Public Invited to Use Information Repositories

The following information repositories contain current information technical reports and reference documents on environmental restoration at the Rocky Flats Plant

Rocky Flats Public Reading Room
Front Range Community College Library
3645 West 112th Avenue
Level B Center of Building
Westminster Colorado 80030
303 469 4435
Hours Monday Tuesday 12 00 p m – 8 00 p m
Wednesday 10 00 a m – 4 00 p m
Thursday Friday 9 00 a m – 4 00 p m

Rocky Flats Environmental Monitoring Council
1536 Cole Boulevard Suite 150
Denver West Office Park Building 4
Golden Colorado 80401
303 232 1966
Hours By Appointment

EPA Superfund Records Center
999 18th Street Suite 500
Denver Colorado 80202
303 293 1807
Hours Monday Friday 7 30 a m 4 0 p m

Colorado Department of Health
Hazardous Materials and Waste Management Division
4210 East 11th Avenue Room 351
Denver Colorado 80220
303 331 4830
Hours Monday Friday 8 00 a m – 5 00 p m

Boulder Public Library
1000 Canyon Boulevard
Boulder Colorado 80302
303 441 3100
Hours Monday – Thursday 9 00 a m – 9 00 p m
Friday – Saturday 9 00 a m – 6 00 p m
Sunday 12 00 p m – 6 00 p m

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Telephone 303 966 5754
for general information or
303–966 6159 to have your name
placed on the mailing list

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Calendar of Events

Public Information Workshop on the Draft Rocky Flats Surface Water Management Plan May 30 1991 from 7 9 p m at the Westminster City Park Recreation Center 10455 Sheridan Boulevard Westminster
General Rocky Flats Plant Tours June 10 and July 8 1991 Please call 966 5870 one week in advance for reservations
Rocky Flats Environmental Monitoring Council Meeting 7 00 p m June 25 1991 Front Range Community College Student Lounge (address above)
Public Comment Period on the *Draft Rocky Flats Surface Water Management Plan* Runs through July 20 1991 Send comments to Beth Brainard U S Department of Energy P O Box 928 Golden Colorado 80402 0928 Please note SWMP on the envelope

EG&G Rocky Flats Inc
P O Box 464
Golden CO 80402 0464

ROCKY FLATS
ENVIRONMENTAL RESTORATION UPDATE

EG&G

A PERIODIC UPDATE ON ROCKY FLATS CLEANUP MAY 1991

Surface Water Management at Rocky Flats Plant

Surface Water Management Plan

Rocky Flats began monitoring surface water quality in 1952 Since then the monitoring program has been greatly expanded and presently includes sampling and analysis of surface water at over 100 locations throughout the Plant site for a variety of substances including organic compounds metals and radionuclides

With two major water supplies Great Western Reservoir and Standley Lake directly downstream of the Rocky Flats Plant (RFP) maintaining the quality of surface water at RFP has been a cause of great concern to local cities the Department of Energy and EG&G (DOE/EG&G) federal and state regulatory agencies and the public This concern has resulted in a complex network of regulations agreements and procedures for water quality treatment and management at RFP To integrate water quality management activities and address regulatory requirements and public concerns in an effective unified manner DOE/ EG&G has developed the draft *Rocky Flats Surface Water Management Plan (SWMP)*

The *SWMP* provides a comprehensive and informative summary of all aspects of surface water management at RFP in the context of regulations and public concerns and outlines actions for present and future surface water management options at RFP

Envisioned as a vehicle for addressing specific surface water management issues the *SWMP* is viewed as a living document which will be adapted to address public comments and reflect changing conditions and regulations at RFP As part of this goal a sixty day Public Comment Period running from May 20 until July 20 will allow the public an opportunity to participate in the shaping of the final *SWMP* Copies of the *Plan* are available for review at the five reading rooms listed on page 4

The purpose of the *SWMP* is to address concerns with surface water management at RFP by providing a technically sound and publicly acceptable long term solution to surface water management and disposition at RFP Five specific factors which fostered this plan are 1) DOE/EG&G s obligation to protect the public and to comply with environmental regulations 2) DOE/EG&G s water management goals at RFP 3) the need to integrate the numerous activities at RFP related to surface water management into a unified plan 4) the need to meet new water quality standards imposed on RFP in 1990 and 5) the desire to develop a publicly acceptable plan for present and future surface water management which will prompt action and be applicable regardless of the fate of RFP

The *SWMP* contains two volumes The eight chapters in Volume 1 include information on surface water quality operations treatment and management at RFP Volume 2 includes technical appendices that support Volume 1

Serving as the foundation of the *SWMP* are the many federal and state regulatory requirements which affect surface water management at RFP Primary of those are the Atomic Energy Act the Clean Water Act the Department of Energy Organization Act and the National Pollutant Discharge Elimination System (NPDES) which are implemented through a series of secondary laws and federal/ state agreements Acts such as CERCLA RCRA and NEPA contain guidelines for overseeing any contamination cleanup or environmental impact evaluations

> DOE/EG&G recently released a draft *Surface Water Management Plan* addressing specific issues related to surface water management at RFP DOE/EG&G is encouraging public involvement in the surface water management process A sixty day Public Comment Period which allows the public an opportunity to participate in shaping the final *SWMP* is scheduled to run until July 20 1991 Copies of the *SWMP* are available for review at the Information Repositories

Water Related History of RFP

Important water related features constructed at the opening of RFP include a water treatment plant a sanitary sewage treatment plant a process wastewater treatment plant and several on site ponds for surface water management and spill containment Improvements have been made to each of these systems over time to meet the needs of RFP and comply with regulatory requirements Additional state of the art facilities are planned to reduce or eliminate surface water discharges from RFP assure compliance with new regulatory standards and meet public concerns

Many of the changes in operations treatment and monitoring of RFP have been the result of incidents at the Plant and more stringent environmental standards A major factor affecting surface water management was the December 1989 Colorado Water Quality Control Commission hearing on standards and classification for the Big Dry Creek basin This hearing resulted in the resegmentation of the upper Big Dry Creek basin and the setting of new classifications and stringent site specific water quality standards for surface water on the Plant site At this hearing more rigorous standards and classifications were adopted for Great Western Reservoir and Standley Lake

Surface Water Operations

There are three types of water return flows at RFP process wastewater sanitary wastewater and surface water runoff which require some form of management

Process wastewater which may contain radioactive and/or hazardous materials from its use in manufacturing processes at RFP must be collected and managed separately from all other water Because wastewater from processing activities is treated through a special system which is isolated from other treatment systems at RFP and does not discharge process wastewater is not addressed in the *SWMP*

See **Surface Water** page 2

ADMIN RECORD

Surface Water continued from page 1

Sanitary wastewater or ordinary wastewater generated from the restrooms cafeterias showers and other routine activities at RFP must be transferred to the Sewage Treatment Plant (STP) where it is then treated tested and controlled along with surface water runoff in a series of on site holding ponds and discharged off site following analysis to assure that it meets all applicable standards

Surface water runoff is water that runs over the site from storms snowmelt and ground water return flow It must be collected in on site holding ponds tested and treated if nec essary before it is discharged off site

These detention or holding ponds referred to as the A B C series ponds serve three main purposes for surface water manage ment 1) spill control 2) surface water con trol for monitoring and possible treatment and 3) stormwater detention Discharges are conducted only after extensive filtration treatment sampling and written approval by the Colorado Department of Health (CDH) The cities of Broomfield and Westminster are also notified so that they may conduct inde pendent oversight monitoring and surveil lance of all water discharges

These holding ponds are interconnected by intermittent streams in three natural drainage basins described below that receive runoff from the main facilities area Each drainage contains earthen dams that control off site discharges allowing water testing and treat ment to meet quality standards (See related map on page three)

North Walnut Creek receives surface w ter runoff from the north side of the main facili ties areas Four ponds on this creek A 1 through A 4 collect runoff and are available to control possible chemical spills

South Walnut Creek which has five holding ponds receives surface water runoff from the central portion of the main facilities area Runoff water is diverted past Ponds B 1 and B 2 through B 3 and B 4 and then to Pond B 5 where the water is held for analysis prior to controlled off site discharge Ponds B 1 and B 2 are reserved as backup spill control ponds Pond B 3 also receives discharge from the STP

Woman Creek which has two associated ponds flows across the south side of RFP through Pond C 1 bypasses Pond C 2 and discharges off site Surface runoff from the south side of the RFP manufacturing areas is collected in an interceptor ditch and is then routed to Pond C 2 where water is held and pumped to Pond A 4 for treatment analysis and discharge

The City of Broomfield has constructed a diversion ditch around Great Western Reservoir downstream of Pond A 4 which intercepts Pond A 4 discharges and routes them to Walnut Creek below the reservoir

Management Studies

An extensive surface water monitoring pro gram at RFP includes monitoring of surface water and sediments along with measurement of streamflow and meteorologic parameters

Three types of studies relating to surface water management are underway or planned at RFP 1) hydrologic 2) water quality stud ies and 3) water treatment studies These studies are being conducted to better under stand water quality and hydrology at RFP to assist with improved treatment and manage ment of surface water

The Skaggs Committee

An important part of the *SWMP* is the result of work done by the Skaggs Committee Congressman David Skaggs from the Second U S Congressional District organized forma tion of a committee comprised of representa tives from local cities Jefferson County DOE CDH EG&G EPA and offices of the Governor Senator Timothy Wirth and for mer Senator William Armstrong to study the numerous potential alternatives for the long term m nagement of surface water at RFP

The group hammered out a plan now referred to as Option B with two major components 1) Procuring a replacement water supply for the City of Broomfield then abandoning Great Western Reservoir as a drinking water storage reservoir 2) Constructing a 100 year flood protection for Standley Lake from plant runoff

The activities associated with replacing Broomfield s water supply include the pur chase of water rights to replace water stored in Great Western Reservoir and provision of a reliable delivery system and necessary upgrades to the City of Broomfield s water treatment and distribution systems

Activities associated with the protection of Standley Lake include the construction of a canal to divert flood waters around the Lake the construction of a 100 year flood retention structure upstream of Standley Lake the construction of miscellaneous diversion pipelines and the implementation of pump ing facilities designed to convey runoff from the Standley Lake drainage basin to Great Western Reservoir

Specific components of Option B the ultimate scope and the final design will be developed jointly by the local governments DOE EG&G the State of Colorado EPA and others ■

Geochemical Report

The recently issued *Background Geochemical Characterization Report* provides analyses of studies comparing chemical make up of undisturbed buffer areas of RFP with other plant areas known to have been affected by plant opera tions The purpose of the studies is to help iden tify and assess the potential for environmental contamination in the buffer zone that may have resulted from migration of radioactive or hazardous wastes generated in past RFP operations The buffer zone includes areas north south and west of the main plant but inside plant boundaries

These ongoing studies involve sampling and chemical analyses of data collected from various locations in the buffer zone including background monitoring wells boreholes surface water and sediment sampling stations

The baseline water and soil studies are required to support RCRA interim measures and CERCLA interim remedial actions and will ultimately be incorporated into the final plant closu e plans and remedial investigation and feasibility study reports

The *Background Geochemical Characterization Report* will be updated as additional data are col lected to provide the clearest possible under standing of baseline chemistry at RFP The addi tional data will increase the reliability of the statis tical conclusions identify any seasonal variations and promote better understanding of any change in chemical concentrations found in the buffer zone The ultimate goal of this study is to provide the necessary baseline data to identify contami nated areas at RFP ■

Monthly Status Reports Available

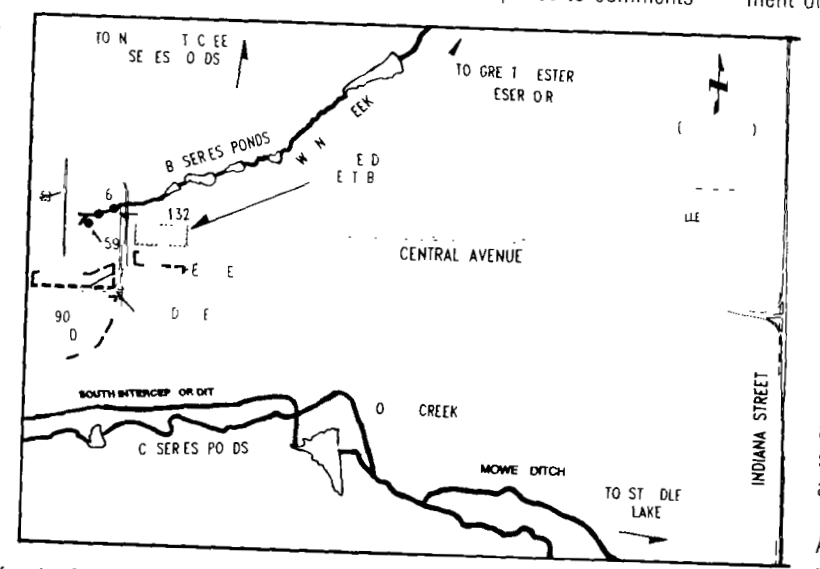
A monthly report summarizing the status of environmental restoration activities at RFP is now available at the information reposito ries Each *Environmental Restoration Program Monthly Report will* describe the previous month s activities and will be available on or about the 20th of each month (i e the April 1991 *Report* became available in the information repositories on May 20 1991) ■

OU2 South Walnut Creek Document Finalized

The *Final Surface Water Interim Measures Interim Remedial Action Plan Environmental Assessment and Decision Document (IM IRAP) for South Walnut Creek Basin (Operable Unit 2 OU2)* has been finalized and is now available at the information repositories listed on page 4 The *IM IRAP* addresses contaminated surface water in the South Walnut Creek drainage basin located on the northern edge of OU2 (903 Pad Mound and East Trenches Areas) Water quality investigations revealed the presence of volatile organic compounds (VOCs) and radioactive mate rials in OU2 surface water

An *IM IRAP* can be carried out to identify screen and evaluate interim alternatives in an expedi tious manner and to propose a preferred alternative to minimize the release of hazardous sub stances An interim action is conducted when it is necessary to resolve a problem more quickly than the several years necessary to evaluate alternatives and identify a preferred remedy under CERCLA and RCRA guidelines The interim action is not the final remedy for OU2 and the CERCLA/RCRA investigations for a final remedy will continue to be conducted at OU2

In conjunction with finali ation of this *IM IRAP* the *OU2 Surface Water Responsiveness Summary* has also been finalized The *Responsiveness Summary* presents DOE s response to comments received at the public meeting held on October 23 1990 as well as those mailed to DOE during the *IM IRAP* pub lic comment period which ended November 24 1990



In light of concerns raised during the public comment period DOE divided OU2 into two *IM IRAPs* The current *IM/IRAP* addresses col lection and treatment of water from seeps into the South Walnut Creek drainage the other *IM IRAP* will address collection and treatment of water from seeps into the Woman Creek drainage The results of field treatability tests at the South Walnut Creek OU2 location may provide a better assessment of applicable treatment technologies in selection of the preferred *IM IRAP* alternative for Woman Creek EPA CDH and DOE are negotiating the schedule but a draft *IM IRAP* for the Woman Creek seeps is expected in 1991 or 1992

In addition to previously proposed collection of surface water at stations SW 59 and SW 61 the *IM IRAP* also proposes collection at a third location designated as SW 132 SW 132 contains the piped flow from portions of South Walnut Creek that lie upstream of SW 59 and SW 61

Completion of the *IM IRAP* for South Walnut Creek is the final step before initiation of the interim action which begins with the installation of the field treatability unit discussed in the companion article on OU2 ■

OU2 Treatability Unit

The first part of the *IM IRAP* for OU2 (South Walnut Creek Surface Water) involves installation of a field treatability unit (FTU) to evaluate the effectiveness of the selected treatment The selected treatment consists of using chemical treatment and microfiltration to remove metals and radionu clides and a granular activated carbon (GAC) system to remove VOCs The first phase of the FTU testing will cover evaluation of the effec tiveness of the GAC system The GAC system is an industry proven technology much like that of a charcoal based drinking water treatment system used in many homes today

The *IM IRAP* requires the collection and treat ment of contaminated surface water from two in stream culvert discharge points and one surface water seep all upstream from the South Walnut Creek deten tion ponds

In order to collect surface water from the sampling locations and transport it to the FTU precast concrete boxes will be placed in the stream bed at the collection stations These boxes known as sumps allow water to col lect to a depth sufficient for pumping to the treatment facility A sand and bentonite mixture will be packed around the sumps to provide a reliable seal and permit water to be collected and transported

A double walled pipe will transfer the raw water to the FTU Water will be stored in a 10 000 gallon double walled influent tank before being processed through the FTU s GAC system Treated effluent will then be dis charged into South Walnut Creek Operation of the GAC treatment began on May 13 1991

Design of the remainder of this FTU is currently underway Other portions of the FTU include chemical precipitation microfiltration and a sludge dewatering system that together will remove radionuclides and heavy metals The Interagency Agreement schedule calls for the entire FTU to be completed and begin operating on October 30 1991 ■

New Documents

EG&G Rocky Flats Plant Environmental Restoration Program Monthly Report for March 1991 and for April 1991

Final Surface Water Interim Measures Interim Remedial Action Plan Environmental Assessment and Decision Document South Walnut Creek Basin Operable Unit No 2

Re ponsiveness Summary Final Surface Water Interim Measures Interim Remedial Action Plan Environmental Assessment and Decision Document South Walnut Creek Basin Operable Unit No 2