine.

Should Bethesda Mining take the contract and open the mine? In your decision making, consider the impact to your calculations, (1) if the variable cost is +- $2 per ton; and (2) you anticipate that the president will assume this project *may* be a high risk which typically considered to have a +3% of the required return. Conduct analysis to address these conditions. Is the contract still a good choice?