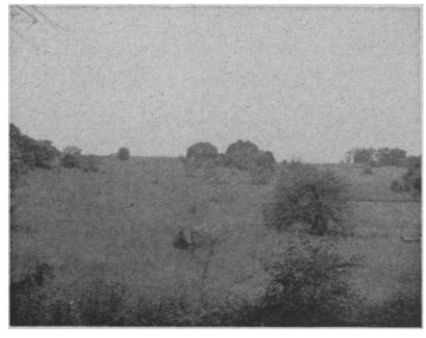
ductions in power use might be effected or which could be implemented should a scarcity of power develop. Barry Commoner will consider the ecological importance and social implications of reducing reliance on power-intensive production technologies. John Todd will discuss biotechnic decentralization as an alternative to the energy crisis; Herman Daly will consider the economic implications of a scarcity of energy; and Richard Stein will review the implications of energy use and need from the standpoint of the architect.

DEAN E. ABRAHAMSON
University of Minnesota Medical School, Minneapolis 55455

29 December

Geological Implications of Solid Waste Landfill



(Left). Well-managed sanitary landfill operation. (Right). Restored landfill area ready for new development. Trees were retained.

Domestic and industrial solid wastes are being produced at an ever-increasing rate. Every method for disposal of this by-product of our highly productive society is encountering objections with the gradual awakening of an environmental conscience in the public mind. With a concern for air pollution, incineration in major metropolitan areas is under attack; even incineration at its best leaves a residue which requires disposal. Open dumping and burning, common methods for handling solid waste disposal, are under attack for health and esthetic reasons.

In response to the recognized shortcomings of other methods of solid waste disposal, the utilization of solid wastes for sanitary landfill has been the fastest growing technique in the last decade. A landfill is a man-made geologic deposit with rather unique physical and chemical properties. Its composition is strikingly inhomogeneous, as is its particle size. The rate of compaction-settling is extremely high in comparison with natural geological sediments. The porosity and permeability of solid waste landfills vary within wide limits and the leachate which seeps forth is frequently a biological and chemical contaminant.

The scheduled symposium on "Geological Implications of Solid Waste Landfill" is dedicated to the principle that "Out of sight, out of mind" is no longer an acceptable basis for getting rid of solid wastes in the ground. Geologists, hydrologists, planners, and landscape architects will address themselves to the definition and recognition of the extent to which various geologic and hydrologic conditions in the ground favor or limit the selection of solid landfill waste disposal sites. There has also been developing a new expertise in the physical and chemical effects of the landfill waste materials upon the sites themselves. The symposium will highlight many of the findings and parameters developed by leading researchers in this contemporary field.

Speakers and Topics

D. A. Stephenson, *What To Do before the Garbage Truck Arrives.*

S. Jackson Hubbard, *Design of a Sanitary Landfill.*

Norbert B. Schomaker, *Construction Techniques for Sanitary Landfills.*

George M. Hughes, *Hydrogeologic Controls on the Movement of Leachates from Refuse.*

Richard R. Parizek and Donald Langmuir, *Management of Leachates from Sanitary Landfill.*

Grover H. Emrich, *Management of Hazardous Geologic Conditions for Safe Solid Waste Disposal.*

Gary L. Merritt and William C. Bucciarelli, *The Geologic Aspects in the Planning and Implementation of the Pennsylvania Solid Waste Management Act 241.*

Edwin G. Otton, *Solid Waste Disposal in the Geohydrologic Environment of Maryland.*

W. L. Fisher and L. F. Brown, Jr., *Geologic Evaluation of Sanitary Landfill Sites, Texas Coastal Zone.*

ARTHUR A. SOCOLOW
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29–30 December

Living Systems: Synthesis, Assembly, Origins

Several approaches to the artificial production of living systems will be reviewed in this symposium. Attention will be focused on systems and on the supporting levels of cellular construction, especially the relevant macromolecules.

Principal topics to be covered first are the chemical synthesis of contemporary proteins (K. Hofmann, University of Pittsburgh) and nucleic acids (M. Caruthers, M.I.T.). The assembly of such macromolecules into systems is emphasized through reports on experiments with polymers from living systems. Many biomacromolecular preparations have been reassembled into organelles (D. J. Kushner, University of Ottawa); nuclei and cytoplasms of amoebas have been transferred from one membrane to another (J. F. Danielli, State University of New York at Buffalo); and models of primitive macromolecules (R. Lohrmann and R. Sanchez, Salk Institute; and D. L. Rohlfing, University of South Carolina) and of primordial cells and organelles (S. W. Fox, University of Miami)