Copies of the plan are available for review at the following public reading rooms

U S Environmental Protection Agency
Superfund Records Center
999 18th Street 5th floor
Denver Colorado 80202 2405
303-293-1842

U S Department of Energy
Public Reading Room
Front Range Community College Library
3645 West 112th Avenue
Westminster Colorado 80030
303-469-4435

Colorado Department of Health
4210 East 11th Avenue
Room 351
Denver Colorado 80220
303-331-6733

Rocky Flats Environmental Monitoring Council
1536 Cole Boulevard
Suite 325 Building 4
Denver West Office Park
Golden Colorado 80401
303-232 1966-by appointment only

Boulder Public Library
1000 Canyon Boulevard
Boulder Colorado 80306
303-441 3100

For further information about groundwater issues at Rocky Flats contact·

Tonya Morrow or Mike McHugh
Community Relations
EG&G Rocky Flats
Building T130F
Golden Colorado 80402-0464
(303) 966-5754

Rocky Flats

DOE Public Affairs 966-5993
Community Relations 966-5754

Information

Groundwater Protection and Monitoring Program Plan

The *Groundwater Protection and Monitoring Program Plan* is a new document put together by EG&G Rocky Flats which contains provisions for continued protection of human health and the environment by comprehensively assessing the impact of the Rocky Flats Plant (RFP) on the groundwater beneath it

To foster a better understanding of groundwater issues at Rocky Flats the plan explains in detail background information about the plant area characteristics protection and monitoring activities and regulatory requirements The following sections summarize these major areas of the plan

Background

The Rocky Flats Plant encompasses approximately 6550 acres of federally owned land Major plant structures including all production buildings are located within a 400-acre controlled area of the facility which is surrounded by a 6 150-acre buffer zone

Plant operations generate solid and liquid nonhazardous hazardous radioactive and mixed radioactive waste streams These wastes are for disposal

Throughout operations since the 1950s environmental protection levels have been consistent with best environmental management practices at the time Because some past plant practices did not meet today's more rigorous standards some of these activities have resulted in contamination of portions of Rocky Flats land

There are 178 places on and near the plant site where contamination is thought to exist Each of these places is called an Individual Hazardous Substance Sites (IHSS) Each IHSS is a location where waste management activities have occurred and/or where a long term release may have occurred Because each IHSS is considered a potential source of environmental contamination it is also a potential source of groundwater contamination The nature of each site varies tremendously for example one site may be a spill of less than a quart of paint or household cleaning solvent while another site may consist of soil contamination resulting from waste drum leakage

At RFP the IHSSs have been consolidated into 16 Operable Units (OUs) Each of these OUs is monitored for identification of hazardous constituents determination of their concentrations and delineation of the extent of contaminant plumes All of the OUs are slated for study and cleanup if necessary according to ranking priority as defined

ADMIN RECORD
A-SW-000073

in the Interagency Agreement a collaborative document among the Department of Energy the U S Environmental Protection Agency and the Colorado Department of Health

Area Characteristics

In the mid 1970s Rocky Flats operators began characterizing the site s geology and hydrogeology Currently com puter generated conceptual models are being prepared to predict the direction and rate of groundwater flow pathways for contaminant migration and extent of contaminant plumes given varying physical chemical and biological fac tors

To create meaningful models scientists must consider a variety of physical characteristics including the following

- Hydrogeology of the site
- Major aquifers (zones below the earth surface capable of produc ing water)
- Full and appropriate identifica tion of RFP geologic units
- Identification of geologic units influence of groundwater flow
- Characterization of background or uncontaminated groundwater
- Identification of contaminant plumes
- Identification of nature and extent of contaminant plumes
- Qualitative and quantitative definition of the interrelationship of groundwater and surface water
- Qualitative and quantitative definition of the relationship among precipitation infiltration and groundwater
- Investigation of the interconnectedness of various water bearing media
- Sources of groundwater pollution
- Uses of groundwater in the vicinity of the plant

Protection

The impact of past and present plant operations on groundwater quality is constantly evaluated in order to protect groundwater resources and eliminate sources of contamination Protection includes analyses of groundwater data and subsequent treatment of groundwa ter that is found to be contaminated Any activity that could have an adverse effect on groundwater quality must be reviewed by the EG&G hydrogeology staff and other scientific departments The activity must be found to have no significant negative impact before the project can begin Projects that involve excavations or other intrusive work are of particular concern since these activi ties could pose a threat to groundwater by introducing contaminated soils into the uppermost layer of groundwater

The RFP also has specially qualified hazardous materials teams that can respond quickly to hazardous or mixed waste spills that if not cleaned up in a timely fashion could pose a threat to groundwater supplies in the area

Monitoring

Groundwater samples taken from wells at the site have been monitored since 1960 Currently there are 371 wells—259 from which samples are regularly collected and analyzed for radionu clides chemical constituents volatile organic compounds trace metals major cations and anions background geochemical characterization and hydrogeologic characterization

After sample collection and analysis detailed statistical interpretations are performed and historical values are compared to new values to identify contamination and to separate local variations in the background water chemistry

Regulatory Requirements

The Groundwater Protection and Moni toring Program is largely defined by federal and state regulations The primary regulating agencies agreements and regulations directing and influencing the program are as follows

- Department of Energy (DOE) orders
- Resource Conservation and Recovery Act (RCRA)
- Comprehensive Environmental Response Compensation and Liability Act (CERCLA)
- U S Environmental Protection Agency (EPA)
- Federal Facility Compliance Agreement (FFCA)
- Clean Water Act (CWA)/ National Pollutant Discharge Elimination System (NPDES)
- National Environmental Policy Act (NEPA)
- Agreement in Principle (AIP)
- Colorado Department of Health (CDH)
- Interagency Agreement (IAG)

Status of the Plan

The new *Groundwater Protection and Monitoring Program Plan* provides comprehensive guidance for contin ued protection and monitoring of Rocky Flats groundwater, thus helping to protect human health and the environment Studies indicate that no contaminated groundwater has left the Rocky Flats site The contaminated groundwater on the site is being addressed with cleanup activities mandated by the Rocky Flats environ mental management program

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The *Groundwater Protection and Monitoring Program Plan* is open for public review and comment from June 20 1991 to August 20 1991 Written comments can be directed to

GPMP Plan Comments Beth Brainard Public Affairs Officer U S Department of En ergy Rocky Flats Office P O Box 928 Golden Colorado 80402 0928