

SECTION 1

INTRODUCTION

The Analysis of Environmental Monitoring at and around the Rocky Flats Environmental Technology Site presents the results of an independent review of the environmental monitoring conducted at Rocky Flats.

Environmental monitoring programs for five discrete environmental media and project-specific monitoring were reviewed and evaluated for effectiveness and potential improvements. A description, critical analyses, and recommended improvements to the monitoring program for groundwater, surface water, soil and sediment, air, ecology, and project-specific monitoring are presented in Sections 2 through 7, respectively.

Environmental monitoring at Rocky Flats is conducted as an integrated, multi-party Site environmental monitoring program, which combines the monitoring activities of Kaiser-Hill (Rocky Flats Department of Energy contractor) and its subcontractors, Colorado Department of Public Health and Environment (CDPHE), and the surrounding communities.

The integrated monitoring program was developed through a joint effort by the Department of Energy, Environmental Protection Agency, CDPHE, the cities of Broomfield and Westminster, and Kaiser-Hill. It was designed using a "data quality objectives" process to evaluate the existing environmental programs and make decisions about the monitoring data needed to comply with regulatory requirements and protect public health and the environment. The integrated monitoring program became a requirement of the Rocky Flats Cleanup Agreement issued on July 19, 1996. The program is described in the *Rocky Flats Environmental Technology Site Integrated Monitoring Plan*, published annually by Kaiser-Hill.

The monitoring program analysis was limited to the monitoring conducted for Rocky Flats. Additional environmental monitoring is performed by some of the nearby municipalities to evaluate the potential impacts of Rocky Flats activities on community water resources and water or wastewater treatment operations. The monitoring performed exclusive of the Rocky Flats environmental monitoring program was outside the scope of the independent review and is not presented.

The independent review was performed for the Rocky Flats Citizens Advisory Board in response to the public concerns expressed in the Rocky Flats Community Needs Assessment. The Community Needs Assessment was conducted in 1996 by the University of Colorado School of Nursing and the Jefferson County Department of Health and Environment, with oversight by the Citizens Advisory Board.

The information presented in this report was provided by the Rocky Flats staff and other parties knowledgeable of the environmental monitoring conducted at Rocky Flats. Information sources included staff from Kaiser-Hill and its subcontractors, Department of Energy, Environmental Protection Agency, Colorado Department of Public Health and Environment, surrounding communities, and public stakeholders. Information sources included various reports, documents, studies, articles, personal interviews, and follow-up telephone conversations with knowledgeable parties.

The environmental monitoring programs described herein were in operation at Rocky Flats at the time of completion of the independent review. Environmental monitoring is dynamic by necessity, and monitoring activities are modified as needed in response to new events, Site activities, or additional data.