TABLE XI.B.9.g.—SOCIAL COSTS FOR SELECTED REGULATORY OPTIONS—Continued [Millions of 1994 dollars]

Option No.	Total capital costs	Total O&M costs	Total annualized costs ¹
PSES-A/C#1	80.9 28.8	53.1 10.2	61.6 13.3
Total ²	174.9	105.4	123.9

Footnotes

¹The total annualized costs of compliance are calculated prior to accounting for the tax deductibility of the pollution control costs.

² Total number of facilities includes seven non-discharging facilities.

Note: These numbers are for all facilities and do not reflect closures predicted by the analyses in this report.

h. Benefit-Cost Comparison. Because not all of the benefits resulting from the regulatory alternative can be valued in terms of dollars, a complete cost-benefit comparison cannot be performed. The social cost of the alternatives considered in the proposed rule, discussed in the preceding section is estimated to be \$123.9 million (1994 \$). The sum of total benefits that can be valued in dollar terms ranges from \$0.2 to \$7.6 million per year (1994 \$) (see Table XI.B.9.h).

TABLE XI.B.9.h.—COMPARISON OF ANNUAL BENEFITS AND COSTS FOR THE PHARMACEUTICAL RULEMAKING [Thousands of 1994 dollars]

Benefits	
Cancer risk reductions	14–5,401
Reductions in emissions of ozone precursors	31–1,929
Human health Agricultural benefits	186–315
Total quantifiable benefits	231-7,646
Costs	
Total Annual Costs to Industry	80,000 123,900

XII. Relationship of Proposed Effluent Guidelines to EPA's Hazardous Waste Initiatives

- A. Relationship to Rulemaking Activities Under RCRA
- 1. Introduction and Overview of Land Ban Regulations

EPA's Office of Solid Waste Phase 3 proposed land disposal restriction regulations under the Resource Conservation and Recovery Act (RCRA) for certain hazardous wastes streams common to the pharmaceutical manufacturing industry on February 16, 1995. These regulations will be codified at 40 CFR Part 268 after they are finalized (scheduled for January 1996).

The proposed RCRA regulations signed on February 16, 1995 cover decharacterized ignitable (I), corrosive (C), reactive (R) and toxic (TC) wastes (i.e., wastes that initially exhibit a characteristic but, as a result of dilution, no longer do so when they are land disposed) that are managed in surface impoundments whose ultimate discharge is regulated under the Clean Water Act. These regulations also potentially apply to decharacterized wastes disposed in Class I

nonhazardous deep injection wells regulated under the Safe Drinking Water Act's Underground Injection Control program. The definitions of these waste streams are listed in Table XII.A. The September 1992 Third decision in Chemical Waste Management v. EPA. 976 F.2d 2 (D.C. Cir. 1992) requires EPA to assure that decharacterized wastes disposed in surface impoundments are treated to the same extent they would be if disposed in surface disposal units. However, the opinion specifically allows this showing of equivalent treatment to be measured at the eventual discharge point, so that treatment occurring in the wastewater treatment system (including the surface impoundment) can be taken into account.

- 2. The Land Disposal Restrictions Program
- a. Introduction to RCRA Land Disposal Restrictions. The Hazardous and Solid Waste Amendments (HSWA) to RCRA, enacted on November 8, 1984, largely prohibit the land disposal of untreated hazardous wastes. Once a hazardous waste is prohibited from land disposal, the statute provides only two options for legal land disposal: Meet the

treatment standard for the waste prior to land disposal, or dispose of the waste in a land disposal unit that has been found to satisfy the statutory no migration test. A no migration unit is one from which there will be no migration of hazardous constituents for as long as the waste remains hazardous. RCRA sections 3004 (d),(e),(g)(5).

The treatment standards may be expressed as either constituent concentration levels or as specific methods of treatment. These standards must substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized. RCRA section 3004(m)(1). For purposes of the restrictions, the RCRA program defines land disposal to include any placement of hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave. Discharge of wastewater streams containing hazardous wastes to surface impoundments is considered temporary land disposal. RCRA section 3004(k).