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Department of Energy

Rocky Flats Office

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ACTION

DIST LTR ENC

- BENJAMIN A
- BRETZKE, J C
- BURLINGAME, A H
- COPP, R D
- CROUCHER, D W
- DAVIS, J G
- FERED, J E
- FERRERA, D W
- FERRIS, L R
- FRAIKOR, F J
- FRANCIS, G E
- GOODWIN, R
- HANNI, B J
- HEALY, T J
- DEKER, E H
- JENS, J P
- KERSH, J M
- KIRBY, W A
- KRIEG, D
- KUESTER, A W
- LEE, E M
- MAJESTIC, J R
- MARX, G E
- MATHEWS, T A
- MEURRENS, B E
- MORGAN, R V
- PIZZUTO, V M
- POTTER, G L
- SAFFELL, B F
- SANDLIN, N B
- SWANSON, E R
- WIEBE, J S
- WILKINSON, R B
- WILSON, J M
- YOUNG, E R
- ZANE, J O

OCT 08 1991

ERD PMP 8543

Section D Categorical Exclusion for Geologic and Ecologic Characterization Within Wetlands or Floodplains at Rocky Flats Plant (RFO/CX025-91)

Ralph Lightner, Director Southwestern Area Programs Division, EM-45

Enclosed is a draft categorical exclusion (CX) for proposed work to characterize the geology and ecology of the Rocky Flats Plant. This portion of the characterization work may occur within wetlands or floodplains on the plant site. The studies outlined in the CX will be conducted to provide data in support of cleanup activities to be performed under RCRA and CERCLA. The work is scheduled to begin immediately and continue through December 1993.

Please contact Tricia Powell (FTS 345-3260) to discuss the planned activity.

*David P. Simonson*  
 David P. Simonson  
 Assistant Manager  
 for Environmental Management

Attachment

- cc w/attachment
- A Rampertaap, EM-453
- L Lawson, EM-431
- S Nesta, EG&G/RF

CORRES CONTROL y y  
TRAFFIC

Reviewed for Addressee  
Corres Control RFP

10991

DATE BY

Ref Ltr #

ADMIN RECORD

SECTION D DETERMINATION  
CATEGORICAL EXCLUSION (CX) DETERMINATION RFO/CX025-91

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**Proposed Action**            Field Activities for Geologic and Ecologic Characterization Within Floodplains or Wetlands

**Location:**                    Rocky Flats Plant, Golden, CO

**Proposed by.**                U S Department of Energy, Rocky Flats Office

**Description of the Proposed Action**

Rocky Flats Plant proposes to carry out field activities to gather data to characterize the geology and ecology of the plant site within wetlands and floodplains in support of the remediation of RCRA and CERCLA sites. This work may be performed both within and outside the boundaries of operable units 1, 2, 5 and 6. The characterization work would include 1) establishing new surface water and sediment sampling stations and collecting samples, 2) collecting soil and soil gas samples, and 3) drilling new water wells and collecting groundwater samples, and 4) drilling to obtain geologic cores.

To establish new surface water and sediment sampling stations, stakes would be driven into the ground at the edge of a stream or water body. The stakes would be used as reference points so that samples can be taken from the same locations periodically. Water and sediment samples would be taken by driving or walking to the sample site and collecting up to a few pounds of sediment or a few quarts of water.

Soil and soil gas samples may be collected within floodplains from grids 38, 51, 52, 57, 81, 96, 109 and 115 shown on Figure 2 using three different methods. The first soil sampling method uses a Colorado Department of Health sampler to remove two to three tablespoons of soil from the ground surface anywhere within the grid. The second soil sampling method that would be used is backhoe excavation of soil pits nine feet long, five feet wide and four feet deep to gather samples from the soil profile within each grid. The sample pits will be refilled with the excavated earth after sampling. Sampling soil gas (Figures 3 and 8) is to be accomplished by using a hand auger to drill a one inch diameter hole 18 to 24 inches deep. A probe is inserted into the hole to sample any gases that escape from the soil.

Drilling new water wells and core holes would involve driving a truck mounted drilling rig to the locations shown on Figures 1, 3, 6, 7, 8, 9, 10, 11, 13 and 14 to drill holes four to six inches in diameter. Drilling activities that may be within the 100 year floodplain or wetlands are highlighted by heavy arrows on the figures. As a general principle, drilling in wetlands would be avoided because of the added difficulties of setting up a drill rig and drilling in saturated soils, but it may be necessary to locate one or more holes within a wetland. As holes are drilled, drill cuttings would be brought to the surface and shoveled into drums for analysis of contaminants and appropriate disposal. Drilling activity will result in the trampling of vegetation for up to 200 square feet around the drill hole.

All of these activities are scheduled to occur between May 1991 and December 1993. They will not introduce or cause the inadvertent or uncontrolled movement of hazardous substances or non-native organisms, or adversely affect environmentally sensitive areas listed in the guidelines. Because of the nature of the proposed activities, no adverse impacts are expected to wetlands or floodplains.

Categorical Exclusion to be applied

3 Site characterization and environmental monitoring, including siting construction or operation of ~~characterization and monitoring devices under CERCLA and RCRA if these activities would not~~ introduce or cause the inadvertent or uncontrolled movement of hazardous substances as defined in section 101(33) of CERCLA, or non-native organisms, and would not adversely affect environmentally sensitive areas as defined in paragraph 4 (DOE NEPA Guidelines, 55FR37178)

DOE NEPA REGULATIONS SECTION D DETERMINATION  
CATEGORICAL EXCLUSION DETERMINATION - RFO/CX 025-91  
Geologic and Ecologic Characterization Within Floodplains and Wetlands at Rocky  
Flats Plant

I have determined that the proposed action meets the requirements for a categorical exclusion as defined in the Section D of the DOE NEPA Guidelines. Therefore, I approve the categorical exclusion of the proposed action from further NEPA review and documentation.

Date \_\_\_\_\_

Signature \_\_\_\_\_

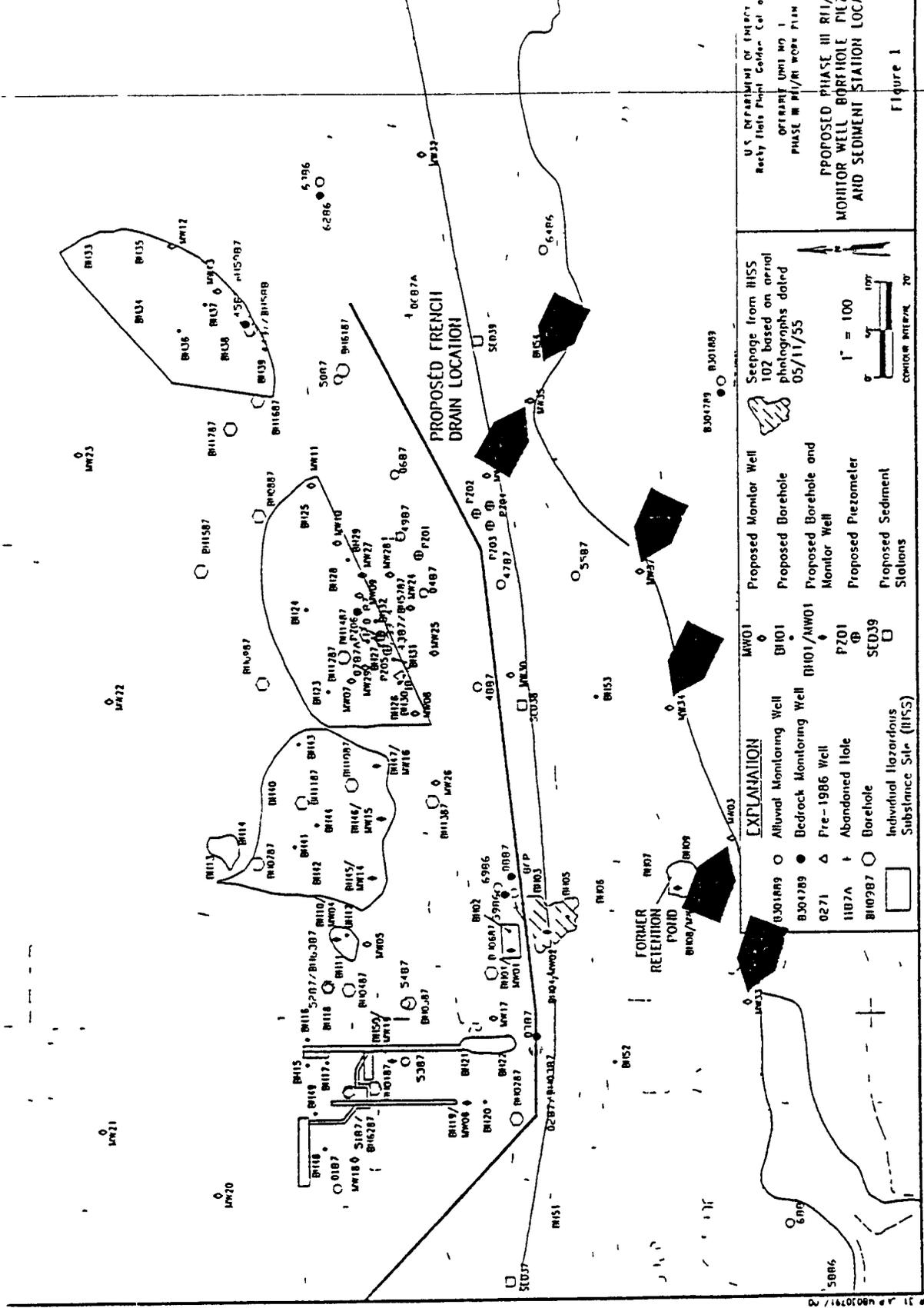
Title Leo Duffy  
Director, Environmental  
Restoration & Waste Mgmt

EH-25 has reviewed this determination and has no objection

Date \_\_\_\_\_

Signature \_\_\_\_\_

Title Carol M. Borgstrom  
Director, Office of NEPA  
Oversight



U.S. DEPARTMENT OF ENERGY  
 Rocky Flats Plant Closure - Col. site  
 OFFERED UMI NO. 1  
 PHASE III RI/RI WORK PLAN

Seepage from IHSS  
 10Z based on aerial  
 photographs dated  
 05/11/55

PROPOSED PHASE III RI/RI  
 MONITOR WELL BOREHOLE PIEZOMETER  
 AND SEDIMENT STATION LOCATIONS

Figure 1

PROPOSED PHASE III RI/RI  
 MONITOR WELL BOREHOLE PIEZOMETER  
 AND SEDIMENT STATION LOCATIONS

PROPOSED PHASE III RI/RI  
 MONITOR WELL BOREHOLE PIEZOMETER  
 AND SEDIMENT STATION LOCATIONS

PROPOSED PHASE III RI/RI  
 MONITOR WELL BOREHOLE PIEZOMETER  
 AND SEDIMENT STATION LOCATIONS

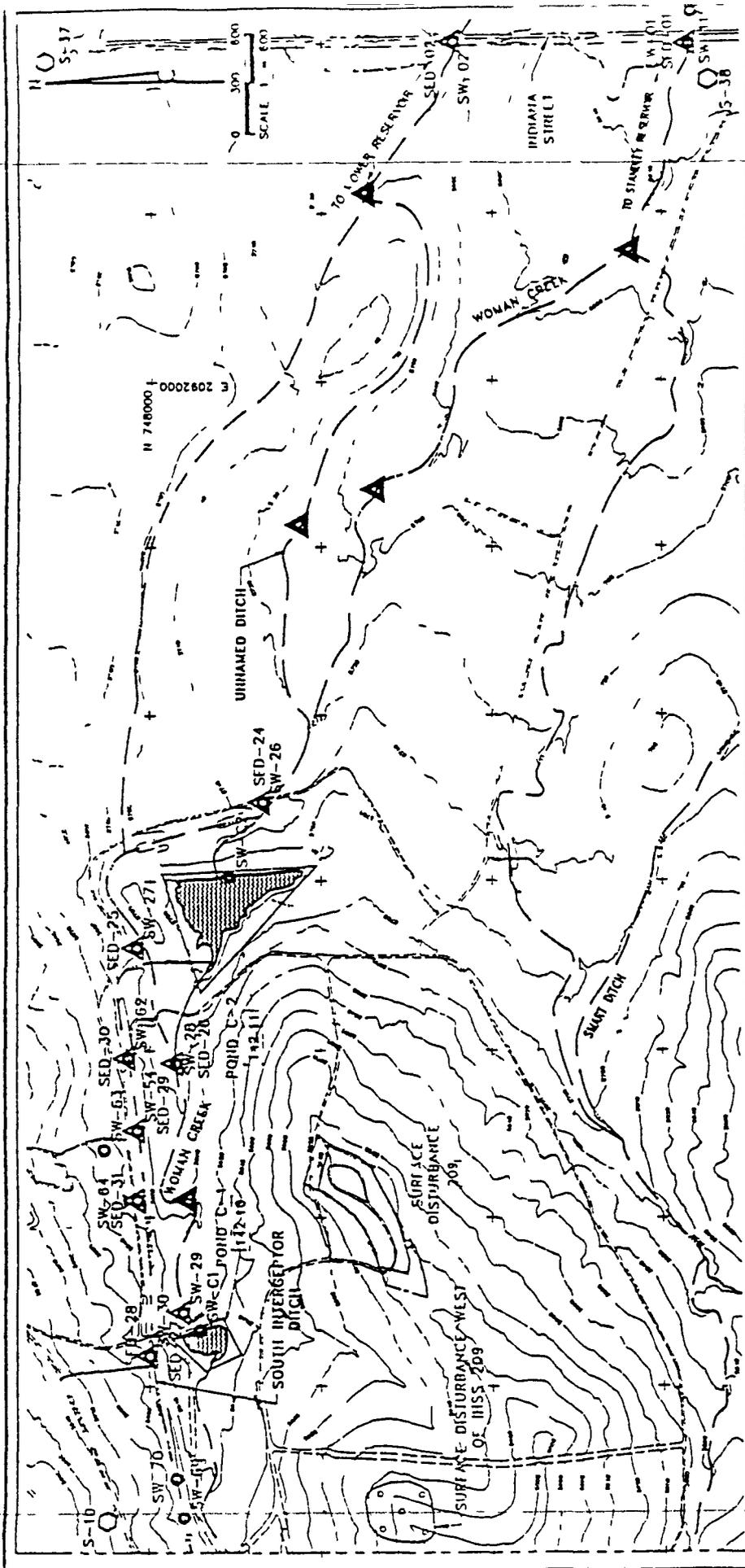
PROPOSED PHASE III RI/RI  
 MONITOR WELL BOREHOLE PIEZOMETER  
 AND SEDIMENT STATION LOCATIONS

PROPOSED PHASE III RI/RI  
 MONITOR WELL BOREHOLE PIEZOMETER  
 AND SEDIMENT STATION LOCATIONS









**EXPLANATION**

- (113) INDIVIDUAL HAZARDOUS SUBSTANCE SIE
- SW-10 EXISTING SURFACE WATER LOCATION
- SED-1 EXISTING SEDIMENT SAMPLING LOCATION
- INTERMITTENT STREAM
- ==== DIRT ROAD
- PRELIMINARY EXTENSION OF THE SURFACE DISTURBANCE BASED ON A RECONNAISSANCE
- ORIGINAL STREAM CHANNEL NEAR POND C-2
- S-23 O COSTING RADIOACTIVE AMBIENT AIR MONITORING PROGRAM LOCATION
- A PROPOSED SEDIMENT SAMPLE LOCATION

--- MATCHLINE  
(SEE FIGURE 7-2 [1 OF 2])

U.S. DEPARTMENT OF ENERGY  
Rocky Flats Plant Golden, Colorado

OPERABLE UNIT 5  
PHASE 1 RI/RI WORK PLAN

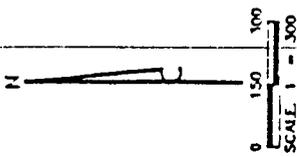
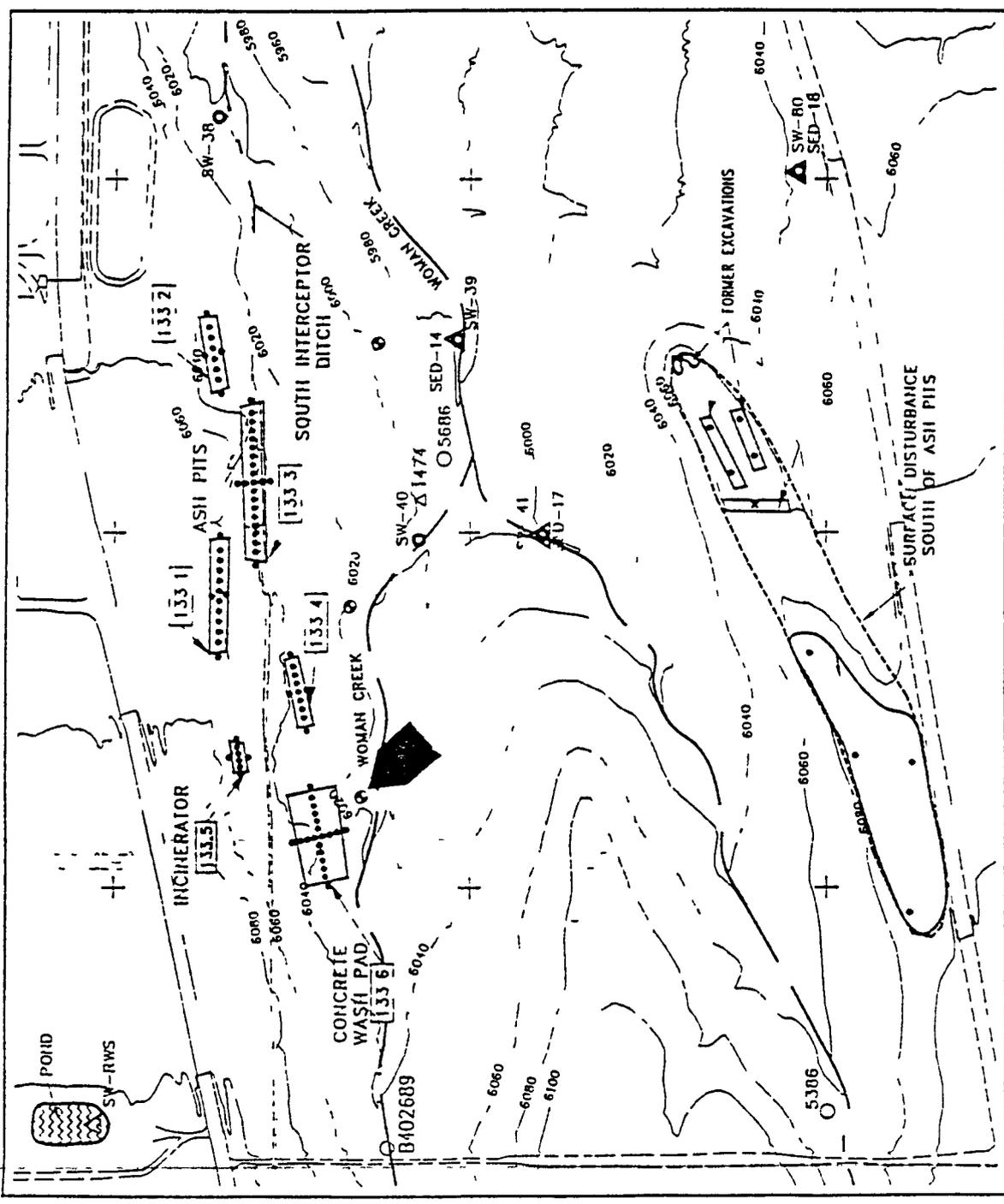
SEDIMENT & SURFACE WATER  
SAMPLING SITES & AIR MONITORING  
STATIONS ALONG WOMAN CREEK AND  
THE SOUTH INTERCEPTOR DITCH

Figure 5

PLM REPORT 11  
MARCH 1981

25060108

80617



**EXPLANATION**

- [115] INDIVIDUAL HAZARDOUS SUBSTANCE PIT
- SW-1 ○ EXISTING SURFACE WATER SAMPLING LOCATION
- 5786 ○ EXISTING ALLUVAL GRADEWATER WETTING WELL
- 4D-17 △ EXISTING SEDIMENT SAMPLING LOCATION
- 1474 △ PRE 1986 WETTING WELL
- PROPOSED SOIL BORING LOCATION
- ⊙ PROPOSED WELL LOCATION
- ⊗ PROPOSED SURFACE SAMPLING LOCATION
- INTERMITTENT STREAM
- ==== DIRT ROAD

\*ALL PROPOSED LOCATIONS AFE APPROXIMATE

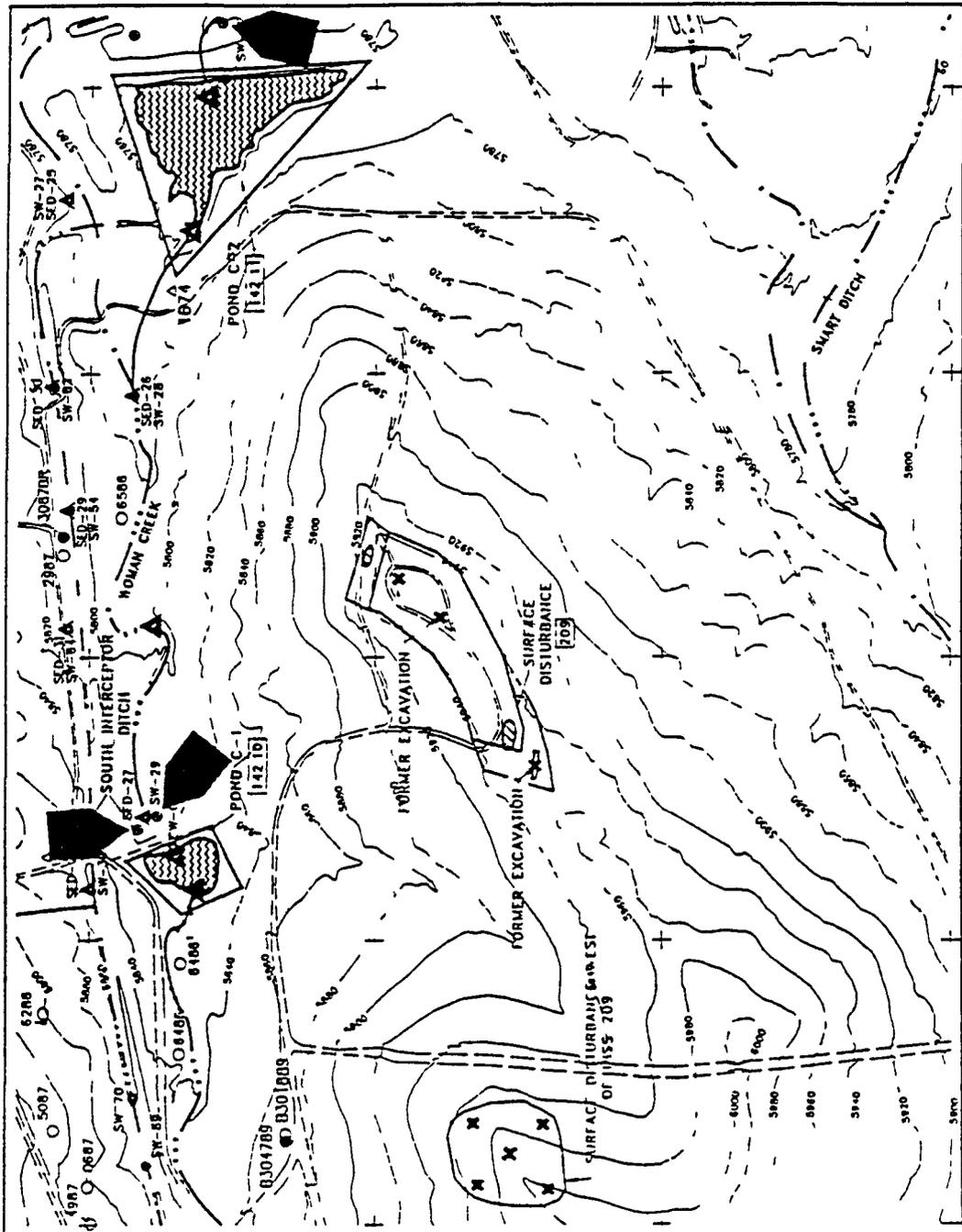
U.S. DEPARTMENT OF ENERGY  
 Rocky Flats Plant Golden, Colorado

OFFSHORE UNIT 5  
 PHASE 1 RI/RI WORK PLAN

PROPOSED SAMPLING & WELL LOCATIONS  
 ASH PITS 1-4 INCINERATOR  
 CONCRETE WASH PAD (HSS 133 1-6)  
 AND ADDITIONAL SURFACE DISTURBANCE

Figure 6  
 REVISED BY  
 MARCH 1991

70217



**EXPLANATION**

- [115] PERIODIC HAZARDOUS SUBSTANCE SITE
  - SW-1 ○ EXISTING SURFACE WATER SAMPLING LOCATION
  - 5708 ○ EXISTING ALLIUM CHLORIDE WATER MONITORING WELL
  - SED-17 △ EXISTING SETBACK SAMPLING LOCATION
  - 3007 ● EXISTING RETROFIT OVERWATER MONITORING WELL
  - POULETE DEPRESSION
  - INTERMITTENT STREAM
  - DIRT ROAD
  - PROBABLE EXTENSION OF THE SURFACE DISTURBANCE BASED ON A 3% RECONSTRUCTION
  - ORIGINAL STREAM CHANNEL IN OR POOL C 2
  - PROPOSED SURFACE SAMPLING LOCATION
  - PROPOSED WELL LOCATION
  - PROPOSED SETBACK SAMPLING LOCATION
- 3 OTHER LOCATIONS IN EACH POOL WILL BE SELECTED AT RANDOM  
 \*ALL PROPOSED LOCATIONS ARE APPROXIMATE

U.S. DEPARTMENT OF ENERGY  
 Rocky Flats Plant Golden Colorado  
 OPERABLE UNIT 5  
 PHASE I RI/RI WORK PLAN

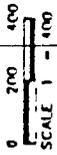
**PROPOSED SAMPLING & WELL LOCATIONS  
 IHS 142 10-11 PONDS C-1 & C 2  
 IHS 209 SURFACE DISTURBANCE & THE  
 SURFACE DISTURBANCE WEST OF  
 IHS 209**

REV. AMEND. 1  
 MARCH 1991

Figure 7



**DRAFT**  
FOR COMMENTS AND  
DISCUSSION ONLY



**EXPLANATION**

- INDIVIDUAL HAZARDOUS SUBSTANCE SITE
- EXISTING SURFACE WATER SAMPLING LOCATION
- EXISTING ALLUVAL CROCODRAWER WETLANDS MII
- EXISTING SEDIMENT SAMPLING LOCATION
- EXISTING BEDROCK CROCODRAWER WETLANDS MII
- EXISTING PRE 1946 WELL
- INTERMITTENT STREAM
- DIRT ROAD
- PROPOSED WELL LOCATION<sup>1</sup>
- PROPOSED SEDIMENT SAMPLE LOCATION<sup>1</sup>
- PROPOSED BEDROCK WELL LOCATIONS FOR SITE WIDE GEOLOGICAL CHARACTERIZATION PROGRAM. These wells are shown in figure 11

<sup>1</sup>ALL PROPOSED LOCATIONS ARE APPROXIMATE

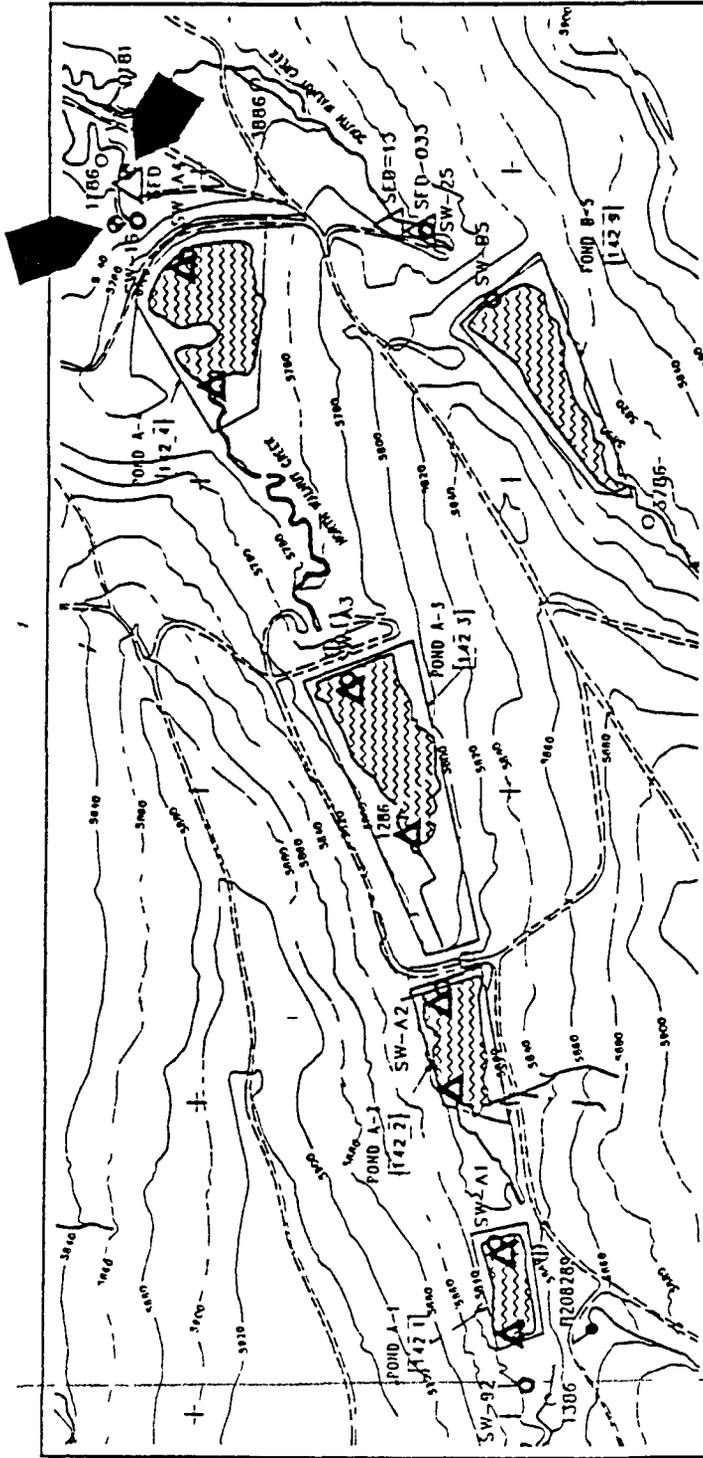
U.S. DEPARTMENT OF ENERGY  
Rocky Flats Plant Golden, Colorado

OPERABLE UNIT 6  
PHASE 1 RI/RI WORK PLAN

PROPOSED SAMPLING & WELL LOCATIONS  
IHSSs 142.1-4  
A-SERIES DETENTION PONDS  
ALONG NORTH WALNUT CREEK

Figure 9

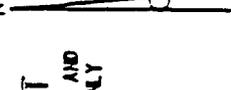
APRIL 1981



12 of 17

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FOR COMMENTS AND  
DISCUSSION ONLY

N



0 150 300  
SCALE 1" = 300'

**EXPLANATION**

- (1) INDIVIDUAL HAZARDOUS SUBSTANCE SITE
  - SW-10 EXISTING SURFACE WATER SAMPLING LOCATION
  - 5786 EXISTING ALLUVAL GROUNDWATER MONITORING WELL
  - SED-17 EXISTING SEDIMENT SAMPLING LOCATION
  - INTERMITTENT STREAM
  - DIRT ROAD
  - [141] ROCKY FLATS BLDG #10
  - PROPOSED WELL LOCATION<sup>1</sup>
  - PROPOSED BORING AND SURFACE SAMPLE LOCATION
  - △ PROPOSED SEDIMENT SAMPLE LOCATION<sup>1,2</sup>
  - ⊕ PROPOSED REDROCK WELL LOCATIONS FOR SITE-WIDE GEOLOGICAL CHARACTERIZATION PROGRAM<sup>1</sup>
- <sup>1</sup> ALL PROPOSED LOCATIONS ARE APPROXIMATE  
<sup>2</sup> THREE OTHER LOCATIONS IN EACH POND WILL BE SELECTED AT RANDOM

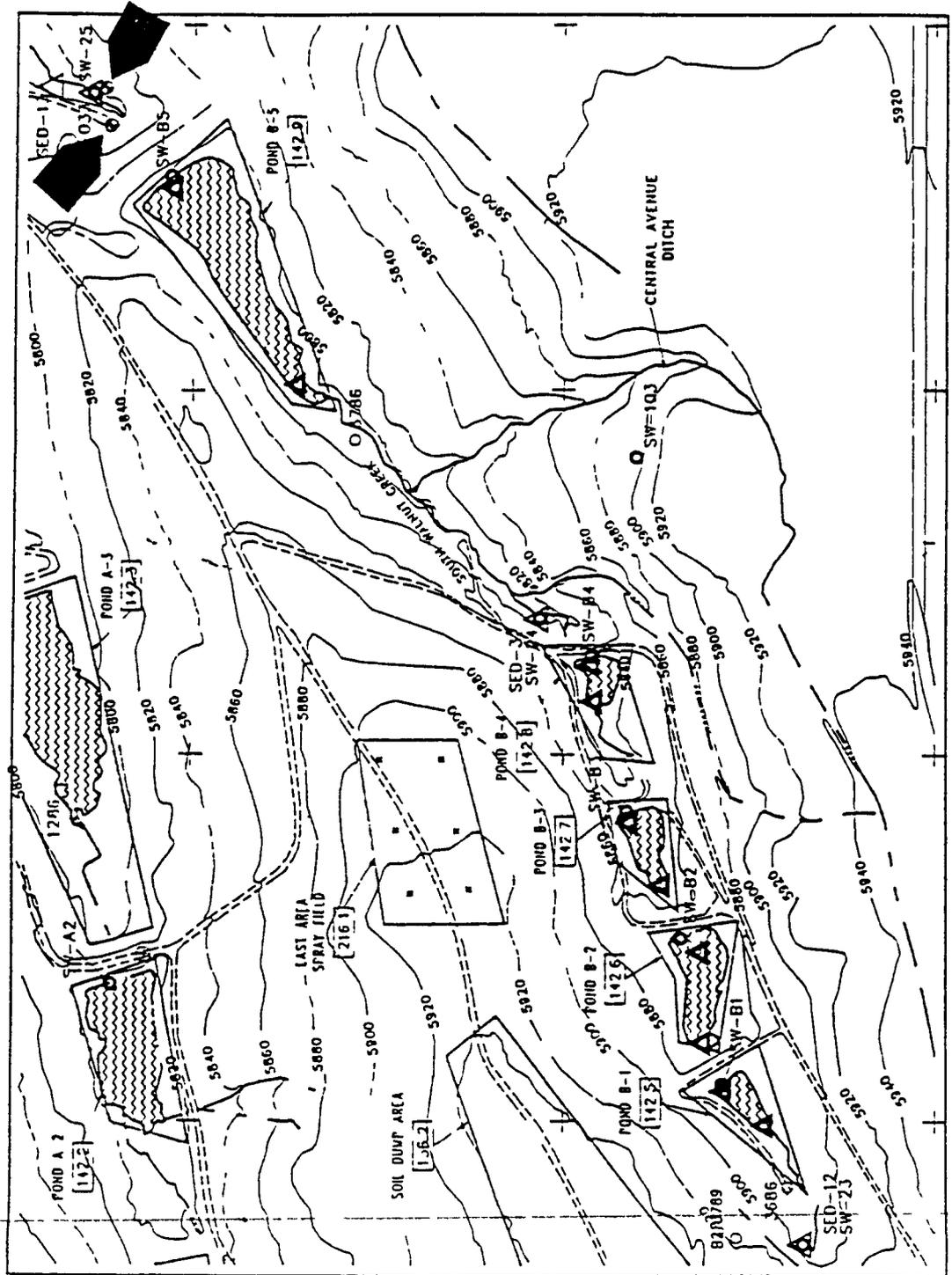
U.S. DEPARTMENT OF ENERGY  
Rocky Flats Plant Golden, Colorado

OPERABLE UNIT 6  
PHASE 1 REMEDIATION WORK PLAN

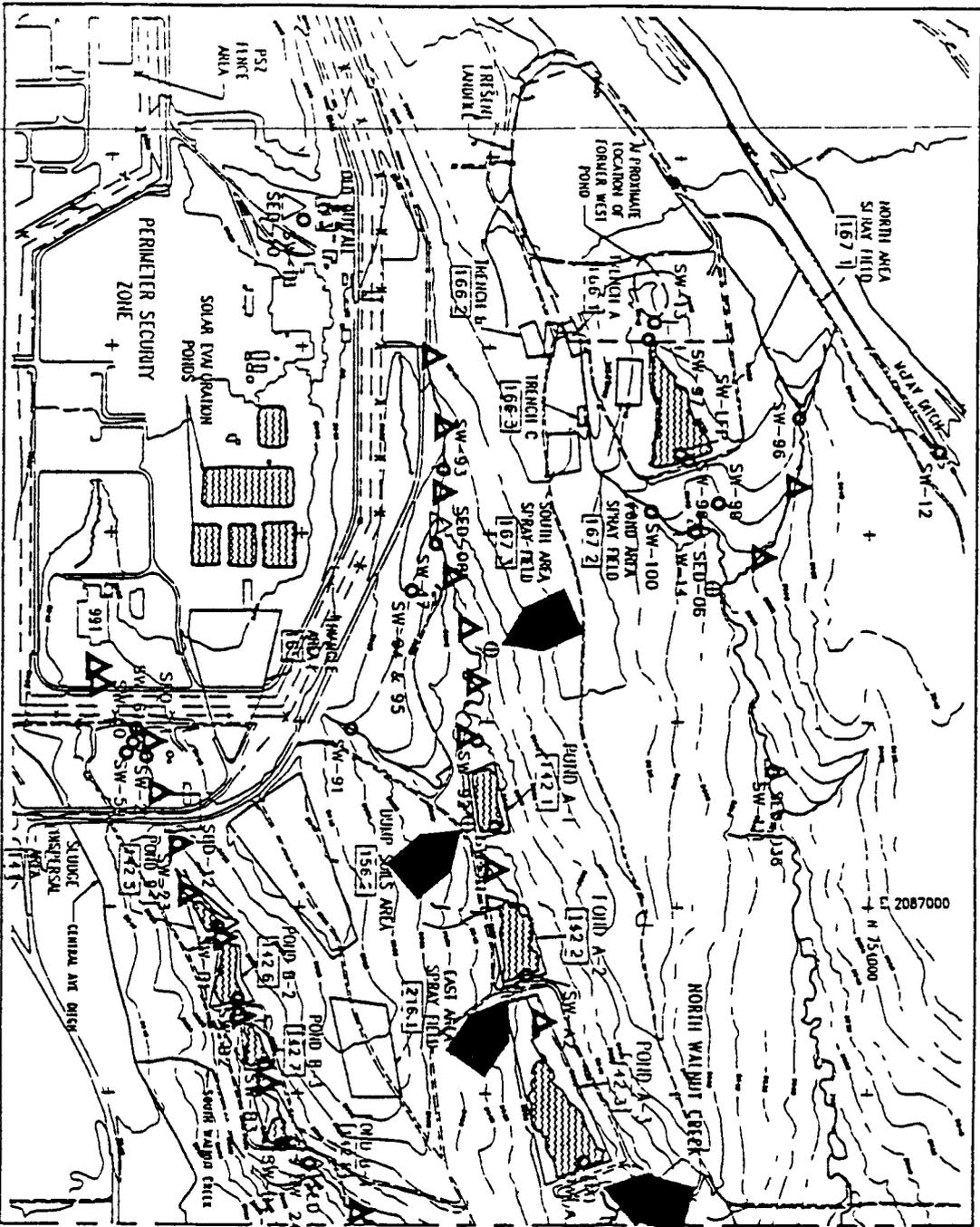
PROPOSED SAMPLING & WELL LOCATIONS,  
IHSSs 142 5-9,  
B-SERIES DETENTION PONDS  
ALONG SOUTH WALNUT CREEK  
IHSS 216 1 EAST AREA SPRAY FIELD

Figure 10

April 1981

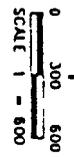


13-617



MATCHLINE  
(SEE FIGURE 7-4 [2 OF 2])

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DISCUSSION ONLY



**EXPLANATION**

- INDIVIDUAL HAZARDOUS SUBSTANCE SITE (HSS) IN OR ADJACENT UNIT 6
- HSS REFERENCE NUMBER
- EXISTING SURFACE WATER SAMPLING LOCATION
- EXISTING SEDIMENT SAMPLING LOCATION
- PERIMETER SECURITY ZONE
- DIRT ROAD
- PROPOSED LOCATIONS FOR SEDIMENT SAMPLES<sup>1</sup>
- PROPOSED BEDROCK WELL LOCATIONS FOR SITE-WIDE GEOLOGICAL CHARACTERIZATION PROGRAM<sup>1</sup>

<sup>1</sup> ALL PROPOSED LOCATIONS ARE APPLICABLE

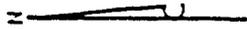
U.S. DEPARTMENT OF ENERGY  
Rocky Flats Plant Golden, Colorado

OPERABLE UNIT 6  
PHASE I RTU/RU WORK PLAN

SEDIMENT SAMPLING SITES AND  
SITE-WIDE PROGRAM BEDROCK WELLS  
ON NORTH AND SOUTH  
WALNUT CREEKS

14021

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DISCUSSION ONLY



0 300 600  
SCALE 1" = 600'

**EXPLANATION**



INDIVIDUAL HAZARDOUS SUBSTANCE SITE  
(IHSS) IN OPERABLE UNIT 6



IHSS REFERENCE NUMBER



EXISTING SURFACE WATER SAMPLING LOCATION



EXISTING SEDIMENT SAMPLE LOCATION



DIRT ROAD



PROPOSED LOCATIONS FOR SEDIMENT SAMPLES<sup>1</sup>

<sup>1</sup> ALL PROPOSED LOCATIONS ARE APPROXIMATE

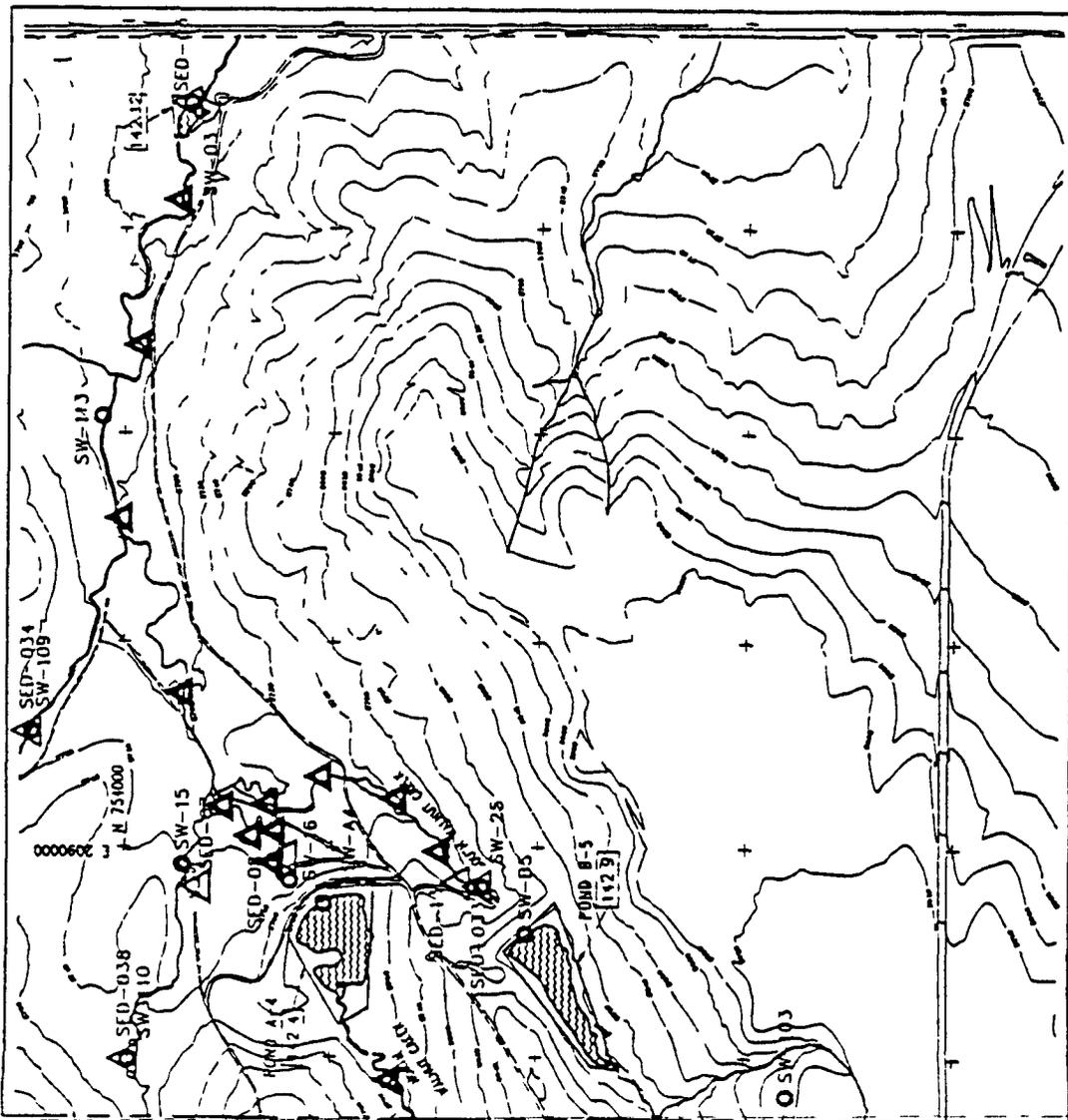
U.S. DEPARTMENT OF ENERGY  
Rocky Flats Plant, Golden, Colorado

OPERABLE UNIT 6  
PHASE 1 RFI/RI WORK PLAN

SEDIMENT SAMPLING SITES AND  
SITE-WIDE PROGRAM BEDROCK WELLS  
ON NORTH AND SOUTH  
WALNUT CREEKS

Figure 12

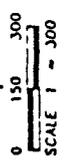
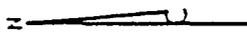
APRIL 1991



MATCHLINE  
(SEE FIGURE 7-4 (2 OF 2))

017-71

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DISCUSSION ONLY



**EXPLANATION**

- [115] INDIVIDUAL HAZARDOUS SUBSTANCE SITE
- SW-1 ○ EXISTING SURFACE WATER SAMPLING LOCATION
- 5786 ○ EXISTING ALLUVAL GROUNDWATER MONITORING WELL
- SEC-17 △ EXISTING SEDIMENT SAMPLING LOCATION
- 3087 ● EXISTING BEDROCK GROUNDWATER MONITORING WELL
- - - - - INTERMITTENT STREAM
- DIRT ROAD
- PROPOSED SOIL BORING LOCATION<sup>1</sup>
- ⊕ PROPOSED WELL LOCATION<sup>1</sup>
- PROPOSED BORING AND SURFACE SAMPLE LOCATION<sup>1</sup>
- ||||| PROPOSED ELECTROMAGNETIC SURVEY LINE LOCATION<sup>1</sup>

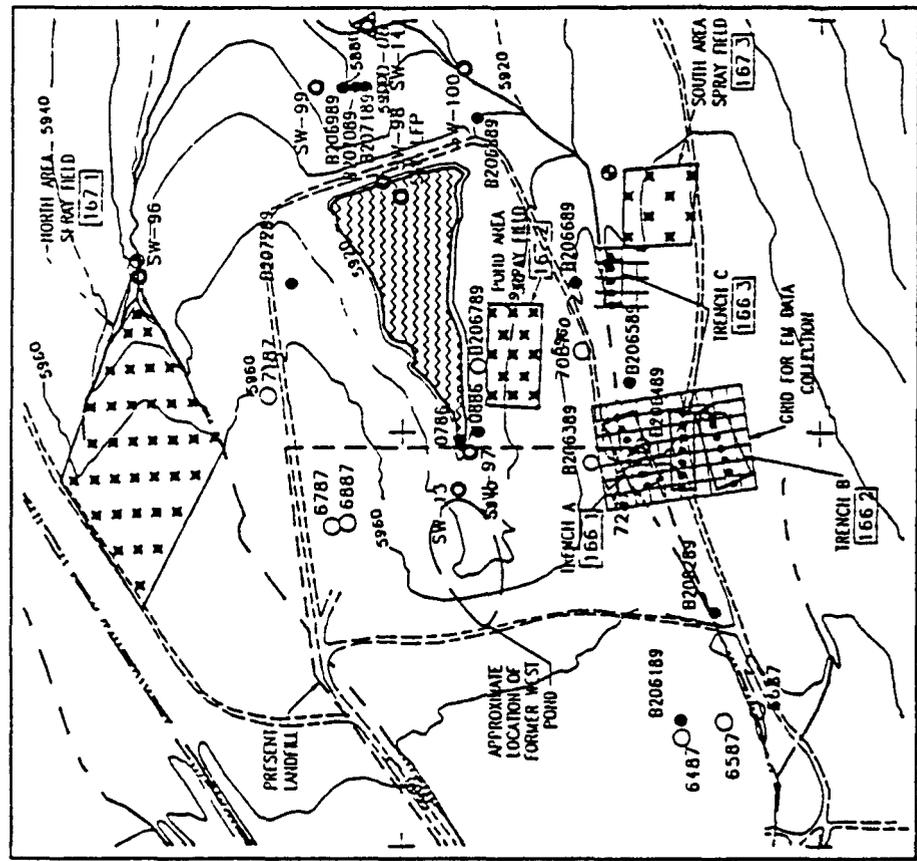
<sup>1</sup>ALL PROPOSED LOCATIONS ARE APPROPRIATE

U S DEPARTMENT OF ENERGY  
Rocky Flats Plant Golden Colorado  
OPERABLE UNIT 6  
PHASE 1 RI/RI WORK PLAN

PROPOSED SAMPLING & WELL LOCATIONS  
HISSs 166 1-3, TRENCHES A, B, & C  
IHSSs 167 1-3 NORTH AREA,  
POND AREA AND SOUTH AREA

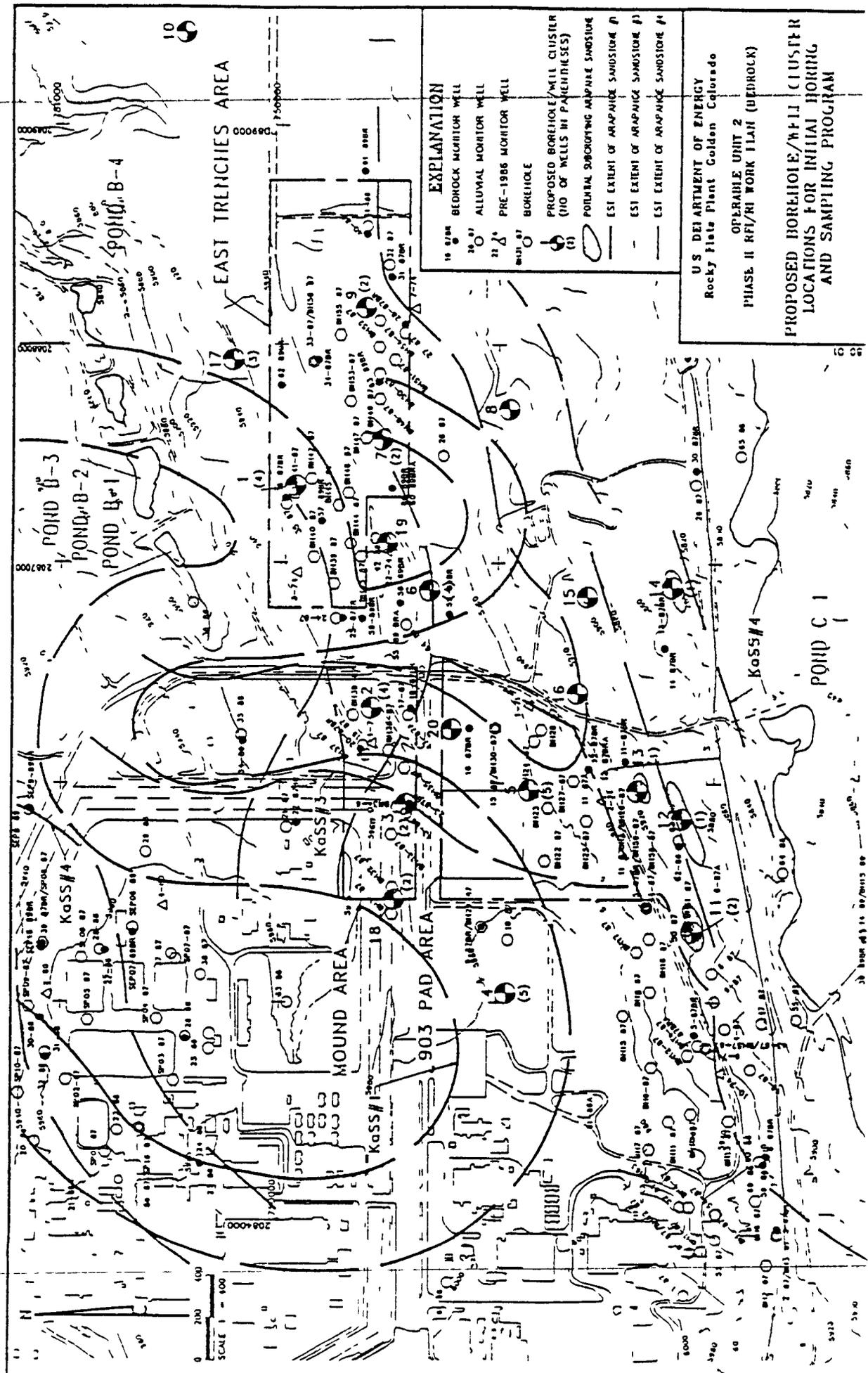
APRIL 1991

Figure 13



Preliminary information from the U S Army Corps of Engineers shows no flood plain for the drainageways on this map

117



**EXPLANATION**

10 070A	BEDROCK MONITOR WELL
20 07	ALLUVIAL MONITOR WELL
21 07	PRE-1986 MONITOR WELL
22 07	BOREHOLE
23 07	PROPOSED BOREHOLE/WELL CLUSTER (NO OF WELLS IN PARENTHESES)
(1)	POTENTIAL SUBCROPPING ARAPAHO SANDSTONE
(2)	EST EXTENT OF ARAPAHO SANDSTONE #1
(3)	EST EXTENT OF ARAPAHO SANDSTONE #2
(4)	EST EXTENT OF ARAPAHO SANDSTONE #3

U.S. DEPARTMENT OF ENERGY  
 Rocky Flats Plant Golden Colorado  
 OPERABLE UNIT 2  
 PHASE II RFI/RI WORK PLAN (BEDROCK)  
 PROPOSED BOREHOLE/WELL CLUSTER  
 LOCATIONS FOR INITIAL HOING  
 AND SAMPLING PROGRAM

SCALE 1" = 500'

30