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Department of Energy

ROCKY FLATS OFFICE
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MAR 11 1993

93 DOE-02561

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Colorado Department of Health
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MAR 1 1993

Gentlemen

As agreed upon the Department of Energy/Rocky Flats Office (DOE/RFO) is hereby transmitting a draft outline for an Interim Measure/Interim Remedial Action (IM/IRA) for management of the water in the A series ponds B series ponds Pond C 2 and the Landfill Pond as discussed in scoping meetings held with representatives from your agencies Also enclosed is a draft chart outlining the steps and a tentative schedule for submittal of an IM/IRA We would appreciate receiving any comments or questions you have regarding this outline by March 19 1993 to begin the detailed amplification of the elements presented

An interim plan for managing pond waters that was also discussed with your agency representatives will be available for your review shortly

If you have any questions regarding these issues please contact me at 966-5918 or Mark Van Der Puy at 966 2473

Sincerely


**James K. Hartman
Assistant Manager for Transition
and Environmental Restoration**

ADMIN RECORD

A-0005-000402

MAR 11 1993

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93 DOE-02561

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February 23 1993

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**DRAFT OUTLINE
Pond Water Management IM/IRA**

Executive Summary

Chapter 1 Introduction

- 1 1 Project Background
Statement of Basis and Purpose**
- 1 2 General Approach to Surface Water Management**
- 1 3 IM/IRAP Organization**

Chapter 2 Site Characterization

- 2 1 Site Description and Background**
 - 2 1 1 RFP Location Map and Facility Description**
 - 2 1 2 Surrounding Land Use/Population Density**
 - 2 1 3 Ponds/drainages/flowpaths description and maps**
 - 2 1 4 Downstream water use & downstream considerations
Option B projects water rights**
- 2 2 Description of Affected Environment**
 - 2 2 1 Physical Environment spatial setting & topography**
 - 2 2 2 Meteorology/Climate**
 - 2 2 3 Ecology general**
 - 2 2 4 Ecology aquatic specific to ponds/streams**
 - 2 2 5 Geology/Hydrology/Hydrogeology**
 - 2 2 6 Threatened and Endangered Species
Endangered Species Act
Bald Eagle Protection Act**
 - 2 2 7 Sensitive Environments wetlands/floodplains**
 - 2 2 8 Cultural Resources**

**DRAFT OUTLINE
POND WATER MANAGEMENT IM/IRA DECISION DOCUMENT**

- 2 3 Summary of Existing Pond Water Management System
 - 2 3 1 Non Discharge Ponds (ponds A1 A2 B1 B2 as a system)
 - Functions Spill or suspect water collection/control
 - Protection of discharge ponds
 - Volume Management methods spray evaporation
 - or transfer/release to other non discharge ponds
 - Operational Protocols monitoring/sampling
 - requirements analytes of concern notification/
 - approval steps system operations and oversight
 - 2 3 2 Discharge Ponds (ponds A3 A4 B5 C2 as a system")
 - Functions Collection of stormwater and STP flows
 - Off site discharge
 - protection of downstream water
 - Volume Management methods discharge with or
 - without treatment interdischarge pond transfers
 - Operational Protocols regulatory monitoring/sampling
 - requirements analytes of concern notification/
 - approval steps system operations and oversight
 - 2 3 3 Landfill Pond
 - Functions collection/control of landfill leachate
 - Protection of downstream waters
 - Volume Management methods spray evaporation
 - or transfer/release to non discharge ponds
 - Operational Protocols monitoring/sampling requirements analytes of
 - concern notification/ approval steps facility operations and
 - oversight
 - 2 3 4 Drainage Pathway Management
 - Functions intercept & collect on site water flows
 - Diversion of run on
 - Management methods valved bypass pipes interceptor
 - ditches static diversion structures
 - Operational Protocols flow monitoring routine
 - maintenance/inspection
- 2 4 Current Regulatory /Water Management Guidance Documents
 - 2 4 1 NPDES/NPDES FFCA Monitoring Biomonitoring Pond
 - Discharges STP discharges SPCC/BMP
 - 2 4 2 CWQCC Stream Standards
 - 2 4 3 AiP
 - 2 4 4 IAG RAD Work Plan
 - 2 4 5 STP Influent Control Internal Waste Streams ID

DRAFT OUTLINE
POND WATER MANAGEMENT IM/IRA DECISION DOCUMENT

- 2 5 Sources & Potential Contaminants associated with this IM/IRA
 - 2 5 1 Previous Releases Remobilization of contaminants
Historical Release Report
 - 2 5 2 STP Discharges
 - 2 5 3 New On site spills/releases
 - 2 5 4 Discharges from Operable Units
OU 1 Effluents OU 2 Effluents Seep at B2
 - 2 5 5 Landfill Leachate
 - 2 5 6 Other Sources of Contaminants
Diesel spills algae blooms 460 outfall
 - 2 5 7 Summary of potential/known contaminants by pond

- 2 6 Summary of Water Quality Management
 - 2 6 1 Background Water Quality Investigations
 - 2 6 2 Regulatory Water Quality Reporting
Discharge Monitoring Reports (STP Discharges Off site Discharges)
 - 2 6 3 Ambient Water Quality Conditions
Site Specific by location

- 2 7 Summary of Site Risks
 - 2 7 1 Pathway Exposure Assessment
 - 2 7 2 Contaminants of Concern
Radionuclides Metals Organics
 - 2 7 3 Toxicity Assessment
Radionuclides Metals Organics
 - 2 7 4 Risk Characterization
 - 2 7 5 Existing Risk Assessments (Chem Tracking)

- 2 8 Site Conditions that Justify an IM/IRA
 - 2 8 1 Deletion of regulatory control of discharges under NPDES
 - 2 8 2 Site Risk considerations
 - 2 8 3 Potential for unregulated transfer or treatment of RCRA
regulated waste (spread of contamination)
 - 2 8 4 Procedural control of operations
 - 2 8 5 Potential degradation of Waters of the US
 - 2 8 6 Use of "Waters of the US for treatment/storage of RCRA
regulated substances

Unresolved Jurisdictional issue

DRAFT OUTLINE
POND WATER MANAGEMENT IM/IRA DECISION DOCUMENT

Chapter 3 Identification of Pond Water Management IM/IRA Objectives

- 3 1 Scope of IM/IRA**
Pond Management efforts subject to the IM/IRA will include emergency spill control storage treatment volume reduction transfers monitoring and discharges The overall goal of the IM/IRA is to prevent the spread of contaminants through the efforts noted above in an approved regulatory framework Corollary to this goal is the need to assure consistency with IAG remediation efforts and the forthcoming NPDES permit (including both the STP point source outfall and stormwater BMP s)

- 3 2 IRA Schedule**
 - 3 2 1 DRAFT Decision Document (Complete 9 1 93)**
 - 3 2 2 FINAL Decision Document (Complete May? 1994)**
 - 3 2 3 Implementation Plan**

- 3 3 Compliance w/ ARAR s and Protection of Health/Environment**
 - 3 3 1 ARAR s Definition and Purpose Performance criteria used to evaluate success in achieving protection of human health and the environment (to the maximum extent practicable)**
 - 3 3 2 To Be Considered (TBC s) Items other than ARAR s which promote/ enhance the Objectives**
 - 3 3 3 ARAR Categories Purpose of Chemical Specific Location Specific and Action Specific Requirements**

Chapter 4 Identification and Analysis of Potential ARAR s

- 4 1 Potential Ambient or Chemical Specific Requirements**
 - 4 1 1 Benchmarks document for water quality includes
SDWA MCL s & MCL Goals
Federal (CWA) Ambient Water Quality Standards
CWQCC Stream Standards (Statewide & Basin Specific)**
 - 4 1 2 RCRA Max Conc Limits (LDR & F039)**
 - 4 1 3 Air Quality Standards**

- 4 2 Potential Location Specific Requirements**
 - 4 2 1 Pond specific requirements for ambient water quality
monitoring dam safety considerations etc**
 - 4 2 2 NPDES point source outfall (per Permit)**
 - 4 2 3 NPDES stormwater monitoring points (per Permit)**

- 4 3 Potential Action Specific Requirements**
 - 4 3 1 Discharge operations SOP s reporting/approvals**
 - 4 3 2 Spill Collection/Containment BMP s**
 - 4 3 3 Treatment BAT SOP s waste handling**
 - 4 3 4 Spray Evaporation SOP s etc**
 - 4 3 5 LF pond transfers SOP s etc**
 - 4 3 6 Interpond transfers (Non discharge ponds) SOP s etc**
 - 4 3 7 Interpond transfers (Discharge ponds) SOP s etc**
 - 4 3 8 Construction efforts Building Codes env analysis**
 - 4 3 9 Sampling/Analytical protocols standard methods**
 - 4 3 10 Emergency releases**

- 4 4 Summary of Selected ARAR s**
 - 4 4 1 Justification of selected Ambient or Chemical Specific ARAR s**
 - 4 4 2 Justification of selected Location Specific ARAR s**
 - 4 4 3 Justification of selected Action Specific ARAR s**

Chapter 5 Screening and Analysis of Pond Water Management Options

- 5 1 IM/IRA Plan Screening Process
 - 5 1 1 Effectiveness
 - Ability to meet Objectives and ARAR s
 - Risk Reduction
 - 5 1 2 Implementability
 - Technologically available
 - Funding constraints
 - 5 1 3 Laws and regulations
 - Legal under existing environmental legislation
 - Consistent with other laws/regulations (FAR OSHA)
 - 5 1 4 Cost/Benefit analysis
 - 5 1 5 Consistency with OU actions
 - OU s 5 6 7 investigations workplans final actions
 - 5 1 6 Regulator and Public Acceptance

- 5 2 Non Discharge Ponds Management Options
 - 5 2 1 Methods for controlling pond volume
 - 5 2 1 1 Spray Evaporation
 - 5 2 1 2 Irrigation Vegetation enhancement
 - 5 2 1 3 Transfers between ponds
 - 5 2 1 4 Discharge off site
 - 5 2 1 5 Recycle
 - 5 2 2 Treatment Technology / Options (BAT)
 - 5 2 2 1 Solids removal Filtration etc
 - 5 2 2 2 Organics Removal GAC etc
 - 5 2 2 3 Metals Removal Ion Exchange etc
 - 5 2 2 4 Radionuclide Removal
 - 5 2 3 Monitoring

- 5 3 Discharge Ponds Management Options
 - 5 3 1 Methods for controlling pond volume
 - (See 5 2 1 above)
 - 5 3 2 Treatment Technology / Options (BAT)
 - (See 5.2 2 above)
 - 5 3 3 Monitoring

- 5 4 Landfill pond/ landfill leachate management
 - 5 4 1 Methods for controlling pond volume
(See 5 3 1 above)
 - 5 4 2 Collection methods
 - 5 4 3 Storage options type of storage volume
 - 5 4 4 Treatment Technology/ Options (see above)
 - 5 4 5 Monitoring

- 5 5 NPDES Regulated water management constraints
 - 5 5 1 On site spill collection routing and storage
 - 5 5 1 1 No Action (same as existing)
 - 5 5 1 2 Collection and storage requirements
 - 5 5 1 3 Monitoring and other requirements
 - 5 5 1 4 Drainage pathway upgrades/ changes

 - 5 5 2 Stormwater collection routing and storage
 - 5 5 2 1 No Action (same as existing)
 - 5 5 2 2 Collection and storage requirements
 - 5 5 2 3 Monitoring and other requirements
 - 5 5 2 4 Drainage pathway upgrades/ changes

 - 5 5 3 STP effluent discharge and routing
 - 5 5 3 1 Effluent storage
 - No Action continue using B 3
off line storage tanks
reclaim/line reuse B 3
 - 5 5 3 2 Relocation of discharge point
 - No Action continue using B 3
to A 4
below A 4
off site

Chapter 6 PROPOSED ACTIONS

- 6 1 Summary of Selected Pond Water Management Options
 - 6 1 1 Non Discharge Ponds
 - Water collection and storage volume control
 - treatment technology operational/procedural control
 - 6 1 2 Discharge Ponds
 - Water collection and storage volume control
 - treatment technology operational/procedural control
 - 6 1 3 Landfill Pond
 - Water collection and storage volume control
 - treatment technology operational/procedural control
 - 6 1 4 Drainage Pathways
 - Maintenance and reconstruction
 - Operational/procedural control
 - 6 1 5 STP effluent
 - Collection and storage
 - Operational/procedural control
 - Discharge point

- 6 2 Environmental Impacts of Selected Options
 - 6 2 1 Air
 - 6 2 2 Water
 - 6 2 3 Terrestrial and Aquatic
 - 6 2 4 Threatened and Endangered Species
 - 6 2 5 Personnel Exposure
 - 6 2 6 Cultural Resources
 - 6 2 7 Wetlands and Floodplains
 - 6 2 8 Commitment of Resources
 - 6 2 9 Cumulative Impacts

- 6 3 Environmental Evaluation of No Action
 - 6 3 1 Air
 - 6 3 2 Water
 - 6 3 3 Terrestrial and Aquatic
 - 6 3 4 Threatened and Endangered Species
 - 6 3 5 Personnel Exposure
 - 6 3 6 Cultural Resources
 - 6 3 7 Wetlands and Floodplains
 - 6 3 8 Commitment of Resources
 - 6 3 9 Cumulative Impacts

Chapter 7 Implementation Plan

- 7 1 Assumptions and Qualifications**
 - NEPA**
 - Availability of necessary permits/ permit modifications**
 - Availability of funding**
 - Reservation of Rights under CERCLA and IAG**

- 7 2 Proposed Schedule of Tasks & Milestones**
 - 7 2 1 Development of SOP s**
 - 7 2 2 Construction efforts**
 - 7 2 3 New research/studies**
 - 7 2 4 Technology Improvements**
 - Rad Removal Technologies?**
 - Filtration?**
 - Real Time Monitoring?**

CHAPTER 8 Public Comment and Responsiveness Summary (FUTURE)

REFERENCES

Historical Release Report

Surface Water Management Plan

Spill Prevention Control and Countermeasures/ Best Management Practices Plan (SPCC/BMP)

Workplan for the Control of Radionuclides in Water Discharges

Operable Units 5 6 7 RI/RFI/FS Work Plans

Federal Facilities Compliance Agreement (NPDES FFCA)

InterAgency Agreement (IAG)

Agreement in Principle (AIP)

National Pollution Discharge Elimination System (NPDES) point source and stormwater permit applications

APPENDICES

- I 40 CFR 268 43 Table CCW (F039 waste)
- II CWQCC Segment 4 and Segment 5 water quality standards
- III Summary of historical water quality data
- IV Summary of previous Risk Assessments (Chem Tracking study)
- V Statistical Methods and References
- VI Summary of Water Quality Reporting System (WQRS)

Tentative Schedule (without NEPA considerations)

ID	Name	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd		
		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
1	Phase I Scoping Process																					
2	Assemble Team																					
3	Delinlize scope and objectives																					
4	Prepare Draft Outline																					
5	Complete Draft Outline																					
6	Complete scoping process																					
7	Phase II Document Preparation																					
8	Prepare background information (Chapter 1)																					
9	Prepare site characterization (Chapter 2)																					
10	Prepare Objectives section (Chapter 3)																					
11	Define operational alternatives																					
12	Legal/regulatory Interpretations																					
13	Integration w/ OU activities																					
14	Perform Alternatives Evaluations																					
15	Select preferred alternatives																					
16	Prepare Proposed Actions (Chapter 4)																					
17	Prepare Implementation Plan (Chapter 5)																					
18	Internal EG&G/DOE review																					
19	Complete Draft Document																					
20	Review and Comment Period																					
21	EPA/CDH Review																					
22	Revisions																					
23	Agency review of revisions																					
24	Public Comment																					
25	Public Meeting																					
26	Public Meeting																					
27	Response to Comments																					
28	Agency review of Comment Response																					
29	Final Decision Document issued																					