AGENDA

July 19, 1995
Arvada Center for the Arts and Humanities

KAISER•HILL

6:30 Introduction ....Dennis Connors

6:35 C.U.R.E. Site Demonstration Introduction .....Ted Ball

6:50 OU11, West Spray Field Review .....Dennis Shubbe
Questions and Answers
Public Comments

- BREAK -

8:00 OU2 Trench T2 (IHSS 109) . ... Ann Sieben
Questions and Answers
Public Comments

ADMIN RECORD

A-OU11-000158

Written Comments:

OU11

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Colorado Department of Public Health & Environment
Hazardous Materials & Waste Management Division
4300 Cherry Creek Drive South
Denver, Colorado 80222

OU11 & OU2

Michael Konczal
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Golden, Colorado 80402-0928

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Rocky Flats Environmental Technology Site

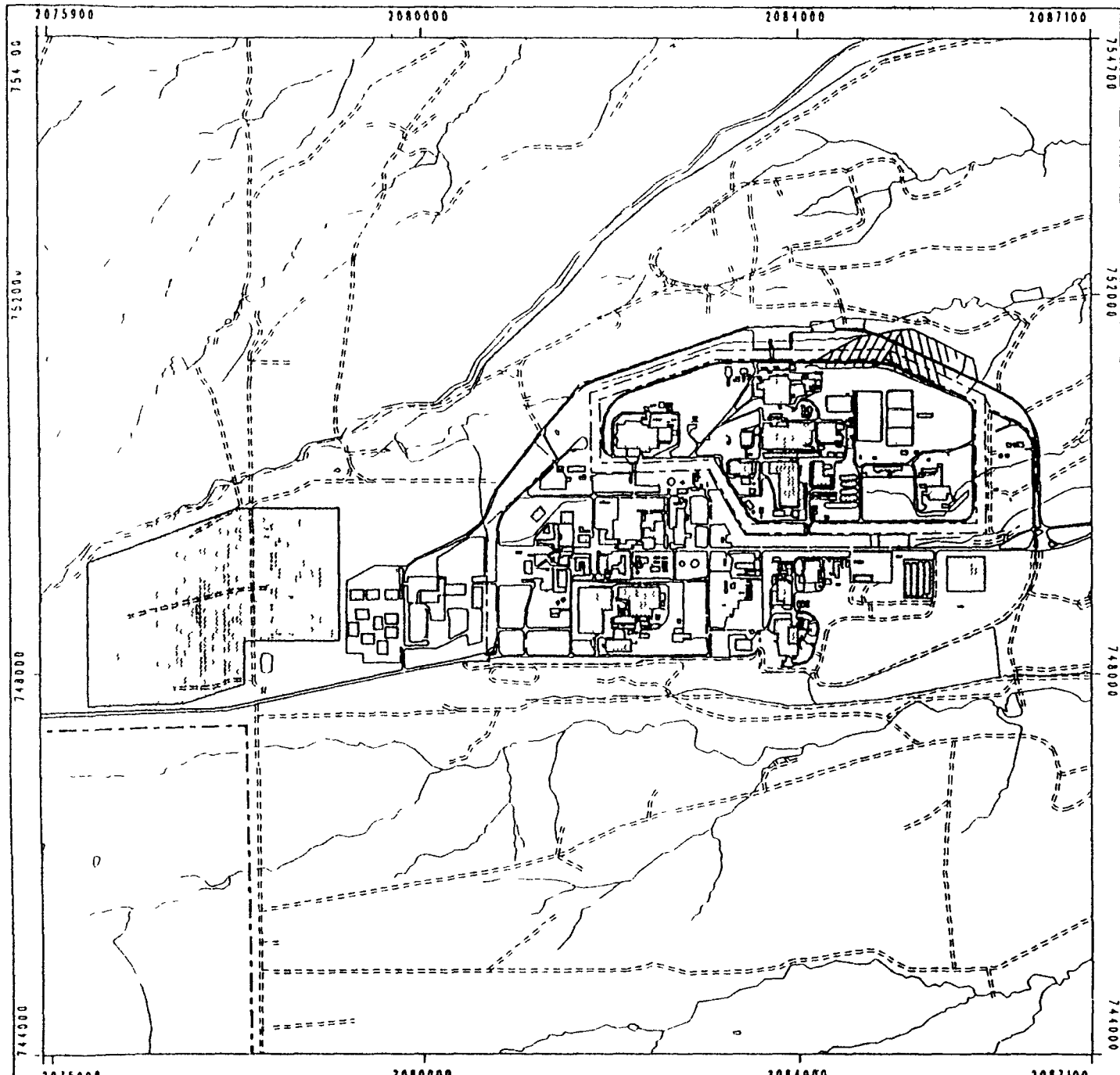
Operable Unit 11 (OU-11)
West Spray Field

Public Meeting

July 19, 1995

OU-11 Site Background

- General
  - located in western buffer zone
  - approximately 105 undeveloped acres
  - one IHSS, IHSS 168
- Topography
  - relatively level
- Geology
  - Rocky Flats alluvium
- Surface Water
  - no permanent features
- Ground Water
  - depth to water table is approximately 50 feet
  - eastward flowing



EXPLANATION

- Interceptor Trench System
- Streams and Drainages
- Paved Roads
- Dirt Roads
- Security Fences
- Rocky Flats Boundary
- OU 11 (IHSS 168)
- Lakes and Ponds
- Buildings and Trailers

Scale = 1 19200
1 inch = 1600 feet

800 0 1600ft

State Plane Coordinate Projection
Colorado Central Zone
Datum NAD27

U S Department of Energy
Rocky Flats Environmental Technology Site
Golden, Colorado

Location Map

Final Combined Phases
RFI/RI Report

Operable Unit 11

June 1995

Figure 1 2-1

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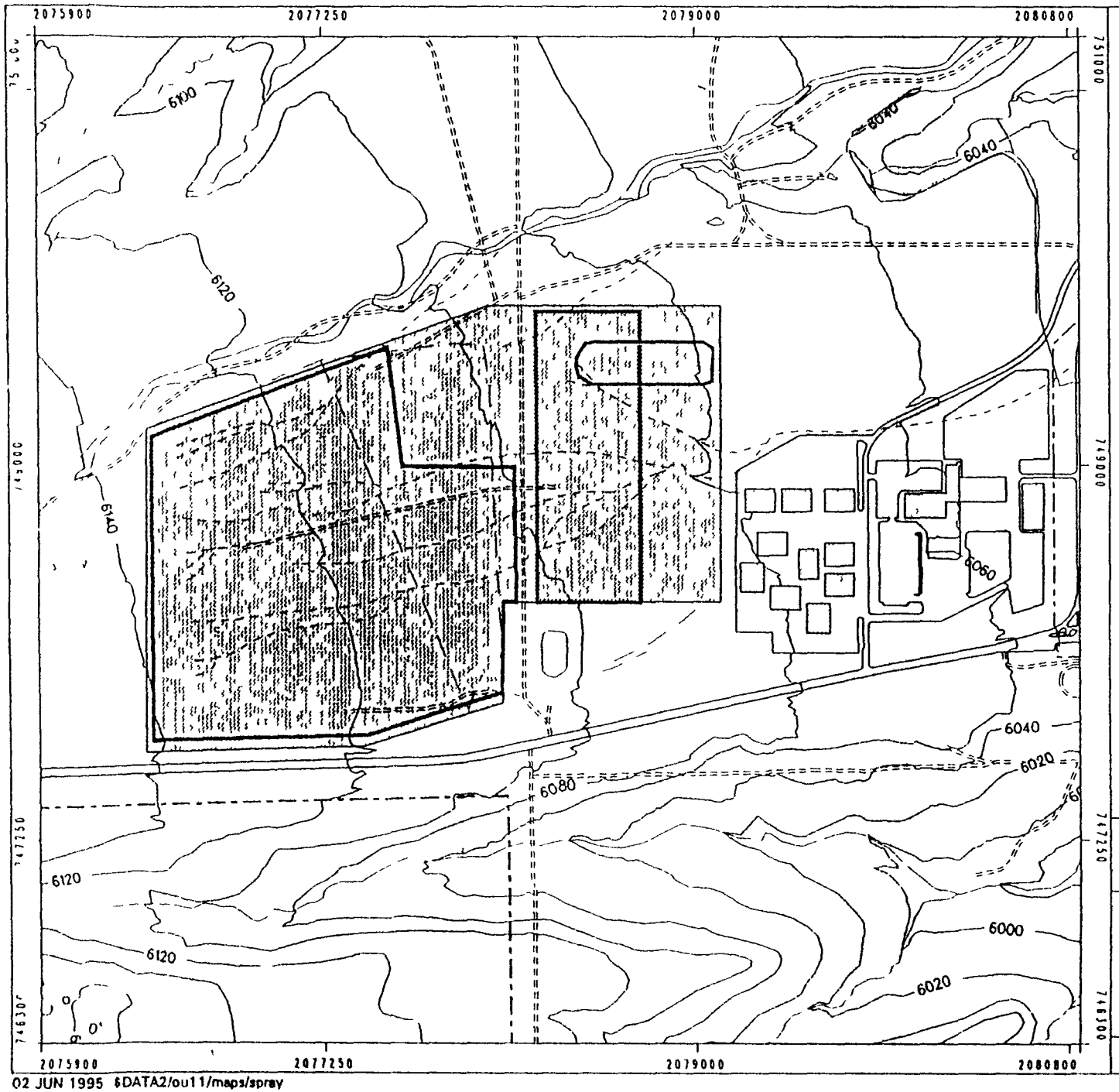
OU-11 Site History

- Operational History
  - April 1982 through October 1985
  - periodic spray application of excess liquids from Solar Ponds
  - sources of Solar Pond liquids were the Sewage Treatment Plant and the Interceptor Trench System
  - approximately 41 acres in total area
- Spray Liquid Characteristics
  - approximately 66 million gallons
  - elevated levels of nitrates, radionuclides, volatile organic compounds and semivolatile organic compounds



EXPLANATION

- Spray Area 1
- Spray Area 2
- Spray Area 3
- Spray Induced Drainage
- Manmade Drainage
- Streams and Drainages
- Topographic Contours (20 ft Interval)
- Paved Roads
- Dirt Roads
- Security Fences
- Rocky Flats Boundary
- OU 11 (IHSS 168)
- Lakes and Ponds
- Buildings and Trailers (130 Complex)

DATA SOURCE
Buildings roads and fences provided by
Facilities Engineer EG&G Rocky Flats, Inc. 1991
Hydrology provided by
United States Geological Survey (date unknown)

N

Scale = 1 8400
1 inch = 700 feet

300 0 700ft

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Areas of Spray Application

Final Combined Phases
RFI/RI Report

Operable Unit 11

June 1995

Figure 1 2 2

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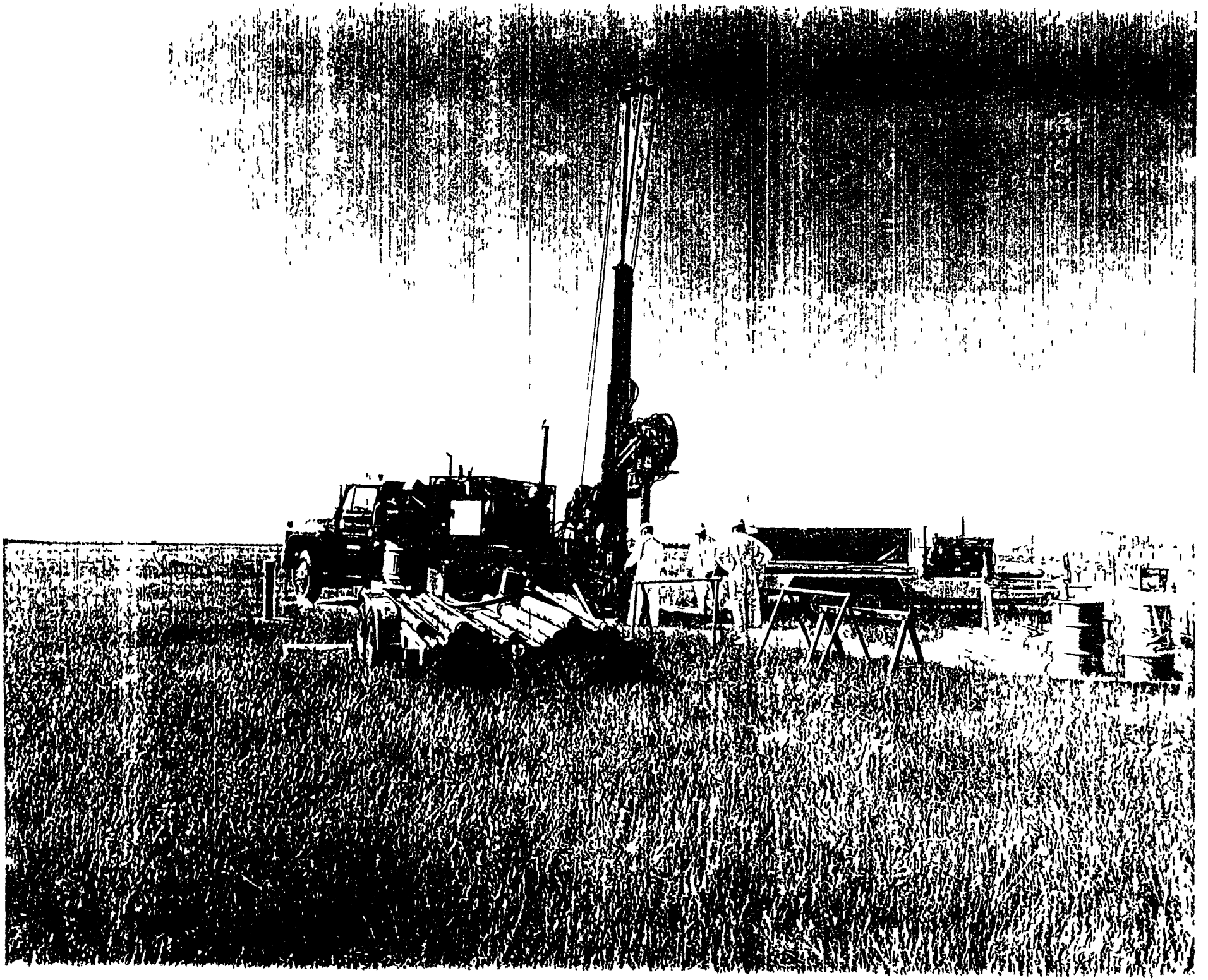
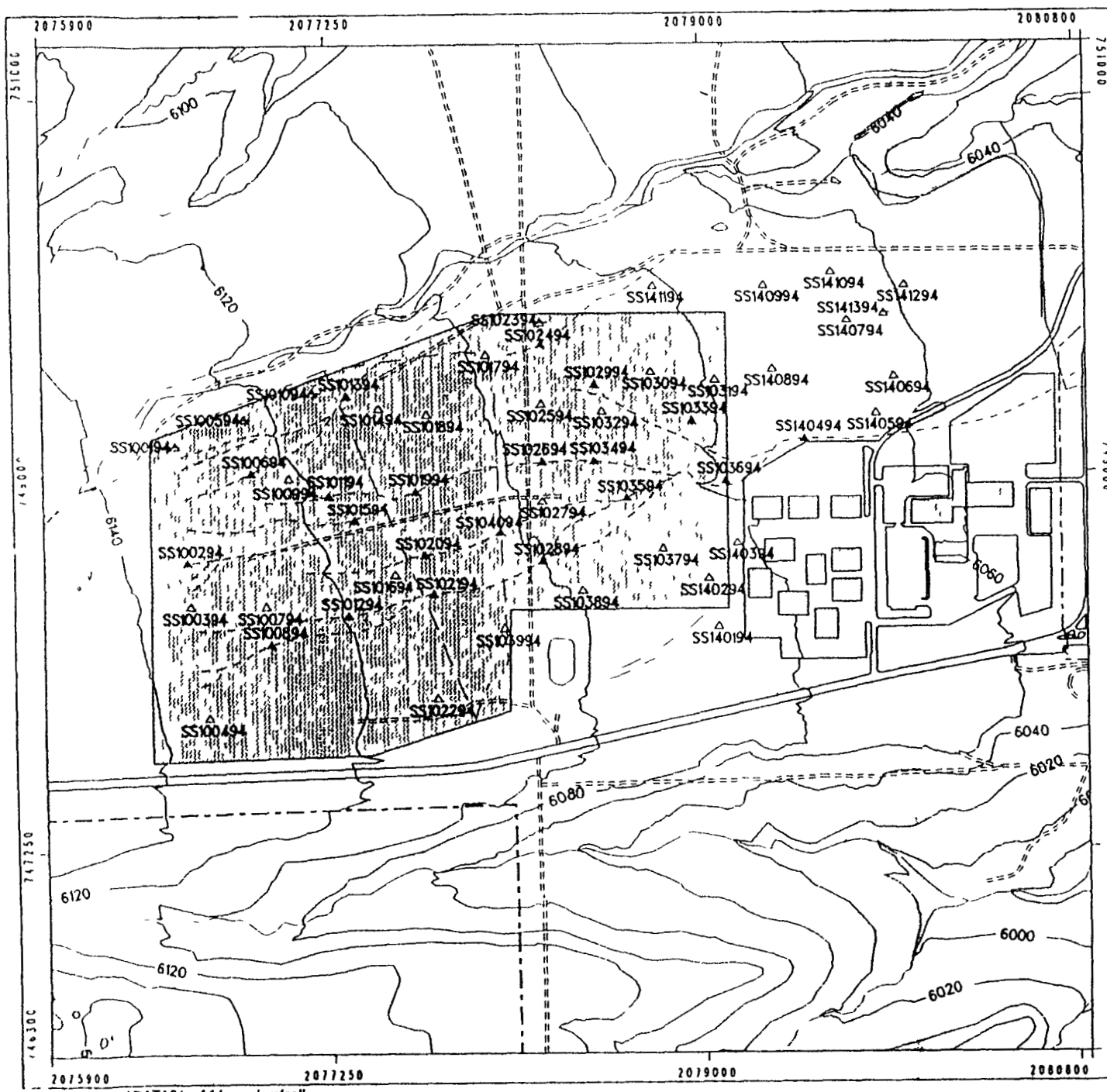
OU-11 Site Investigation

- RCRA Facility Investigation/Remedial Investigation (RFI/RI)
  - HPGe Survey
  - Surface Soils
  - Subsurface Materials
  - Groundwater Monitoring
  - Geophysical Logging
  - Ecological Surveys
- OU-11 Combined Phases RFI/RI Report
  - detailed information concerning investigation





EXPLANATION

Sample Locations

- ▲ Channel (20)
- △ Non-Channel (28)
- ☆ Pipeline Junctures (5)
- Spray-Induced Drainage
- Manmade Drainage
- Streams and Drainages
- Topographic Contours (20 ft Interval)
- Paved Roads
- Dirt Roads
- Security Fences
- Rocky Flats Boundary
- OU 11 (IHSS 168)
- Lakes and Ponds
- Buildings and Trailers (130 Complex)

N

Scale = 1 8400
1 inch = 700 feet

350 0 700ft

State Plane Coordinate Projection
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Surficial Soil Sample Locations

Final Combined Phases RFI/RI Report

Operable Unit 11

June 1995

Figure 2 2 1

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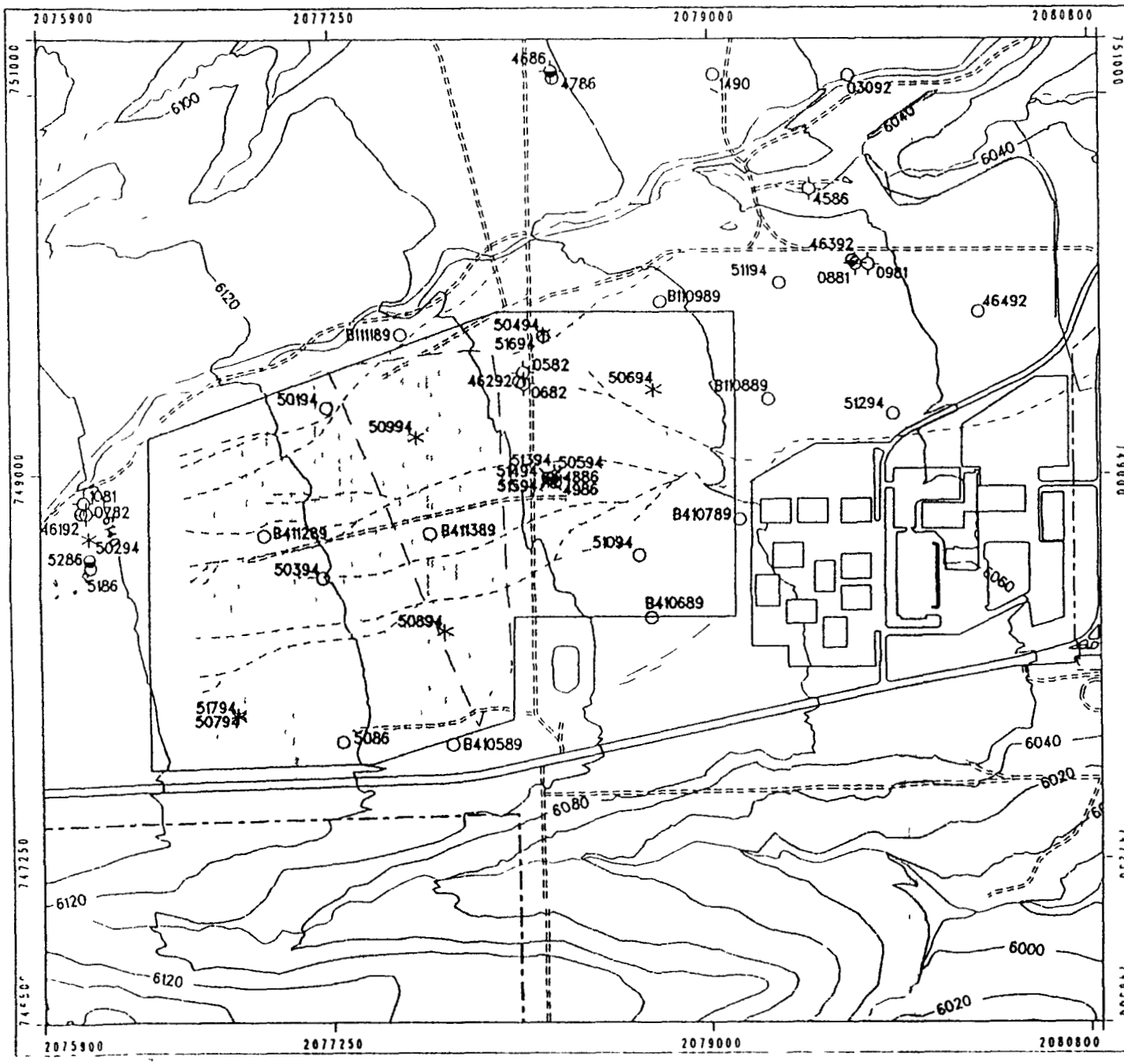

EXPLANATION

- 1994 Borehole
- UHSU Alluvial Well (Upper Hydrostratigraphic Unit)
- UHSU Variably Saturated Zone Well
- UHSU Weathered Bedrock Well
- LHSU Bedrock Well (Lower Hydrostratigraphic Unit)
- Abandoned Well
- Spray Induced Drainage
- Manmade Drainage
- Streams and Drainages
- Topographic Contours (20 ft. Interval)
- Paved Roads
- Dirt Roads
- Security Fences
- Rocky Flats Boundary
- OU 11 (IHSS 188)
- Lakes and Ponds
- Buildings and Trailers (130 Complex)

N

Scale = 1 8400
1 Inch = 700 feet

350 0 700ft

State Plane Coordinate Projection
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Monitoring Well and Borehole Location Map

Final Combined Phases RFI/RI Report

Operable Unit 11

June 1995

Figure 2 2 3

OU-11 RFI/RI Findings

- Potential contaminants of concern (PCOCs)
  - identified through statistical, spatial, temporal and historical information analyses
  - surface soils PCOCs were americium-241, plutonium-239/240 and nitrate/nitrite
  - subsurface materials PCOCs were tritium and nitrate/nitrite
- Fate and Transport
  - extremely limited mobilization
- Ecological Impacts
  - no adverse effects.

OU-11 Summary of Site Risks

- Risk quantified using the CDPHE Conservative Screen
  - PCOC concentration compared to EPA's Risk Based Concentration (RBC)
  - RBCs based on a one in a million carinogenic risk and/or a non-carcinogenic hazard index of one
- Maximum detected concentrations of the OU-11 PCOCs are below Risk Based Concentrations

PCOC	Background	OU-11 Max.	RBC
Americium	0.019 pCi/g	0.43 pCi/g	2.37 pCi/g
Plutonium	0.05 pCi/g	2.2 pCi/g	3.42 pCi/g
Tritium	0.1294 pCi/g	3.4 pCi/g	14,700 pCi/g
Nitrate/Nitrite	2.3 mg/kg	37 mg/kg	439,000 mg/kg

- CDPHE Conservative Screen ratio sums
  - carcinogenic ratio sum of 0.82
  - non-carcinogenic ratio sum of 0.000084
- OU-11 is a low hazard site, no remedial action is required

OU-11 Preferred Alternative

- The Preferred Alternative proposed for OU-11 is No Action
  - selection was based on the results of the CDPHE Conservative Screen
- OU-11 is in a protective state
  - OU-11 poses no current or potential threat to human health or the environment under a residential use scenario