



Mr. John Rampe  
OGC-115-05  
October 27, 2005  
Page 2 of 2

**F-3.5 Legibility of documents; Poor quality of copies**

See attached package related to this corrective action.

Document numbers OU03-A-000523 and OU01-A-000597 were the best available copies and could not be replaced.

Document number OU03-A-000568 was replaced with a more legible copy.

**F-3.6 Confirm that CDs and other media referenced are available for review**

Please refer to the response provided in the Corrective Action Plan, as well as the attached package.

Source One performed searches of the AR contents to identify and locate all CDs and other media referenced in the AR. Media items were collected and filed with the original paper record. A database reference was entered in the "Comments" field that identifies media attached to the paper record. The attached package provides screen shots of these references.

**F-3.7 Missing Contact Record**

Contact Record was located and included in the AR.

**F-3.8 Missing index for OU-3**

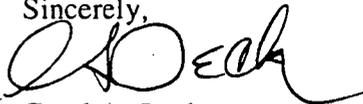
The OU-3 AR index was located and included in the AR.

**F-4 Technical and guidance documents**

Please refer to the response provided in the Corrective Action Plan, and to the attached one-page summary of how this item was resolved. K-H reviewed major decision documents to identify any technical or guidance documents that may have been omitted. In addition, referenced technical and guidance documents that are not readily available to the public were identified and were or will be included in the AR. Other efforts are ongoing to ensure that the references listed in the RI/FS and other site documents are available through the AR.

Should you have any questions or require additional information, please feel free to contact me at 303-966-3722.

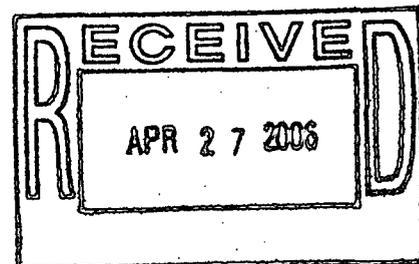
Sincerely,



Carol A. Deck  
Corporate Counsel

Enclosures:  
As Stated

cc:  
D. Hicks, RFPO  
L. Brooks, K-H



Assessment Number RFPO-05-0005  
Corrective Action F-3.5

- OU03-A-000523 (Copy Attached) the best available copy was originally transmitted to the CERCLA AR.
- OU03-A-000568 (Copy Attached) See attached legible copy.
- OU01-A-000597 (Copy Attached) the best available copy was originally transmitted to the CERCLA AR.

OU03-A-000523

BEST  
AVAILABLE  
COPY

John Rampe  
DOE - RFFO

Public Health and Environment  
Materials and Waste Management

Comments on

DECISION/RECORD OF DECISION FOR  
THE OFFSITE AREAS  
January 1997

- 1 In the second sentence of the Declaration Statement on page 2, the use of the term "on-site" is confusing since the term normally refers to areas within RFETS boundaries
- 2 The final sentence of the Declaration Statement should be revised to indicate that this CAD/ROD will be reviewed in five years
- 3 Under the signature line for CDPHE on page 3, replace Tom Looby with Howard Roitman, who is Director of the Hazardous Materials and Waste Management Division rather than the Office of Environment
- 4 The last sentence of the third paragraph on page 4 is incorrect. Please re-write the sentence as follows "Water from Pond C-2, located in the Woman Creek drainage ~~and~~ which drains water from the 881 Hillside south of the industrial area, is pumped to Woman Creek"
- 5 Please modify the first sentence of the second paragraph on page 5 as follows "Portions of OU 3, as a result of accidental releases from RFETS in the past and routine operations in the early years of plant operations, contain low-level deposits of radionuclides"
- 6 In the third paragraph on page 5 it states that the 903 Pad "may be" responsible for some of the radionuclides in OU 3. The next paragraph says that the holding pond reconstruction "may have" contributed to radionuclide deposits and "may have" resulted in resuspension of sediments containing radionuclides. In the Proposed Plan and later in this document, OU 3 radionuclide contamination is definitively attributed to these two sources. Therefore, "may be" and "may have" should be replaced with more affirmative language.
- 7 The list of entities which provided comments in the first sentence in the Highlights of Community Participation section should include the City of Broomfield.
- 8 To be clearer and more complete, two of the bulleted items at the bottom of page 6 should be modified.  
1st bullet - "Point source discharge and stormwater monitoring conducted under the Site's National Pollutant Discharge Elimination System (NPDES) permit (which

ADMIN RECORD

A-0003-000523

currently does not regulate plutonium and americium), issued pursuant to the Clean Water Act,"

3rd bullet - "Surface water monitoring conducted pursuant to RFCA (effluent from the Sewage Treatment Plant is currently not monitored),"

- 9 The term "bedrock geology", which is consistent with the RFI/RI Report, should be used rather than "subsurface geology" in the second paragraph in the Geology and Hydrogeology section on page 7. The Arapahoe Formation, for example, is exposed at the surface in the vicinity of Standley Lake.
- 10 The last sentence in the first paragraph on page 8 should be modified to read, "Water from Pond C-2 is pumped to Woman Creek."
- 11 The third paragraph on page 11 mentions that reservoir sediments samples were compared to background data for stream sediments. This comparison is a limitation of the RFI/RI Report which should be acknowledged here or in a discussion of uncertainties mentioned in comment #19 below.
- 12 In the last sentence in the second paragraph under "Other Environmental Media: Surface Water, Groundwater and Air" on page 12, the standard for Mower Reservoir should be changed to 0.15 pCi/L to correspond to the new Segment 4 standard.
- 13 The last sentence in the third paragraph under "Other Environmental Media: Surface Water, Groundwater and Air" on page 12 mentions "upper-bound mean background values". It is assumed that these values are the 95% UCL on the arithmetic mean, but this should be specified.
- 14 The last sentence in the fourth paragraph under "Other Environmental Media: Surface Water, Groundwater and Air" on page 12 states that the "over the vast majority of OU 3" resuspension is not a problem. This summary statement should state where resuspension was determined to be a potential problem, even if only "rarely".
- 15 The paragraph at the top of page 14 mentions the two exposure scenarios evaluated in the HHRA and lists the "additional exposure pathways" included for the residential scenario. For the sake of clarity, the basic exposure pathways for both scenarios should also be listed, so that readers can understand how complete the assessment is.
- 16 The second paragraph on page 14 implies that residential exposures were included because of DOE's desire to assess even remotely possible scenarios since future land use assumptions are uncertain. The City of Broomfield prefers that this paragraph acknowledge their request to have these scenarios included.
- 17 The second sentence of the fourth paragraph on page 14 is in error. This statement would apply only to non-radionuclides which were not assessed. For radionuclides, slope factors are based on average risks and therefore are not "upper bounds of excess cancer".

risk”

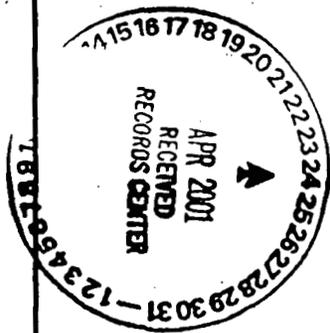
- 18 The last sentence of the fourth paragraph on page 14 should be re-written to state that excess lifetime cancer risks which are below or within the one in ten thousand ( $1 \times 10^{-4}$ ) to one in one million ( $1 \times 10^{-6}$ ) range are considered protective of human health
- 19 This document is written as though there is no longer any uncertainty as to the safety of the offsite areas. The limitations and uncertainties inherent in the RFI/RI investigation need to be acknowledged. The RFI/RI Report, which is the basis for this decision, included an uncertainty analysis. This uncertainty analysis should be summarized or referenced in a separate paragraph or within the conclusions of this document in order to fully describe the limits of the decision-making basis. Acknowledging that the data analyzed for the RFI/RI was limited serves to protect all of the parties to this decision document. Specific examples follow
- a) Groundwater data was collected from two wells in OU 3, which were installed to assure that no contamination was getting past the dams. The document should state that only limited OU 3 groundwater data exists. The conclusion that contamination in groundwater at the Site will not reach wells in OU 3 is based on the assumption that all contaminated groundwater at the Site emerges to surface water, and is contained and monitored before leaving the Site.
- b) This document should state that non-radionuclide chemicals were not analyzed in OU 3 soil, which is consistent with the OU 3 Work Plan. This was done because the assumption was made that any non-radionuclides would pose a lower risk than the radionuclides in soil, and would be cleaned up along with the radionuclides during any remedy. Beryllium is especially important, since it is a site-related chemical which may cause an allergic-type sensitization that is not dose-dependent in a small susceptible portion of the population. The draft report, *Estimated Exposure and Cancer Risk from Beryllium Released to the Air from the Rocky Flats Plant* (Radiological Assessments Corporation, February 1997) references several studies conducted on beryllium in soil in the Rocky Flats area including *Analysis of Selected Metals in the Surficial Soils of OU2*, which was produced for the OU 3 RFI/RI Report. All of these studies conclude that beryllium concentrations in the soils around RFETS do not appear to be above background.
- c) Because background lake sediment data was not available or collected for the RFI/RI study, the reservoir sediments were compared primarily to stream sediment data. Lake and stream sediments, however, are not strictly comparable because of differences in flow conditions, etc. This limitation should be included in the uncertainty section of the document.
- d) The potential for transport of radionuclides to offsite areas remains uncertain. The actinide migration studies currently being conducted will consider issues that may alter our understanding of transport mechanisms for radionuclides. This document

should acknowledge that if the conclusions of this study impact the data upon which the no-action decision is based, the decision will be re-visited

- 20 The final sentence of Response to Comment #8 on page 21 is inappropriate for a decision document. This sentence should be deleted or replaced with a statement that the OU 3 CAD/ROD does not affect the status of the Settlement Agreement.

OU03-A-000568

# ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



## RESULTS OF THE OPERABLE UNIT 3 REMEDIAL INVESTIGATION

Rocky Flats Local Impacts Initiative

January 10, 1996

Rocky Flats Environmental Restoration



1/4/96 RFLII (part)

1

ADMIN RECORD

A-0003-000568

1/34

# RI Goals and Objectives

Characterize physical features

Define sources of contamination

Characterize the nature and extent of  
contamination in each media of each IHSS

Describe contaminant fate and transport

Collect data to establish baseline risk for OU 3



# RI Results and Conclusions

Contaminant plume is result of wind dispersion from 903 pad and trends west to east

Maximum concentrations/activities immediately east of RFETS east gate

Maximum Rad values identified

—Pu 6.47 pCi/g

—Am .52 pCi/g



# RI Results and Conclusions (cont.)

No vertical migration in soils or sediments

Analytes in surface water are within background levels

Analytes in reservoir sediments are highest in GWR, maximum values are buried beneath 18 inches of sediment

No migration from sediments to ground water



4

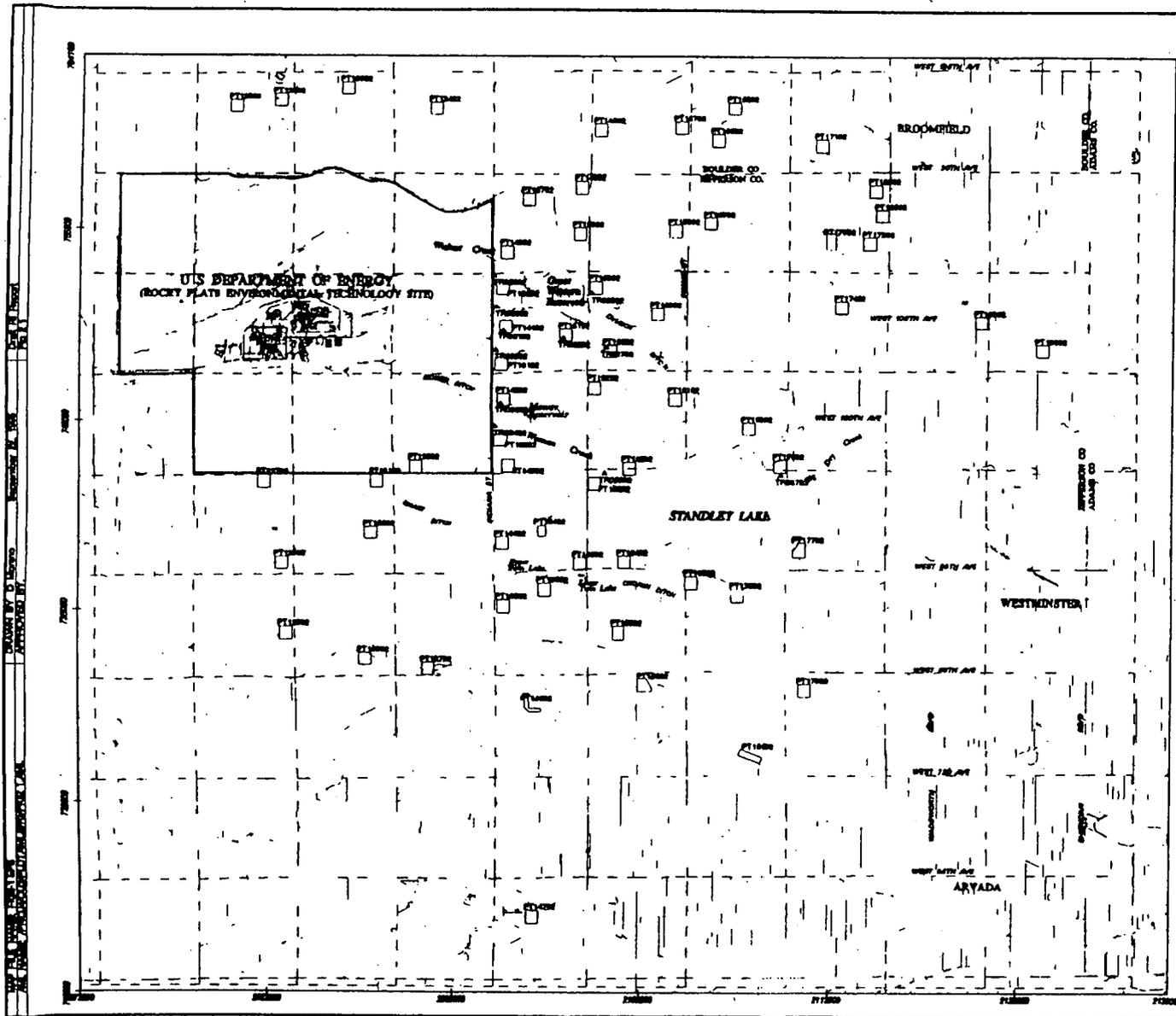


Figure 2-1  
 Surface Soil Sample Locations  
 Operable Unit 3  
 IHSS 199 Surface Soils Sampling Area

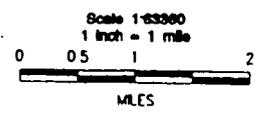
ROCKY FLATS  
 ENVIRONMENTAL TECHNOLOGY SITE  
 U.S. Department of Energy

Best Available Copy

- Surface Soil Plot
- Trench Sample Locations

**DRAFT**

Mapping Sources:  
 Jefferson County Mapping Dept.  
 EG&G Rocky Flats  
 U.S. Geological Survey



Polyconic projection 1827 North American datum  
 Colorado central zone state plane coordinate system.



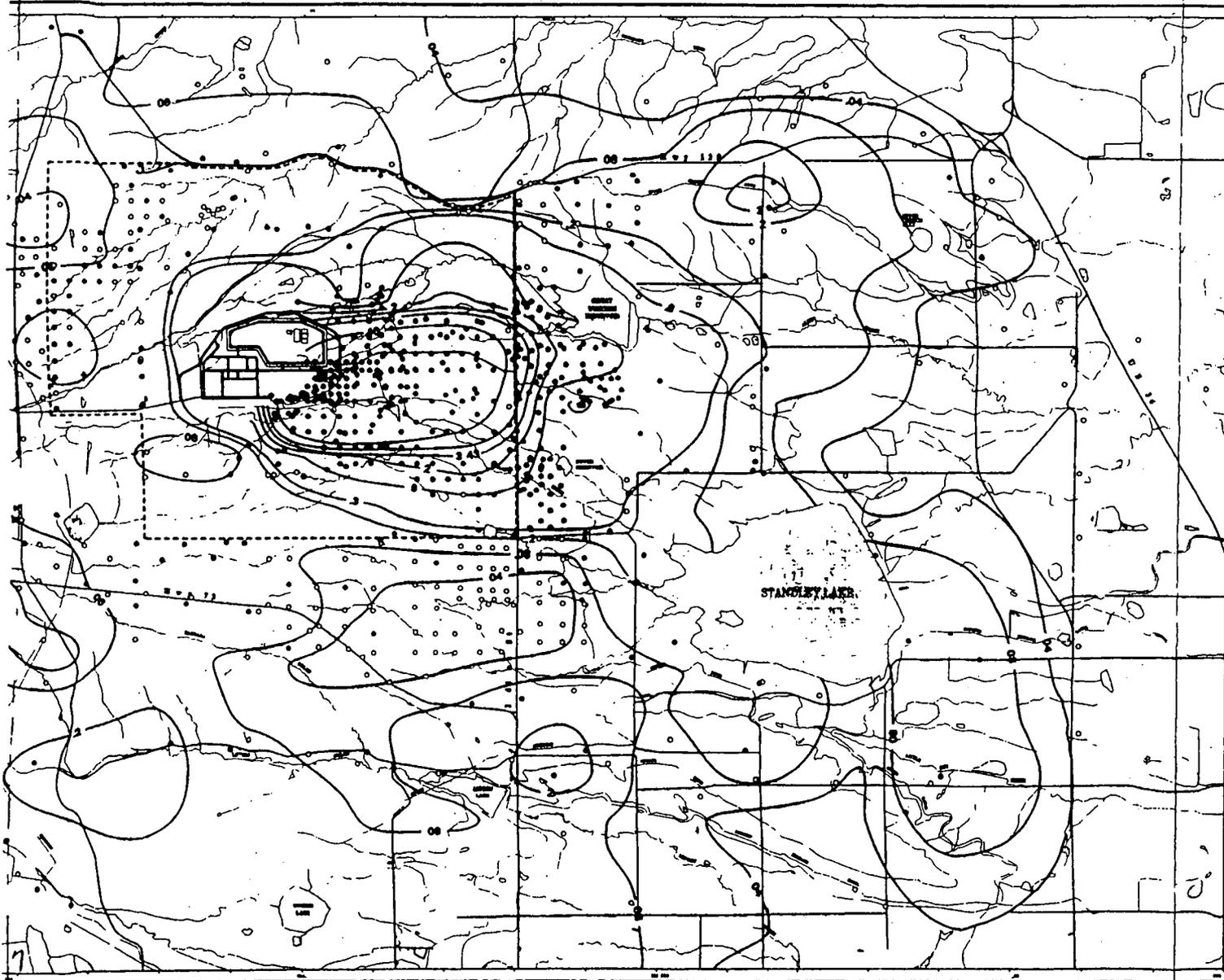


Figure 4-6A  
 Pt 239+240 (pci/g) Isopleth  
 with Exhaustive  
 Surface Soil Sampling Locations  
 (G-Type Edman)

**ROCKY FLATS  
 ENVIRONMENTAL TECHNOLOGY SITE  
 U.S. Department of Energy**

Concentration Levels (pci/g)

- < 0.05
- ◻ 0.05 0.20
- ◻ 0.20 0.50
- ◻ 0.50 1.00
- ◻ 1.00 4.00
- ◻ 4.00 9.00
- ◻ > 10.00

**DRAFT**

Best Available Copy

Standard Features

- N Isopleth Lines
- BO3 Pad
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences
- - - Rocky Flats boundary
- Major Roads
- Secondary Roads
- RWETS Roads

DATE 05/08/88  
 Revision, draft, and format provided by  
 Pacific Slope  
 2000 Pacific Ave., No. 2001  
 Berkeley, CA 94704  
 Prepared by  
 (10/87) RWETS  
 The contents of this map were derived from  
 previous mapping efforts. Digital data are from  
 the Rocky Flats Environmental Technology Site.

Scale 1:40000  
 1 inch represents approximately 3283.33 feet



State Plane Coordinate System  
 California Central Zone  
 Datum: NAD83

Figure 4-6B  
 Am 241 (pCi/g) Isopleth  
 with Exhaustive  
 Surface Soil Sampling Locations  
 (P-Type Locations)

ROCKY FLATS  
 ENVIRONMENTAL TECHNOLOGY SITE  
 U.S. Department of Energy

- Concentration Levels (pCi/g)
- < 0.05
  - ◻ 0.05 0.25
  - ◻ 0.25 0.50
  - ◻ 0.50 1.00
  - ◻ 1.00 2.00
  - ◻ 2.00 4.00
  - ◻ 4.00 8.00
  - ◻ > 10.00

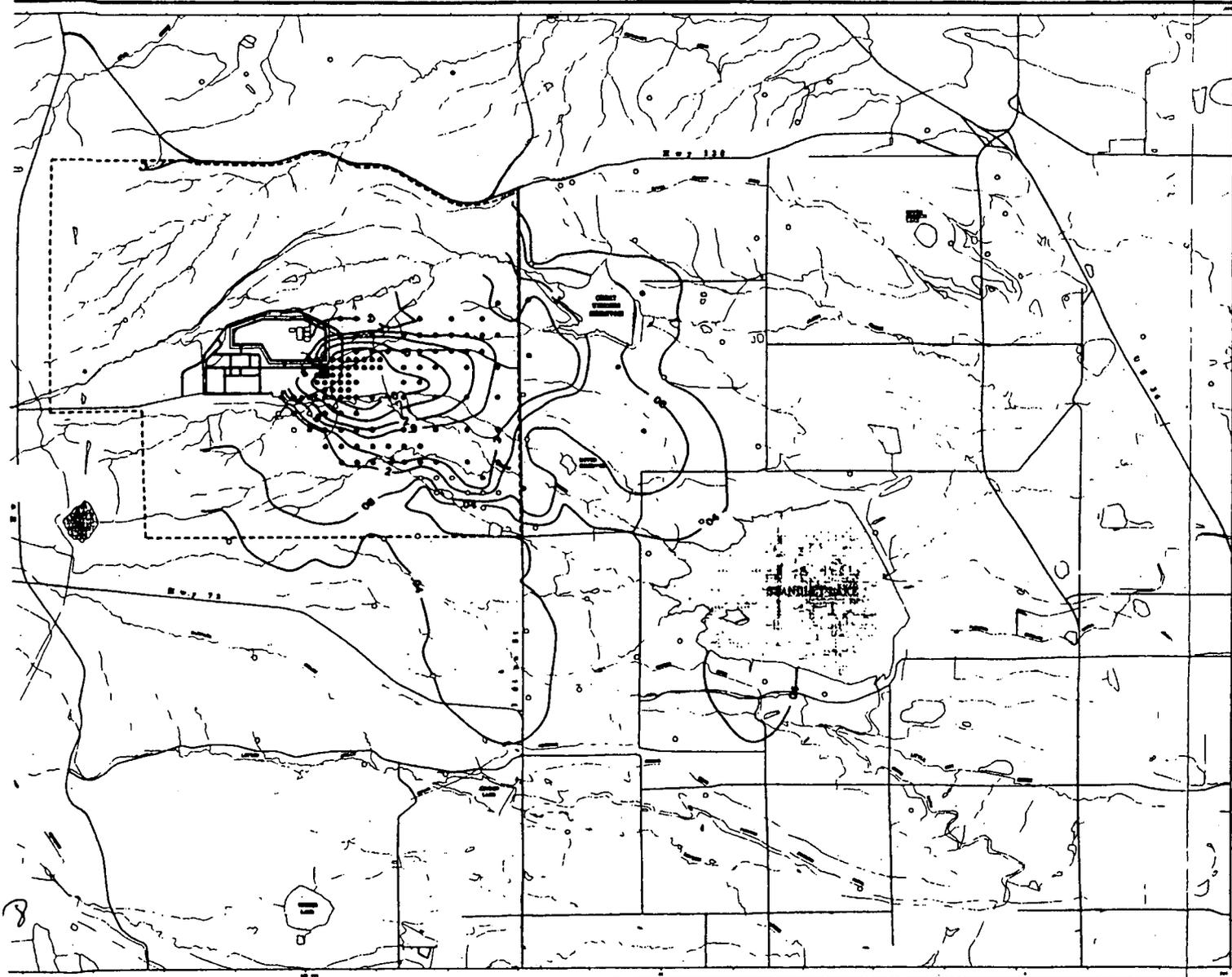
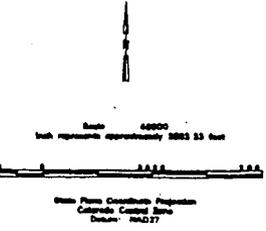
**DRAFT**

Best Available Copy

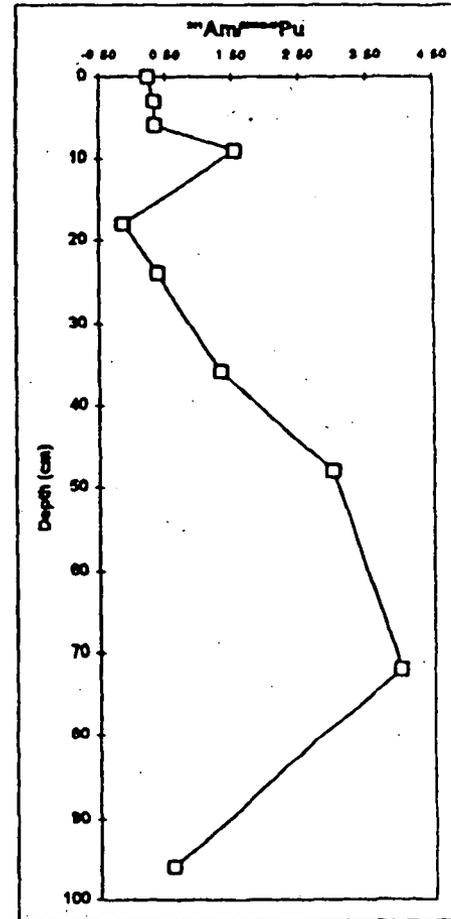
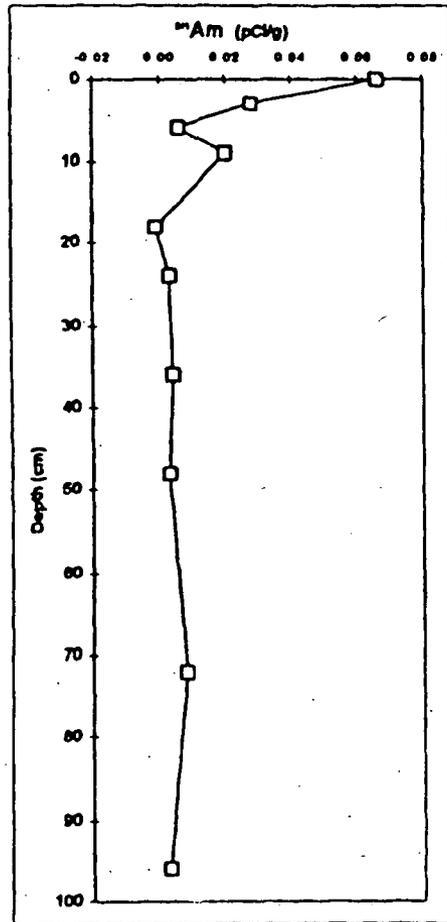
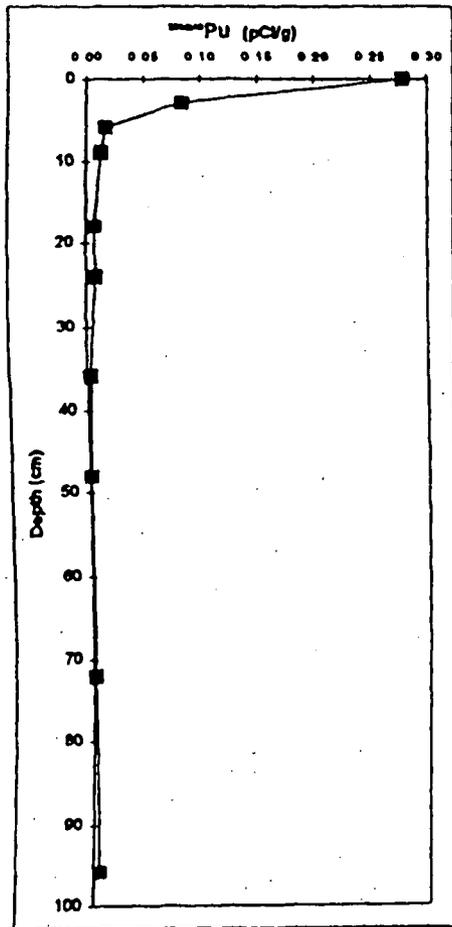
- Standard Features
- N Isopleth Lines
  - SO3 Pad
  - Lakes and ponds
  - Streams, ditches, or other drainage features
  - Fences
  - - Rocky Flats boundary
  - Major Roads
  - Secondary Roads
  - RFETS Roads

ATIS 000000  
 Boundary, road, and fence provided by  
 Rockwell Int'l.  
 SO3 Pad, Int'l. 0001  
 Hydrology provided by  
 Lockheed Martin

The contours for this map were generated by  
 computer software using digital data for Am-241  
 at Rocky Flats, Colorado Environmental Research Station.



Trench 02882



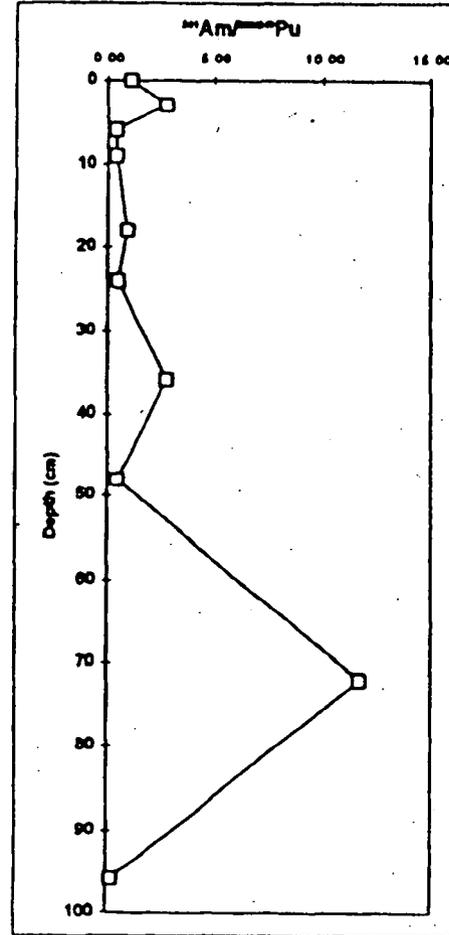
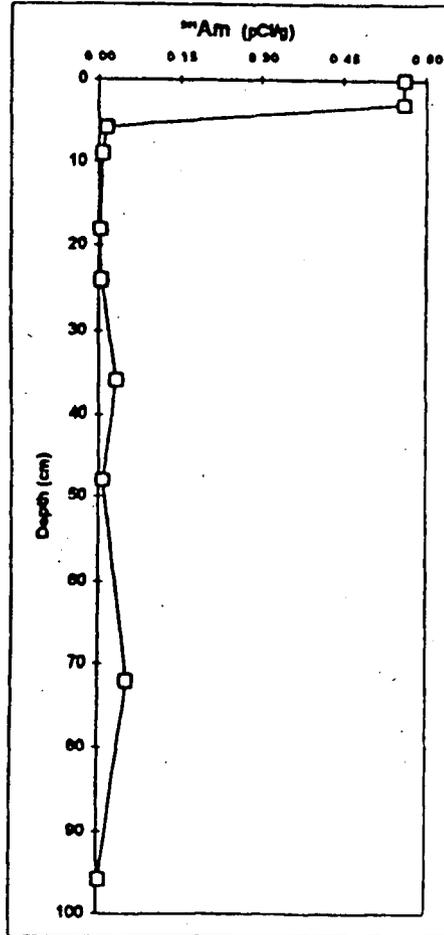
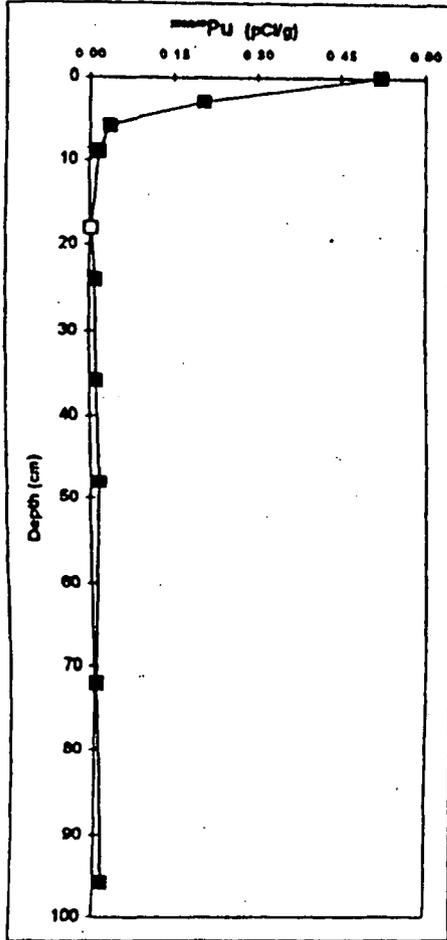
Rocky Flats Environmental Restoration



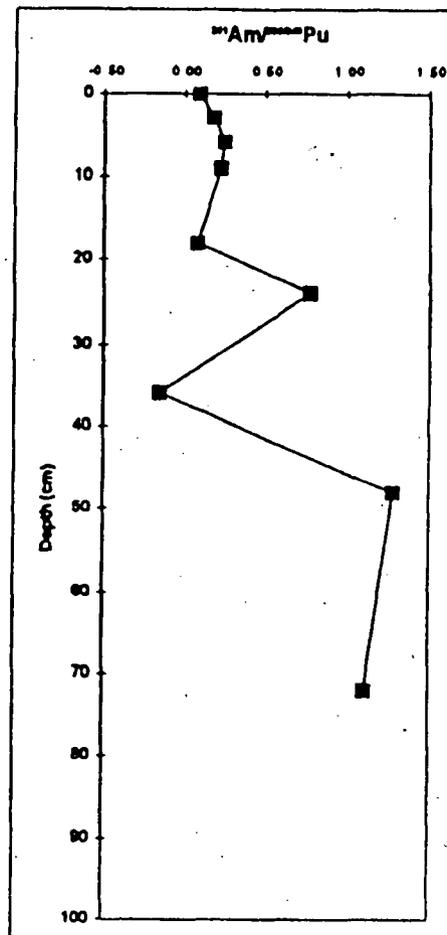
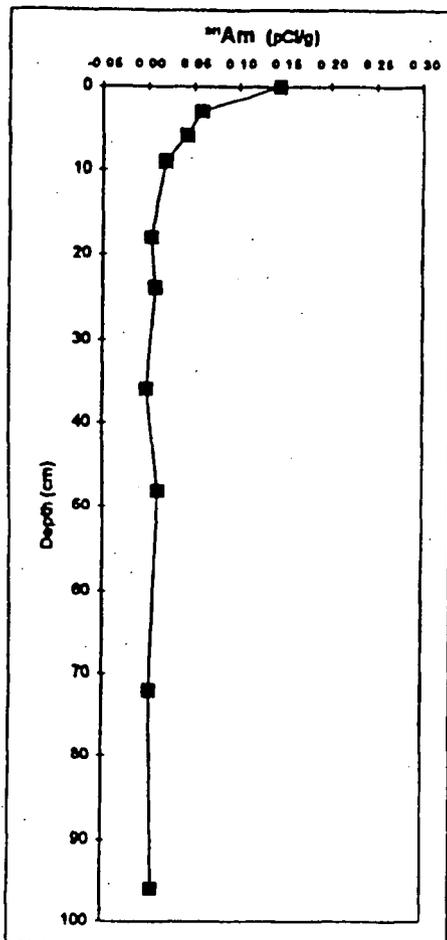
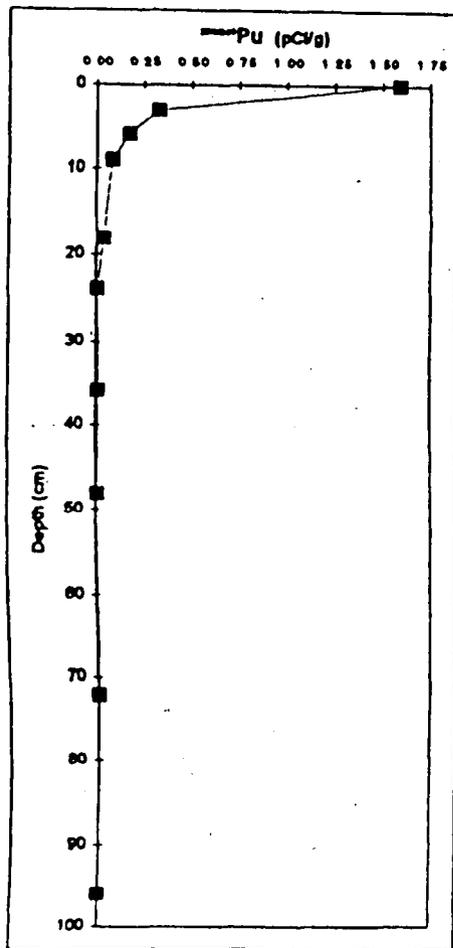
12/11/95

9

Trench 02992



Trench 03492



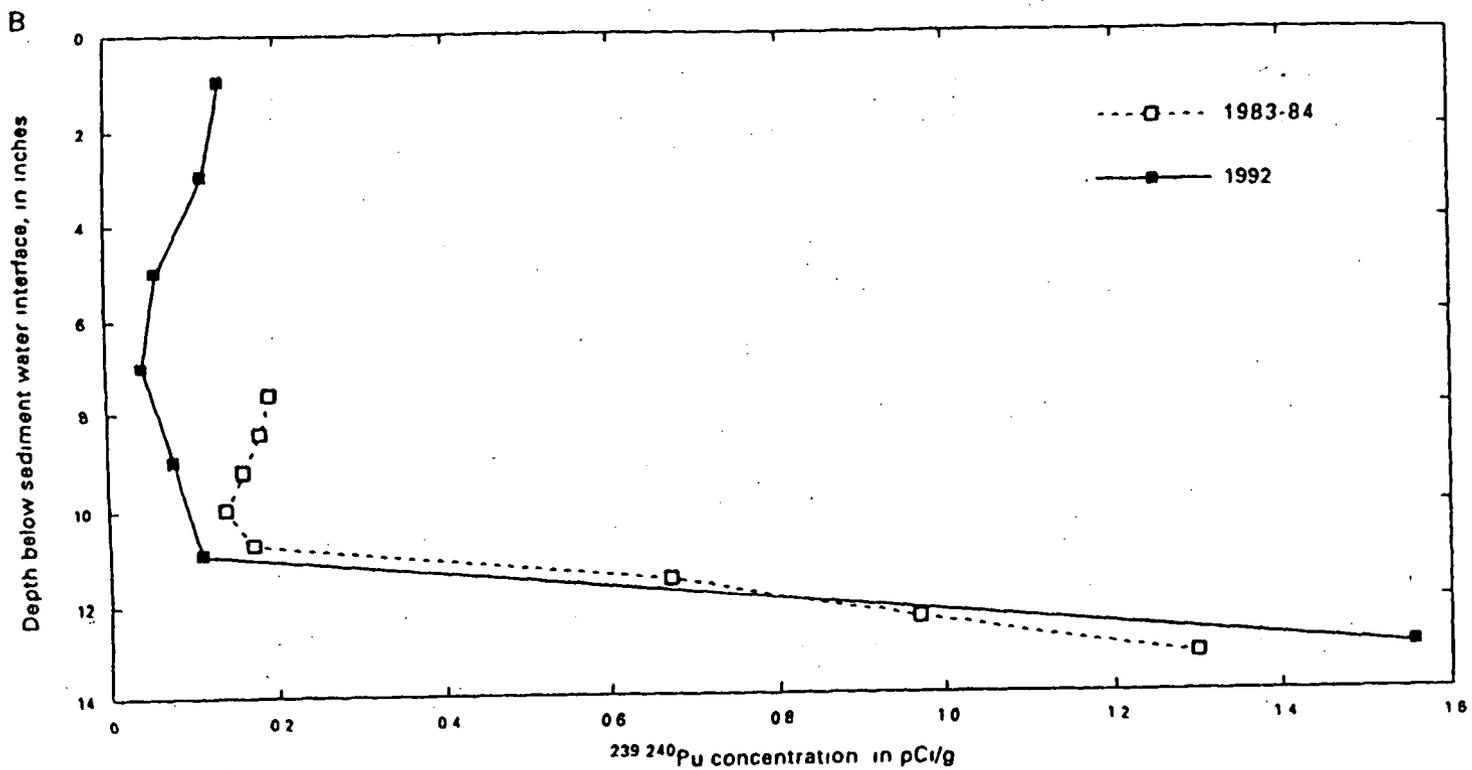


Figure 15B Relation of concentrations of  $^{239,240}\text{Pu}$  to depth at lake-bottom-sediment site SED08392 collected from Standley Lake in 1983-84 and 1992



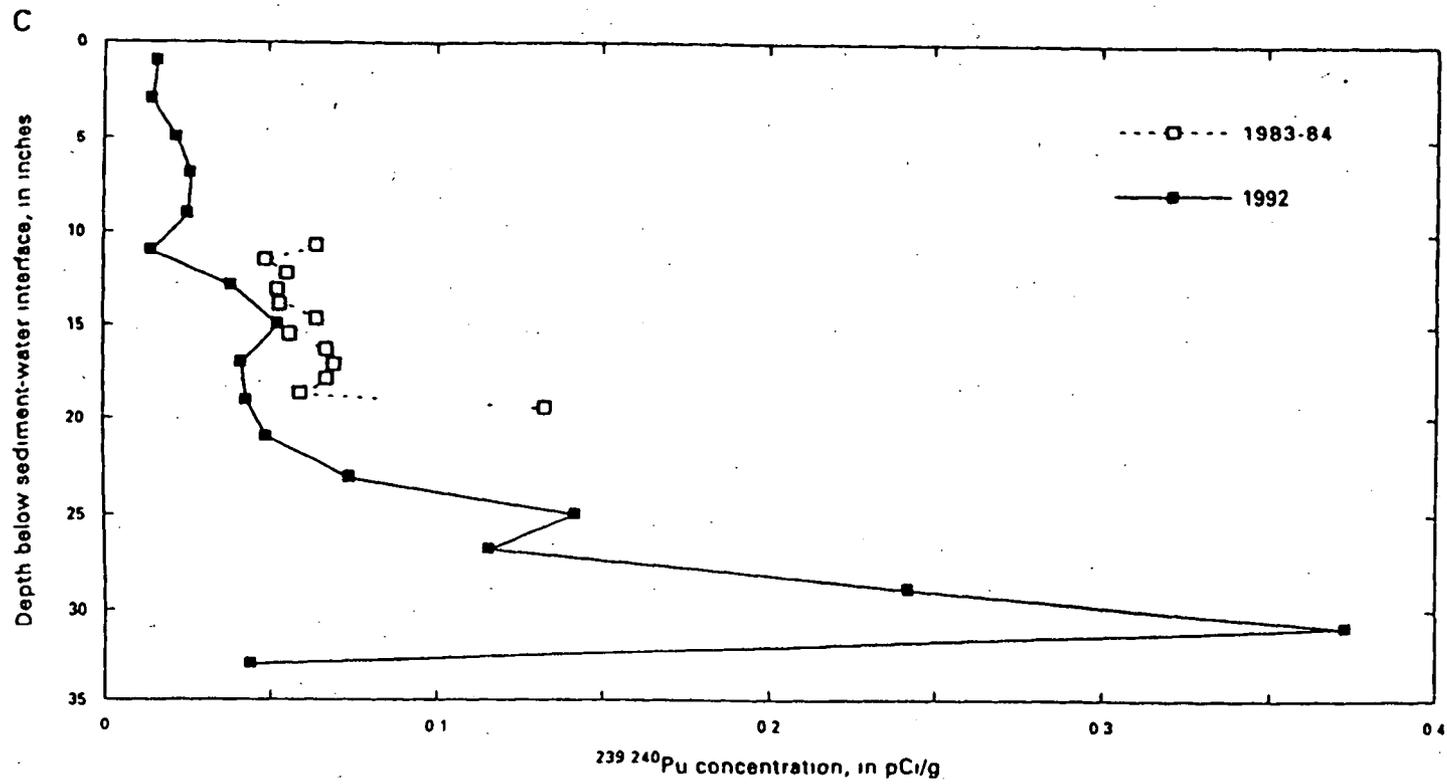


Figure 15C Relation of concentrations of  $^{239,240}\text{Pu}$  to depth at lake-bottom-sediment site SED09192 collected from Great Western Reservoir in 1983-84 and 1992



Characterization of Selected Radionuclides in Sediment and Surface Water in Standley Lake, Great Western Reservoir, and Mower Reservoir, Jefferson County, Colorado, 1992

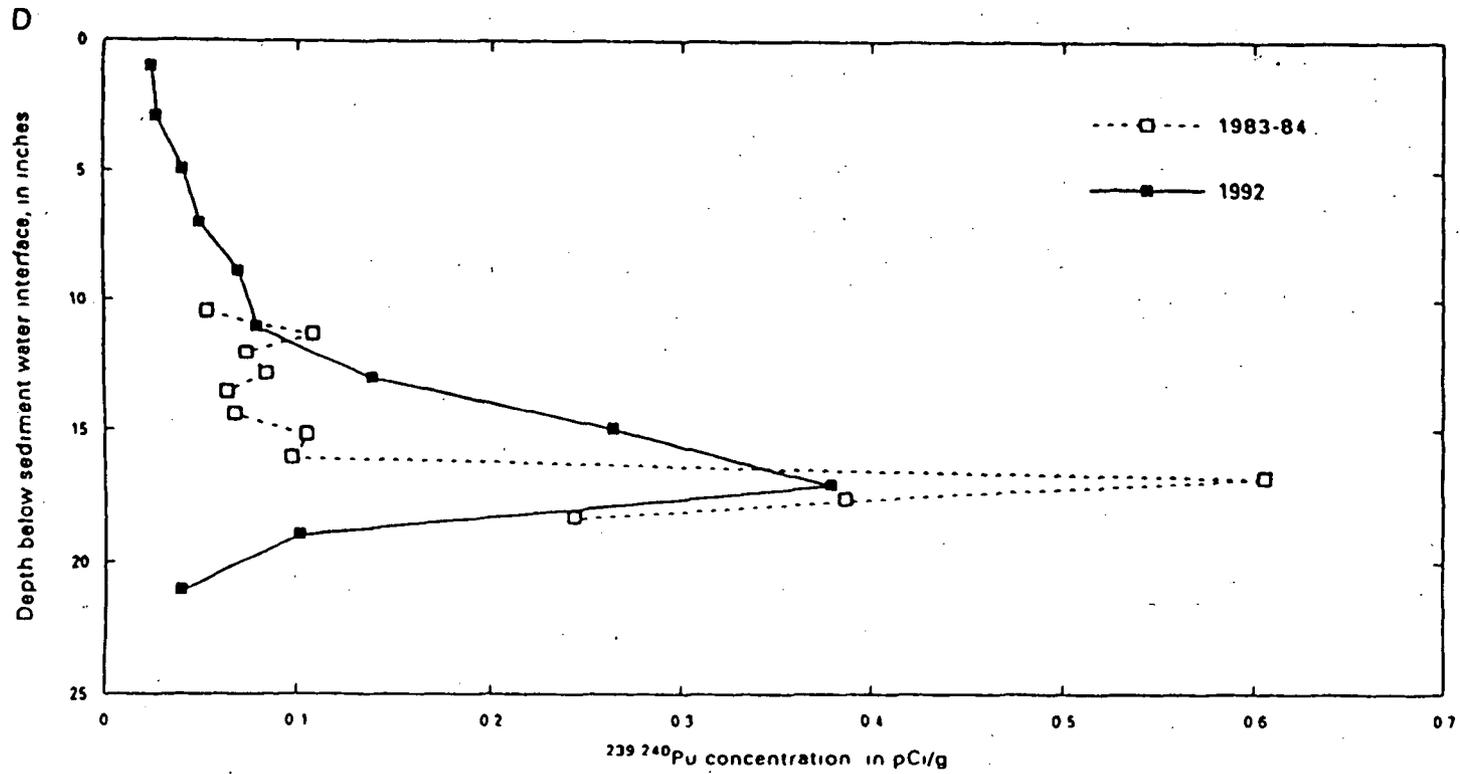


Figure 15D Relation of concentrations of  $^{239,240}\text{Pu}$  to depth at lake-bottom sediment site SED08592 collected from Great Western Reservoir in 1983-84 and 1992

Rocky Flats Environmental Restoration



12/11/95

14

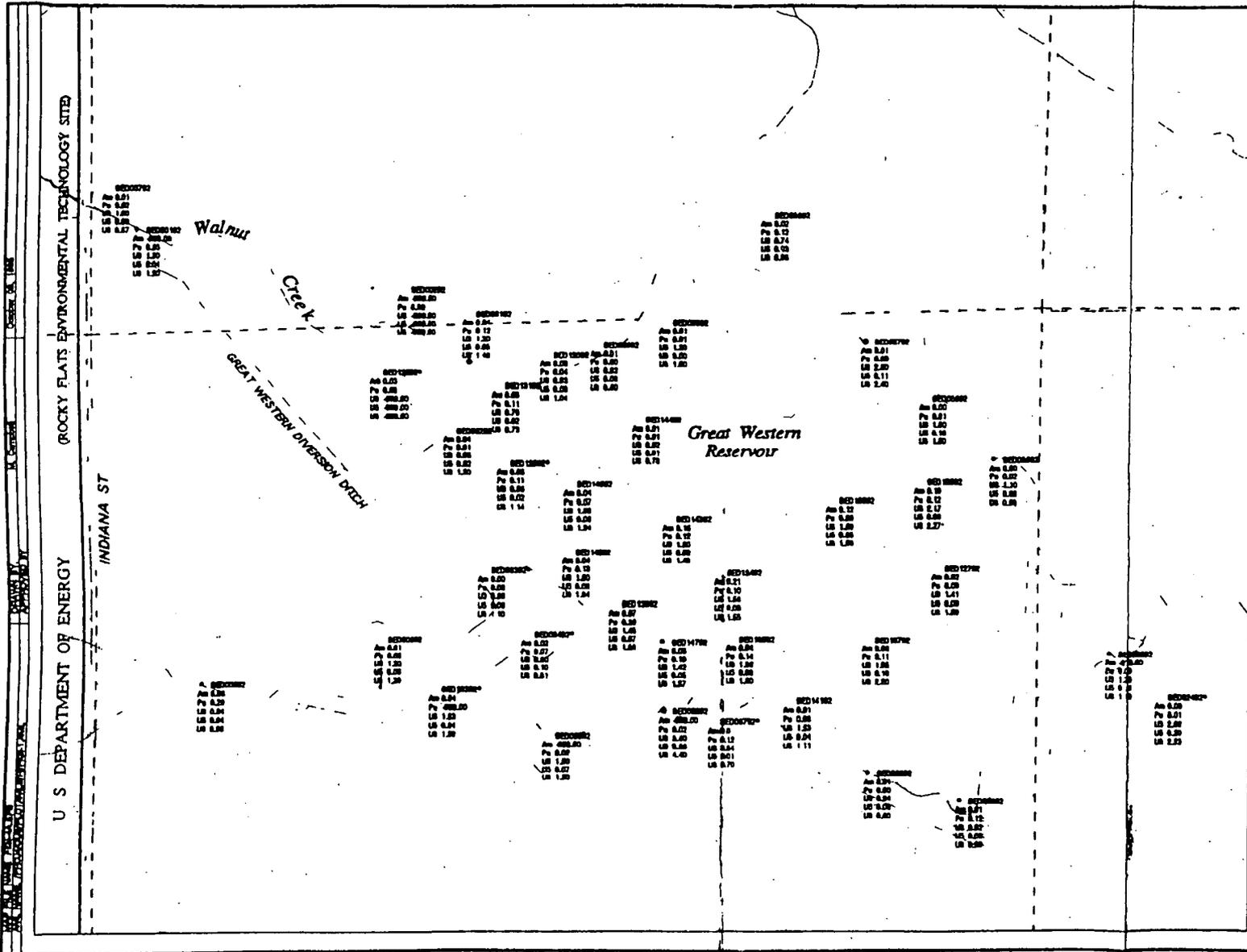


Figure I-4A  
 Analytical Results of  
 Selected Radionuclides  
 for Sediment Samples  
 Operable Unit 3  
 BSS 200  
 Great Western Reservoir

ROCKY FLATS  
 ENVIRONMENTAL TECHNOLOGY SITE  
 U.S. Department of Energy

Best Available Copy

Analyte Symbols:  
 Am Americium-241  
 Pu Plutonium-239/240  
 U3 Uranium-233/234  
 U5 Uranium-235  
 U8 Uranium-238

Units are pCi/g

• 1982 Grab/Core samples  
 1982 Sediment grab sample

Note: Data shown are for grab  
 locations only.  
 Values of -999 indicate  
 rejected data.

DRAFT

Mapping Source:  
 Jefferson County Mapping Dept.  
 EG&G Rocky Flats  
 U.S. Geological Survey

Scale 1:6000  
 1 inch = 500 ft  
 0 250 500 1000  
 SCALE IN FEET

Polysar projection 1987 North American  
 datum, Colorado central zone state plane  
 coordinate system

07

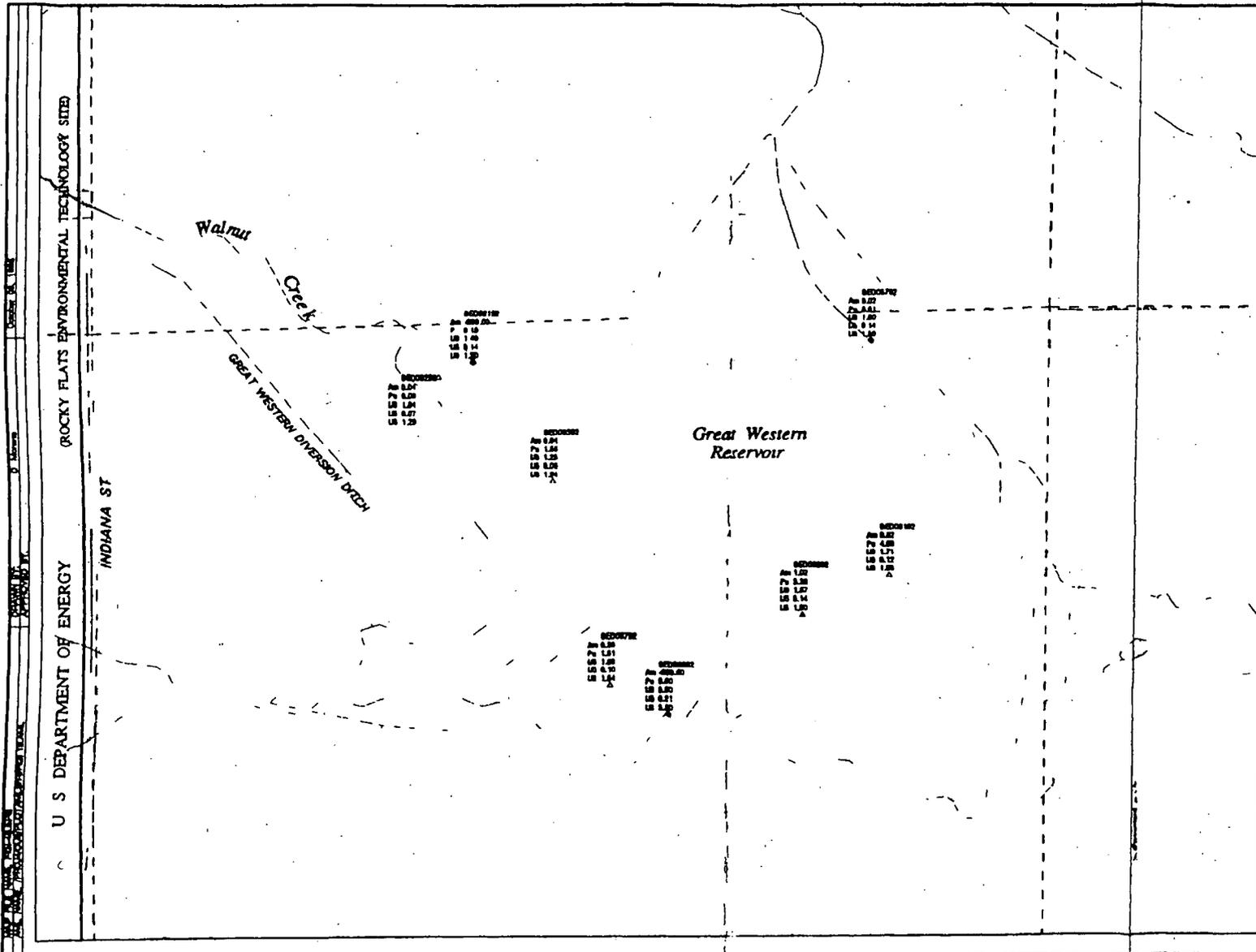


Figure I-4B  
**Analytical Results of  
 Selected Radionuclides  
 for Sediment Samples**  
 Operable Unit 3  
 HSS 200  
 Great Western Reservoir

ROCKY FLATS  
 ENVIRONMENTAL TECHNOLOGY SITE  
 U.S. Department of Energy

Analyte Symbol:  
 Am Americium-241  
 Pu Plutonium-239/240  
 U3 Uranium-233/234  
 U5 Uranium-235  
 U6 Uranium-238

Units are pCi/g

- 1982 Grab/Core samples
- ▲ 1982 Sediment Core sample

Note: Data shown are maximum values for core locations only. Values of -999 indicate rejected data.

Best Available Copy

**DRAFT**

Mapping Sources:  
 Jefferson County Mapping Dept.  
 EG&G Rocky Flats  
 U.S. Geological Survey

Scale 1:6000  
 1 inch = 500 ft

0 250 500 1000  
 SCALE IN FEET

Projection: projection 1827 North American datum, Colorado central zone state plane coordinate system.

Figure I-5A  
 Analytical Results of  
 Selected Radionuclides  
 for Sediment Samples  
 Operable Unit 3  
 IHSS 201  
 Standley Lake

ROCKY FLATS  
 ENVIRONMENTAL TECHNOLOGY SITE  
 U.S. Department of Energy

Analysis Symbols  
 Am Americium-241  
 Pu Plutonium-239/240  
 U3 Uranium-233/234  
 U5 Uranium-235  
 U6 Uranium-238

Units are pCi/g

1992 Grab/Coarse samples  
 1992 Sediment grab sample

Note: Data shown are for grab  
 locations only  
 Values of -999 indicate  
 rejected data.

Best Available Copy

DRAFT

Mapping Sources  
 Jefferson County Mapping Dept.  
 EGAG Rocky Flats  
 U.S. Geological Survey

Scale 1:15840  
 1 inch = 1320 ft or 0.25 mi

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Projection: 1987 North American  
 datum, Colorado central zone state plane  
 coordinate system

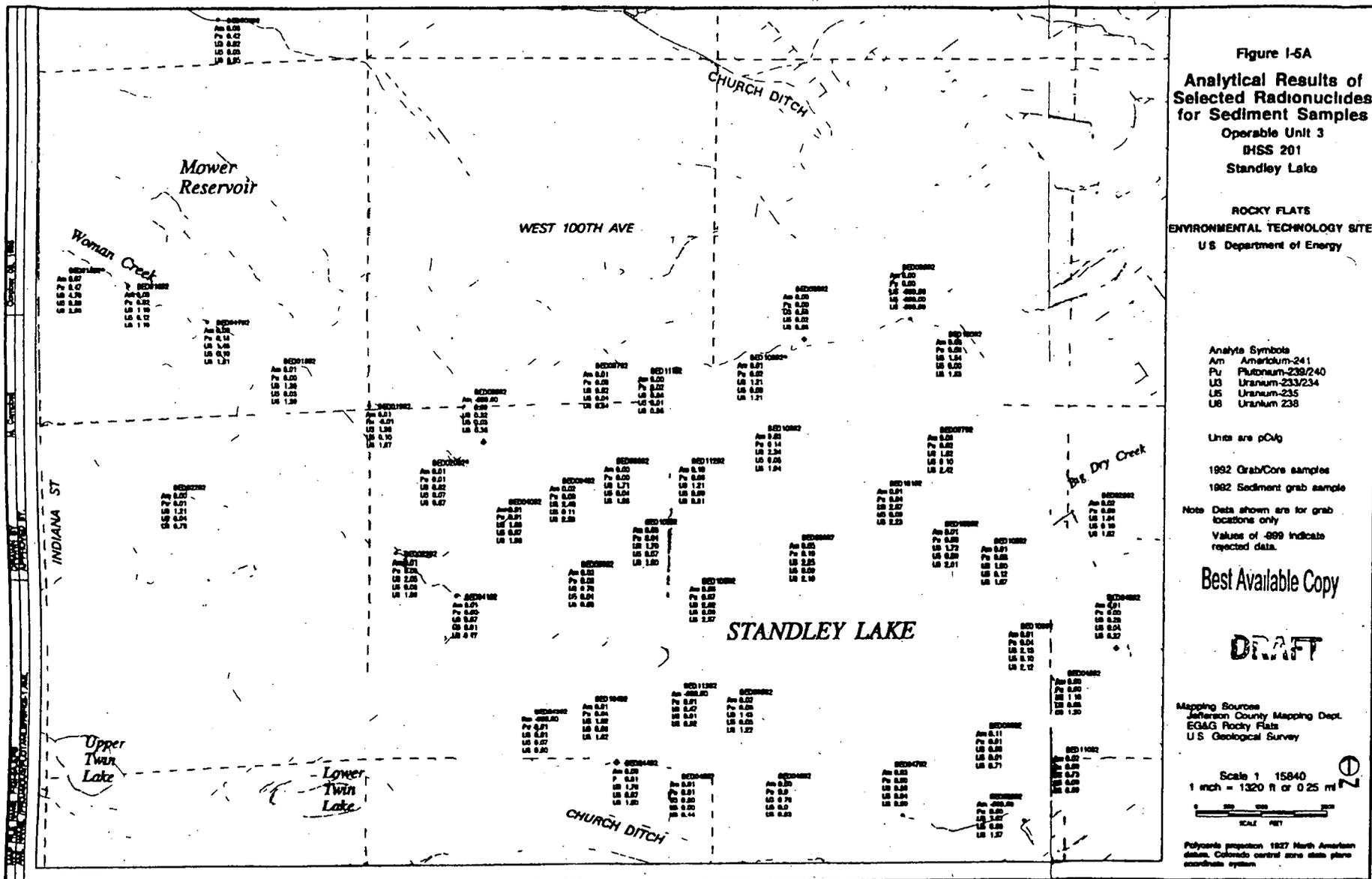


Figure I-58  
**Analytical Results of  
 Selected Radionuclides  
 for Sediment Samples**  
 Operable Unit 3  
 IHSS 201  
 Standley Lake

ROCKY FLATS  
 ENVIRONMENTAL TECHNOLOGY SITE  
 U.S. Department of Energy

Analysis Symbols:  
 Am Americium-241  
 Pu Plutonium-239/240  
 U3 Uranium-233/234  
 U5 Uranium-235  
 U8 Uranium-238

Units are pCi/g

- 1992 Grab/Coarse samples
- ▲ 1992 Sediment Core sample

Note: Data shown are maximum values for core locations only. Values of -999 indicate rejected data.

Best Available Copy

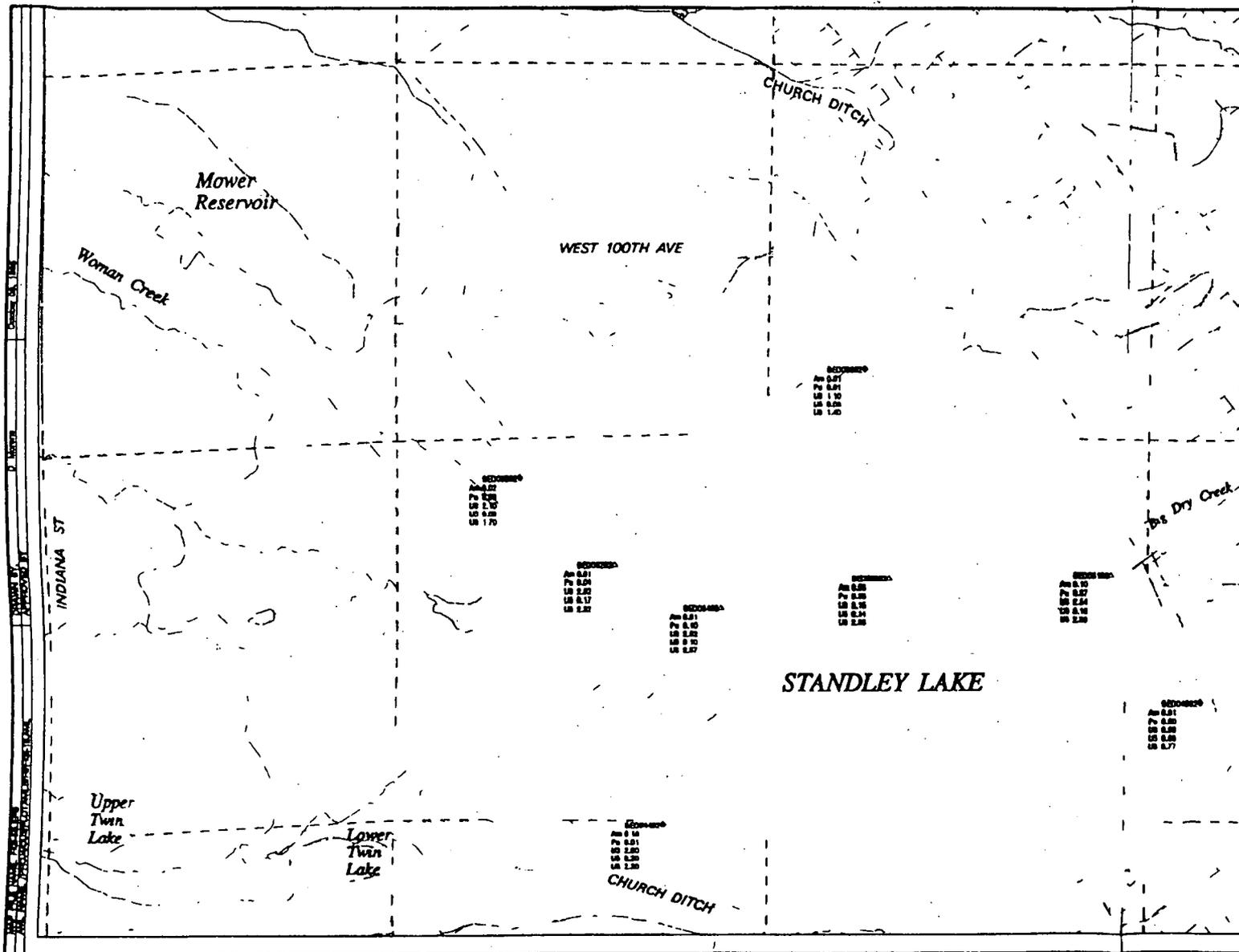
DRAFT

Mapping Sources:  
 Jefferson County Mapping Dept.  
 EG&G Rocky Flats  
 U.S. Geological Survey

Scale 1:15840  
 1 inch = 1320 ft or 0.25 mi



Projection: 1927 North American datum, Colorado central zone state plane coordinate system



U.S. DEPARTMENT OF ENERGY (ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE)

INDIANA ST

MOWER

DITCH

Mower Reservoir

Woman

Creek

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Figure I-8A  
Analytical Results of  
Selected Radionuclides  
for Sediment Samples  
Operable Unit 3  
BtSS 202  
Mower Reservoir

ROCKY FLATS  
ENVIRONMENTAL TECHNOLOGY SITE  
U.S. Department of Energy

Analysis Symbols  
Am Americium-241  
Pu Plutonium-239/240  
U3 Uranium-233/234  
U5 Uranium-235  
U6 Uranium-238

Units are pCi/g

- 1982 Grab/Core samples
- 1982 Sediment Grab sample

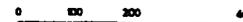
Note: Data shown are for grab  
locations only.  
Values of -999 indicate  
rejected data.

Best Available Copy

DRAFT

Mapping Sources:  
Jefferson County Mapping Dept.  
EG&G Rocky Flats  
U.S. Geological Survey

Scale 1:2400  
1 inch = 200 ft



SCALE IN FEET

Projection: projection, 1927 North American  
datum. Control control area state plane  
coordinate system.



Figure I-68  
**Analytical Results of  
 Selected Radionuclides  
 for Sediment Samples**  
 Operable Unit 3  
 HSS 202  
 Mower Reservoir

ROCKY FLATS  
 ENVIRONMENTAL TECHNOLOGY SITE  
 U.S. Department of Energy

Analyte Symbol  
 Am Americium-241  
 Pu Plutonium-239/240  
 U3 Uranium-233/234  
 U5 Uranium-235  
 U6 Uranium-238

Units are pCi/g

- 1992 Grab/Core samples
- ▲ 1992 Sediment Core sample

Note: Data shown are maximum  
 values for core locations only.  
 Values of -999 indicate  
 rejected data.

Best Available Copy

DEATT

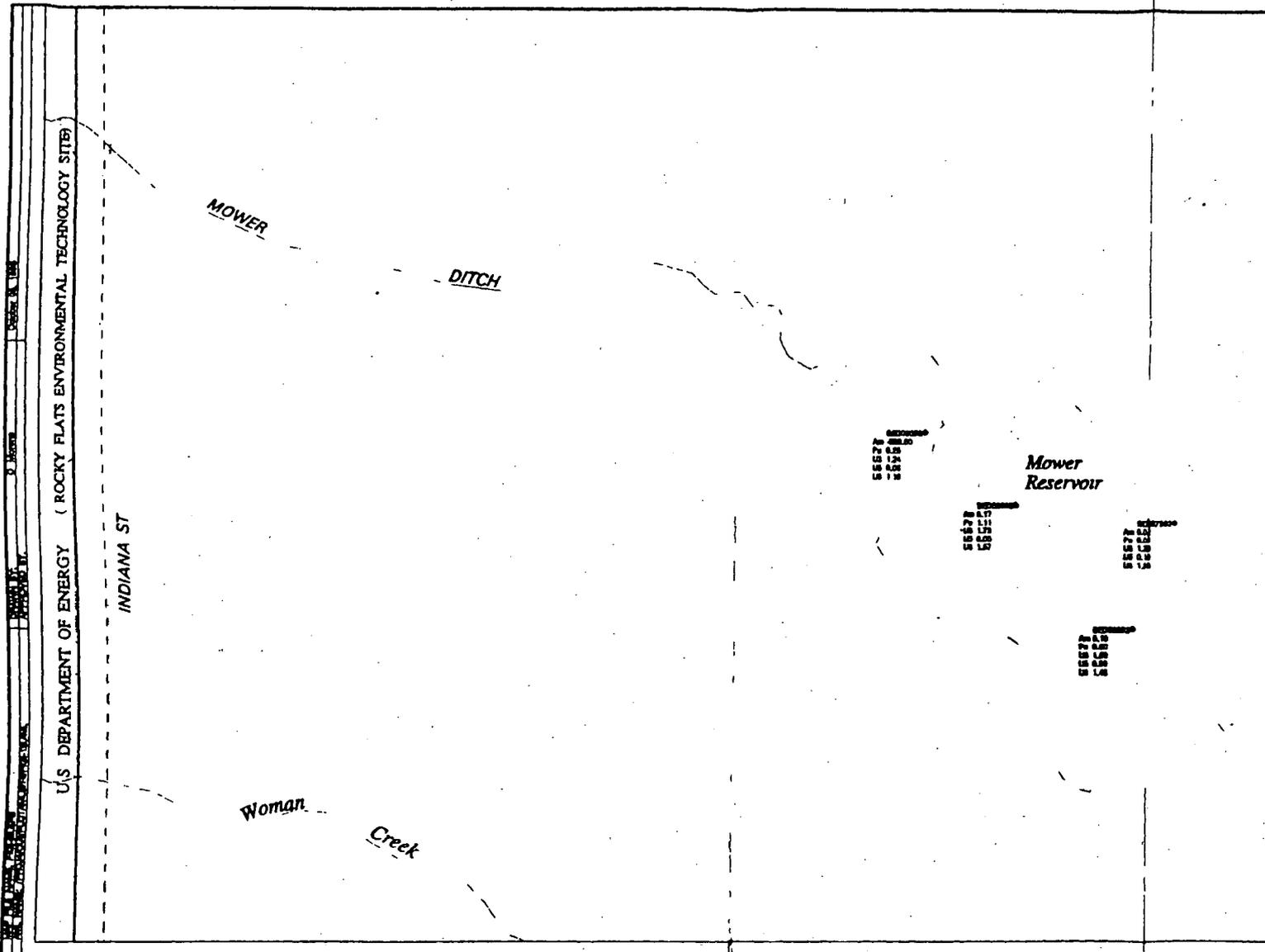
Mapping Sources  
 Jefferson County Mapping Dept.  
 EG&G Rocky Flats  
 U.S. Geological Survey

Scale 1:2400  
 1 inch = 200 ft

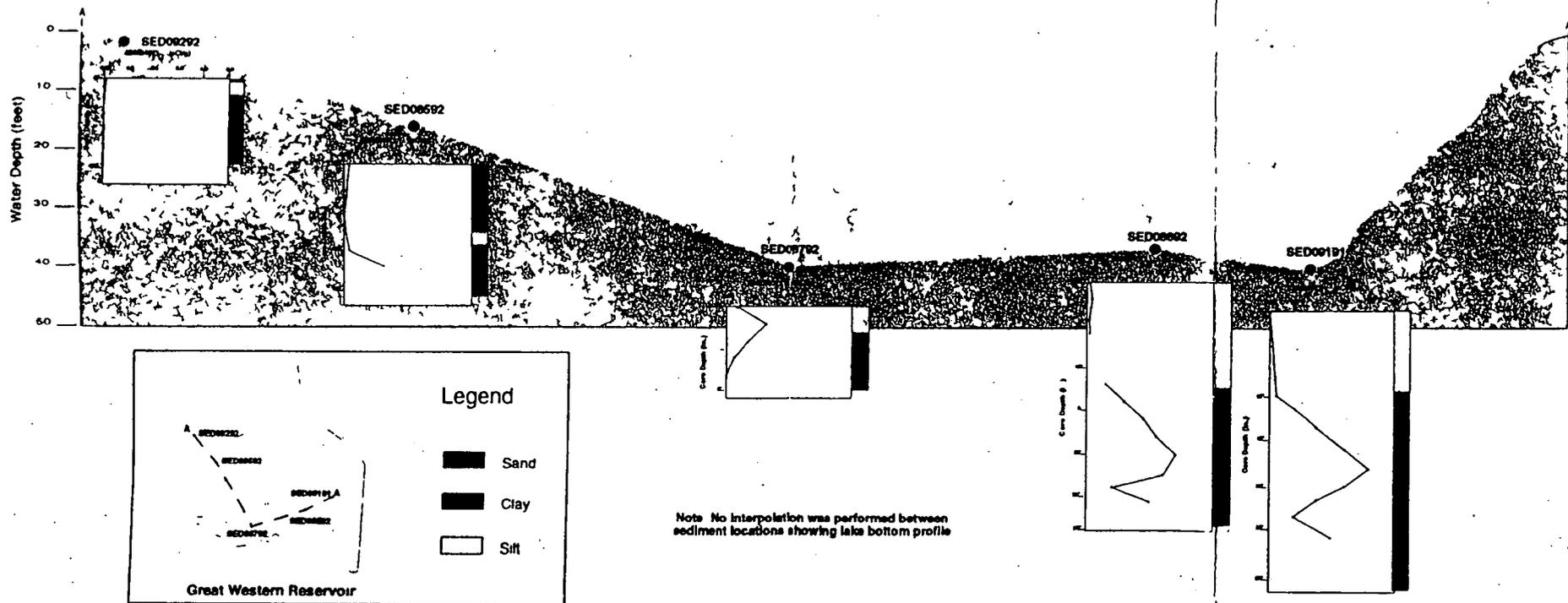
0 100 200 400

SCALE IN FEET

Projection: projection 1927 North American  
 datum, Colorado central zone state plane  
 coordinate system



20



Best Available Copy

Figure 4-9 **DRAFT**  
**Pu DEPTH PROFILES**  
**FOR GREAT WESTERN**  
**RESERVOIR**  
**Operable Unit 3**

# RI Results and Conclusions (cont.)

Ecological sampling revealed no significant uptake, no adverse effects, no calculated risk levels

Wind tunnel study shows that resuspension at undisturbed terrestrial locations is extremely low



# Human Health Risk Assessment

Chemicals of Concern

Exposure Scenarios

Radiation Risk Characterization

Radiation Dose Characterization



# Human Health Risk Assessment (cont.)

## Chemicals of Concern (COCs)

- Pu-239/240 in Surface Sediments at GWR
- No other COCs present in Standley Lake or Mower Reservoir Sediments
- No COCs present in surface water
- Pu-239/240 and Am-241 in Soils
- No other COCs present in Soils



# Human Health Risk Assessment (cont.)

## Exposure Scenarios

- Residential (most conservative)
- Recreational Open Space (current and most likely future use)

## Major pathways assessment

- Ingestion, Inhalation, & External Exposure

Exposure scenarios bound potential exposure situations



# Human Health Risk Assessment (cont.)

## Radiation Risk Characterization

### —Soils

- For Residential Exposure, Risk = 3 in 1,000,000
- For Recreational Exposure, Risk = 0.05 in 1,000,000

### —GWR Sediments

- For Residential Exposure, Risk = 0.9 in 1,000,000
- For Recreational Exposure, Risk = 0.01 in 1,000,000



# Human Health Risk Assessment (cont.)

## EPA Risk Guidelines

- 1 to 100 in 1,000,000 considered by EPA to be protective of human health

## Conclusion

- All Risks are within the EPA guidelines
- Under the most conservative exposure assumptions, OU 3 risks are very low and do not warrant further action



# Human Health Risk Assessment (cont.)

## Radiation Dose Characterization

### —Soils

- For Residential Exposure, Dose = 0.190 millirem
- For Recreational Exposure, Dose = 0.006 millirem

### —GWR Sediments

- For Residential Exposure, Dose = 0.011 millirem
- For Recreational Exposure, Dose = 0.0001 millirem



# Human Health Risk Assessment (cont.)

## EPA Dose Guidelines

- 15 millirem dose proposed by EPA for radiation site clean up standard

## Conclusion

- All doses are within EPA Standard
- No Further Action at OU3 is supported by radiation dose assessment



# Ecological Risk Assessment

## ERA Process

- Used PCOCs from HHRA
- Screened against literature benchmark values to determine potential effects
- No risk or effects were identified within terrestrial & aquatic ecosystems in OU3



# Proposed Plan

Presents preferred alternative for remedial actions to the regulatory agencies and the Public

Serves as the basis for the CAD/ROD

Incorporates a formal Public Involvement Program

Schedule

—Draft PP submitted to DOE for transmittal to the Regulatory Agencies on December 6, 1995



# Proposed Plan (cont)

- Final PP scheduled for submittal in April 1996
- Conclusions
  - Proposed Plan summarizes the OU 3 risks and proposes a No Action Alternative



# Corrective Action Decision/ Record of Decision

Describes the final remedy action selection made by EPA, CDPHE, and DOE

Includes a summary of responses to Public and Regulatory Agency Comments on the Proposed Plan - Responsiveness Summary (RS)



# Corrective Action Decision/ Record of Decision (cont.)

## Schedule

- Draft CAD/ROD scheduled for submittal in July 1996
- Draft RS scheduled for submittal in September 1996
- Final CAD/ROD scheduled for submittal in November 1996
- Agency Approval & Release to the Public - December 1996



OU01-A-000597

# Endangered Species Act COMPLIANCE



~~PROPOSED~~ 881-HILLSIDE FRENCH  
DRAIN (881-HFD) PROJECT

FINAL BIOLOGICAL SURVEY REPORT

DEPARTMENT OF ENERGY  
ROCKY FLATS OFFICE  
GOLDEN, CO

OCTOBER 1991

ADMIN RECORD

A-DU01-000597

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## 1.0 INTRODUCTION

Correspondence between the Department of Energy, Rocky Flats Office (DOE, RFO) and the U.S. Fish & Wildlife Service (USFWS) (dated 15 September 1991) identified several proposed remedial action and operational projects at RFP which may require official (Section 7) consultation with USFWS regarding potential impacts to resources protected under the Endangered Species Act (ESA) [16 U.S.C 1531 *et. seq.*]. Internal DOE, RFO guidance further emphasized the need to insure compliance with applicable biological regulations ~~before proceeding with the proposed~~ 881-Hillside French Drain (881-HFD) project. On 19 September 1991, DOE, RFO met with USFWS, Golden, CO, to discuss Rocky Flats Plant (RFP) compliance with the ESA. <sup>and 10 October, 1991</sup>

This report is concerned with two classes of species, one of which is a subset of the other:

- **Species of Concern (SOC species):** T&E species, <sup>(see below)</sup> plus those which are federal Category 1, 2 or 3 species, state threatened or endangered species, or state species of concern.
- **Threatened & Endangered (T&E species):** are a subset of SOC species which includes only those listed (threatened or endangered) or proposed to list under federal regulations. These are the species to which the ESA directly applies and the ones injury to which could result in civil and/or criminal penalties.

At the meeting <sup>881-HFD</sup> it was determined that consultation would be required on the ~~proposed~~ project. To limit impacts to 881-HFD construction schedules, DOE, RFO requested that the consultation process be expedited. To facilitate expeditious consultation, DOE, RFO and USFWS agreed that DOE, RFO would prepare a report summarizing ecological survey data pertinent to SOC species collected during: (a) performance of the 881 Hillside Operable Unit 1 (OU1) Environmental Evaluation (EE) and (b) special surveys on the 881-HFD project site. USFWS visited the 881-HFD site; the visits took place on 26 September 1991 and 17 October 1991.

USFWS agreed to review the report to determine whether sufficient information had been collected to-date to allow assessment of potential impacts to ~~threatened or endangered~~ species or their habitats in or near the 881-HFD project. <sup>T & E</sup>

Furthermore, DOE, RFO is undertaking development of: (a) an addition to the Ecology SOP to direct the identification, reporting, and support of T&E species observed at RFP and (b) a RFP sitewide procedure to govern compliance with ESA with respect to future facility and remediation projects. Both procedures are presently in draft form and under review by the Environmental Protection Agency (EPA), the Colorado Department of Health (CDH), USFWS, and the Colorado Division of Wildlife (CDOW).

## 2.0 DESCRIPTION

### 2.1 Project Description

Details of the 881-HFD Project are contained in the 881 Hillside Operable Unit 1 Interim Remedial Action Plan (IRAP). In general, the excavation for the French Drain will extend along a section of the 881 Hillside to allow installation of a groundwater collection system. The excavation will vary in sections from 3 to 10 meters in depth and from 10 to 30 meters in width, and extend for approximately 800m along an east-west transect. The location for the proposed project is shown in Drawing 1. The project will impact a total of about 2.8 hectares (approximately 7 acres).

why was connection not made?

## 2.2 Resource and Habitat Description

An updated list of SOC species which potentially exist at RFP is provided in Table 1; annotations show those with a documented presence at RFP and those with a documented presence at or near the project site.

The Threatened and Endangered Species Evaluation Report, Rocky Flats Plant Site (April 4, 1991), prepared by EG&G Rocky Flats, Inc., provides a broad picture of potential T&E species at RFP and provides the most recently published wetlands map, habitat map, and prairie dog colony map. On 17 September 1991, USFWS transmitted to DOE, RFO a list of additional SOC species; these additional species were incorporated into Table 1. Also applicable to surveying for SOC species is the recent delineation of habitat types (updated habitat map to be finalized by November 1991).

(see sec. 3.4, p. 4)

Habitat types to be disturbed include woodlands, wetlands, wet meadow, short and tall marsh, disturbed areas, and mesic grasslands. The primary habitat is highly disturbed and typified by successional and rehabilitation species. Habitat types immediately adjacent to the 881-HFD project site include wet meadow, short marsh, mesic grassland, rehabilitation, and disturbed types. Activities in and near the 881-HFD will affect approximately 2.8 hectares (approximately 7 acres).

## 3.0 SURVEY

### 3.1 Design

Methodologies used for ecological surveys at RFP are specified in the EG&G Environmental Management Department Standard Operating Procedures (SOP) Volume 5.0, Ecology. These SOPs have been approved for use on CERCLA/RCRA investigations by EPA, CDH, USFWS, and the Colorado Division of Wildlife (CDOW). Each Ecology SOP specifies a Master's Degree and two years of field experience as the minimum qualifications required of personnel conducting the surveys.

### 3.2 On-Site Inspection

RFP ecology field programs, which began in spring 1991, include the: (a) Threatened and Endangered Species Evaluation Report, Rocky Flats Plant Site, (b) Baseline Wildlife/Vegetation Studies, (c) OU1 environmental evaluation (EE), (d) OU2 EE, (e) OU5 EE, and (f) surveys specific to the 881-HFD project site. In the aggregate, these programs cover a survey area bounded on the west by a line 0.3 mile east of Highway 93, on the east by Indiana Street, on the north by Highway 128, and on the south by a line 0.5 to 1.0 miles north of Highway 72. Ecology surveys conducted within OU1, OU2, OU5, and OU fringe areas have more densely spaced sampling locations than do surveys conducted in OU "reference" and baseline areas.

The following types of ecological surveys were conducted throughout 1991 at or near the 881-HFD project site:

- **Relative Abundance Transects:** Three relative abundance transects (RA01A, RW01A, RG01A) were designed to sample fauna along the 881 Hillside about 200 meters above and below (parallel alignment) the proposed French Drain. Observations of the fauna in association with the three transects have been made monthly or bi-monthly since May 1991; each observation session required about one hour to complete. All observations of vertebrates and selected invertebrates (e.g.,

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butterflies) were tallied and assigned to habitat types. Summaries were compiled in terms of species per unit time by habitat.

- **Emlen Bird Transects:** Twelve bird transects, ranging in length from 100 to 1000 meters, and totalling 3300 meters, were configured within habitats adjacent to the proposed project area, along Woman Creek and the 881 Hillside. Data have been compiled from these transects five times since May. Each sampling session required ten minutes to more than an hour to complete, depending upon the transect length and the number of birds present. Data were compiled on density of birds by season within habitat types.
- **Small Mammal Transects:** Nineteen, 25-trap transects were specifically designed to sample populations of small mammals along Woman Creek and the 881 Hillside on either side of the proposed French Drain. The sites were sampled over a four-night period in mid-May and again in late September, for a total of 3800 trap nights.
- **Vegetation Transects:** Vegetation sampling was conducted in conjunction with the aforementioned bird and mammal transects within the ditch environment. Data have been compiled on vegetation cover, density, composition, richness, and production from 80, 50-meter point-intercept cover transects, 80 2x50 meter belt transects, and from 140 0.25 m<sup>2</sup> production plots. The vegetation along the alignment of the proposed French Drain has been characterized and quantified using these techniques.
- **Insect Sweep-netting:** Insect populations have been characterized by sweep-netting the aforementioned mammal transects on three occasions from mid-summer to early fall.
- **Large Mammal Pellet Counts:** Occurrence of deer and rabbits has been documented by counting pellet groups in conjunction with the sampling of small mammals at the sites previously enumerated.
- **Fish Surveys:** A minimum of two minnow traps were placed for a minimum of three nights at six sites on the South Interceptor Ditch in the spring and fall, immediately adjacent to the 881-HFD project site, in order to determine if any fish species were present (none were). Elaborate fisheries surveys were conducted in Ponds C-1, C-2, and eight sites along Woman Creek in order to characterize the ichthyofauna. Data were obtained on water chemistry, benthic macroinvertebrates, periphyton, and plankton in conjunction with these surveys.
- **SOC Species Surveys (General):**
  - △ **Prairie Dog Surveys:** In accordance with USFWS guidelines and directives, surveys of prairie dogs have been conducted on a regular basis since February, in order to ascertain the suitability of the RFP site for black-footed ferrets. Three small prairie dog colonies have been delimited on suitable maps. About 40 person-hours have been associated with this survey.
  - △ **Raptor Surveys:** Intensive searches for habitat appropriate for raptor nests were conducted through the late winter, spring, and early summer. All observations of raptors have been recorded in a standardized format. These activities have consumed about 70 person-hours.
  - △ **Rare Plant Surveys:** From time to time throughout the growing season, surveys were conducted for SOC species within suitable habitats. Particular attention was paid to searching

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suitable habitat for Lady's Tresses (*Spiranthes diluvialis*), the Colorado Butterfly Plant (*Gaura neomexicana*), and the Forktip Threeawn (*Aristida basiramea*).

- **SOC Species Surveys (Specific):** During the week of 7-11 October 1991, the phreatophytic zone of the SID and adjacent portions of Woman Creek and its tributaries were searched for SOC species, with particular reference to the possible occurrence of *Spiranthes diluvialis*. The xeric and transition portions of the corridor were carefully examined for the possible occurrence of *Aristida basiramea*, *Gaura neomexicana*, and other SOC plant species.

Minnow traps were placed at an additional four sites on the SID and an additional 11 sites on Woman Creek and its tributaries in an attempt to ascertain the status of the Common Shiner (*Notropis cornutus*), a Colorado State species of concern, and the Plains Top Minnow (*Fundulus sciadicus*), a federal Category 2 species.

Additional traplines were established in late September and early October in OU5, to the west of the project area, in an attempt to better ascertain the range of *Zapus hudsonius preblei*.

### 3.3 Interviews with Experts

EG&G has discussed the potential occurrence of *Spiranthes diluvialis*, *Aristida basiramea*, *Zapus hudsonius preblei*, *Gaura neomexicana*, and other SOC species with Dr. Fred Harrington (Ebasco Services, Inc.), who currently serves as Field Supervisor for the sitewide biological baseline studies and for the OU1 EE. Dr. Harrington has, in turn, consulted with appropriate specialists in order to make a proper determination of the status of SOC species in, or near, the project site. Dr. Harrington has 32 years experience in ecosystem research, planning, and management, including extensive experience with T&E species management; his resume appears in Attachment A.

### 3.4 Literature Review

The ~~Threatened and Endangered Species Evaluation Report, Rocky Flats Plant Site (April 4, 1991)~~ provides a broad picture of potential SOC species at RFP and contains a literature review for those species. Literature searches have been performed for all of the additional species on the USFWS list (Table 1) and are included as Attachment 2 in Identification and Reporting of Threatened and Endangered and Special Concern Species, EMD Administrative Procedures Manual (3-21000-ADM), Procedure NEPA.12 (15 October 1991 draft). ✓ correction applied

## 4.0 RESULTS

These results represent ecological survey data collected between late winter 1991 and 11 October 1991 during the aforementioned surveys. They also include all documented findings of SOC species at RFP that might be impacted by the proposed 881-HFD Project.

### 4.1 Presence of Compliance-Listed Species

- **Preble's Meadow Jumping Mouse:** One individual assigned to this species (*Zapus hudsonius preblei*), a federal Category 2 species, was confirmed as having been captured and released in a rehabilitation habitat type transect (MR02A) about 50 meters south of the 881-HFD during the spring sampling season. Attempts to trap *Zapus* in the vicinity of the 881-HFD during the fall period were unsuccessful. This lack of success may have been due to: (a) the hibernation behavior of *Zapus*, (b)

competition from high fall populations of deer mice (*Peromyscus maniculatus*) and meadow voles (*Microtus pennsylvanicus*) who enter the traps more aggressively, or (c) the actual absence of *Zapus* from the vicinity of the 881-HFD. Six individuals captured in the northern buffer zone in the spring were assigned to another non-T&E species, the Western Jumping Mouse (*Zapus princeps*). However, determinations were tentative, based solely on external characteristics. None of these were captured in the northern zone during the fall. Since voucher specimens have not yet been taken, documentation of the respective distributions of *Z. princeps* and *Z. hudsonius preblei* remain to be ascertained.

- **Black-footed Ferret:** Two small black-tailed prairie dog colonies, about 1500 meters northeast and 2000 meters east of the 881-HFD, aggregated to about 10 and 5 hectares, respectively. Each contained fewer than 40 individuals. The ferret (*Mustela nigripes*), a federal and state endangered species, may be associated with prairie dog colonies above a certain size. However, given the small size of these prairie dog colonies, it is extremely unlikely that *M. nigripes* is present.
- **Forktip Threeawn:** This species (*Aristida basiramea*), a Colorado State species of concern, has been found just south of the west access road entering Rocky Flats, growing on gravel scars bordering an old roadway, 1000 meters to the west of the 881-HFD. This gravel habitat can apparently support the species when other plants are absent and adequate moisture can accumulate. Given these habitat preferences, it is highly unlikely that this species would be found in the 881-HFD and none have been observed there.
- **Diluvium Lady's Tresses:** Appropriate habitat for the diluvium lady's tresses (*Spiranthes diluvialis*), a federal proposed endangered species, includes the edge of wetlands dominated by sedges, rushes, and cattails. Populations of the plant have been found in Jefferson and Boulder Counties on either side of the RFP site. There is a small wetland area within the 881-HFD project area that may be suitable habitat for this species. However, an extensive search during the flowering period (reported as extending from early July to early October) of this species, in the wetland area of the 881-HFD, yielded negative results.
- **Colorado Butterfly Plant:** Appropriate habitat for the Colorado butterfly plant (*Gaura neomexicana* var. *coloradensis*), a federal Category 2 species, includes the transition zone between wetland bottoms and the drier uplands associated with wet meadow habitat. Given that there is suitable habitat for this species adjacent to the 881-HFD, there was a reasonable probability that the species might be found on the project site. However, an extensive search during the flowering period (reported as extending from early July to late September) of this species, throughout the 881-HFD project area, yielded negative results. AAW OK
- **Bald Eagle:** Individuals of this species (*Haliaeetus leucocephalus*), a federal and state endangered species, have been observed soaring over the developed area and flying over the northeast portion of the buffer zone. None have been observed to roost or hunt on RFP and none have been observed in proximity to the 881-HFD.
- **Peregrine Falcon:** Two individuals of this species (*Falco peregrinus*), a federal and state endangered species, were observed at RFP in early fall. One was flying from west to east near the west gate. The other was observed perched on a powerline near Pond B-5 and made an attempt to capture a killdeer inbound to Pond B-5. However, no nesting or roosting activities have been observed and none have been observed in proximity to the 881-HFD.

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- **Ferruginous Hawk:** This species (*Buteo regalis*), a federal Category 1 species, was observed adjacent to the 881-HFD in winter, spring, and early summer. A juvenile male was resident in the vicinity in the area for a six week period in early late spring and early summer; nesting was not documented. This individual was observed hunting primarily in the riparian zone of Woman Creek and along the 881 Hillside, directly above the proposed French Drain project site. Most observations of this species have been in association with prairie dog colonies southeast of RFP.
- **Swainson's Hawk:** A pair of this species (*Buteo swainsonii*), a federal Category 3 species, attempted to nest in early June in a cottonwood about 1000 meters southeast of the 881-HFD. The nest was abandoned for unknown reasons in early July. During this period, members of the pair were not observed hunting in the vicinity of the 881-HFD, although other observations of this species have been documented infrequently but widely on the RFP site.
- **Other:** No additional SOC species are expected to occur with any degree of regularity in association with the 881-HFD project site.

4.2 Presence of Critical Habitat

No T&E species have been documented in or near the project site and the majority of the project site's 2.8 hectares should not be considered as critical to T&E species.

5.0 ANALYSIS OF POTENTIAL IMPACTS

5.1 Direct Impacts

Habitats (including wetlands) at the location of the 881-HFD Project will be totally destroyed during excavation. The small (approximately 400 m<sup>2</sup>) habitat group (two large cottonwood trees and associated wetland) above the western end of the French Drain alignment will be completely removed by the project. This is fairly unique habitat within the Woman Creek drainage and is known to support as many as 14 species of migratory birds both for nesting and foraging. Impacts to the grassland and wetland areas along the project alignment may be potentially harmful to the migratory birds utilizing the area.

Although the small wetland habitat in the 881-HFD does not represent a substantial portion of the total wetland habitat present at RFP, they comprise, none-the-less, a man-made jurisdictional wetland as defined in 33 CFR 328.3(b) and 40 CFR 230.3(t). This wetland is shown on the maps prepared for the Wetlands Assessment: Rock Flats Plant Site (01 April 1991). As the 881-HFD project is new construction, wetland impacts would not qualify for exclusion under 10 CFR 1022.5(g). Construction projects affecting wetlands not discussed in the September 1977 RFP EIS are subject to the requirements of 10 CFR 1022.

5.2 Indirect Impacts

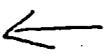
The proposed excavation activities could have an adverse impact on the dynamics of jumping mouse populations living adjacent to the southern edge of the construction site. As a general rule, there should be no earth-disturbing activities within 200 meters of *Zapus* nesting areas. While it is difficult to predict the magnitude and types of impacts to this species (and perhaps other SOC species) due to vibration, noise and other physical disturbances emanating from construction activities, attention has to be called to the fact that such impacts could occur.

There is also a possibility for increased sedimentation into Woman Creek from excavation activities at

where from?

6

why was this question unanswered?



the SID Project. Due to the shallow nature of the creek even a small increase in sedimentation levels could greatly affect the macrobenthos and fish populations in the creek. Seven non-SOC species of fish have been identified in Woman Creek: Stoneroller (*Campostoma anomalum*), Creek Chub (*Semotilus atromaculatus*), Golden Shiner (*Notemigonus crysoleucas*), Fathead Minnow (*Pimephales promelas*), Largemouth Bass (*Micropterus salmoides*), Green Sunfish (*Lepomis cyanellus*), and the Western White Sucker (*Catostomus commersoni*). The two SOC fish species that could be present at RFP, the Common Shiner (*Notropis cornutus*), a Colorado State species of concern, and the Plains Topminnow (*Fundulus sciadicus*), a federal Category 2 species, have yet to be observed in Woman Creek.

It is also possible that installation of the French Drain could restrict or eliminate recharge of a significant portion of the Woman Creek drainage from the 881 Hillside, including that portion of the creek which may harbor a *Zapus* population. Since the 881 Hillside French Drain system is designed to intercept groundwater flowing through alluvial materials, it is anticipated that its construction will decrease the flow of water through these materials downslope of the Drain. It is not currently known what impact this will have on the quantity of water carried by Woman Creek. Although it is believed that Woman Creek losses and gains water to and from alluvial materials along its length, its character downslope of the proposed 881-HFD project site is not fully known. The groundwater-surface water interactions are complex and appear to vary both spatially and temporally. Work is currently underway to determine these interactions more precisely using detailed discharge measurements at multiple sites along the Woman Creek drainage.

In addition, disturbance of the land around the 881-HFD due to excavation activities could lead to the invasion of opportunistic plant species that are less desirable as forage for small mammal and bird populations.

### 5.3 Cumulative Impacts

Immediately to the west of the 881-HFD project site, in the upper Woman Creek drainage, are the Old Landfill and Ashpits sites which are scheduled for remediation; however, specific actions for remediation of these sites have yet to be determined. The potential for cumulative impacts to SOC species, either from 881-HFD excavation activities, other projects along Woman Creek, or South Interceptor Ditch maintenance, certainly exists. However, sufficient information is not presently available to fully verify the existence, or characterize the extent, of cumulative impacts.

### 5.4 Platte River Hydrology

In order to avoid impacts to T&E species in Nebraska that are dependent upon downstream flows, water-related projects at RFP must demonstrate a zero net depletion to the Platte River basin.

Water collected by the French Drain is to be treated and returned to the Platte River watershed. It is anticipated that there will be no net loss of water to the Platte River as a result of the operation of the French Drain. While there could be evaporative or other process losses during the water treatment, they are estimated to be minimal and could be fully mitigated by the injection of make-up water.

} not  
adequate

### 6.0 DETERMINATION

General and focused surveys have found no evidence of T&E species on, or in proximity to, the 881-HFD project site.

Based on the data currently available, DOE,RFO has determined that excavation of the 881-HFD

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could have adverse direct, indirect, or cumulative impacts on SOC species in or near the project.

Based on the data currently available, DOE, RFO anticipates that construction of the 881-HFD will cause no net depletion to the Platte River basin. However, potential impacts to the hydrologic regime in Woman Creek are still being evaluated.

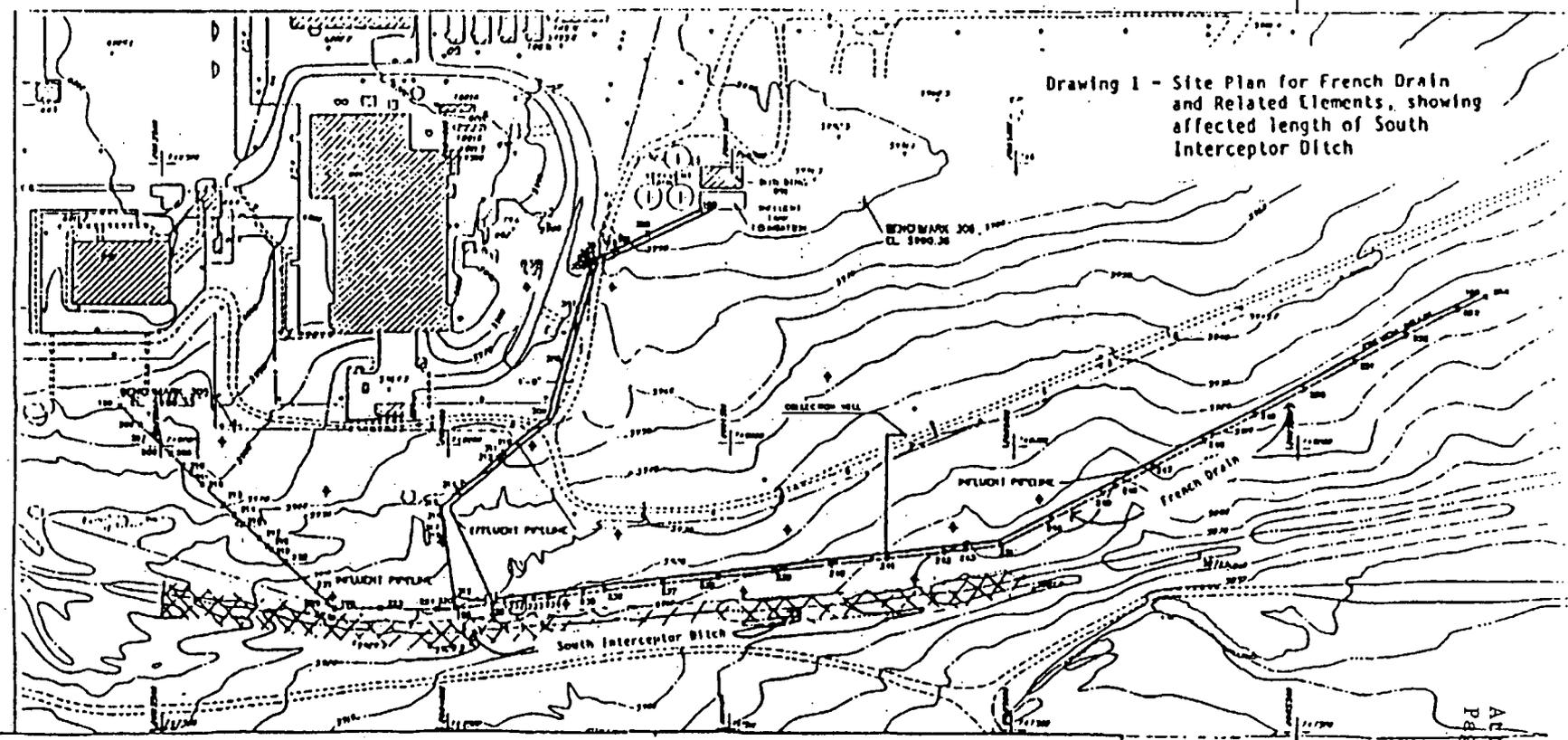
} not  
adequate

Based on the data currently available, DOE, RFO has determined that any activity involving impacts to the small wetland habitat are subject to the requirements of 10 CFR 1022.1

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1) Prepared by EG&G Rocky Flats, EM/NEPA Division, (303) 273-6188. Report originally compiled and written by Ms. Meredith L. Brogden; re-written and edited by Dr. Bruce K. Hope; reviewed by Mr. Bruce J. Bevirt, Dr. Fred Harrington, Mr. Scott McGlochlin, and Dr. Lawrence E. Woods. Platte River hydrology analysis provided by Mr. Eric Mendes, EG&G Rocky Flats, EM/Surface Water Division. Information on the types and results of surveys conducted were transcribed from a report (Letter RFEV3-EDEN-EGRF-M-015) prepared by Dr. D. Jean Tate (Ebasco Services) and Dr. Fred Harrington (Ebasco Services) under EM/NEPA Division Contract BA64980EB.

TABLE 1 SOC SPECIES COMPLIANCE LIST FOR THE 001-HFD PROJECT					
GROUP	COMMON NAME	SCIENTIFIC NAME	STATUS	RFP	SITE
PLANTS	Forktip Threawn	<i>Aristida basiramea</i>	CO	yes	no
	Colorado Butterfly Plant	<i>Gaura neomexicana</i> var. <i>coloradensis</i>	C2		
	Toothcup	<i>Rotula ramosior</i>	CO		
	Diluvium Lady's Trossos	<i>Spiranthis diluvialis</i>	P		
AMPHIBIANS & REPTILES	Northern Leopard Frog	<i>Rana pipans</i> spp.	C2	yes (?)	no
	Texas Horned Lizard	<i>Phrynosoma cornutum</i>	C2		
FISH	Plains Topminnow	<i>Fundulus sciadicus</i>	C2		
	Common Shiner	<i>Notropis cornutus</i>	CO		
BIRDS	Peregrine Falcon	<i>Falco peregrinus</i>	E	yes	no
	Bald Eagle	<i>Haliaeetus leucocapillus</i>	E	yes	no
	White-faced Ibis	<i>Plegadis chichi</i>	C2		
	Ferruginous Hawk	<i>Buteo regalis</i>	C2	yes	forage
	Whooping Crane	<i>Grus americana</i>	E		
	Harlequin Duck	<i>Histrionicus histrionicus</i>	C2		
	Western Snowy Plover	<i>Charadrius alexandrius nivosus</i>	C2		
	Mountain Plover	<i>Charadrius montanus</i>	C2		
	Piping Plover	<i>Charadrius melodus</i>	T		
	Long-billed Curlew	<i>Numerus americanus</i>	C2		
	Least Tern	<i>Sterna antillarum</i>	E		
	Black Tern	<i>Chidonia niger</i>	C2		
	Swainson's Hawk	<i>Buteo swainsonii</i>	C3	yes	forage
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	C3B			
MAMMALS	Swift Fox	<i>Vulpes velox</i>	C2		
	Black-footed Ferret	<i>Mustela nigripes</i>	E		
	Pebbles Meadow Jumping Mouse	<i>Zapus hudsonius preblei</i>	C2	yes	close
	Fringed Myotis	<i>Myotis thysanodes</i>	C2		
<p><b>STATUS:</b> (E) endangered species (C1) Federal Category 1 (propose to list)  (T) threatened species (C2) Federal Category 2 (appropriate to list but no data)  (CO) Colorado State species of concern (C3) Federal Category 3 (formerly proposed)  (P) Proposed</p>					



Drawing 1 - Site Plan for French Drain and Related Elements, showing affected length of South Interceptor Ditch

**HARRINGTON, FRED A.**

Biologist

**PROFESSIONAL SUMMARY**

Dr. Harrington has 32 years of professional experience in the energy and natural resources fields. He has performed a wide range of services including endangered species management; mine land planning, permitting, and reclamation; baseline and monitoring studies; mitigation planning; regulatory reviews and "fatal-flaw" evaluations; parks and reserves planning, design, and management; and a wide range of land use planning activities. He has served as project manager and principal investigator on projects throughout the Rocky Mountain region, Northern Great Plains, Pacific Northwest, Desert Southwest, and has worked for extended periods in Latin America and the Middle East. He is currently engaged in hazardous waste remedial investigations and related projects with the Department of Energy and the U.S. Army.

Dr. Harrington serves as Field Operations Leader for the Rocky Flats Plant biota baseline study under the Environmental Restoration Program and the Environmental Evaluation of Operable Unit (OU) 1. He has played a major role in developing standard operating procedures for biota investigations.

**EDUCATION**

Ph.D., Wildlife Biology, Colorado State University, 1978  
M.S., Natural Resources Administration, Colorado State University, 1969  
B.S., Wildlife Biology, Colorado State University, 1959  
Biology, University of New Mexico, 1955-56

**ADDITIONAL TRAINING**

Health and Safety Training Course, 40 hours, 1990  
Industrial Ecology Institute, Colorado School of Mines, 1980  
Business Administration Short Courses, Harvard/University of Tehran, 1973-75  
Alpine Ecology Summer Seminars, University of Colorado, 1966-1969  
Business Administration, University of Maryland, USAFI, 1964-1965

Dr. Harrington has organized and attended a very large number of conferences, conventions, and seminars that included topics in industrial ecology, ecological guidelines for land use, marine biology, endangered species management, mitigation, parks and reserves, and international conservation issues.

**REGISTRATIONS AND CERTIFICATIONS**

Registered Ecologist, Registry of the International Union for the Conservation of Nature and Natural Resources  
Certified International Diver, Professional Association of Diving Instructors  
Certified Flight Instructor (Airplane and Instruments) FAA  
Certified Ground Instructor (Advanced and Instruments) FAA  
Airline Transport Pilot Rating (Multi-engine) FAA

## PROFESSIONAL AFFILIATIONS OR MEMBERSHIPS

Sigma Xi, Ecological Society of America, American Society of Mammalogists, American Ornithological Union, Society for Range Management, Wildlife Society, International Union for the Conservation of Nature and Natural Resources, American Institute of Biological Science, Survival Service Commission

## SECURITY CLEARANCES

Rocky Flats Red Badge  
Department of Energy "Q" Clearance Pending

## EBASCO EXPERIENCE

Dr. Harrington joined EBASCO in 1990. He participates in a wide range of projects, including the Rocky Mountain Arsenal (RMA) Hazardous Waste Remedial Investigation/Feasibility Study for the U.S. Army Program Manager's Office for the RMA Contamination Cleanup and the Rocky Flats Plant Monitoring Program for the Department of Energy (DOE). He is currently assigned as Field Operations Leader for the Rocky Flats Plant biota baseline study and for the Environmental Evaluation of OU-1.

## THREATENED AND ENDANGERED SPECIES EXPERIENCE

As an advisor to the Survival Service Commission (SSC) of the International Union for the Conservation of Nature and Natural Resources (IUCN), Dr. Harrington played a major role in the creation and passage of CITES (Convention in Threatened and Endangered Species of Flora and Fauna), to which the United States and a majority of nations are now signatories.

As chief advisor to the Iran Department of the Environment (under the former Shah), Dr. Harrington was credited with developing a successful recovery plan for the Persian Fallow Deer, the world's rarest deer. He subsequently served with SSC's Deer Group in formulating recovery plans for other species of endangered cervids. He worked with IUCN, International Waterfowl Research Group (IWRB), International Council for Bird Preservation, the Soviet Union, Iran and the International Crane Foundation, in developing a recovery plan for the Siberian White Crane, the Eurasian counterpart of the Whooping Crane. He was credited with organizing the Ramsar Conference, which led to ratification of the MARR list, protecting wetlands of international concern throughout Eurasia.

He developed a management plan for endangered bustards in the Middle East, and was the first to raise Great Bustards successfully in captivity. He was involved in successful endangered species planning and management for the Marsh Crocodile, Caspian Snow Cock, Caspian "Salmon" (a race of Brown Trout), and sea turtles in the Persian Gulf.

Dr. Harrington was engaged as an advisor by several other Middle Eastern nations, including Bahrain, Pakistan, and Saudi Arabia. He worked with the Government of Oman to develop nature preserves for the endangered Arabian Tahr and Muscat Gazelle.

Upon returning to the United States in 1979, Dr. Harrington served as consultant and acting Western Regional Land Steward for the Nature Conservancy, San Francisco. In that capacity, he was responsible for endangered species planning and management in the Conservancy's eighty western preserves. He prepared master plans that included endangered species recovery plans for Sycan Marsh, Oregon (Greater Sandhill Cranes), Pine Butte Swamp, Montana (Grizzly Bears); Silver Creek, Idaho ("McCloud" Rainbow Trout);

RESFLATS DRES  
Mon Oct 21, 1991 1133

Daudrich Northern Desert Shrub Reserve, Idaho (endangered ecosystems); Birds-of-Prey Reserve, Idaho (falcons); Gila River Riparian Reserve, New Mexico (endangered ecosystem); Dixon-Dozier Sanctuary, California (valley grassland, vernal pools, endangered flora, endangered invertebrates); Kipahulu Valley, Maui, Hawaii (endangered flora and birds); and many others.

As a private consultant in recent years, Dr. Harrington has prepared dozens of endangered species evaluations and mitigation and management plans for government and industry. He was responsible for preparation of the Trinity River Wildlife Management Options Study (Mitigation Planning) for the Bureau of Reclamation.

Dr. Harrington has worked with the Commission of the Californias in preparation of plans for rare flora and fauna in Baja California. Similarly, he has worked with the Secretaria de Desarrollo Urbano y Ecologia (SEDUE), the Universities of Chiapas and Colima, Earthwatch, and the Institute for World Conservation and Development in planning for endangered species in Tamaulipas (oak/sweetgum biotic community ecology); Siankaan Biosphere Reserve, Quintana Roo (coral reefs, estuaries, American crocodiles, rare avifauna, spider monkeys); Lagos de Montebello, Chiapas (quetzals and orchids); Maruata, Michoacan (spawning sea turtles), Zitacuaro, Michoacan (wintering Monarch Butterflies) and other sites.

### PRIOR EXPERIENCE

**Fred Harrington and Associates**  
Consulting Biologist and CEO (9 years)

Dr. Harrington supervised a group of professional biologists and land use management specialists who offered a wide range of services including environmental services, land use planning, and biological studies. During this period he served as project manager and principal investigator on numerous major energy projects in the Northern Great Plains and Rocky Mountain region including the Garrison Coal Field, Powder River Basin, and elsewhere on behalf of the coal and uranium industries. Likewise, he has worked with federal agency programs in the completion of extensive wildlife and vegetation inventories for the Bureau of Land Management. He coordinated an abandoned mine land reclamation project under contract to Wyoming Department of Environmental Quality. Dr. Harrington and his colleagues were engaged by a large number of nonprofit conservation organizations including the Nature Conservancy, The Institute for World Conservation and Development, and the International Union for Conservation of Nature and Natural Resources. In recent years, Dr. Harrington devoted considerable time to investigations of the tropical rain forest degradation phenomenon throughout Latin America.

**VTN Wyoming Incorporated**  
Manager of Environmental Sciences (2 years)

For this multidisciplinary company, Dr. Harrington was responsible for program development, budget and finance, marketing, and quality control. Principal activities were associated with environmental impact assessments in the Powder River Basin and adjacent areas. Dr. Harrington served to coordinate the activities of biologists, sociologists, geologists, soil scientists, economists, archaeologists, and several engineering disciplines. He served as principal investigator on a variety of projects in the Northern Great Plains and Rocky Mountain region. He played a major role in the Bureau of Reclamation's Trinity River (California) Management Options Study. He conducted the first environmental feasibility study for coal pipelines in the region.

Iran Department of the Environment  
Chief Advisor (7 years)

Dr. Harrington was employed by the Iranian government (under the former Shah) to supervise and conduct environmental studies. Shortly thereafter he was given responsibility for preparation of the Iran National Report to the Stockholm International Conference on the Human Environment (UNEP, UNDP, UNESCO, 1971). As a result of the favorable response to the report by the conferees, he was asked to present plans for creation of the Iran Department of the Environment. Plans were approved by Parliament in 1972. He was authorized to recruit 44 foreign advisors in the field of environmental conservation to assist in developing the program. He subsequently guided the development of an organization with jurisdiction over environmental protection and pollution abatement, national parks and reserves, fisheries, wildlife, plant protection, and national museums. He supervised the first studies of oil pollution in the Persian Gulf, and proposed the first pollution abatement facilities at Iranian ports. He conducted the first studies of pesticides in the Caspian Sea, which led to a bilateral agreement on pesticide control and regulation between Iran and the Soviet Union. Dr. Harrington was innovator of "Pardisan," a nature park complex near Tehran, where he worked with such famous architects as Ian McHarg and R. Buckminster Fuller. The master plan won the annual award at the American Association of Landscape Architects in 1977.

OTHER EXPERIENCE

Dr. Harrington began his career as a biologist for New Mexico Game and Fish Department, working on a federal aid project "Investigations of Big Game and Ranges." He served 5 years as Flight Navigator in the U.S. Air Force, attaining the rank of Captain. During that period he was assigned to Military Airlift Command, and served as a combat aircrew member in Vietnam in aeromedical evacuation and transport squadrons. When he returned to graduate school, he was engaged by the National Park Service to study habitat preferences of large mammals in Rocky Mountain National Park. For his efforts he was granted the Hibbs Award for "Outstanding Contribution to Wildlife Management in the State of Colorado."

Assessment Number RFPO-05-0005  
Corrective Action F-3.6

- A full text database search was performed for the following terms: 'CD', 'floppy', 'media' and 'disk'.
- The analysis of search results identified references to media that had been attached to the paper record.
- Media items were collected from various sources and filed with the original paper record.
- A database reference was entered in the 'Comments' field that identifies media attached to the paper record. (See attached screen shots)

Doc No	000873	Date	08/08/2005	Est	E 178	Priority	YES, ROUTINE	REL
Title: Agency Draft AAE Risk Evolution North Firing Rang IHSS Group NE-1								
Keywords: OS-RF-00781; KLV-048-05; Ref: D00865								

Document Type	REPORT / STUDY / PLAN	Create Date	10/11/2005
Date Received	08/10/2005	By User	N70052
Log Date	10/11/2005	Last Modified	10/11/2005
Doc Entry Date	10/11/2005	By User	N78515
Doc Type	C	Doc Status	
Doc Status		Doc Action	

**Abstract:** Acronyms

The purpose of this document is to provide a summary of Potential Ecological Risk for the Individual Hazardous Substance SRs IHSS Group NE-1 North Firing Range Potential Area of Concern (PAC NW-1505) within the No Name Gulch Draining Exposure Unit (NNEU). The Draft Closeout Report for the North Firing Range was

**Comments:** Acronyms

1 CD attached to this document BZ-A-000873.

Doc ID	002238	Doc Date	07/29/2004	Pages	90	Comments	YES, ROUTINE	Print
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Title: Data Summary Report for IHSS Group 500-4  
 ID: 04-RF-00781; KLW-005-04

Document Type	DATA SUMMARY		Create Date	08/04/2004
Date Received	08/03/2004	By User	KLW	
Logon Date	08/04/2004	Last Modified	08/20/2004	
Data Entry Date	08/04/2004	By User	KLW	
Requester	C	Approval		
Approval Status		Approval Date		

**Abstract:** Acronyms  
 The Data Summary Report summarizes accelerated action characterization activities conducted at Individual Hazardous Substance Site IHSS Group 500-4, consisting of IHSS 500-117.2. At the Rocky Flats Environmental Technology Site (RFETS/Site). IHSS Group 500-4 consists solely of IHSS 500-117.2 the Middle Site

**Comments:** Acronyms  
 See AR IA-A-002179. 1 CD attached to document.  
 See approval under AR IA-A-002495.





Doc No	Doc Date	By	Area	Action	Print
00224	07/29/2004	79	YES, ROUTINE		
The Final Closeout Report for IHSS Group 500-2					
04-RF-00797; KLV-004-04					

CLOSEOUT REPORT		Created On	08/04/2004
Date Received	08/03/2004	ID	741573
Open Date	08/04/2004	Los	03/14/2005
Date Entry Date	08/04/2004	By User	902689
Priority	C	Priority	
Index	HY	Index	HY

**Acronyms**

This Closeout Report summarizes accelerated action activities conducted Individual Hazardous Substance Site IHSS Group 500-2, IHSS 500-158 Radioactive Site Building 551. Activities were planned and executed in accordance with the Industrial Area Sampling and Analysis Plan (IASAP) (DOE 2001), IASAP Addendum

**Acronyms**

See under AR IA-A-002183. 1 CD attached to document.

Doc ID	002347	Date	09/28/2004	1	YES, ROUTINE
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Subject: The Final Data Summary Report for IHSS Group 700-10  
 Reference: 04-RF-00995; KLV-022-04; [002348]

Document Type	TRANSMITTAL LETTER	Create Date	09/30/2004
Date Received	09/30/2004	By User	N71157
Login Date	09/30/2004	Last Modified	09/27/2005
Date Entry Date	09/30/2004	By User	N71157
Priority	C	Public Release	<input type="checkbox"/>
Acronym	<input checked="" type="checkbox"/>	Document	<input type="checkbox"/>

Submits the attached [002348] Final Data Summary Report for Individual Hazardous Substance Site IHSS Group 700-10 for regulators files. Previous comments have been incorporated and Colorado Department of Public Health and Environment (CDPHE) on September 21, 2004 approved the document.

Comments  Acronym  
 1 CD attached to document.

IA  0027  08/24/2004  35  YES, ROUTINE  PRELIM

Title: Data Summary Report for HSS Group 400-1 UBC 439 Radiological Survey  
 ID: 04-RF-00877; KLV-010-04

**DATA SUMMARY**

Create Date: 09/01/2004  
 By User: NGA1573  
 Last Modified: 09/19/2005  
 By User: NGA1573

Date Received: 09/01/2004  
 Log Date: 09/01/2004  
 Data Entry Date: 09/01/2004

Status: C  
 Priority:

**Final Data Summary Report for Individual Hazardous Substance Site HSS Group 400-1 for regulator files. Previous comments have been made incorporated and the document was approved by Colorado Department of Public Health and Environment (CDPHE) on August 23, 2004.**

1 CD attached to document.

Case No.	08/24/2004	36	YES, ROUTINE	PRELIM
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**Data Summary Report for IHSS Group 400-4**

04-RF-00878; KLV-011-04

<b>Document Type</b>	DATA SUMMARY	<b>Create Date</b>	08/31/2004
<b>Date Received</b>	08/31/2004	<b>By User</b>	NZS1573
<b>Begin Date</b>	08/01/2004	<b>Last Modified</b>	08/09/2005
<b>End Date</b>	08/01/2004	<b>By User</b>	NZS1573
<b>Category</b>	C	<b>Case Type</b>	
<b>Priority</b>		<b>Case History</b>	
<b>Acronym</b>		<b>Case Type Document</b>	

**Acronym**

This Data Summary Report summarizes accelerated action characterization conducted at Individual Hazardous Substance Site IHSS Group 400-4 of the Rocky Flats Environmental Technology Site (RFETS/Site). These activities were planned and executed in accordance with the Industrial Area Sampling and Analysis Plan

**Acronym**

1 CD attached to document.



IA	00234	09/29/2004	39	YES, ROUTINE	PREM
Data Summary Report for IHSS Group 700-5 Building 770 UBC					
Internal Code: 04-RF-00953; KLM-017-04					

<b>Document Type</b>		<b>DATA SUMMARY</b>		<b>Create Date</b>		09/30/2004	
<b>Date Received</b>	09/29/2004	<b>By User</b>	NA11573	<b>Last Modified</b>	09/20/2005	<b>By User</b>	NA11573
<b>Login Date</b>	09/30/2004	<b>Access</b>	HY				
<b>Data Entry Date</b>	09/30/2004	<b>Access</b>	HY				
<b>Access Type</b>	C	<b>Access Role</b>					
<b>Access History</b>		<b>Access History</b>					

**Title/Subject:** Acronym

This Data Summary Report summarizes Accelerated Action (AA) characterization activities conducted at Individual Hazardous Substance Site IHSS Group 700-5, which consists of the Building 770 Waste Storage Facility Under Building Contaminant (UBC) Site, at the Rocky Flats Environmental Technology Site

**Comments:** Acronym

1 CD attached to document.



SW  A  00357  03/01/2002  E 593 YES, ROUTINE  PUBLIC  25

Title: LCDB Preliminary, March 2002

Internal Code: N/A; (Ref: 02-DOE-00827; 00358-RF-02; 02-RF-0124) Rev No: To:

Document Type: REPORT / STUDY / PLAN    
 Date Received: 06/12/2002   
 Create Date: 06/13/2002   
 By User: 6902689/   
 Login Date: 06/13/2002   
 Login By: JCR   
 Last Modified: 06/27/2005   
 Date Entry Date: 06/13/2002   
 Index: JCR   
 By User: 710578/   
 CREDIT: C   
 Under Review: N   
 Admin History: N   
 Public History: N   
 Open to Document: Y

Title:  Acronym   
 Land Configuration Design Basis (LCDB) Preliminary, March 2002. The Land Configuration Design Basis Project is being conducted to define the design basis to allow development of the final topography and closure configuration (including drainages, ponds, roads, and other post-closure components) for the Rocky Flats

Comments:  Acronym   
 1 CD attached to document.

SW	001849	10/01/2003	E	350	YES, ROUTINE	PUBLIC
Fiscal Year 2004 IMP, dated October 2003						
Title Code: N/A						

Document Type	REPORT / STUDY / PLAN		Create Date	11/24/2003
Date Received	11/24/2003	By User	MB02699	
Login Date	11/24/2003	By User	JCR	
Date Entry Date	11/24/2003	Last Modified	09/27/2005	
Category	C	By User	JCR	
Document Type	N		By User	JAN53
Document Status	N		By User	JAN53

**Acronym**

Integrated Monitoring Plan, Fiscal Year 2004, dated October 2003 - Includes Background and Summary documents. This FY04 IMP identifies the routine monitoring programs for surface water, groundwater, air, and ecology. It is designed to minimize the duplication of efforts among US Department of Energy.

**Comments** **Acronym**

1 CD attached to document.

SWP  A  DD1866  02/29/1996  517  YES, ROUTINE  PUBLIC  RTR

Title: 1995 Annual RCRA Groundwater Monitoring Report  
 Transmittal Code: RF/ER-96-0008.UN

Document Type	REPORT / STUDY / PLAN		Create Date	01/23/2004
Date Received	01/22/2004		By User	N902698
Expon Date	01/23/2004	JCR	Last Modified	03/27/2005
Date Entry Date	01/23/2004	JCR	By User	N710531
Category	C	Public Access		
Document History		Public History		

Title Subject: Acronym  
 1995 Annual RCRA Groundwater Monitoring Report for Regulated Units at the Rocky Flats Environmental Technology Site, Final Report; February 29, 1996. This report presents the results for the 1995 groundwater monitoring program conducted at the three interim status RCRA regulated units at the RFETS. The

Attachment: Acronym  
 1 CD attached to document.

SW	004868	11/18/1997	151	YES, ROUTINE	PUBLIC
Title: 1996 Annual RFCA Groundwater Monitoring Report					
Internal Code: RFRMRS-97-087.LIN					

Document Type	REPORT / STUDY / PLAN	Create Date	01/23/2004
Date Received	01/22/2004	By User	802699
Login Date	01/23/2004	Last Modified	08/27/2005
Data Entry Date	01/23/2004	By User	NA1574
Lead Dept	C	Document	
Document		Document	N

**Subject:** Acronym  
 1996 Annual RFCA Groundwater Monitoring Report, November 18, 1997. Volume I and II (Vol. II in disk format)

**Comments:** Acronym  
 2 CD attached to document.

SW	004879	02/01/2004	E	337	YES, ROUTINE	18816
Title: Final Annual Report RFETS 2002 RFCA GWMR						
Internal Code: N/A						

Document Type	CORRESPONDENCE	Create Date	02/18/2004
Date Received	02/18/2004	By User	JAS78
Logon Date	02/19/2004	Last Modified	03/27/2005
Date Entry Date	02/19/2004	Indexer	JAS78
Priority	C	Priority	PT
Form Dist		Form Dist	
Form Dist		Form Dist	

**Summary:** Acronym

This report summarizes the groundwater monitoring activities at the Rocky Flats Environmental Technology Site (RFETS/RSite) for Calendar Year (CY) 2002. It is required annually by the Rocky Flats Cleanup Agreement (RFCA) as outline in the Integrated Monitoring Plan (IMP). Specifically, this document discusses

**Comments:** Acronym

1 CD attached to document.

SW	004935	02/01/2004	E	337	YES, ROUTINE	FILE
Title: 2002 Annual RFCA Groundwater Monitoring Report						
Internal Code: RFETS-2002-RFCA-GWMR						

Document Type:	REPORT / STUDY / PLAN	Create Date:	05/11/2004
Date Received:	05/10/2004	By User:	NS12689
Login Date:	05/11/2004	Last Modified:	08/27/2005
Date Entry Date:	05/11/2004	By User:	01576
Record Type:	C	Public History:	<input type="checkbox"/>
Internal History:	<input type="checkbox"/>	Site W/D Status:	Y

**Title/Subject:** Acronyms  
**Final 2002 Annual Rocky Flats Cleanup Agreement (RFCA) Groundwater Monitoring Report for the Rocky Flats Environmental Technology Site, February 2004 Text and Figures; Appendices on CD. This document discusses groundwater flow conditions, groundwater monitoring in the vicinity of the groundwater remedial**

**Comments:** Acronyms  
 1 CD attached to document.

SW  A  005111  08/09/2005  60  YES, ROUTINE  PREEM

Draft MSE of Groundwater Contamination Summary Report

SW-A-005111, SW-A-005112, SW-A-005113

Document Type: **CONCURRENCE**

Date Received: 08/17/2005

Log Date: 08/22/2005

Data Entry Date: 08/22/2005

Create Date: 08/22/2005

By User: JAL578

Last Modified: 08/20/2005

By User: JAL578

Log:  HY  HY

Index:  HY

Category:  C

Status:

This Nature and Extent of Groundwater Contamination Summary Report has been prepared pursuant to Task 10 of the Final Work Plan for the Development of the Remedial Investigation / Feasibility Study (RI/FS), Report (DOE 2002). This SR will be incorporated into the RI/FS Report as Section 4.0.

Comment: **Acronyms**  
 1 CD attached to document.

SW	Doc No	Doc Date	ES	Pages	Routing	Status	Print
	005118	08/20/2005	1		YES, ROUTINE	PREP	

Title: **The DOE RFPO Internal 2004 Annual Ecology Report**

Internal Code: **05-RF-00821; DAW-028-05**

Document Type	<b>TRANSMITTAL LETTER</b>		Created Date	<b>08/24/2005</b>
Date Received	<b>08/22/2005</b>	Created By	<b>N/A153</b>	
Logon Date	<b>08/24/2005</b>	Index By	<b>HY</b>	
Date Entry Date	<b>08/24/2005</b>	Index By	<b>HY</b>	
Doc Type	<b>C</b>	Under Review	<input type="checkbox"/>	
Final Entry	<input type="checkbox"/>	Public Entry	<input type="checkbox"/>	
		Case AR Document	<input type="checkbox"/>	

**Title Summary:** **Acronym**

The US Department of Energy, Rocky Flats Project Office (DOE/RFPO), and Internal 2004 Annual Ecology Report. The report is provided on 2 CDs per copy. There is approximately 770 vegetation photos and a Weed Management History which provides maps by year since 1997 of where herbicides have been used and of the

**Comments:** **Acronym**

2 CDs attached to documents.

002355 09/01/2004 E 34 YES, ROUTINE PRELIM

Data Summary Report (DSR) for HSS Group 400-2

Ref: 04-RF-01003; KLV-028-04

**DATA SUMMARY**

Date: 10/05/2004

Log Date: 10/06/2004

Data Entry Date: 10/06/2004

Created Date: 10/06/2004

By User: W302693

Last Modified: 09/20/2005

By User: W711573

Log By: JCR

Log Date: JCR

**Acronyms**

Data Summary Report for HSS Group 400-2, UBC 440 - Modification Center. This DSR summarizes characterization activities conducted at HSS 400-2. Approval of this DSR constitutes regulatory agency concurrence that HSS Group 400-2 is a No Further Accelerated Action (NFAA) site.

**Comments**

Acronym

See approval under AR IA-A-002351, September 27, 2004, 1 CD attached to document.

Activity	002680	Doc Date	09/01/2004	En	135	YES, ROUTINE	PRELIM
Title: Data Summary Report for IHSS Group 400-8 IHSS 157.2 Radioactive Site South Area							
Ref: 04-RF-01075; KLV-028-04							

Document	DATA SUMMARY		Create Date	10/21/2004
Date Rec'd	10/21/2004		By User	002680
Logon Date	10/21/2004	Team By	JCR	
Date Entry Date	10/21/2004	Index	JCR	
Date		Under Date		
Date		Date		
Date		Date		

**Acronym**  
 Data Summary Report for IHSS Group 400-8 IHSS 157.2 Radioactive Site South Area. Approval of this DSR constitutes regulatory agency concurrence that IHSS Group 400-8 is a No Further Accelerated Action (NFAA) Site.

**Comments**  
 Acronym  
 1 CD attached to document.

000219	02/06/2004	2	YES, ROUTINE	Public
RE: ER RSOP Notification and Closeout Report for IHSS Group 700-4 (B771/774)				
00088-RF-04				

Document ID:	APPROVAL LETTER	Created Date:	02/18/2004
Date Rec'd:	02/17/2004	By User:	N711573
Logon Date:	02/18/2004	Last Modified:	03/21/2005
Date Entry Date:	02/18/2004	By User:	N711573
Version:	C	Parent Doc ID:	
Parent Doc ID:		Category:	

**ACRONYM**

The Colorado Department of Public Health and Environment (CDPHE) Hazardous Material (HM) and Waste Management (WM) Division has reviewed the Environmental Restoration (ER) Rocky Flats Cleanup Agreement Standard Operating Protocol (RSOP) Notification and Closeout Report for Individual Hazardous

**ACRONYM**

1 CD attached to documents.

Doc No	001208	Doc Date	12/01/2002	ES	37	Time	YES, ROUTINE	Status	PUBLIC	Print
Characterization Data Summary IHSS Group 000-1										
Ref: 02-RF-02590; JLB-070-02										

<b>DATA SUMMARY</b>		Create Date	12/24/2002
Date Received	12/12/2002	By User	N902535
Login Date	12/24/2002	Last Modified	09/24/2005
Data Entry Date	12/24/2002	By User	N71573
Entry Type	C	LRP	<input type="checkbox"/>
Final Status	<input type="checkbox"/>	LRP	<input type="checkbox"/>
Final Status	<input type="checkbox"/>	LRP	<input type="checkbox"/>
Final Status	<input type="checkbox"/>	LRP	<input type="checkbox"/>

**Characterization Data Summary Individual Hazardous Substance Site IHSS Group 000-1, December 2002.** This summary characterizes activities that were planned and executed in accordance with the Industrial Area Sampling and Analysis Plan (IASAP), 2001 and Addendum No IA-03-02. This IHSS Group 000-1 includes IHSS

Comments: **Acronym**  
 1 CD attached to document.

Doc ID	Doc Date	Doc Type	Doc Status	Doc Action	Doc Print
001208	12/01/2002	E	76	YES, ROUTINE	AUTOC
Draft Closeout Report for HSS Group 600-1 (PAC 600-1001), December 2002					
Ref: 02-DOE-01878; 00893-RF-02					

Document Type	CREATE DATE	BY USER
CLOSEOUT REPORT	12/28/2002	NS02899
Date Received	LOG IN DATE	LAST MODIFIED
12/26/2002	12/28/2002	01/20/2005
LOG IN DATE	LOG IN BY	BY USER
12/28/2002	JCR	NS02899
DATE ENTRY DATE	LOG IN BY	BY USER
12/26/2002	JCR	NS02899
REPORT TYPE	REPORT STATUS	REPORT BUSINESS
C	N	Y
REPORT USER	REPORT STATUS	REPORT BUSINESS
N	N	Y

**ACRONYM**

Draft Closeout Report for Individual Hazardous Substance Site HSS Group 600-1 (Potential Area of Concern (PAC) 600-1001, Building 663), dated December 2002. This closeout report summarizes characterization and accelerated action activities conducted at the Temporary Waste Storage Building. Accelerated action activities

**Comments** **ACRONYM**

Report includes 1 CD: 600-1 Data

IA  02/25/03  02/01/2003  83  YES, ROUTINE  PUBLIC

Title: Final Closeout Report for HSS Group 800-4  
 Ref: 02-RF-00244; JLB-009-03

**CLOSEOUT REPORT**  
 Create Date: 02/11/2003  
 By User: NS02693  
 Last Modified: 05/20/2005  
 By User: N7H1573

Date Received: 02/10/2003  
 Login Date: 02/11/2003  
 Date Entry Date: 02/11/2003  
 LRP    
 LRP

Acronym  
 Final Closeout Report for Individual Hazardous Substance Site HSS Group 800-4;  
 Under Building Contaminant (UBC) 886; HSS 164.2 - Radioactive Site No. 2,  
 Building 888 Spill; HSS 000-121 - Building 828 Sump, Tanks and Original Process  
 Waste Lines (OPWL), February 2003.

Comments: Acronym  
 1 CD attached to document.



YES  NO  PENDING  YES, ROUTINE  PENDING  
 Title: Approves the revised IASAP Addendum No IA-03-04, IHSS Group 700-3  
 ID: 00488-RF-03

Document Title: APPROVAL LETTER  
 Date Entered: 05/29/2003  
 Login Date: 05/28/2003  
 Date Entry Date: 05/29/2003  
 Create Date: 05/29/2003  
 By User: N902685  
 Last Modified: 09/21/2005  
 By User: N6157

The Colorado Department of Public Health and Environment (CDPHE) approves the revised Final Industrial Area Sampling and Analysis Plan (IASAP) Addendum No. IA-03-04, Individual Hazardous Substance Site IHSS Group 700-3. The concerns were addressed and the final version may now complete the approval cycle.

Comments: [Acronym]  
 [ CD attached to documents ]



IA	001487	06/20/2003	1	YES, ROUTINE	1690
Approvals the Final Closeout Report for IHSS Group 300-1					
00598-RF-03					

APPROVAL LETTER		Created Date	06/27/2003
Date Received	06/27/2003	By User	N002695
Login Date	06/27/2003	Date Approved	06/27/2003
Date Entry Date	06/27/2003	By User	N71157
Category	C		
Priority			
Status			

**Acronyms**

The Colorado Department of Public Health and Environment (CDPHE) approves the Final Closeout Report for IHSS Group 300-1 dated June 2003 and concurs that these IHSS Groups need No Further Accelerated Action (NFAA). Contaminants identified in Individual Hazardous Substance Site IHSS 300-134(N) may need further

**Comments**

1 CD attached to document.

CERCLA ADMINISTRATION RELATED DOCUMENTS

A  B  C  D  E  F  G  H  I  J  K  L  M  N  O  P  Q  R  S  T  U  V  W  X  Y  Z  AA  AB  AC  AD  AE  AF  AG  AH  AI  AJ  AK  AL  AM  AN  AO  AP  AQ  AR  AS  AT  AU  AV  AW  AX  AY  AZ  BA  BB  BC  BD  BE  BF  BG  BH  BI  BJ  BK  BL  BM  BN  BO  BP  BQ  BR  BS  BT  BU  BV  BW  BX  BY  BZ  CA  CB  CC  CD  CE  CF  CG  CH  CI  CJ  CK  CL  CM  CN  CO  CP  CQ  CR  CS  CT  CU  CV  CW  CX  CY  CZ  DA  DB  DC  DD  DE  DF  DG  DH  DI  DJ  DK  DL  DM  DN  DO  DP  DQ  DR  DS  DT  DU  DV  DW  DX  DY  DZ  EA  EB  EC  ED  EE  EF  EG  EH  EI  EJ  EK  EL  EM  EN  EO  EP  EQ  ER  ES  ET  EU  EV  EW  EX  EY  EZ  FA  FB  FC  FD  FE  FF  FG  FH  FI  FJ  FK  FL  FM  FN  FO  FP  FQ  FR  FS  FT  FU  FV  FW  FX  FY  FZ  GA  GB  GC  GD  GE  GF  GG  GH  GI  GJ  GK  GL  GM  GN  GO  GP  GQ  GR  GS  GT  GU  GV  GW  GX  GY  GZ  HA  HB  HC  HD  HE  HF  HG  HH  HI  HJ  HK  HL  HM  HN  HO  HP  HQ  HR  HS  HT  HU  HV  HW  HX  HY  HZ  IA  IB  IC  ID  IE  IF  IG  IH  II  IJ  IK  IL  IM  IN  IO  IP  IQ  IR  IS  IT  IU  IV  IW  IX  IY  IZ  JA  JB  JC  JD  JE  JF  JG  JH  JI  JJ  JK  JL  JM  JN  JO  JP  JQ  JR  JS  JT  JU  JV  JW  JX  JY  JZ  KA  KB  KC  KD  KE  KF  KG  KH  KI  KJ  KK  KL  KM  KN  KO  KP  KQ  KR  KS  KT  KU  KV  KW  KX  KY  KZ  LA  LB  LC  LD  LE  LF  LG  LH  LI  LJ  LK  LL  LM  LN  LO  LP  LQ  LR  LS  LT  LU  LV  LW  LX  LY  LZ  MA  MB  MC  MD  ME  MF  MG  MH  MI  MJ  MK  ML  MN  MO  MP  MQ  MR  MS  MT  MU  MV  MW  MX  MY  MZ  NA  NB  NC  ND  NE  NF  NG  NH  NI  NJ  NK  NL  NM  NO  NP  NQ  NR  NS  NT  NU  NV  NW  NX  NY  NZ  OA  OB  OC  OD  OE  OF  OG  OH  OI  OJ  OK  OL  OM  ON  OO  OP  OQ  OR  OS  OT  OU  OV  OW  OX  OY  OZ  PA  PB  PC  PD  PE  PF  PG  PH  PI  PJ  PK  PL  PM  PN  PO  PP  PQ  PR  PS  PT  PU  PV  PW  PX  PY  PZ  QA  QB  QC  QD  QE  QF  QG  QH  QI  QJ  QK  QL  QM  QN  QO  QP  QQ  QR  QS  QT  QU  QV  QW  QX  QY  QZ  RA  RB  RC  RD  RE  RF  RG  RH  RI  RJ  RK  RL  RM  RN  RO  RP  RQ  RR  RS  RT  RU  RV  RW  RX  RY  RZ  SA  SB  SC  SD  SE  SF  SG  SH  SI  SJ  SK  SL  SM  SN  SO  SP  SQ  SR  SS  ST  SU  SV  SW  SX  SY  SZ  TA  TB  TC  TD  TE  TF  TG  TH  TI  TJ  TK  TL  TM  TN  TO  TP  TQ  TR  TS  TT  TU  TV  TW  TX  TY  TZ  UA  UB  UC  UD  UE  UF  UG  UH  UI  UJ  UK  UL  UM  UN  UO  UP  UQ  UR  US  UT  UU  UV  UW  UX  UY  UZ  VA  VB  VC  VD  VE  VF  VG  VH  VI  VJ  VK  VL  VM  VN  VO  VP  VQ  VR  VS  VT  VU  VV  VW  VX  VY  VZ  WA  WB  WC  WD  WE  WF  WG  WH  WI  WJ  WK  WL  WM  WN  WO  WP  WQ  WR  WS  WT  WU  WV  WW  WX  WY  WZ  XA  XB  XC  XD  XE  XF  XG  XH  XI  XJ  XK  XL  XM  XN  XO  XP  XQ  XR  XS  XT  XU  XV  XW  XX  XY  XZ  YA  YB  YC  YD  YE  YF  YG  YH  YI  YJ  YK  YL  YM  YN  YO  YP  YQ  YR  YS  YT  YU  YV  YW  YX  YZ  ZA  ZB  ZC  ZD  ZE  ZF  ZG  ZH  ZI  ZJ  ZK  ZL  ZM  ZN  ZO  ZP  ZQ  ZR  ZS  ZT  ZU  ZV  ZW  ZX  ZY  ZZ

001485  06/19/2003  1  YES, ROUTINE  PUBLIC

Final Closeout Report for IHSS Group 600-2, PAC 400-802 - Approval

00601-RF-03

Document Type: APPROVAL LETTER

Date: 06/30/2003

Create Date: 07/01/2003

By User: NS02695

Last Modified: 08/21/2005

By User: NT11513

Begin Date: 07/01/2003

End Date: 07/01/2003

LRP:

LRP:

C:

U:

P:

A:

ACTORM

The Colorado Department of Public Health and Environment (CDPHE) approves the Final Closeout Report for Individual Hazardous Substance Site IHSS Group 600-2, PAC 400-802, Storage Shed South of Building 334 dated June 2003. The Division also concurs that this IHSS Group needs No Further Accelerated Action (NFAA).

ACTORM

1 CD attached to documents.

AC	001512	07/15/2003	1	YES, ROUTINE	PUBLIC
Forwards the DSR for IHSS Group 900-485					
03-RF-001042; JLB-067-03					

TRANSMITTAL LETTER		Create Date	07/17/2003
Date Received	07/16/2003	By User	NS02695
Begin Date	07/17/2003	Last Modified	08/21/2003
Date Entry Date	07/17/2003	By User	N711576
Copy	LRP		
Copy	LRP		
Unit	C		
Unit			
Unit			

**TR/ACN:** Acronyms  
 Forwards/submits the attached [001512] Data Summary Report (DSR) IHSS Group 900-485 dated July 2003 for approval.

**TR/ACN:** Acronyms  
 I CD attached to documents.

001524	07/16/2003	1	YES, ROUTINE	PUBLIC
NFAA for Data Summary Report (DSR) IHSS Group 800-2				
00675-RF-03				

Document Type	APPROVAL LETTER	Create Date	07/29/2003
Date Approved	07/22/2003	By User	N90269
Logon Date	07/29/2003	Last Modified	09/21/2005
Data Entry Date	07/29/2003	By User	N71157
Entry Type	C		
Version	1.00		

**Acronyms**

The Colorado Department of Public Health and Environment (CDPHE) approves the No Further Accelerated Action (NFAA) for the Data Summary Report (DSR) Individual Hazardous Substance Site IHSS Group 800-2, June 2003.

**Comments**

1 CD attached to documents

YES  NO  YES, ROUTINE  PUBLIC  
 Title: Final Data Summary Report IHSS Group 500-8 - Approval  
 ID: 00667-RF-03

Category: APPROVAL LETTER  
 Date Entered: 07/21/2003  
 Date Modified: 07/28/2003  
 Data Entry Date: 07/29/2003  
 Created Date: 07/29/2003  
 By User: N9126855  
 Last Modified: 07/29/2003  
 By User: N71573

Title/Subject: APPROVAL LETTER  
 The Colorado Department of Public Health and Environment (CDPHE) approves the Final Data Summary Report for Individual Hazardous Substance Site IHSS Group 500-8 and concurs that this IHSS Group needs No Further Accelerated Action (NFAA).

Comments: APPROVAL LETTER  
 1 CD attached to documents.

Doc ID	00688	Doc Date	07/23/2003	Page	5	Priority	YES, ROUTINE	Public	PUBLIC
Approves the NFAA for DSR HSS Group 900-485									
00688-RF-03									

Document Type	APPROVAL LETTER	Created Date	07/31/2003
Date Issued	07/28/2003	By User	8012685
Open Date	07/31/2003	Class	LRP
Date Entry Date	07/31/2003	Class	LRP
Priority	C	By User	NAUSA
Public	<input type="checkbox"/>	File Name	
Acronym		Copy to Document	<input type="checkbox"/>

The Colorado Department of Public Health and Environment (CDPHE) approves the No Further Accelerated Action (NFAA) for the Data Summary Report HSS Group 900-485 July 2003. This report is specific to Potential Area of Concern (PAC) 900-175, the S&W Building 980 Contract Storage Facility. Enclosed for reference

Acronyms  
 CD attached to documents.

Doc ID	001610	Doc Date	08/22/2003	Page	2	Priority	YES, ROUTINE
Title: (IASAP FY03 Addendum No. IA-03-09 IHSS Group 600-4 - Approval)							
Record ID: 00812-RF-03							

Doc Name	APPROVAL LETTER	Created Date	08/09/2003
Date Received	08/27/2003	By User	NS12695
Logn Date	09/08/2003	Last Modified	08/27/2003
Date Entry Date	09/08/2003	By User	NS12695
Recd. Type	C	Doc. Type	
Priority		Doc. Status	

Title/subject: Acronym

The Colorado Department of Public Health and Environment (CDPHE) approves the Industrial Area Sampling and Analysis Plan (IASAP) FY03 Addendum No. IA-03-09 IHSS Group 600-4 August 2003. Attached are specific comments from the CDPHE on this addendum.

Comments: Acronym

1 CD attached to documents.

Doc No	0015133	Doc Date	08/21/2003	Ex Level	1	Priority	YES, ROUTINE	CD	Y/N
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Title: Data Summary Report for IHSS Groups 300-3 and 300-4 - Approval  
 Letter ID: 00813-RF-03

Document Title		APPROVAL LETTER		Create Date		08/08/2003	
Date Released	08/27/2003	By User	8902695	Last Modified	08/27/2003	By User	8902695
Logon Date	09/08/2003	Class	LRP	Created	09/08/2003	By User	8902695
Date Entry Date	09/08/2003	Index	LRP	Created	09/08/2003	By User	8902695
Category	C	Unit		Created	09/08/2003	By User	8902695
Form		Unit		Created	09/08/2003	By User	8902695

Abstract: Acronym  
 The Colorado Department of Public Health and Environment (CDPHE) has reviewed the Data Summary Report for Individual Hazardous Substance Site IHSS Groups 300-3 and 300-4 (Under Building Contamination UBC 371 and UBC 374) and approves the No Further Accelerated Action (NFAA).

Comments: Acronym  
 1 CD attached to documents.

Doc No	Doc Desc	Doc Date	EA	Page	Priority	Notes
001680		09/01/2003	E	52	YES, ROUTINE	

Data Summary Report for IHSS Group 900-3

Ref: 03-RF-01478; JLB-097-03

Document Type	DATA SUMMARY	Create Date	10/13/2003
Date Modified	10/09/2003	By User	AS/2593
Log In Date	10/13/2003	Last Modified	03/20/2005
Date Entry Date	10/13/2003	By User	AT/1573
Created By	C	Unit Based	M
Initial Status		Table Name	
		Copy to Summary	Y

**Acronym**

Data Summary Report for IHSS Group 900-3 - IHSS 213 - The 904 Pad (900-213) Unit 15, Pondcrete Storage; includes Tents 8, 9, 10, and 11. This data summary report summarizes characterization activities conducted at this individual Hazardous Substance Site. Analytical results indicate that No Further Accelerated

**Acronym**

1 CD attached to document.

Doc No	001907	Doc Date	12/18/2003	Priority	1	Category	YES, ROUTINE	Public	<input type="checkbox"/>
Forwards: The Final Data Summary Report for HSS Group 400-3									
03-RF-01846; JLB-149-03									

TRANSMITTAL LETTER		Create Date	01/07/2004
Date	12/31/2003	By User	N411573
Icon Date	01/07/2004	Last Modified	03/21/2005
Date Entry Date	01/07/2004	By User	N411573
Category	C	Priority	1
Public	<input type="checkbox"/>	Document	<input type="checkbox"/>

**Acronym**

Forwards/submits: The attached [001907] Final Summary Report for Individual Hazardous Substance Site HSS Group 400-3. The document and No Further Accelerated Action (NFAA) recommendation were approved by Colorado Department of Public Health and Environment (CDPHE) on December 18, 2003.

**Comments**

ICD attached to documents.

AR No	002027	Doc Date	03/01/2004	ES	120	Routing	YES, ROUTINE	Status	PUB
Final Closeout Report for IHSS Group 400-8									
Ref: 04-RF-00357; JLB-023-04									

Document Type	CLOSEOUT REPORT	Create Date	04/06/2004
Date Received	04/01/2004	By User	NR12684
Loan Date	04/06/2004	Created By	JCR
Date Entry Date	04/06/2004	Created By	JCR
Classification	C	Last Modified	03/27/2004
Public Access	<input type="checkbox"/>	By User	NR12684
Public Name		CECLA Document	Y

**Title/Subject:** Acronym  
 Final Closeout Report for IHSS Group 400-8 (UBC 441, IHSS 400-122, and Portions of IHSS 000-121, including Tanks T2 and T3), March 2004. This report summarizes the characterization and accelerated action activities conducted at this IHSS Group.

**Comments:** Acronym  
 See approval under AR IA-A-002021. 1 CD attached to document.

Doc ID: 002031 | Doc Date: 03/01/2004 | E | 109 | YES, ROUTINE | PUBLIC

**Title:** Final Closeout Report for HSS Group 800-1  
**Ref:** 04-RF-00328, JLB-022-04

**Document Type:** CLOSEOUT REPORT

**Date Received:** 04/01/2004  
**Created Date:** 04/07/2004  
**By User:** NS02699

**Login Date:** 04/07/2004  
**Created By:** JCR  
**User Modified:** 03/01/2005  
**By User:** NS02699

**Date Entry Date:** 04/07/2004  
**Created By:** JCR

**Access Type:** C  
**Public Access:**

**Document Status:**  **Public Access:**  **Document:** Y

**Abstract:** Acronym  
 Final Closeout Report for HSS Group 800-1, March 2004. This Group consists of Under Building Contamination UBC 865, Potential Areas of Concern PAC 800-1204, PAC 800-1210, PAC 800-1212, PAC 000-504, and Individual Hazardous Substance Site HSS 000-121. Activities were conducted between August 14 and December

**Comment:** Acronym  
 1 CD attached to document.

Activity	00205	Date	04/01/2004	Ext	90	Priority	YES, ROUTINE	Pub	PUBLIC	Print
Final Closeout Report for IHSS Group 900-1										
Ref: 04-RF-00388; JLB-031-04										

CLOSEOUT REPORT				Create Date	04/12/2004
Date Received	04/07/2004	Created By	JCR	By User	NS0268
Login Date	04/12/2004	Last Modified	09/20/2005	By User	N711573
Date Entry Date	04/12/2004	Case / R. Document	Y		

**Title:** Acronym  
 Final Closeout Report for IHSS Group 900-1. This Closeout Report summarizes the characterization and accelerated action activities conducted at Individual Hazardous Substance Site Group 900-1. IHSS Group 900-1 consists of the following IHSS, Potential Area of Concern, and Under Building Contamination sites:

**Comments:** Acronym  
 1 CD attached to document.

Doc#	002139	Date	05/01/2004	Page	48	YES, ROUTINE	PUBLIC
Data Summary Report for HSS Group 600-3, HSS 600-120.1							
Ref: 04-RF-00585; JLB-047-04							

Description: DATA SUMMARY		Create Date	05/25/2004
Doc#	05/24/2004	By User	N902699
Login Date	05/25/2004	Last Modified	03/11/2005
Data Entry Date	05/25/2004	By User	N902699
Basic Type	C	Public	<input type="checkbox"/>
Public	<input type="checkbox"/>	Open to Business	Y

**Acronym**

Data Summary Report (DSR) for HSS Group 600-3, HSS 600-120.1 (Fiberglass Area North of Building 664). See approval under AR IA-A-002140

**Comments**

Acronym

1 CD attached to document.

Doc No	002143	Doc Date	05/01/2004	Exp Date	E 28	Rechn	YES, ROUTINE	Stem	PUBG
Title: Final Data Summary Report for HSS Group 500-5, PAC 500-904									
Ref: 04-RF-00584; JB-048-04									

Document Type	DATA SUMMARY	Create Date	05/28/2004
Date Rec'd	05/24/2004	By User	N802699
Login Date	05/28/2004	Last Modified	03/17/2005
Date Entry Date	05/28/2004	By User	N802699
Copy Style	C	Under Review	<input type="checkbox"/>
Classification	<input type="checkbox"/>	Public Access	<input type="checkbox"/>
Final Data Summary	<input type="checkbox"/>	Copy With Summary	Y

Final Data Summary Report for HSS Group 500-5, PAC 500-904. See DSR approval under AR IA-A-002127.

1 CD attached to document.

Doc ID	Doc Date	Est	Doc Type	Doc Status
004819	03/01/2004	E	327	YES, ROUTINE
Title: 2004 Integrated Monitoring Plan, Rev 2				
Location: N/A				

Doc Type	Created Date	By User
REPORT / STUDY / PLAN	04/28/2004	NS02893
Date Modified	Last Modified	By User
04/28/2004	09/20/2005	N71573
Doc Entry Date	Doc Entry	
04/26/2004	JCR	
Doc Type	Under Review	Doc Available
C		Y

ACRONYM

Integrated Monitoring Plan FY2004, Revision 2. Includes the Summary and the Background documents. This fiscal year IMP identifies the routine monitoring programs for surface water, groundwater, air, and ecology, designed to minimize the duplication of efforts among DOE, CDPHE, the cities of Broomfield and

Comments: ACRONYM

CD attached to document.



Doc ID	Doc Date	Page	Priority	Doc Type
00943	10/07/2003	1	YES, ROUTINE	PUBLIC
Title: EPA approval of Characterization Data Summary HSS Group NEANW				
Doc No: 00943-RF-03				

APPROVAL LETTER		Create Date	10/13/2003
Created By	10/13/2003	By User	WJZS89
Open Date	10/13/2003	Last Modified	09/22/2005
Date Entered	10/13/2003	By User	WJZS89
Doc Status	C	Doc Approved	N
Doc History		Doc Approved	Y

After reviewing the revisions that have been made to the Characterization Data Summary HSS Group NEANW, EPA is satisfied that all necessary changes have been made to the document to address previous concerns. Therefore, EPA approves the latest version of this document that was transmitted electronically on

ICD attached to documents.

SW	004800	05/15/2003	1	YES, ROUTINE	PUBLIC
Approves Final Data Summary Report and NFAA for IHSS Group 700-12					
00479-RF-03					

APPROVAL LETTER			
Date	05/22/2003	Create Date	05/29/2003
Logon Date	05/29/2003	By User	N902695
Date Entry Date	05/29/2003	Last Modified	08/27/2005
	LRP	By User	N711573
	LRP		
	C		

Acronym

The Colorado Department of Public Health and Environment (CDPHE) approves the Final Data Summary Report for Individual Hazardous Substance Site IHSS Group 700-12 and concurs that this IHSS Group needs No Further Accelerated Action (NFAA) based on the agreement reached regarding the Division's comments.

Comments Acronym

1 CD attached to documents.



## Administrative Record Assessment Resolution of Corrective Action F-4

As part of the Corrective Action Plan for this item, the bibliographies and lists of references in the major RFETS decision documents were reviewed, and technical and guidance documents identified. As noted in the Corrective Action Plan, technical and guidance documents need not be included in the Administrative Record or listed in the AR index if they are listed in the bibliography of a document already included in the AR.

For this corrective action, K-H contacted document authors to the extent possible, and reviewed bibliographies and reference lists of major decision documents to identify any technical or guidance documents that may have been omitted. In addition, referenced technical and guidance documents that are not readily available to the public were identified and were or will be included in the Administrative Record.

The following decision documents were reviewed:

- Present Landfill IM/IRA
- Original Landfill IM/IRA
- Component Removal RSOP
- Facility Disposition RSOP
- Decommissioning Program Plan
- Asphalt and Soil RSOP
- ER RSOP
- 776 DOP
- 771 DOP
- 371 DOP

In addition to the actions specifically committed to in the Assessment's Corrective Action Plan, the RI/FS team is in the process of reviewing the reference list of each section of the RI/FS and adding to the AR all of the documents that are not readily available to the public. This effort will include adding to the AR most or all of the journal articles cited. Similar reviews are also occurring of references in the HRR and all of the Closeout Reports. These reviews are nearly complete and are expected to be finished in November.

As a result of the review of the decision documents listed above, the following technical and guidance documents will be added to the AR:

- CDPHE, Proposed Soil Remediation Objectives Policy Document (draft), December 31, 1997
- CDPHE, Guide to Interpreting the Division's Wastewater Treatment Unit Policy, January 2000
- RFETS PCB Waste Guidance #25
- RFETS Stratospheric Ozone Protection Compliance Manual
- Sandia Nat'l Laboratories, Nonradiological Impacts of Transporting Radioactive Materials, SAND81-1703, February 1982
- U.S. Army Corps of Engineers, Rocky Flats Plant Wetlands Mapping and Resource Study, 1994

113  
713