6102 U-004-1005.11

AGENDA AND HANDOUTS FROM DISCUSSION ABOUT A PROPOSED OPERABLE UNIT 2 ON-PROPERTY DISPOSAL FACILITY - OCTOBER 25, 1994

10/25/94

DOE-FN PUBLIC
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AGENDA

DISCUSSION ABOUT A PROPOSED ON-PROPERTY DISPOSAL FACILITY

AGENDA

Welcome	Rod Warner
Scope of Meeting	Rod Warner
OU2 Proposed Plan	
• Review of OU2 Subunits	Jim Williams
• Overview of Preferred Alternative	Jim Williams
• Remedial Design & Construction	Greg Jones
Criteria for Success	Jim Williams
Key Questions	Nancy Weatherup
Path Forward	Nancy Weatherup
Public Involvement	Rod Warner

OPERABLE UNIT 2

FEMP

DEFINITION OF FEDERAL LAND USE

When the federal government retains ownership of the FEMP, land use and site access are restricted for authorized government purposes only. The receptors evaluated under this scenario are:

- Expanded Trespasser
- Off-Property Farmers (Adult and Child)
- Great Miami River Users
  - Recreational
  - Residential
  - Agricultural

OPERABLE UNIT 2

FEMP

PATHWAYS OF EXPOSURE

- **TRESPASSER**
  1. Direct Radiation
  2. Inhalation
  3. Ingestion
  4. Dermal

- **OFF-PROPERTY FARMER**
  1. Ingestion

OPERABLE UNIT 2

FEMP

CONCEPT OF REMEDY

CONSOLIDATE: material exceeding cleanup levels into a single place

LOCATE: the consolidated material in the most suitable place

ISOLATE: the material from potential human and environmental receptors

MONITOR: to ensure that protectiveness is maintained

INTEGRATE: with overall site remediation strategy

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OPERABLE UNIT 2

PREFERRED ALTERNATIVE

Excavation and on-site disposal with off-site disposal of fraction exceeding waste acceptance criteria.

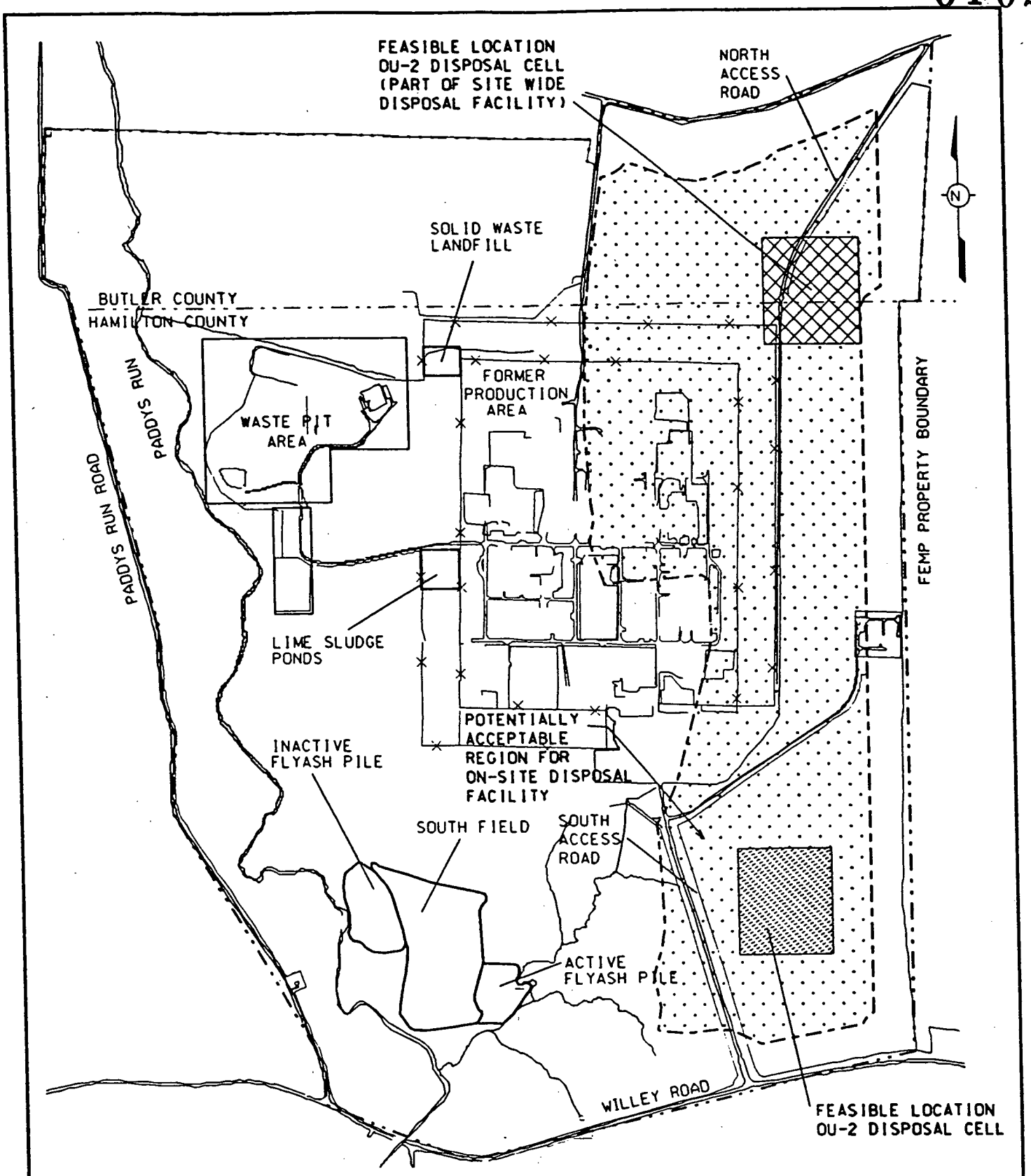
OPERABLE UNIT 2

OU2 WASTE VOLUME

Based on Federal Ownership and 10^{-6} ILCR

SOURCE	VOLUME (YD^3)	(pCi/G U-238) AVERAGE CONTAMINATION	MAXIMUM CONTAMINATION	CLEANUP LEVEL
Landfill	24,200	43	577	13
Lime Sludge Ponds	18,500	4	84	39
Active Flyash Pile	71,600	4	13	6
South Field	85,400	16	397	3
Inactive Flyash Pile	103,400	50	1570	3
	303,100			

Approximately 3,000 yd^3 will exceed WAC and be shipped off-site.



SCALE

0 1000 2000 FEET

SITE PLAN
FEASIBLE LOCATIONS
FOR OPERABLE UNIT 2 ON-SITE DISPOSAL

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OPERABLE UNIT 2

FEMP

SEQUENCE OF WORK

- Site Preparation
- Excavation
- Disposal
- Site Restoration
- Perched Groundwater/Construction Water Treatment

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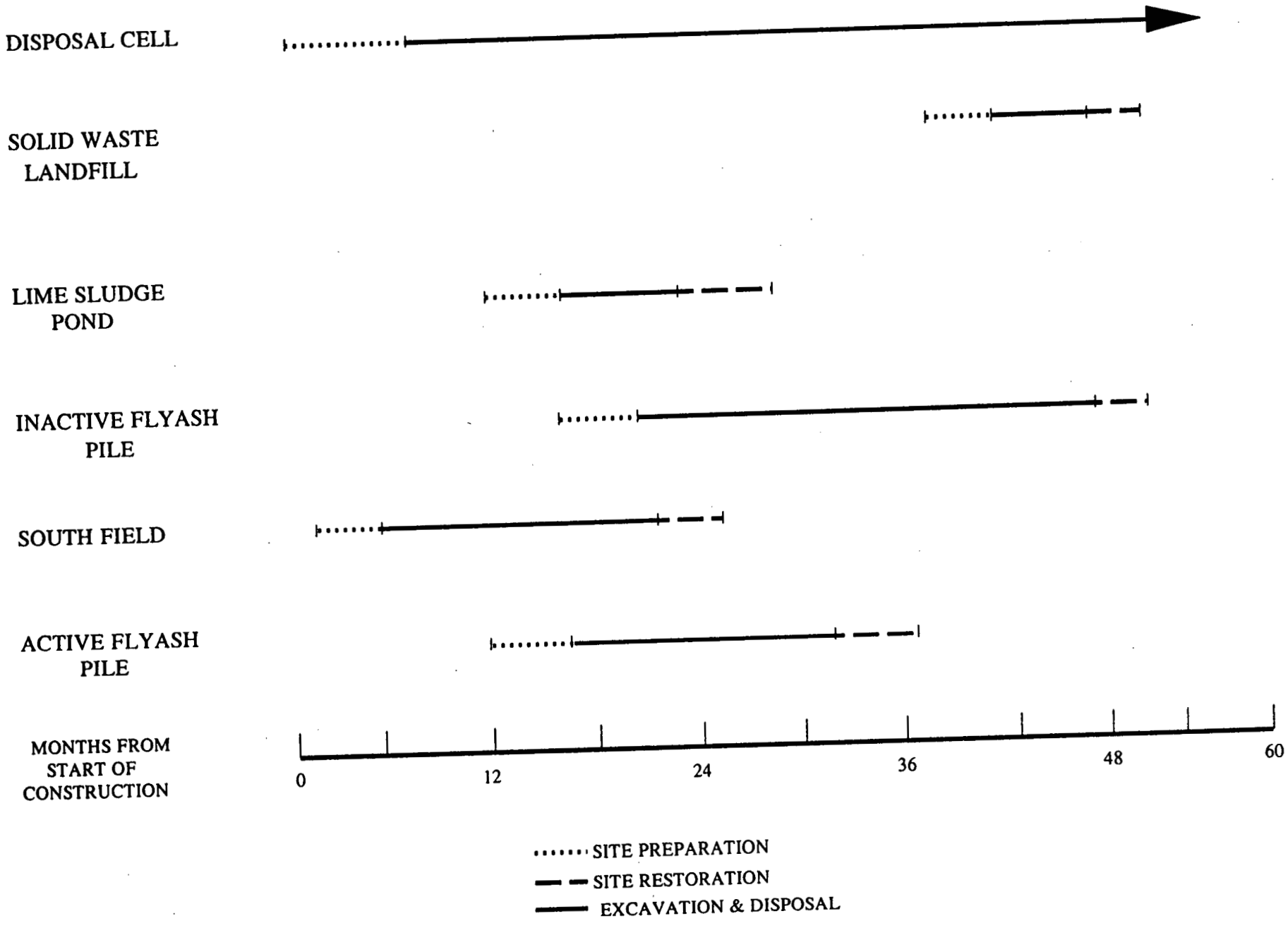
ESTIMATED OPERABLE UNIT 2 CONSTRUCTION DURATION



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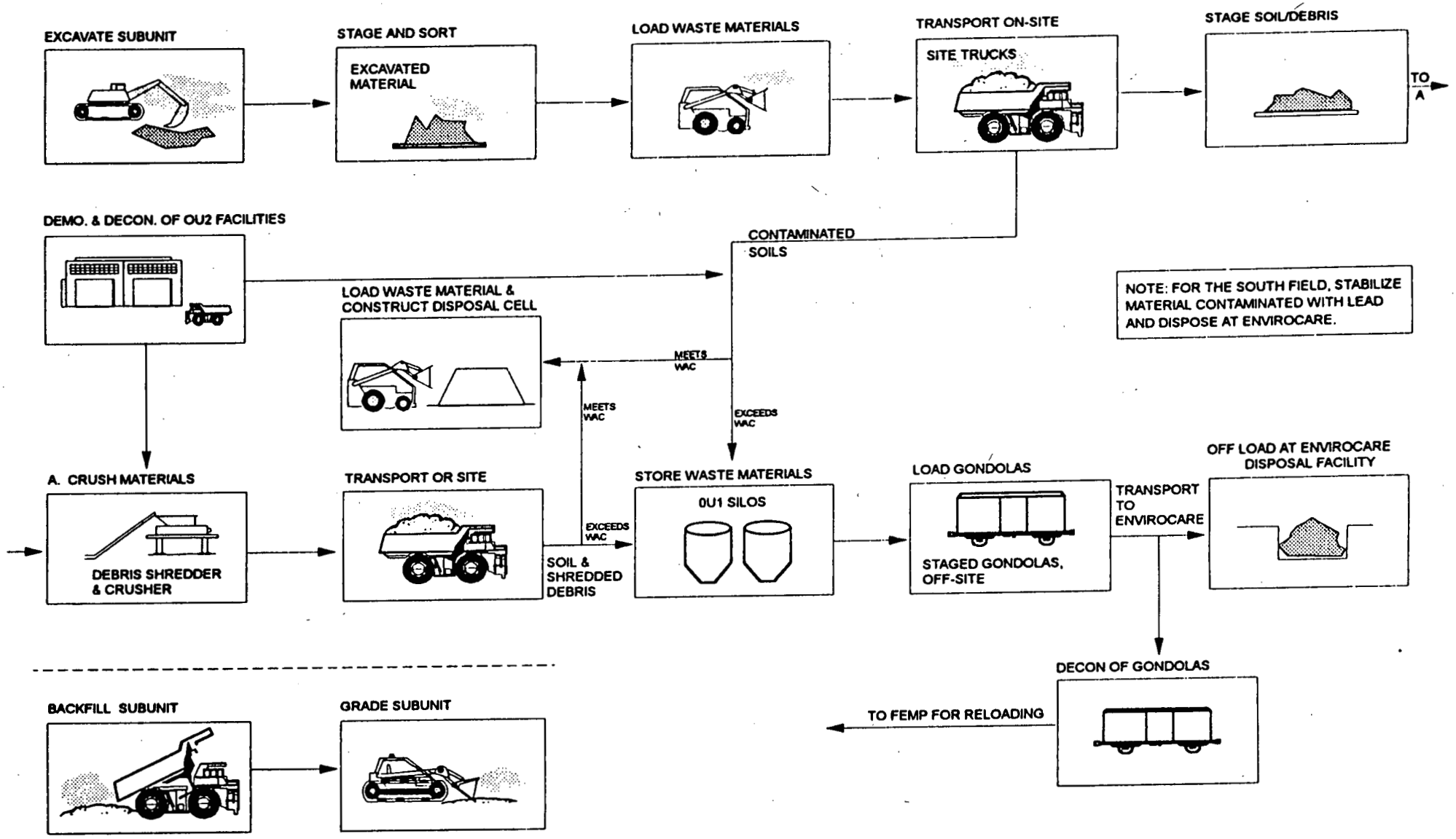

FIGURE C.2-8
ALTERNATIVE 6 REMEDIAL ACTIVITIES,
EXCAVATION AND ON-SITE DISPOSAL WITH OFF-SITE DISPOSAL
OF FRACTION EXCEEDING WAC

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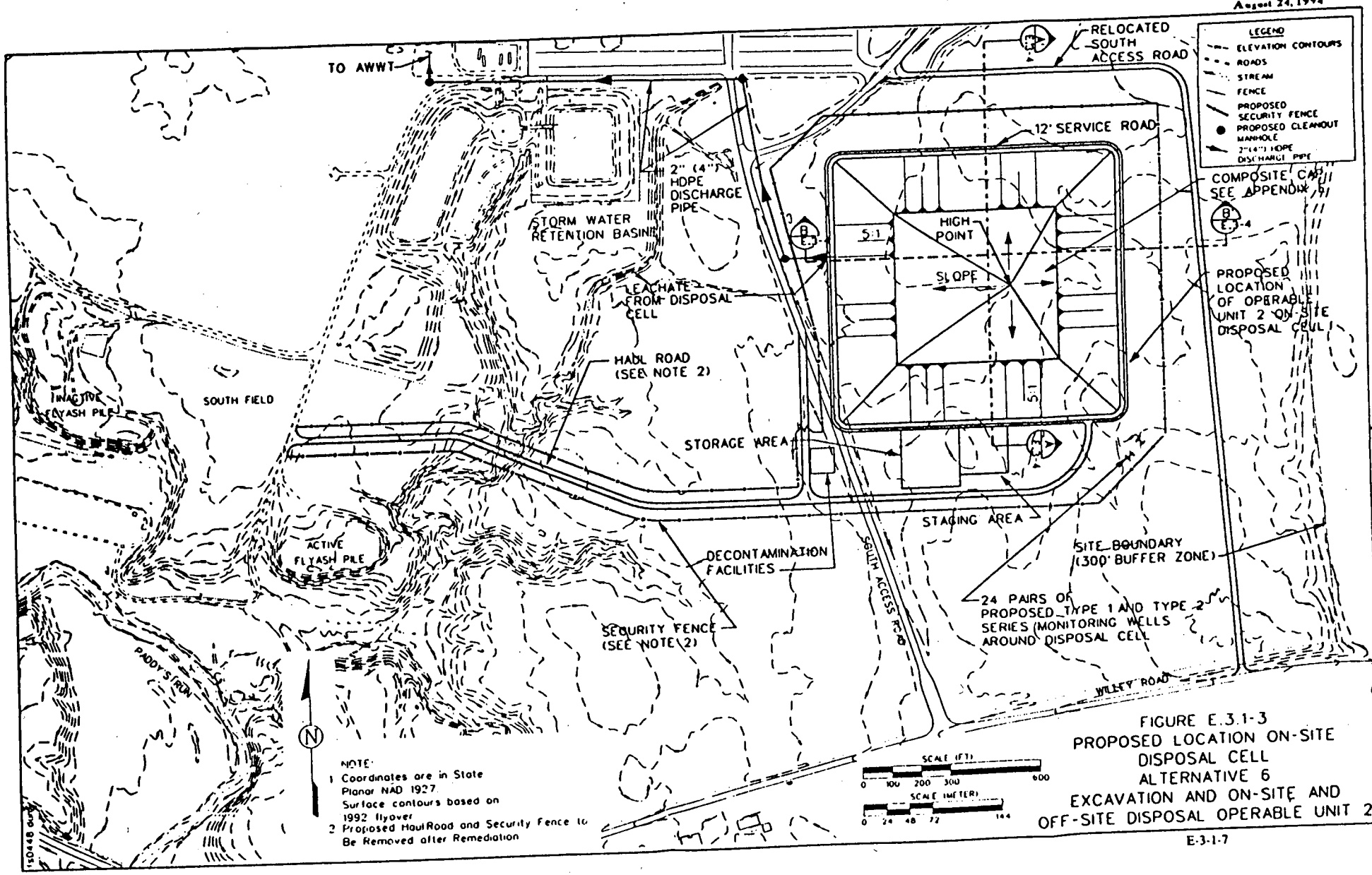
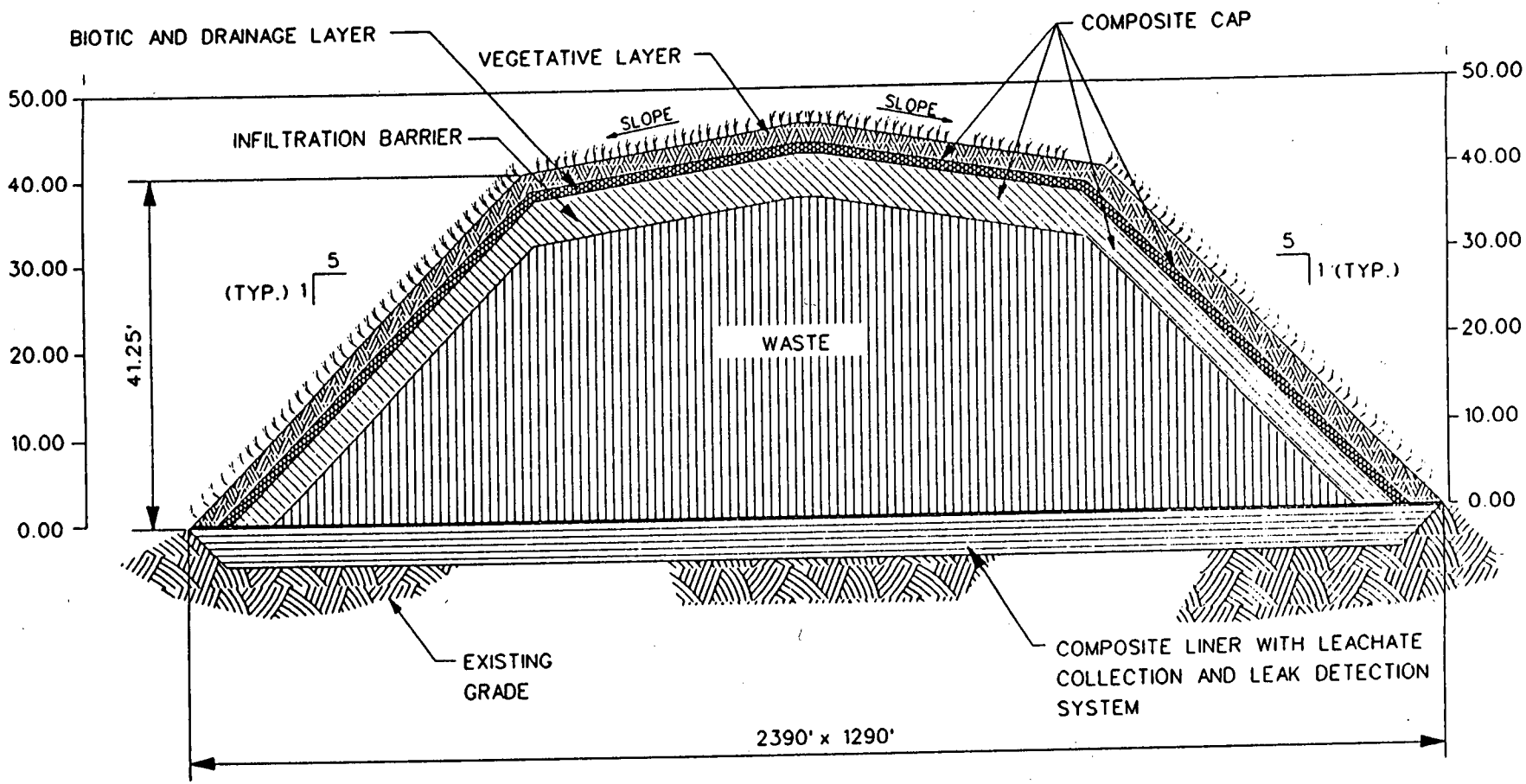


FIGURE E.3.1-3
PROPOSED LOCATION ON-SITE DISPOSAL CELL
ALTERNATIVE 6
EXCAVATION AND ON-SITE AND OFF-SITE DISPOSAL OPERABLE UNIT 2



TYPICAL SECTION
SITE WIDE ON-SITE DISPOSAL FACILITY

(SCALE EXAGGERATION: APPROXIMATELY 1-VERTICAL TO 15-HORIZONTAL)

/us: ermo5/2ard1/dgn/sitewd.dgn

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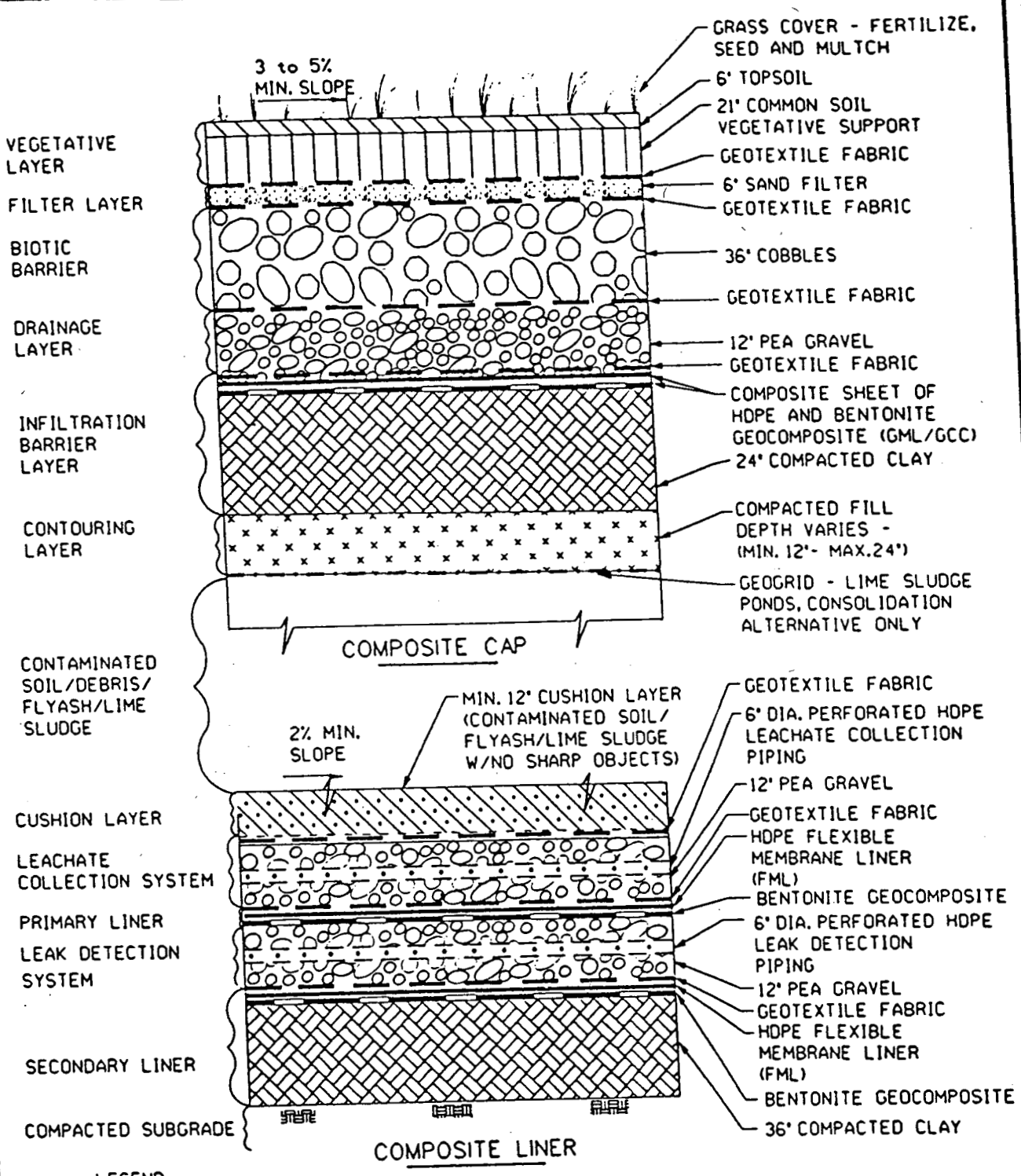


FIGURE E.3.1-6
TYPICAL DETAIL
COMPOSITE CAP AND LINER
(NOT TO SCALE)

OPERABLE UNIT 2

FEMP

CRITERIA FOR SELECTING A SUCCESSFUL REMEDIAL ALTERNATIVE

- Overall Protection of Human Health and the Environment
- Compliance with ARARs

- State Acceptance
- Community Acceptance

- Reduction of Toxicity, Mobility, or Volume Through Treatment

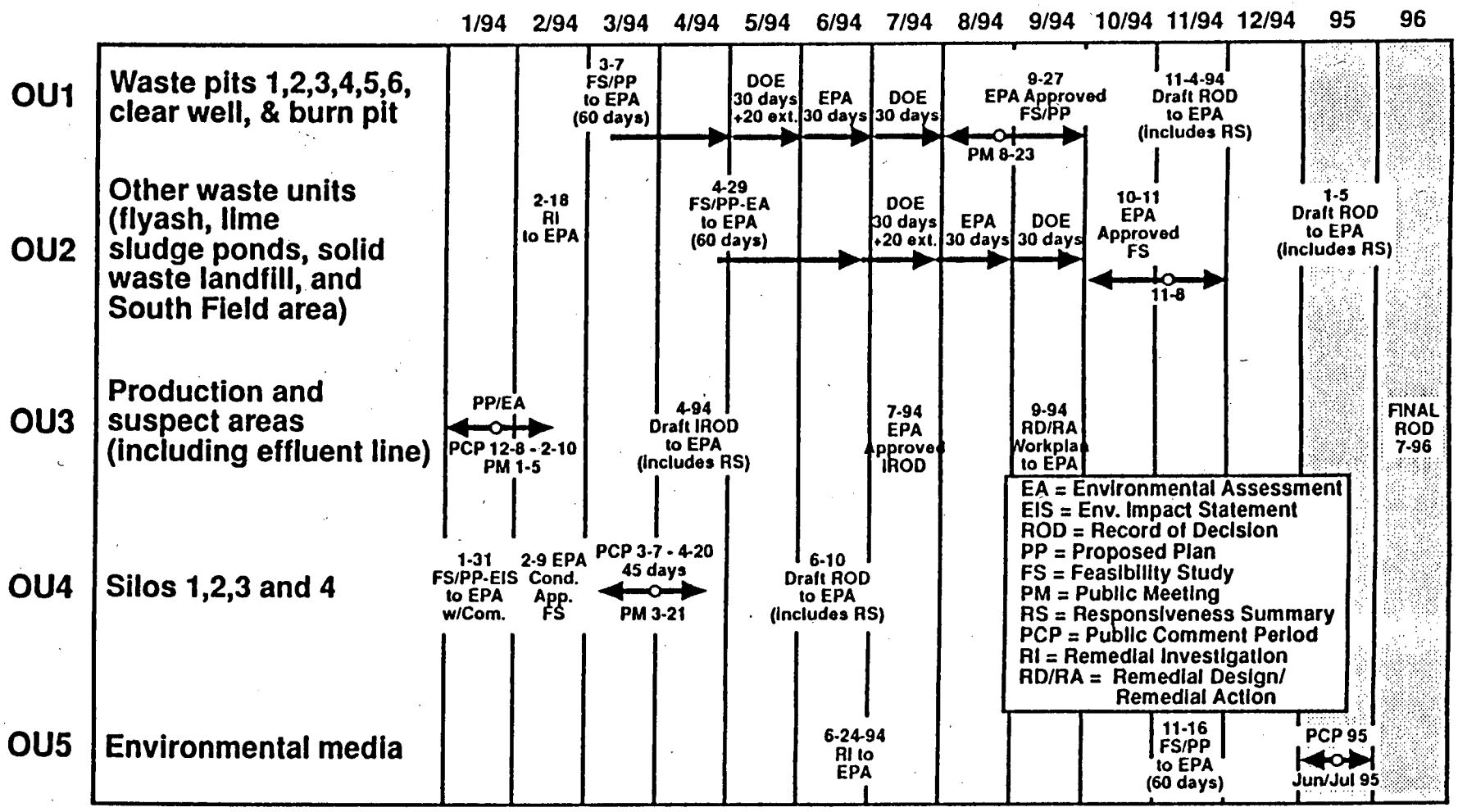
- Long-Term Effectiveness and Permanence
- Short-Term Effectiveness
- Implementability
- Cost

OPERABLE UNIT 2

HOW WILL THIS DECISION BE COORDINATED WITH OTHER FEMP DECISIONS?

- OU1 and OU4
- OU5 and OU3

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT 1994 SCHEDULE OF FS/PROPOSED PLAN/PUBLIC COMMENT ACTIVITIES



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OPERABLE UNIT 2

FEMP

HOW MUCH WASTE IS EXPECTED TO REMAIN ON SITE AND HOW LARGE WOULD THE DISPOSAL FACILITY BE?

- Maximum footprint
- Expected footprint
- Computer generated views

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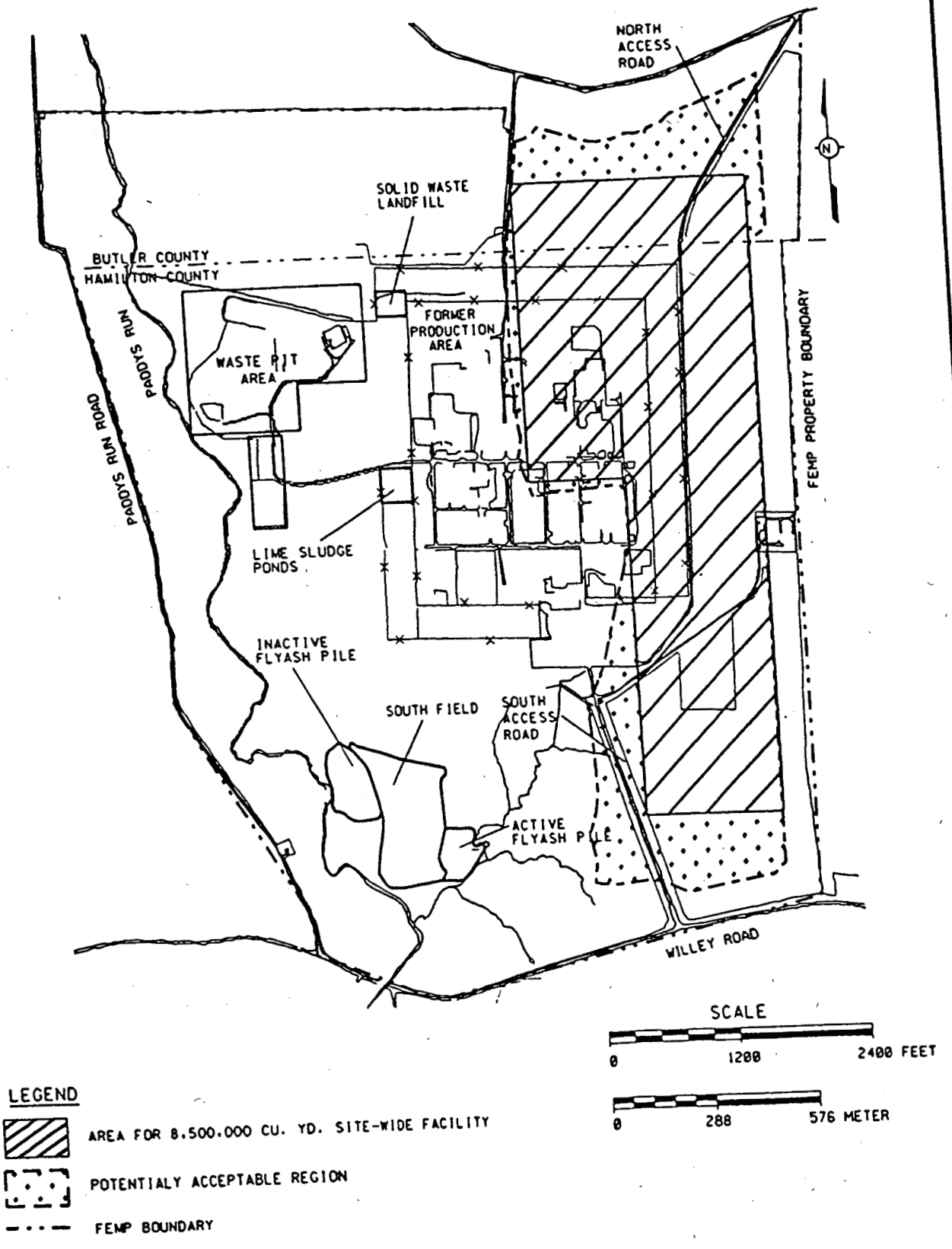

FIGURE E.3.1-1
SITE PLAN
POTENTIALLY ACCEPTABLE REGION
FOR SITEWIDE ON-SITE DISPOSAL

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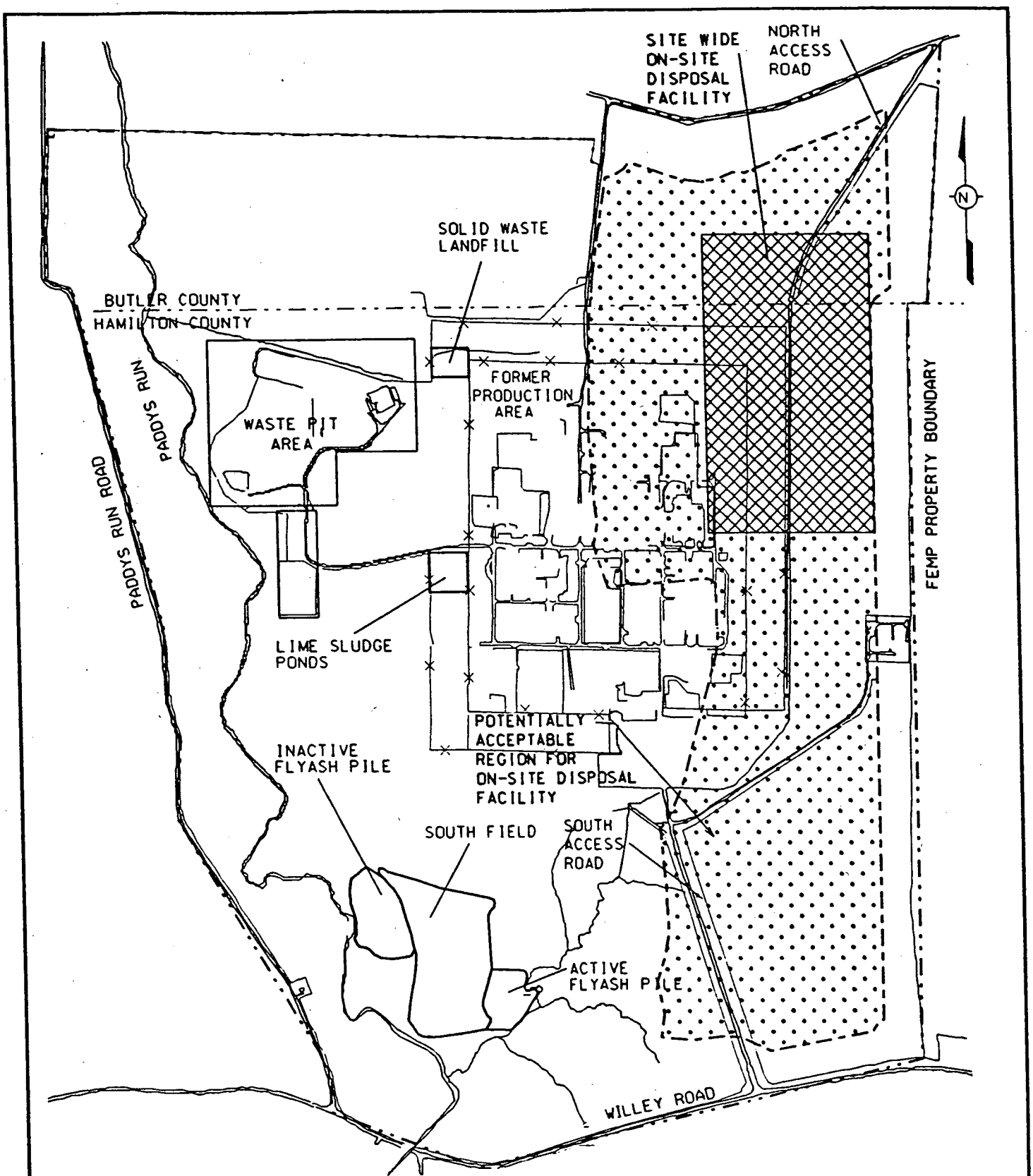

SCALE

0 1000 2000 FEET

SITE PLAN
FEASIBLE LOCATION
SITE WIDE ON-SITE DISPOSAL FACILITY

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OPERABLE UNIT 2

FEMP

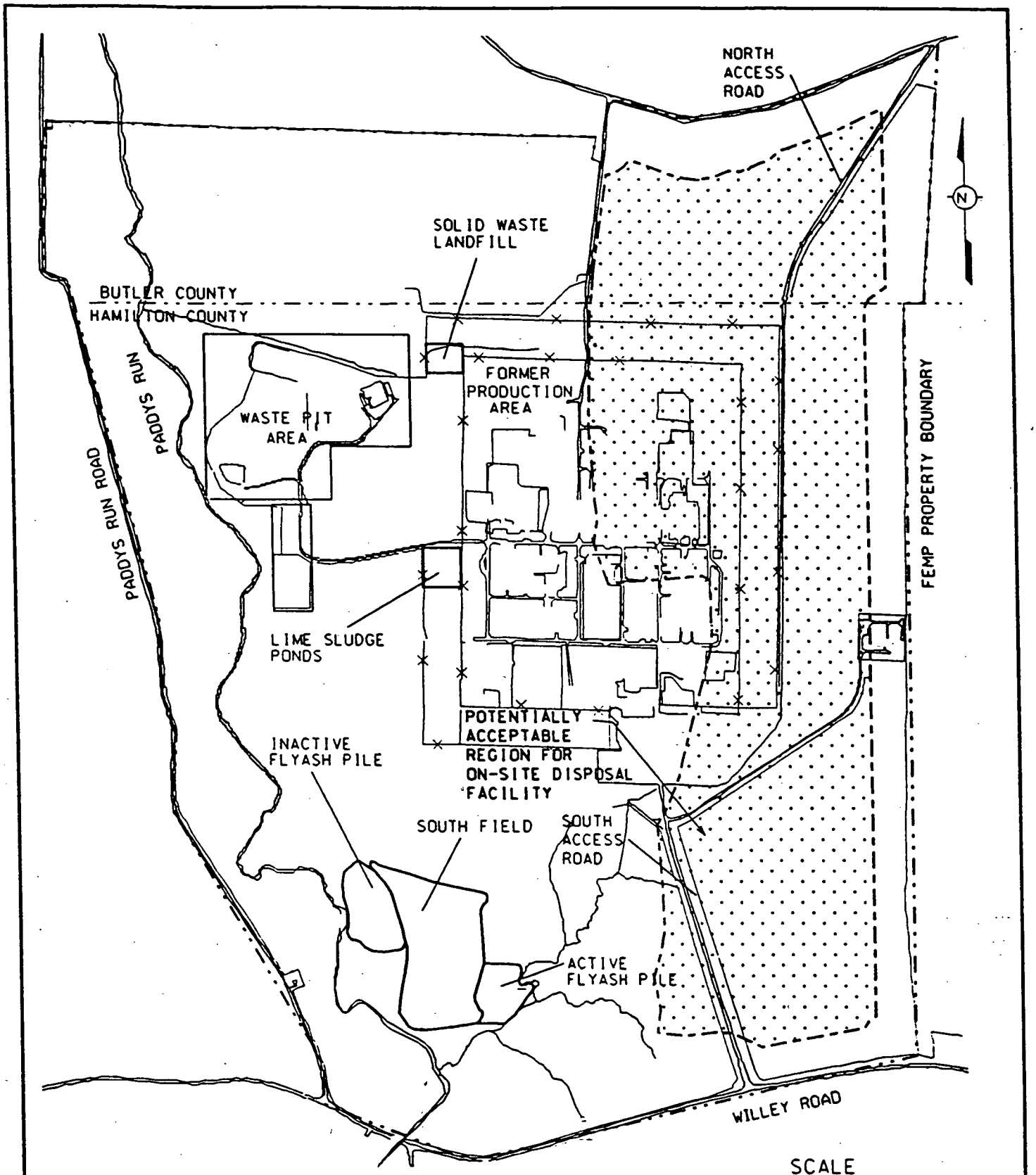
IS THE PREFERRED REMEDIAL ALTERNATIVE IN THE PROPOSED PLAN PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT?

- Waste Acceptance Criteria/Conservative transport modeling
- Best hydrogeology on site
- Design

  Control of infiltration

  Leachate collection

  Leak detection



SITE PLAN
POTENTIALLY ACCEPTABLE REGION
FOR
ON-SITE DISPOSAL FACILITY

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OPERABLE UNIT 2

FEMP

WHAT ACTIVITIES AND PROGRAMS WILL ENSURE PROTECTIVENESS/EFFECTIVENESS?

- Disposal facility inspection and maintenance
- Environmental monitoring
- Reporting
- Five Year reviews

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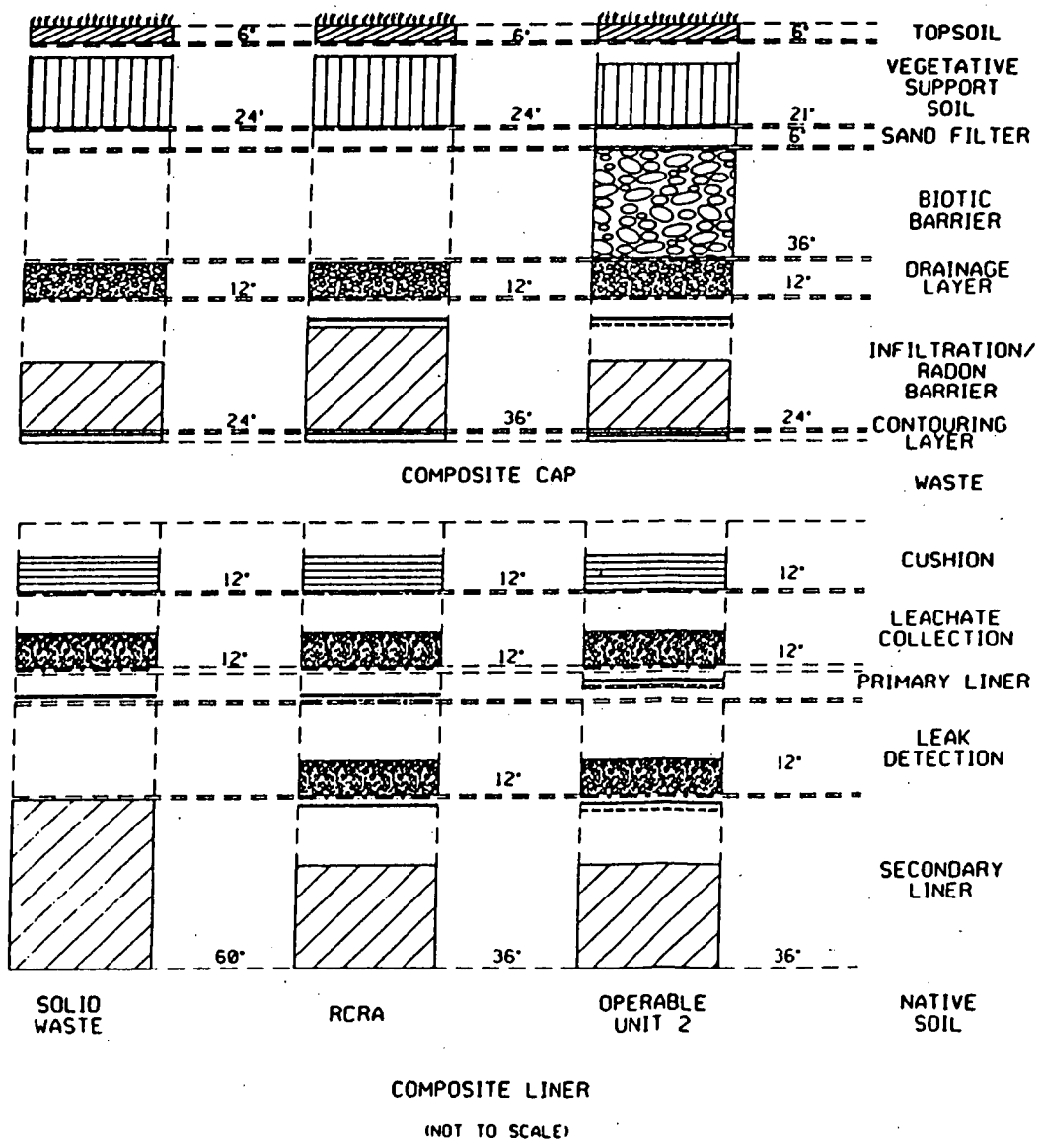
OPERABLE UNIT 2

FEMP

HOW DOES THE PROPOSED DISPOSAL FACILITY COMPLY WITH LANDFILL REGULATIONS?

- Comparison to solid waste and RCRA requirements



LEGEND

- TOPSOIL
- VEGETATIVE SUPPORT
- SAND
- COBBLES
- PEA GRAVEL
- COMPACTED CLAY
- CONTOURING LAYER
- GEOTEXTILE FABRIC
- BENTONITE GEOCOMPOSITE
- HDPE FLEXIBLE MEMBRANCE LINER

FIGURE E.3.1-5
TYPICAL DETAILS
COMPOSITE CAPS AND LINERS

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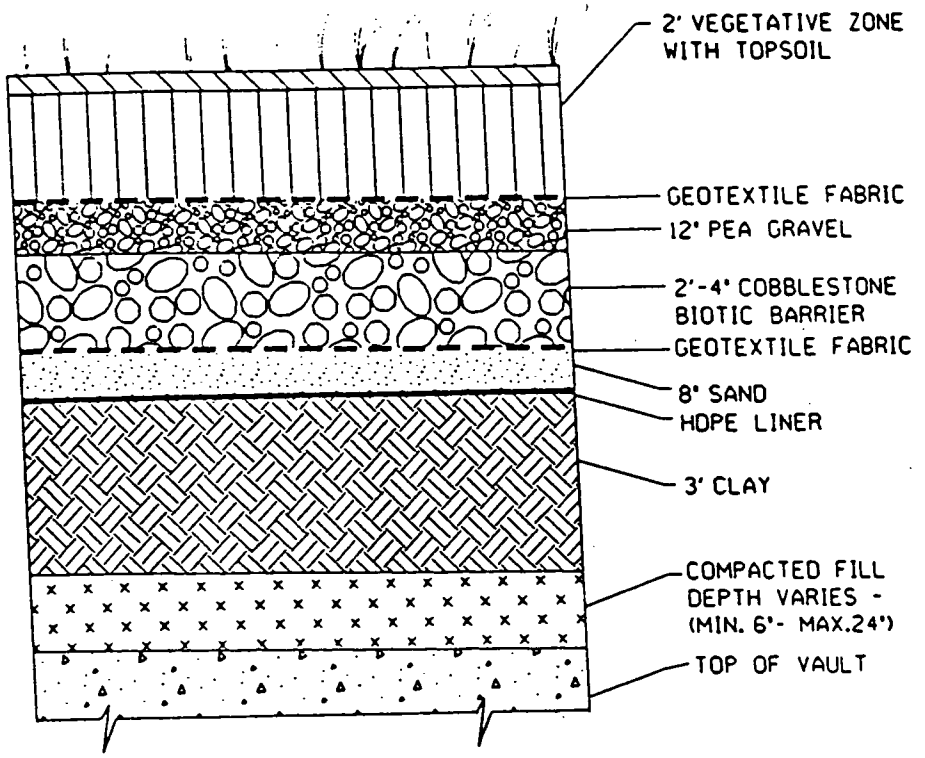
OPERABLE UNIT 2

FEMP

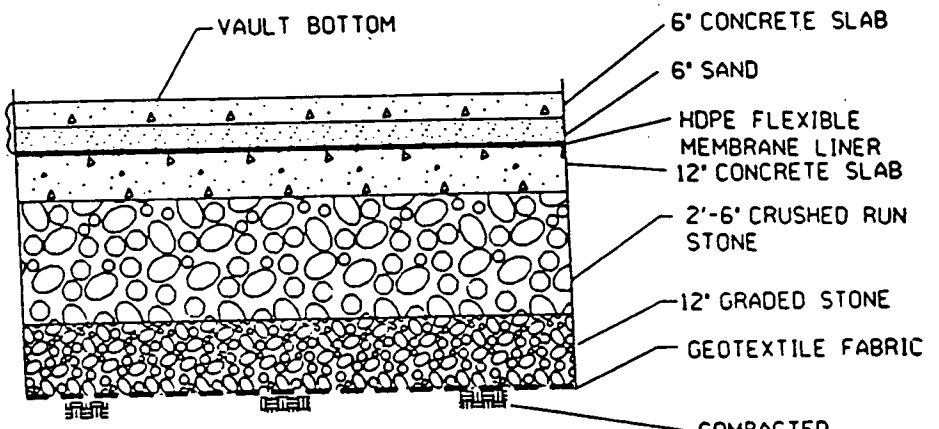
HOW DOES COMPOSITE TECHNOLOGY COMPARE TO A CONRETE VAULT?

- Cross-section
- Cost
- Footprint



CAP DETAIL

DRY CELL TYPE VAULTS ONLY



UNDER VAULT SUBDRAIN DETAIL

LEGEND

- VEGETATIVE ZONE WITH TOPSOIL
- PEA GRAVEL
- COBBLESTONE
- GEOTEXTILE FABRIC
- HDPE FLEXIBLE MEMBRANE LINER (FML)
- SAND
- COMPACTED CLAY
- CONTOURING LAYER
- CONCRETE
- CRUSHED RUN STONE
- GRADED STONE
- COMPACTED SUBGRADE

TYPICAL DETAIL
VAULT CAP AND LINER
(NOT TO SCALE)

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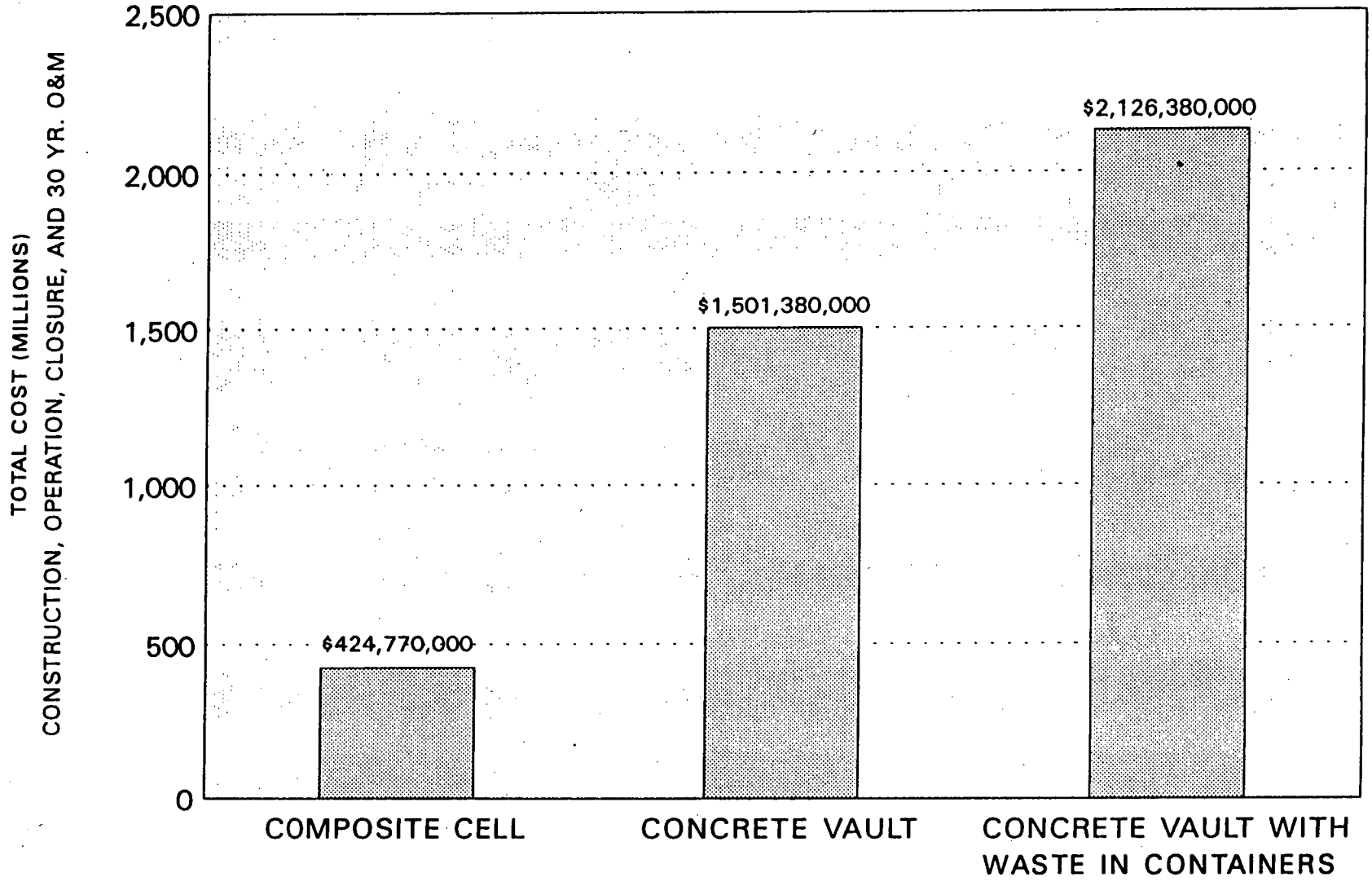
COMPARISON OF ON-SITE DISPOSAL OPTIONS
COSTS



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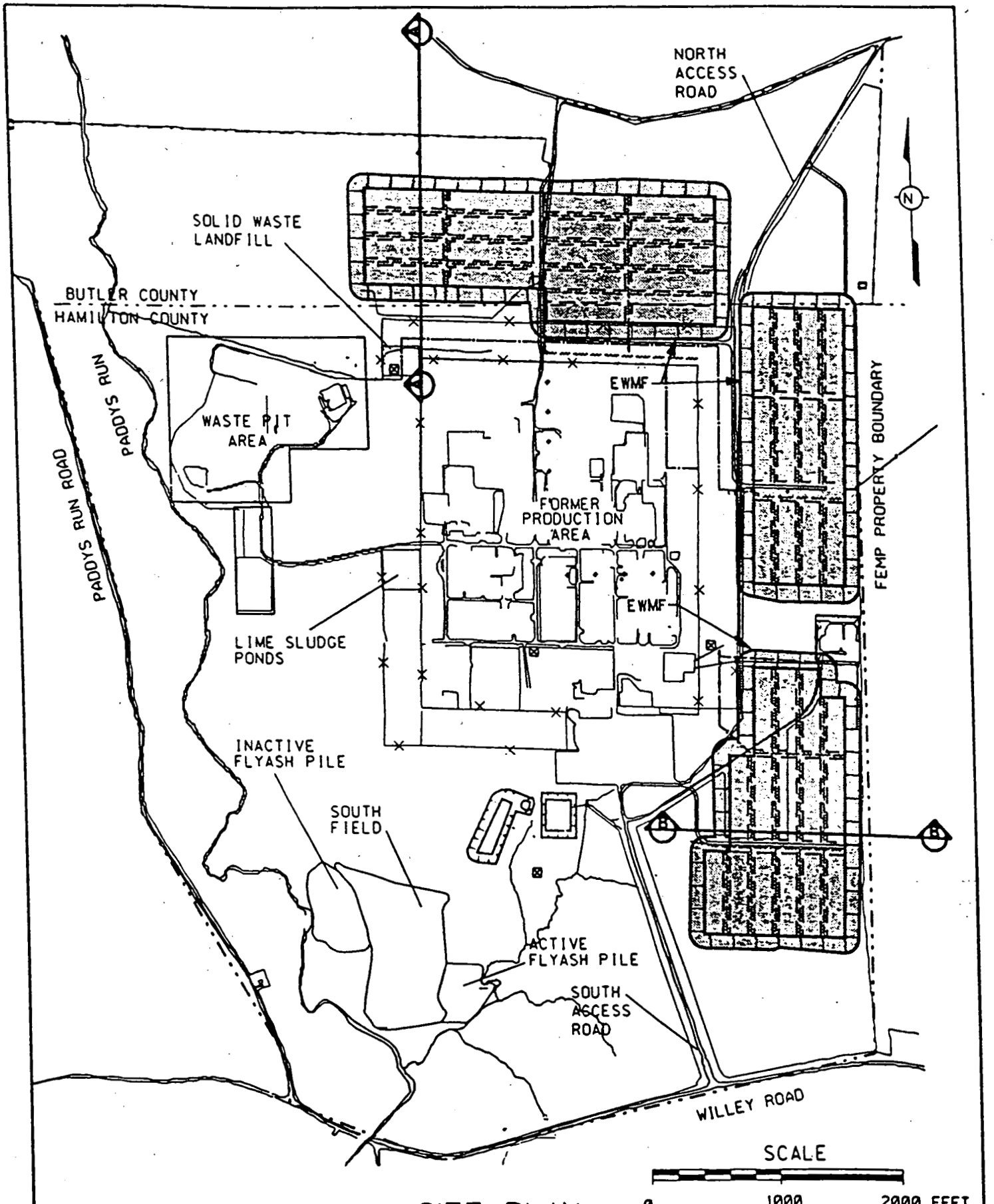


SITE PLAN
CONCEPTUAL LAYOUT
ENGINEERED WASTE MANAGEMENT FACILITY (EWMF)

OPERABLE UNIT 2

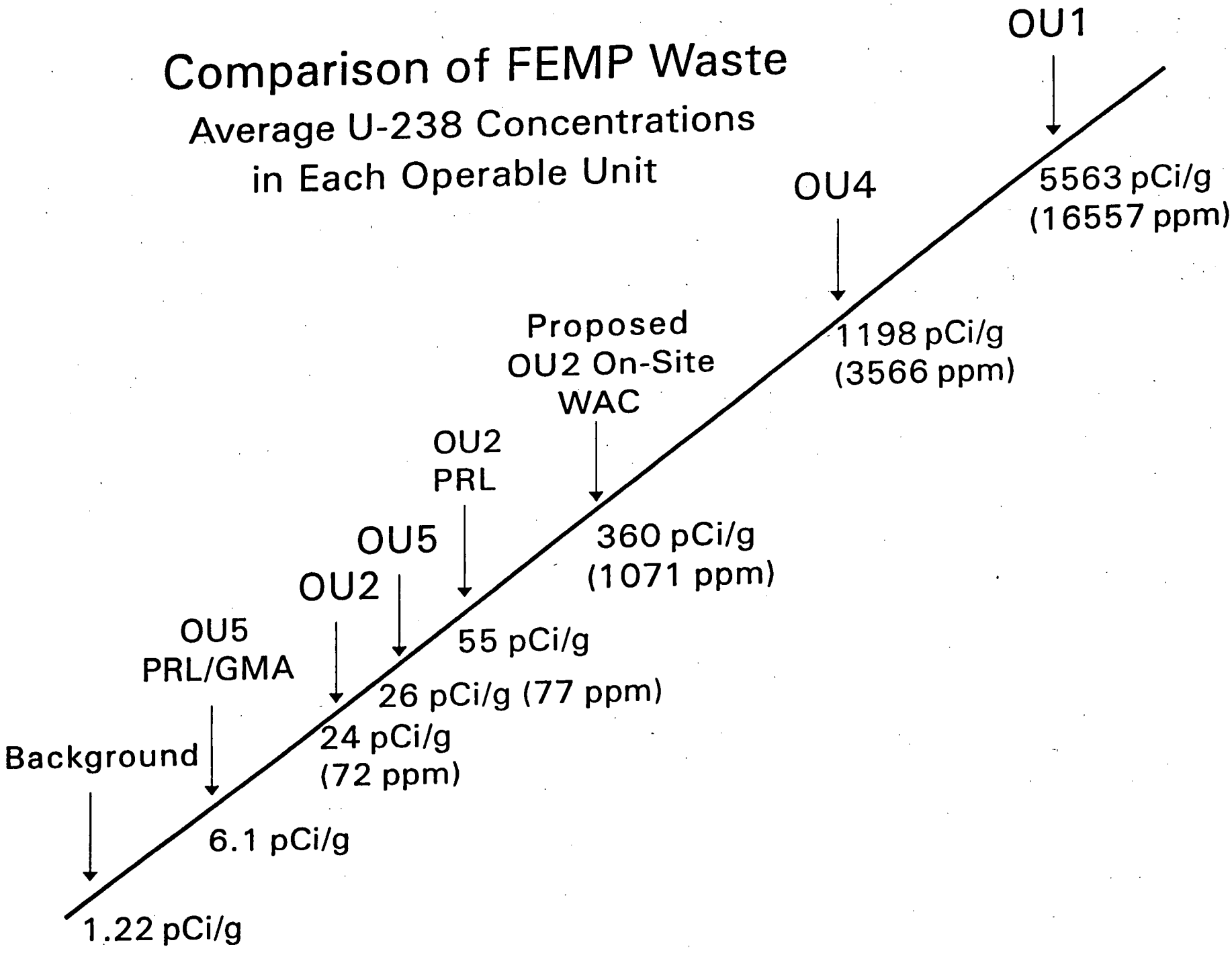
FEMP

HOW WILL THE DISPOSAL FACILITY COMPARE TO OTHER UMTRA/LOW LEVEL DISPOSAL FACILITIES?

- Comparison of waste
- Comparison of cross-section
- Retrievability

Comparison of FEMP Waste

Average U-238 Concentrations in Each Operable Unit



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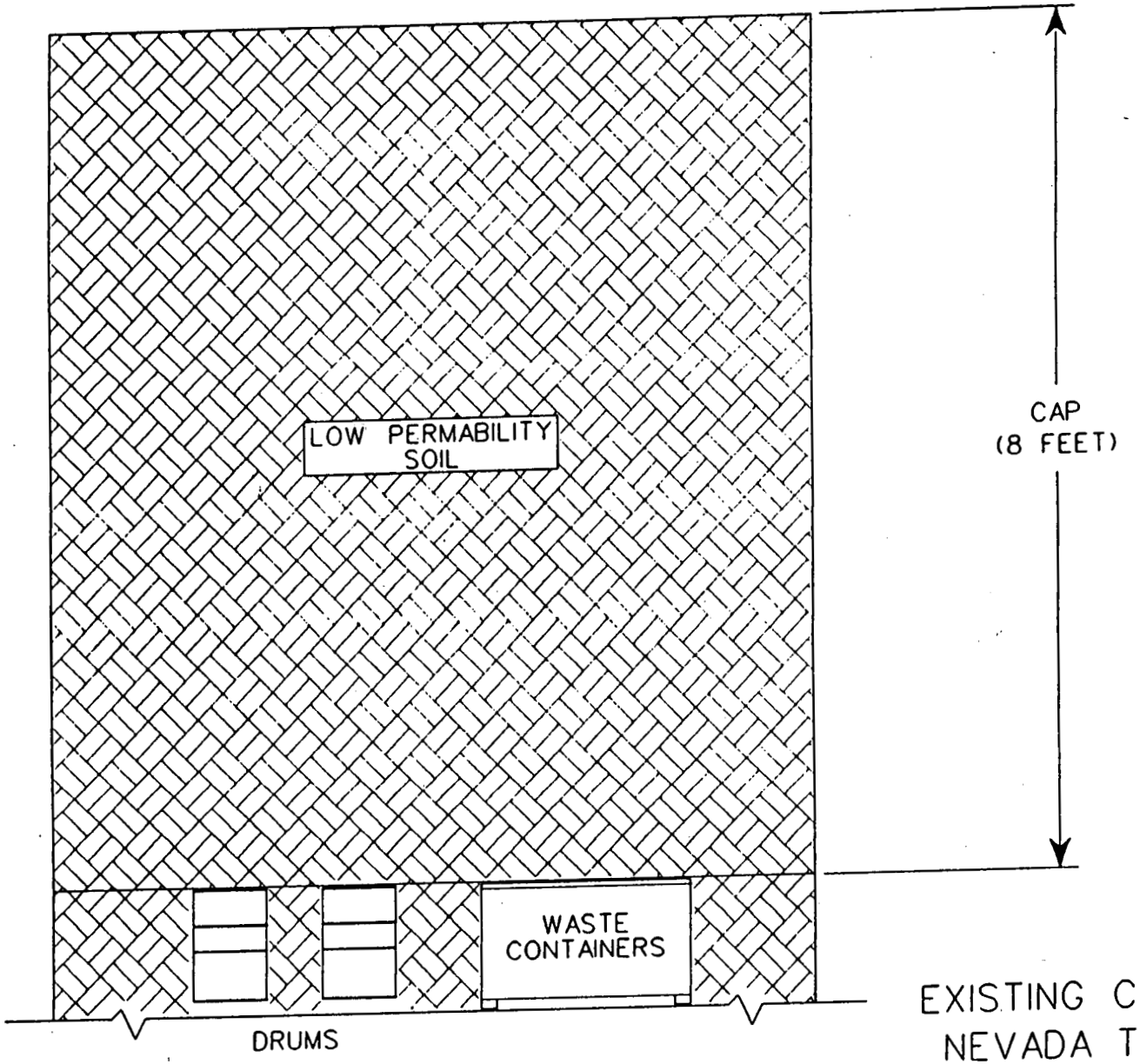

EXISTING CAP DESIGN
NEVADA TEST SITE

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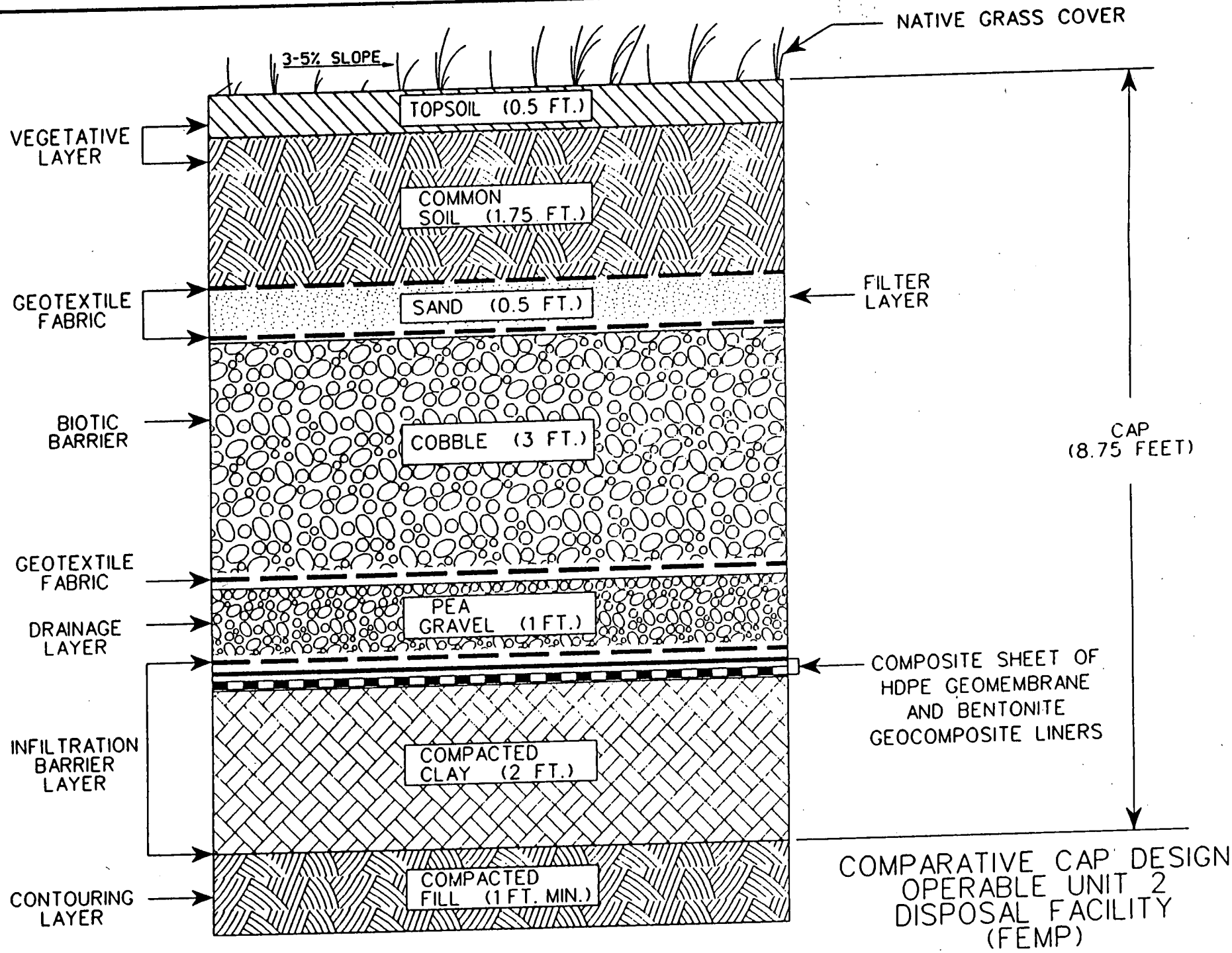

COMPARATIVE CAP DESIGN
OPERABLE UNIT 2
DISPOSAL FACILITY
(FEMP)

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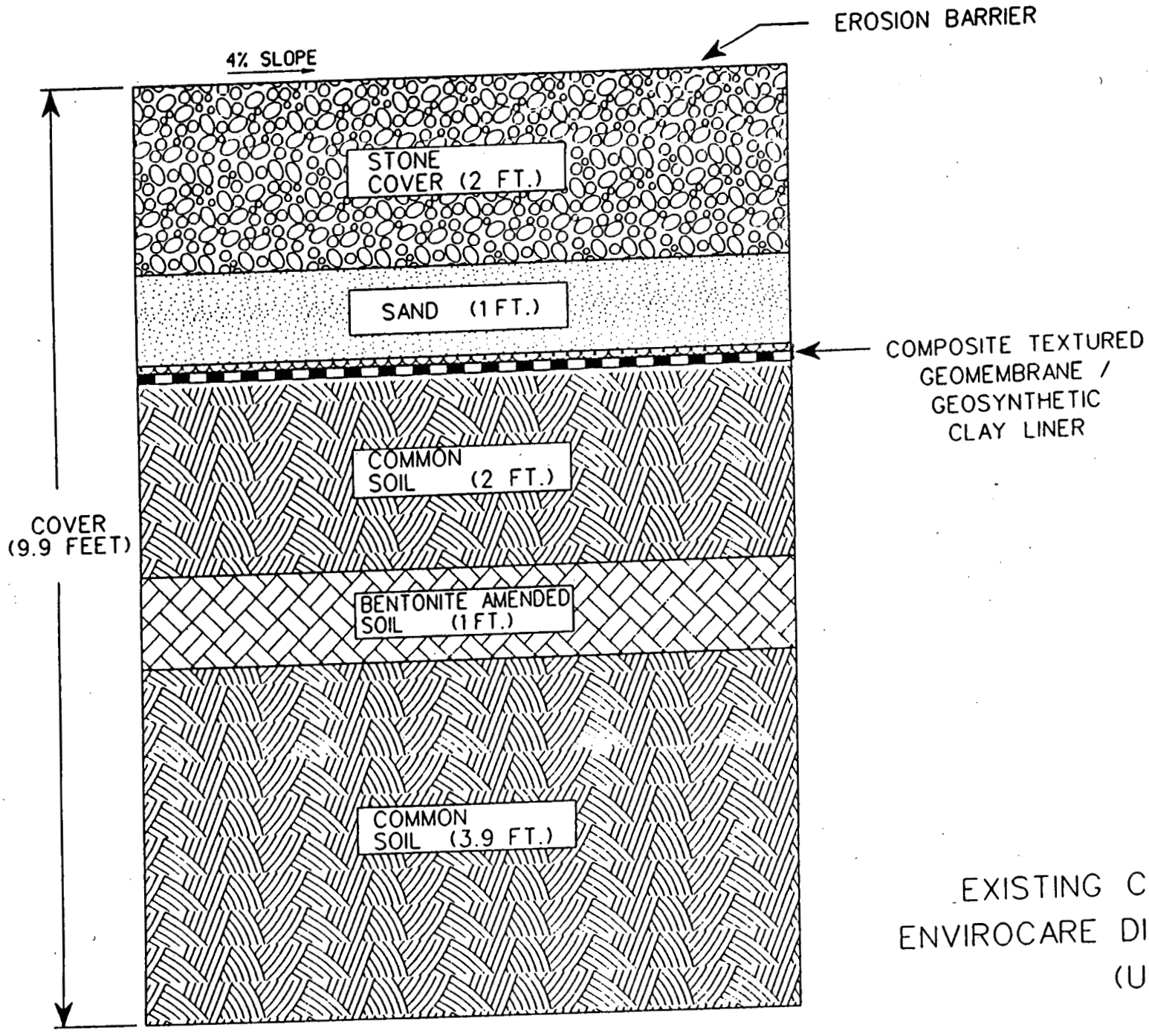

EXISTING COVER DESIGN
ENVIROCARE DISPOSAL FACILITY
(UTAH)

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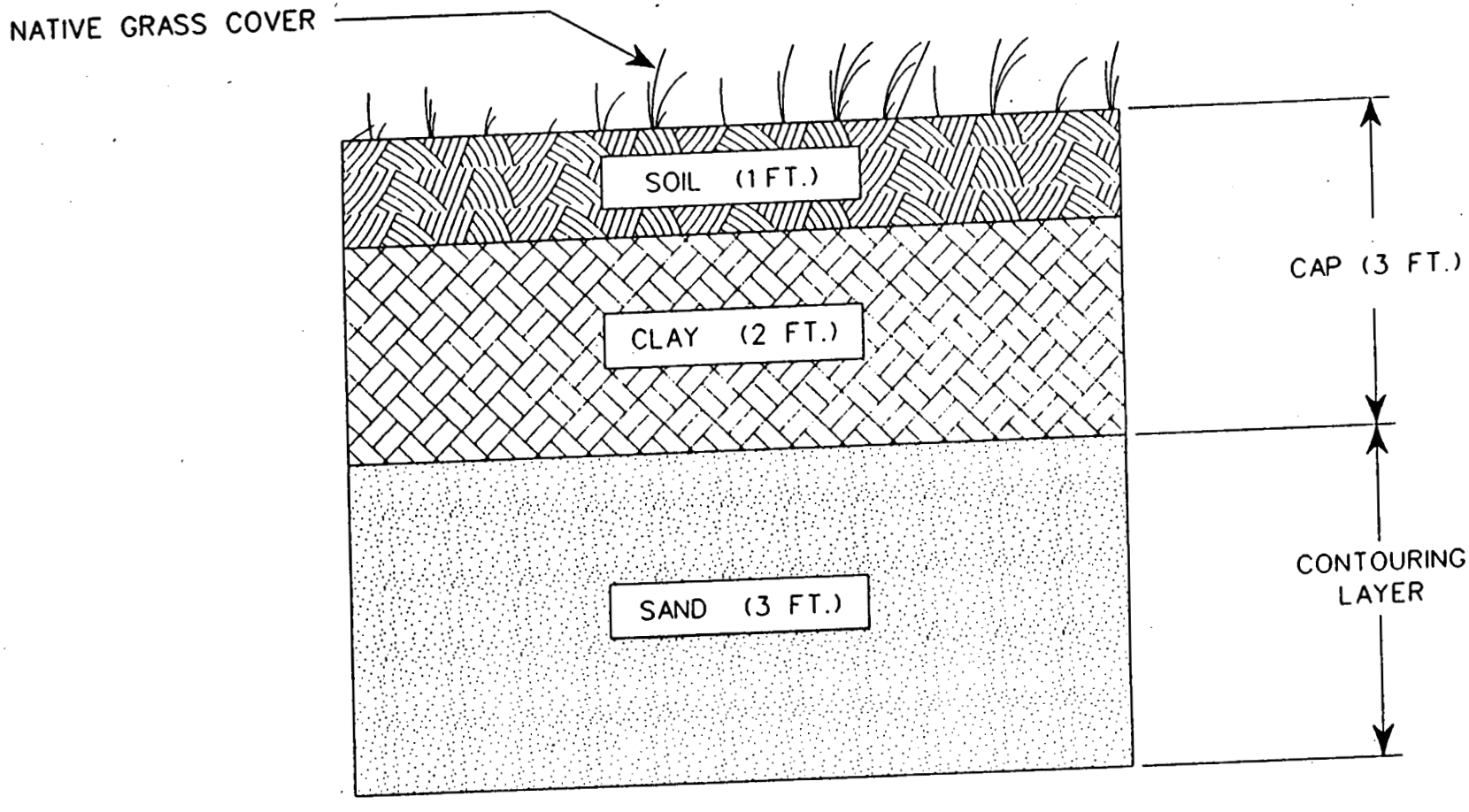

EXISTING CAP DESIGN
CHEM-NUCLEAR'S WASTE MANAGEMENT FACILITY
(SOUTH CAROLINA)

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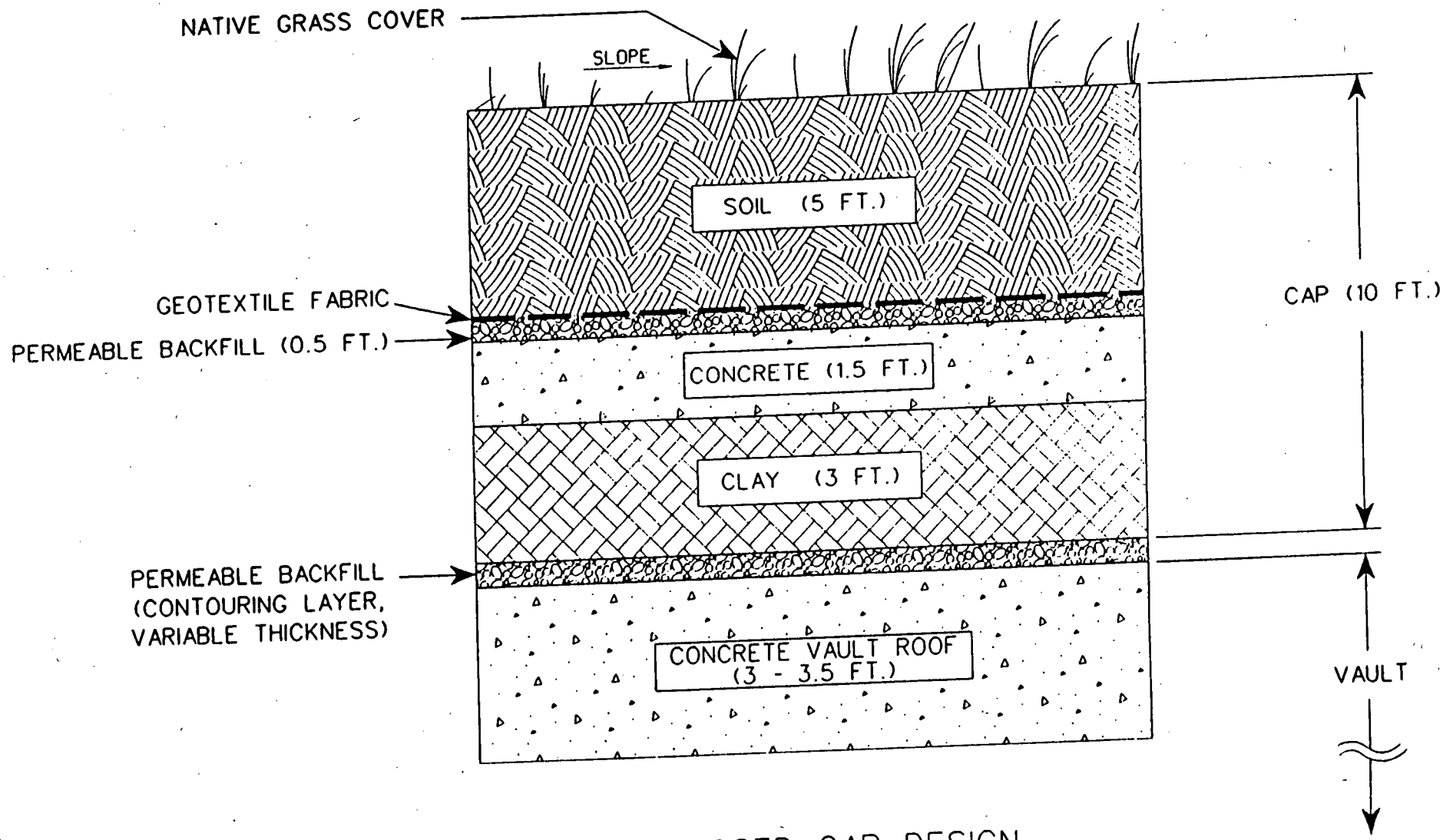

PROPOSED CAP DESIGN
CENTRAL INTERSTATE LOW LEVEL WASTE
DISPOSAL FACILITY
(NEBRASKA)

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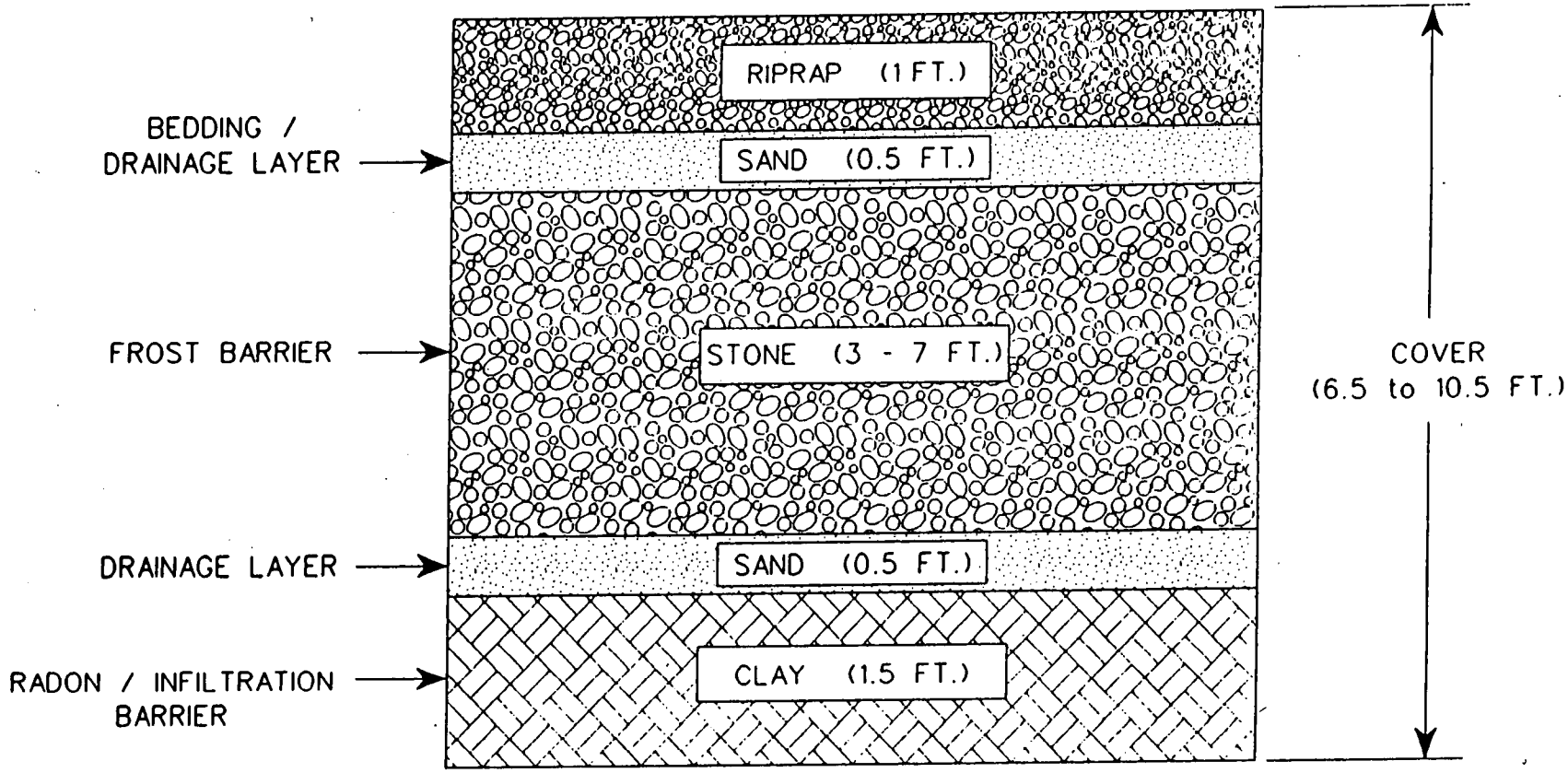

PLANNED COVER DESIGN
ESTES GULCH DISPOSAL SITE
(COLORADO)

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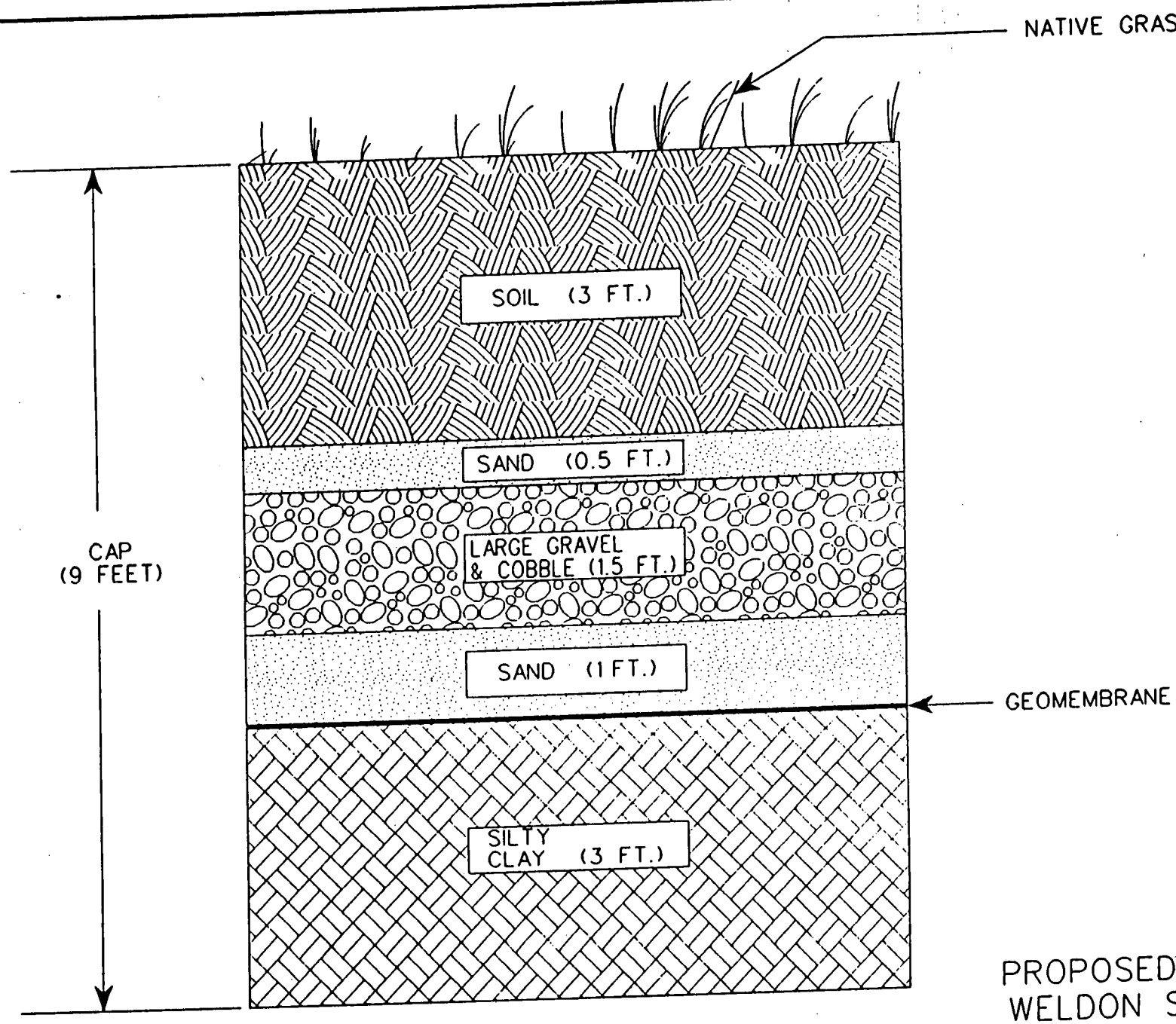

PROPOSED CAP DESIGN
WELDON SPRINGS SITE
(MISSOURI)

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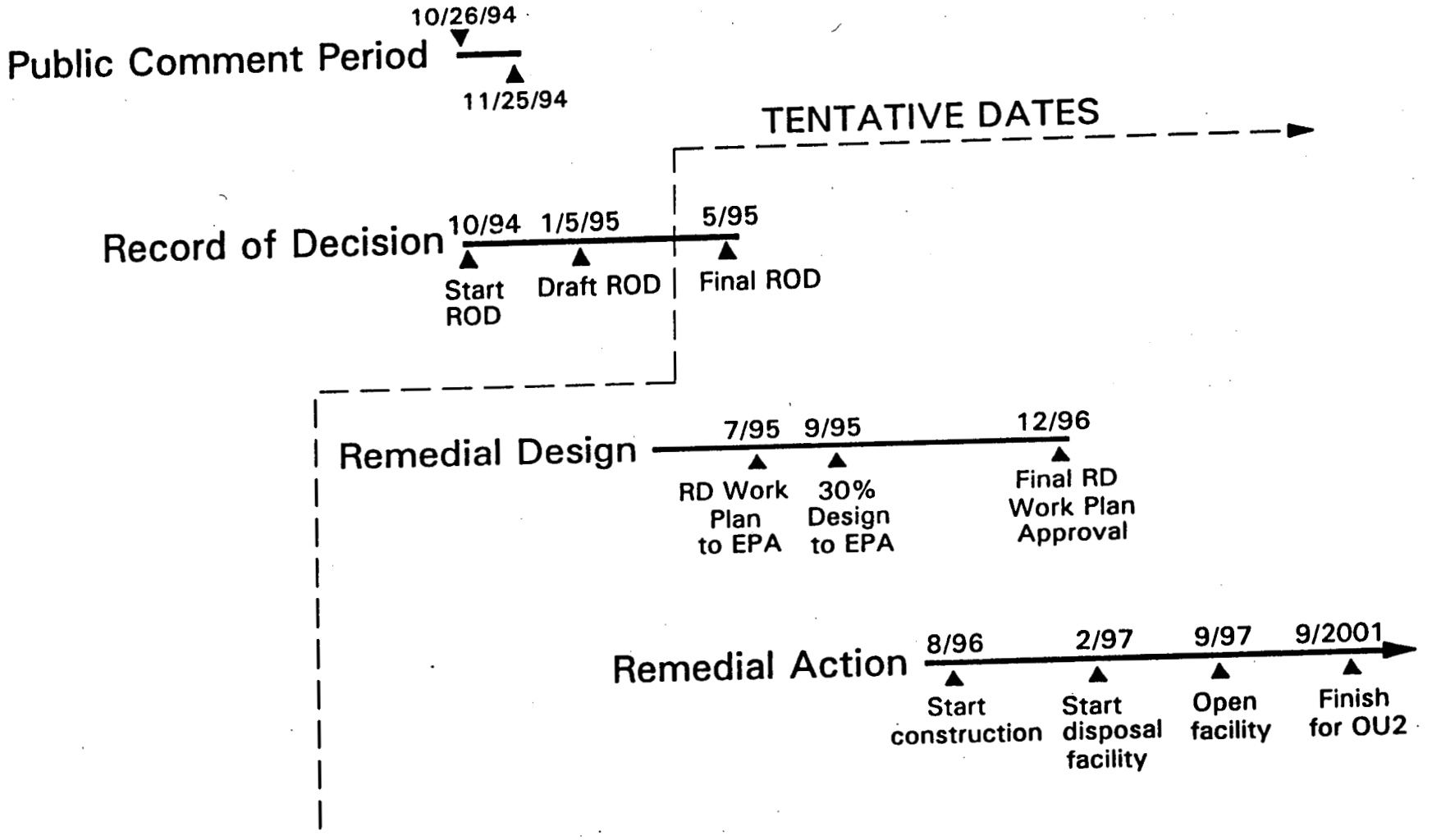
OPERABLE UNIT 2 PATH FORWARD



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PUBLIC PARTICIPATION IN OPERABLE UNIT 2

Remedial Investigation — 2/18/94 (NOA), 5/10/94 (W)

Feasibility Study — 4/29/94 (NOA), 6/28/94 (W)

Proposed Plan — 10/25/94 (W)

Public Comment Period — 10/26/94 (NOA), 11/08/94 (PM)
Start date: 10/26/94
End date: 11/25/94

Record of Decision — 1/5/95 (NOA), 5/95 (tentative) (NOI)
Start date: 10/26/94
End date: 5/95

Remedial Design — (dates of RD and RA to be determined) W, W, W
Start date: 7/95
End date: 12/96

Remedial Action — W, W
Start date: 8/96
End date for OU2: 9/2001

NOA = Notice of Availability
W = Public Workshop
PM = Public Meeting
NOI = Notice of Intent

Key Dates

Jan. 5, 1995 - Draft ROD to EPA
May 1995 - Final ROD
July 1995 - RD Work Plan to EPA (tentative)
Sept. 1995 - 30% Design to EPA (tentative)
Aug. 1996 - Start construction (tentative)
Sept. 1997 - Open disposal facility (tentative)

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Operable Unit 2 On-Site Disposal Facility Workshop

October 25, 1994

EVALUATION

Thank you for attending the informational meeting on the potential, on-site disposal facility at the FEMP. Please take a few moments to answer the questions below:

1. Were the presentations adapted to a suitable level of knowledge for this audience?

2. Did the presentations and information provided (fact sheet) help clarify issues you may have had concerning the potential, on-site disposal facility at the FEMP?

3. Were the presentations too long? too short?

4. Did the speakers explain in simple language and in enough detail the information/materials they presented?

5. Were questions adequately answered throughout the meeting?

6. Did you like the Oak Room and the arrangement of the room?

7. How did you find out about tonight's meeting? Postcard___ newspaper ad___ flyer___ FRESH meeting___ Envoy Program___ newspaper article___

8. Do you have any other constructive comment/criticism about tonight's meeting?

OPTIONAL

Name_____ Phone_____