

HAZARDOUS SUBSTANCES

A Community Perspective

U.C. Berkeley Environmental Sciences / Senior Seminar 1983-84



HAZARDOUS SUBSTANCES: A COMMUNITY PERSPECTIVE

Senior Seminar
Environmental Sciences Group Major
University of California, Berkeley

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This paper does not necessarily reflect the views of
the University of California, Berkeley.

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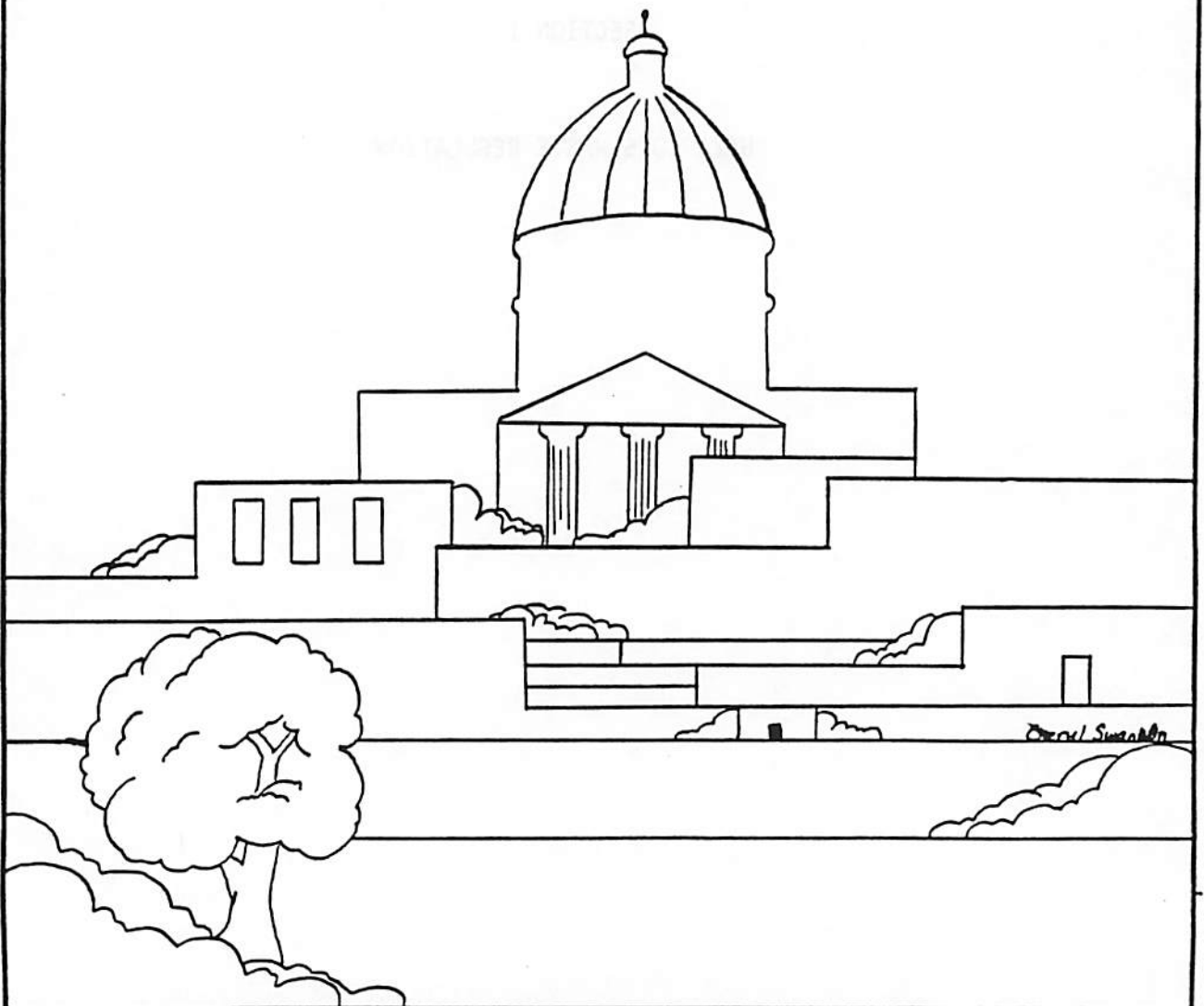
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SECTION I

HAZARDOUS WASTE REGULATION

HAZARDOUS WASTE REGULATION



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ENVIRONMENTAL SCIENCES AT U.C. BERKELEY

The Environmental Sciences group major was created in 1970 in response to the need for an undergraduate program that addresses the wide scope of environmental problems. The students' first years in the program are spent acquiring a solid base of knowledge in mathematics, physics, chemistry and biology. In the last two years the emphasis is on the interdependence of environmental effects, on legal parameters and social consequences. The program culminates in the Senior Seminar, a year-long group study of a subject of environmental concern. This year's Seminar focused on the issue of hazardous substances in the community.

The following students contributed both their time and effort to this project:

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John Dawson	Michelle Pappe
Barbara Elwell	Tim Potter
David Finck	Jean-Pierre Salgado
Kim Fong	Carla Schultheis
Djon Gentry	Cheryl Swanson
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INTRODUCTION

Hazardous substances are everywhere. In the early 1970s, DDT in mother's milk was found to exceed the legally allowed limit in commercial milk. Now PCB's are present in human fat and milk. Hazardous substances, by their very definition, pose acute and chronic health threats to humans, plants and animals. Examples such as these have drawn public attention to the problem of dealing with hazardous waste in a safe and effective manner.

It is essential that we employ better methods of disposal, and that we reduce our reliance upon hazardous substances. Concern over this burgeoning problem prompted participants in this year's seminar to investigate the issue of hazardous substances on a community-wide level.

Our research on the disposal of hazardous wastes by large industries disclosed some areas of concern. In particular, we question the policy of "self-monitoring" of pollutant discharge by industrial wastewater generators. We also found that even when the law has clearly ordered reforms in waste handling, compliance is often slow. It appears that our hazardous waste regulatory system is better at creating rules than it is at implementing and enforcing them.

Our surveys in the City of Berkeley show that most hazardous waste from small businesses is disposed of properly, and we conclude that the threat to the environment from improperly disposed waste is slight. Occupational exposure to hazardous substances is a far greater problem. Owners and workers alike are oblivious to the risks associated with many of the materials they use. As a result, these substances are handled and stored with a casual disregard for simple safety procedures.

At the mention of hazardous substances, people invariably think of industrial or agricultural chemicals, of unfamiliar compounds with unpronounceably long names or ominously short abbreviations. It is little known that many common household products are hazardous as well. Our survey of Berkeley's households showed that people are indeed unaware of the dangerous materials in their homes. Moreover, this lack of concern extends beyond workers and homeowners; students and technicians at the University of California are inadequately instructed in the safe use and disposal of laboratory chemicals.

Hazardous substances are now an integral part of our economy, but their pernicious effects on human health and on the vitality of the environment are becoming increasingly apparent. It behooves all of us to be more alert to the presence of hazardous substances around us; to reduce or eliminate our use of these substances whenever possible; and to provide for their safe handling and proper disposal when their use is unavoidable.