

## SOLID WASTE DISPOSAL

Each year U.S. citizens throw away more than 150 million tons of solid waste—approximately 4.5 pounds per capita per day. By 1980, the figure will rise to 5.5 pounds of refuse for each person. The accumulation comprises paper, garbage, tin cans, bottles, trash, and just plain junk. It must be gathered and disposed of in some manner, and the current annual cost of disposal is about \$3 billion.

Most solid waste is plowed underground by bulldozers; some is burned in open heaps, as at Washington's Kenilworth dump; about 37 million tons is burned in more-or-less modern incinerators. The residues of the incinerators each year contain more than 3 million tons of iron and 200,000 tons of mixed nonferrous metals, mainly aluminum, zinc, copper, lead, and tin. Final burial of the total raw wastes and burned residues in sanitary (and not too sanitary) landfills, results in an irreplaceable annual loss of 9 million tons of metal. This is tantamount to stealing each year many millions of dollars from the national economy.

In 1964, 86.3 million automotive vehicles were registered in the United States. That same year 9.3 million new ones were built and 6.8 million were discarded—cars that were wrecked, worn out, or merely too dilapidated. By 1975 the number of vehicles scrapped is expected to approach 10 million annually. The projection is based on the assumption that the historical relationship between automobile registration and automobiles scrapped will remain relatively constant, and on the assumption that registrations will increase at the 1954 to 1965 rate.

In 1965, approximately 6.7 billion tons of material was dug from the U.S. soil to produce 0.5 billion tons of coal, 2.4 billion tons of crude ore along with marketable products such as sand and gravel and clay, as well as 3.8 billion tons of mining waste. Further processing of the crude ore yielded about 0.4 billion tons more waste materials to be stored in tailings, ponds, or slag heaps.

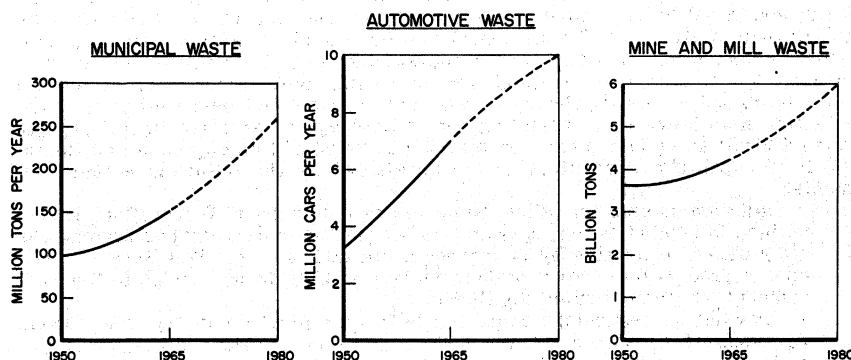
THE THREAT OF ACCUMULATING WASTE

FIGURE 34

Meanwhile, the grades of available ores continue to decline, and user specifications for industrial minerals and fossil fuels are becoming more stringent. If the national economy continues to grow at the expected rate, the domestic minerals industry will be handling at least 9.5 billion tons of material a year by 1975—and producing nearly 6 billion tons of waste. Obviously, the production of solid wastes is increasing rapidly, and the problems arising from it are many-faceted and complex.

Take, for example, the scrap automobile situation. The technology of iron and steel making has been undergoing a revolution in recent years. As a result, only high-grade ferrous scrap is in demand; the market for lower-grade automotive scrap is gradually declining in spite of steadily increasing steel production. Better methods must be devised for upgrading automotive scrap and new uses for it must be found, or the junkyards will continue to grow.

Social pressures also are mounting against defacement of the land by mine waste, slag piles, dumps, tailings, slime ponds, and other waste storage. Not only do these create scenic blights, but they take up space that could be used