



**ABATEMENT MEASURE AND COSTS**

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The ultimate pollution discharge points are indicated under "Source Description" in the following table. These are the points where attention may be devoted to abate pollution; however, it is not recommended that any abatement measures be instituted on this watershed because the net gain in pollution reduction does not warrant the expenditure of funds to accomplish this goal. Each known source is given, its pollution load, proposed method of abatement, and the estimated cost of abatement.

Cost estimates were computed on one judgmental criteria and that was experiences of the Department for similar types of projects and abatement measures.

The small amount of pollution to Big Run is the result of acid mine drainage primarily from abandoned deep and surface mining activity. A description of the possible abatement measures is as follows:

1. Strip mine restoration - utilizing a minimum of terrace backfilling and rechannelization of water through abandoned strip mines to assure rapid runoff. This method also incorporates soil treatment and planting of all affected acreage
2. Deep mine sealing - the construction of a barrier within mine entry, sometimes extended into the adjacent strata by means of a grout curtain. The barrier is usually intended to impede the movement of water from the mine so that the ground water level will rise to an elevation sufficient to inundate the pyritic strata associated with the coal seam.
3. Exploratory borings - the drilling of boreholes to determine the exact location and extent of the deep mine openings.
4. Refuse burial - the burial, regrading, surface treatment and revegetation of abandoned coal refuse piles.

BIG RUN WATERSHED

SAMPLE STATION	PRIORITY NO.	SOURCE DESCRIPTION	POSSIBLE ABATEMENT MEASURES *	ESTIMATED COST
6, 7 & 8	1	Gravity discharges from four abandoned underground coal mines and interconnected surface mines.  Acid load = 867 lbs/day Iron load = 22.5 lbs/day	Strip mine restoration of approximately 22 acres.  NOTE: These mines cannot be hydraulically sealed because of the numerous openings and the large maximum potential head developed.	\$48,680.00
14	2	Gravity discharges from abandoned Richard Beckman deep mine and abandoned surface mine and coal mine refuse pile.  Acid load = 35 lbs/day Iron load = 0.89 lbs/day	Exploratory borings to locate deep mine entries.  Construction of a watertight mine seal. Maximum potential head = 120 feet.  Construction of 200 feet of grout curtain.  Burial of mine refuse and strip mine restoration of 19.5 acres.	\$3,000.00 \$20,000.00 \$30,000.00 \$43,150.00
None	3	Surface water leaching from abandoned mine refuse pile.  Acid load = No estimate	Burial of mine refuse and strip mine restoration of 23 acres.	\$50,900.00

\* NOT RECOMMENDED

