

## Rocky Flats Citizens Advisory Board

### Recommendation 96-13

to the Department of Energy, the Colorado Department of Public Health and Environment and the Environmental Protection Agency

### Cleanup Principles and Critical Reporting Elements

Approved September 5, 1996

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#### PURPOSE:

The purpose of this project is to incorporate public/stakeholder\* perspectives into the DOE process for determining appropriate cleanup levels for individual areas at the Rocky Flats Environmental Technology Site. This purpose is achieved by: 1) formulating a set of high level principles that will provide a degree of guidance to the Implementors and Regulators of the RFETS cleanup activities; and 2) providing a set of critical reporting elements that will standardize important information in cleanup project proposals. (\* Throughout this document the words "stakeholder" and "public" are meant to be inclusive of all segments of the community such as individual citizens, local governments, and public or private interest groups.)

#### OBJECTIVES:

Specifically, CAB, through its Environmental / Waste Management Committee did the following: 1) performed basic research on background contamination levels, risk determination, risk assessment, risk management, and regulatory cleanup standards; 2) coordinated appropriate educational presentations for the E/WM Committee and CAB; 3) developed a set of principles to provide broad, over-all guidance to the variety of cleanup activities that will occur at the Rocky Flats Environmental Technology Site; and 4) developed a list of critical reporting elements that will function as operating parameters/reporting requirements in a cleanup process defined by the agencies.

#### CLEANUP PRINCIPLES:

##### Programmatic Framework:

In order to bound the applicability of these principles, CAB envisions a "Conceptual Framework for Cleanup." This simplified framework consists of two broad phases: Phase I, near-term periodic intensive

activities of possibly 10 to 20 years duration; and Phase II, and a final long-term vision. Phase I The near term should culminate in a safe site of mixed uses encompassing both restricted and unrestricted use areas. Phase II The long-term vision should transition the site from the near-term the Phase I condition of restricted uses, to one of unrestricted use as budgets and technologies become accessible.

### **Scope of Applicability:**

The following principles for cleanup developed by CAB are considered applicable to all activities planned and performed throughout the near-term phase of the "Conceptual Framework for Cleanup." These Principles are intended to address the external environment, namely the soil, air and water, in which contamination exists at the Rocky Flats Environmental Technology Site. These principles do not address the decontamination of former production buildings, waste storage facilities or other physical structures, or their contents.

#### **1) Health and Safety During Cleanup**

This basic principle relates to the health and safety of the workers who will be involved in cleanup and environmental restoration activities at the Site, as well as the surrounding community. Safety management must be equally and consistently implemented and be incorporated throughout cleanup and restoration activities to provide the maximum level of health and safety protection for workers, and the public, and the environment. Retention of the trained workforce will help move toward this goal.

#### **2) Waste Generation**

Cleanup should generate no more waste than is necessary to meet cleanup goals. In general, it is wise to minimize waste generation in cleanup activities, but one should not interpret waste minimization as a justification for lesser amounts of cleanup.

#### **3) No Further Degradation of the Environment**

Protection of natural resources should be a priority in selecting cleanup alternatives. This includes ecological (ecosystems and habitats), geological (surface and subsurface soils and bedrock materials), hydrological (surface and ground waters), and air resources. Selected alternatives should be designed to prevent cross-contamination of media. Every precaution should be taken to see that cleanup operations do not cause contamination of any new areas or any areas previously cleaned up.

#### **4) Technology Utilization**

An inventory of cleanup needs should be matched against current technology in order to identify areas where current technology may be utilized or to identify those areas where a new, emerging technology may prove more cost effective or efficient.

## **5) Background Levels**

The ultimate long-term goal for cleanup at Rocky Flats should be to achieve a level of residual contamination equal to or less than average background of radiation, i.e., a level that includes fallout from above ground nuclear testing and naturally occurring radionuclides, for the Front Range of Colorado when technology allows for this in a cost-effective and environmentally sound manner. In the near term, standards should be set, that given a specific land use and risk level, are protective of human health and the environment. It is understood that we cannot achieve this cleanup to background in the near-term given the current state of technology. There should be a periodic (e.g., every 2 - 5 years) reevaluation of cleanup level goals as compared to available technology to determine whether the goals can be set at levels more protective of human health and the environment.

## **6) Risk Levels / Land Use**

Residual contamination and associated health risks should be compatible with future site use. Future site use determination should involve the general public and stakeholders at the earliest point possible.

## **7) Budgetary Considerations**

Budgetary constraints may impact the cleanup at Rocky Flats. This impact should never affect the actual level of risk reduction.

## **8) Institutional Controls / Risk Elimination**

Risk elimination is the preferred method of controlling the hazards of contaminant escape. All areas that are designated "restricted use" should require an institutional control program. This program should provide for proper monitoring, testing and contingency plans in the event of a contaminant release. In addition, management of the "restricted use" areas should continue indefinitely, or until they are reclassified as "unrestricted use". In the long-term, permanent use of institutional controls is not acceptable.

## **9) Timing of Decisions:**

All Rocky Flats projects should achieve cleanup that ensures protection of human health and the environment. Rocky Flats cleanup activities and environmental restoration (i.e., planning, development, implementation, and completion) must be completed before future land use planning is finalized. When cleanup activities and environmental restoration are nearing completion, final future use plans can then be made.

## **10) Optimization of these Principles**

Individually these cleanup principles will not provide the most acceptable or desired outcome. By balancing and utilizing all these principles in unison, an optimal cleanup can be achieved. Such a cleanup is one that is preferred by the public/stakeholders and tailored to the specific cleanup activity or project.

## CRITICAL REPORTING ELEMENTS:

In order to provide accountability to the public / stakeholders, all documents submitted by the agencies describing specific cleanup proposals and activities should contain sections that address, at a minimum, the following:

- a description of the public / stakeholder involvement process including timelines
- a description of the cleanup process, including how various phases of the project will be implemented, and a detailed description of the project design
- a summary of the health and safety risk levels, before, during and after the remediation activity
- a description of the contaminants that includes specific contamination levels
- a description of anticipated future land uses and associated risk levels
- a summary of the ecological impacts
- a summary of the cleanup costs, and all applicable alternatives with which to compare these costs
- an accounting of waste generation
- description of the steps taken to minimize negative environmental impacts

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The Rocky Flats Citizens Advisory Board is a community advisory group that reviews and provides recommendations on cleanup plans for Rocky Flats, a former nuclear weapons plant outside of Denver, Colorado.

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