
THE STRIP-MINE RECLAMATION PROGRAM IN OHIO

IRVING I. DICKMAN

Chief, Ohio Division of Reclamation

Coal, one of the important resources of Ohio, has only potential value prior to its extraction. So long as land owners have coal to sell, operators can produce it profitably, and consumers can buy it at prices competitive with other energy sources, coal production will continue to be an important element in the state's economy. Since coal is an irreplaceable resource, wise management is practiced only when the greatest possible percentage of the deposit is obtained. In underground mining, usually no more than 60 per cent of a seam is extracted; by strip mining, 90 to 95 per cent of the total is gotten.

Strip mining began in Ohio in 1914 and expanded slowly until World War II. The demand for coal to fight the war led to a substantial increase in mining, and surface mining was especially important since it could produce coal quickly with a minimum of man power. The availability of extremely large and efficient excavating equipment, modern drilling equipment, and highly developed explosives made the removal of the overburden relatively inexpensive.

OHIO LEGISLATION

The passage of the first strip-mine law, known as the "strip coal mining act," which became effective January 1, 1948, was the culmination of years of determined effort by conservation-minded people. While it was not a perfect law, it did mark the beginning of the reclamation program. The main requirements of this law were that tops of the banks be leveled to not less than 15 ft in width, and the banks be revegetated with trees, grass, or shrubs. In order to insure compliance, the operator was required to post a bond in the amount of \$100 per acre, with a minimum of \$1,000. He was required also to obtain a permit, for which he paid a \$50 fee. The licensing of strip-mine operators was administered by the Division of Mines of the Department of Industrial Relations and the reclamation of the affected areas was supervised by the Director of the Ohio Agricultural Experiment Station and the State Forester.

A new "Coal Strip Mine Land Reclamation Act" passed by the 98th General Assembly became effective on July 23, 1949. This law, in contrast with the earlier one, required a license fee of \$50, a fee of \$10 for each acre affected, and bond at the rate of \$190 an acre: \$140 for grading and \$50 for planting. The minimum bond was \$1,000. A new agency was created to administer the new law: the Division of Reclamation in the Department of Agriculture.

The 101st General Assembly again amended the law, effective October 13, 1955. Some of the more important changes were:

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- (1) A requirement that the chief of the Division of Reclamation "shall refuse" to issue a license if he finds that the applicant has failed to comply with the provisions of the act.
- (2) A provision that if an operator desired to strip mine land not described in his application, he might file an amendment revising his estimate of the acreage affected, and deposit the proper license fee and bond for the increased acreage. The operator was required, under a specific penalty, to file an amendment when he exceeded his estimated acreage by more than 10 per cent.
- (3) An increase in the bond required from \$190 to \$220 an acre: \$170 for grading and \$50 for planting.
- (4) A requirement that the operator grade the loose coal-mine refuse and other debris in the last cut of an operation, so as to facilitate their possible submergence by water.
- (5) Inclusion of auger and similar types of mining in the operations requiring licensing and reclamation.

Another amendment in 1959 transferred the Division of Reclamation from the Department of Agriculture to the Department of Natural Resources. It also:

- (1) Defined "operator" more inclusively. Up to that time, the term had not included any person who intended to remove, or did remove, less than 250 tons of coal by strip mining within 12 successive calendar months, or whose removal of coal constituted less than 25 per cent of the tonnage of all minerals removed. Under the 1959 amendment, "operator" includes anyone engaged in strip-mining who removes or intends to remove more than 250 tons of coal by strip mining within 12 successive calendar months.
- (2) Provided for a continuing survey to determine the land that, because of strip mining completed prior to January 1, 1948, the substitution of other areas for land affected by an operation, or other reasons, should be reclaimed in order to preserve and increase the natural resources of the state.
- (3) Provided for acquisition by the state of "any eroded land including land affected by coal strip mining mined prior to January 1, 1948, and land affected by coal strip mining that is or may become unreclaimed as a result of substitution"
- (4) Provided for reclamation and future use of lands acquired by the state.

USE OF COAL STRIP-MINE AREAS

The feature of open-cut mining generally criticized is the unsightly appearance of stripped land. Since this creates an unfavorable impression of the industry, it may be well to point out the length of time involved in the reclamation of such areas in Ohio.

In accordance with the provisions of the Ohio coal strip-mine laws, (Sections 1513.01 to 1513.26 and 1513.99 of the Revised Code), a strip-mine license is issued for a twelve-month period. After the expiration of the license, the operator is given 60 days in which to submit a map and an annual report. He then has two years from the date the map was submitted in which to complete his reclamation. Since the area affected annually averages about 10,000 acres, theoretically one could see about three years accumulated acreage (30,000 acres) which have not been reclaimed. Since more than 85 per cent of the land stripped since January 1, 1948 (effective date of first Ohio strip-mine law) has been reclaimed, it is clear that most of the reclamation is being done within the time requirement of the law.

The operator may request permission to reclaim a substitute area affected by strip-mining instead of the land affected under a particular license. An extension

of time may be granted to complete reclamation if: (a) the practical or economic execution of the mining operation would be impaired by completion of the reclamation work; (b) if definitely planned future mining operations would re-affect the area; (c) if the reclamation would interfere with existing, or definitely planned future, mining operations; or (d) if reasons beyond the control of the operator entitle him to an extension of time.

The opening statement of the Illinois law which became effective on January 1, 1962, expresses the philosophy and objective of practically all such legislation.

It is hereby declared to be the policy of the state to provide, after mining operations are completed, for the reclamation and conservation of lands subjected to surface disturbance by open cut mining and thereby to preserve natural resources, to encourage the planting of forests, to advance the seeding of grasses and legumes for grazing purposes and crops for harvest, to aid in the protection of wildlife and aquatic resources, to establish recreational, home and industrial sites, to protect and perpetuate the taxable value of property and to protect and promote the health, safety and general welfare of the people of this state.

The determination of future use of strip-mined lands is an important aspect of spoil reclamation, since the use selected has a bearing on the intensity of the reclamation over and above the minimum requirements of the law.

Advance planning, including the determination of land use after mining, is highly important. Grading and planting at the lowest possible cost, regardless of the ultimate results, must inevitably give way to planned reclamation which will offer returns to offset the initial expenditure. With advanced planning, the operator can call upon many sources for technical assistance, such as departments of natural resources, experiment stations, operators' associations, mining and geological engineers, the Soil Conservation Service, universities, and equipment manufacturers.

Some operators are successfully utilizing their stripped lands or have sold them for highly specialized uses. Several companies are carrying out farm programs by grazing livestock on the reclaimed areas. Some acreage has been planted to Christmas-tree farms and orchards. Some areas have been utilized for home sites, schools, airports, motels, and other commercial buildings. The greater part of the stripped lands have been devoted to growing different species of trees to serve many purposes in addition to preventing erosion. Under cooperative agreements with the Ohio Division of Wildlife, operators have made three sizeable areas available for public hunting and fishing.

Because of the financial liability they would incur, some landowners have been reluctant to make their lands available for certain public uses, such as hunting, fishing, camping, and hiking. Legislation such as that passed in New Hampshire, New York, and Maine, in which landowners are absolved from certain types of liability, may be needed before additional lands become available for such purposes.

The laws of Ohio and some other states that require the impounding of water in the last cut have been instrumental in creating bodies of water for water supply, flood control, erosion control, or pollution control. Many of these lakes now afford excellent habitat for fish.

Because of the population increase and the demand for recreational facilities which the many political subdivisions may be unable to meet, some operators are now giving consideration to long-range recreational planning, so that when their coal reserves are exhausted they will be ready to step into what may prove to be a lucrative venture.

The State of Ohio has not ignored its obligation, for in addition to administering the strip-mine laws, offering technical assistance, and making cooperative land-use agreements, the Department of Natural Resources, through the Division of Reclamation, has purchased certain areas described as "eroded land"; this includes land affected by coal strip-mining prior to January 1, 1948 (referred to as

“pre-law lands”). Reclamation of these areas is mandatory; they will be reclaimed so as to be suitable for forests, recreation, wildlife, water conservation, or for such other uses as may be deemed proper in the light of the character of the soil, topography, proximity to urban centers, and the requirements of any applicable conservation program.

Certain well known factors will have an effect on mining and the ultimate use of reclaimed areas. These include:

Topography.—The topography of the area is closely related to the later use of the land. Some areas in which the slopes are too steep for other purposes will be used for forest development.

Spoil characteristics.—Spoil characteristics affect the ultimate use of the reclaimed land. A toxic soil, while ill-suited for vegetation, may be ideal for airport, subdivision, or other uses.

Environmental geography.—The geographical location of the area may be a factor determining the amount of reclamation.

Later use.—Later use may be determined by location. A housing subdivision might require complete and fine grading and thorough compaction, whereas this would be neither necessary nor desirable for a forest planting.

Economics.—The economics of open-pit mining is one of the most important factors. The operator is interested in profit and if he can be shown that the reclamation and later use of the land are financially beneficial, he is likely to do a more complete job. The profit motive is a much more effective stimulus than the legislative mandate or the altruistic appeal.

The responsibility for the reclamation lies with the operator. I believe that most of the operators are conscientiously meeting this obligation. As one operator so aptly put it, “The manner in which strip-mining companies carry out reclamation of spoil banks and adjacent areas is important. Proper coverage will reduce runoff, wash, and denudation of hills, thereby reducing the possibility of uncontrollable floods and impoverishment of the land. The legacy in strip-mined areas that we leave for future generations should be one that can be left with pride, not shame.”
