

# **Executive Summary**

This is an account of some of the accomplishments of a 40-year-old health and environmental research program performed in National Laboratories, universities, and research institutes. Under the sponsorship of the Federal agencies that were consecutively responsible for the National energy mission, this research program has contributed to the understanding of the human health and environmental effects of emerging energy technologies.

Both direct and indirect societal benefits emerged from the new knowledge provided by the health and environmental research program. In many cases, the private sector took this knowledge and applied it well beyond the mission of supporting the defense and energy needs of the Nation. Industrial and medical applications, for example, have in several instances provided annual savings to society of \$100 million or more. Collectively, the diffusion of this knowledge has resulted in annual savings to the Government and to the public that are several times larger than the cumulative cost of the entire program itself.

The form of this presentation is, in fact, through "snapshots"—examples of significant, tangible accomplishments in each of the areas at certain times to illustrate the role and impact of the research program. The program's worth is not necessarily confined to such accomplishments; it extends, rather, to its ability to identify and help solve potential health and environmental problems before they become critical. This anticipatory mission has been pursued with an approach that combines applied problem solving with a commitment to fundamental research that is long-term and high-risk.

The narrative of this research program concludes with a perspective of its past and a prospectus on its future.