OPERABLE UNIT 1100

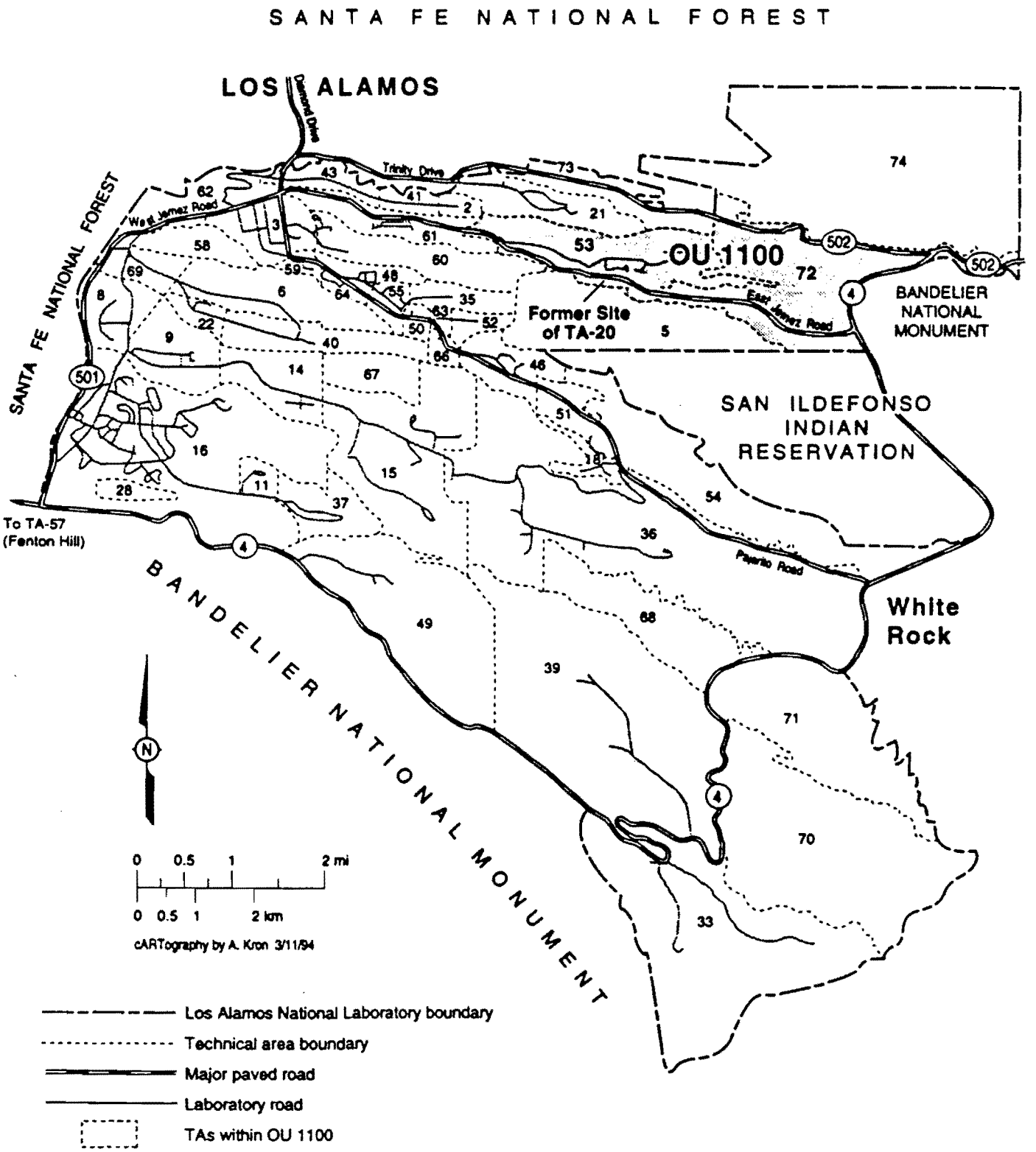
BRIEFING AND SITE TOUR

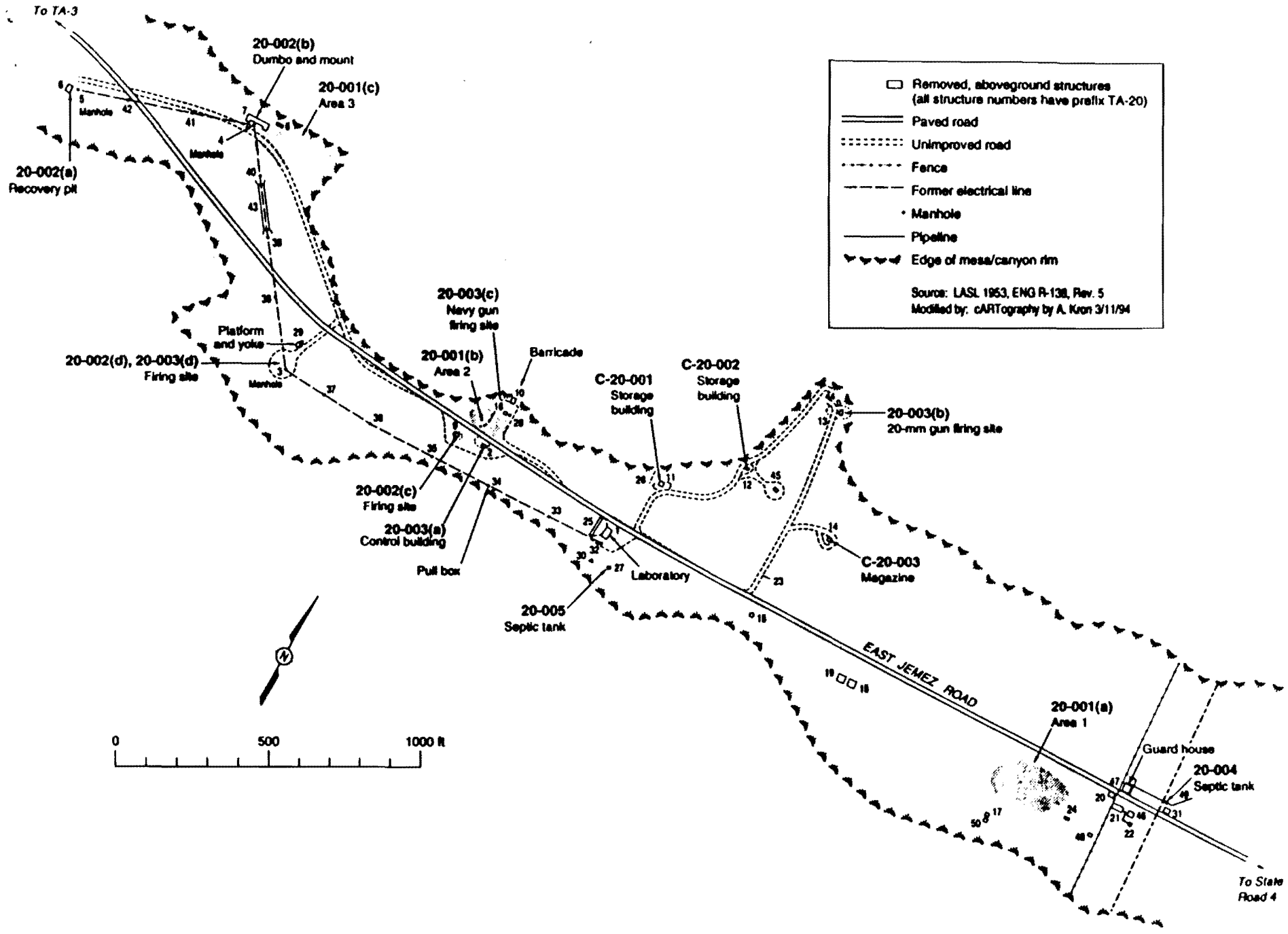
AUGUST 16, 1994

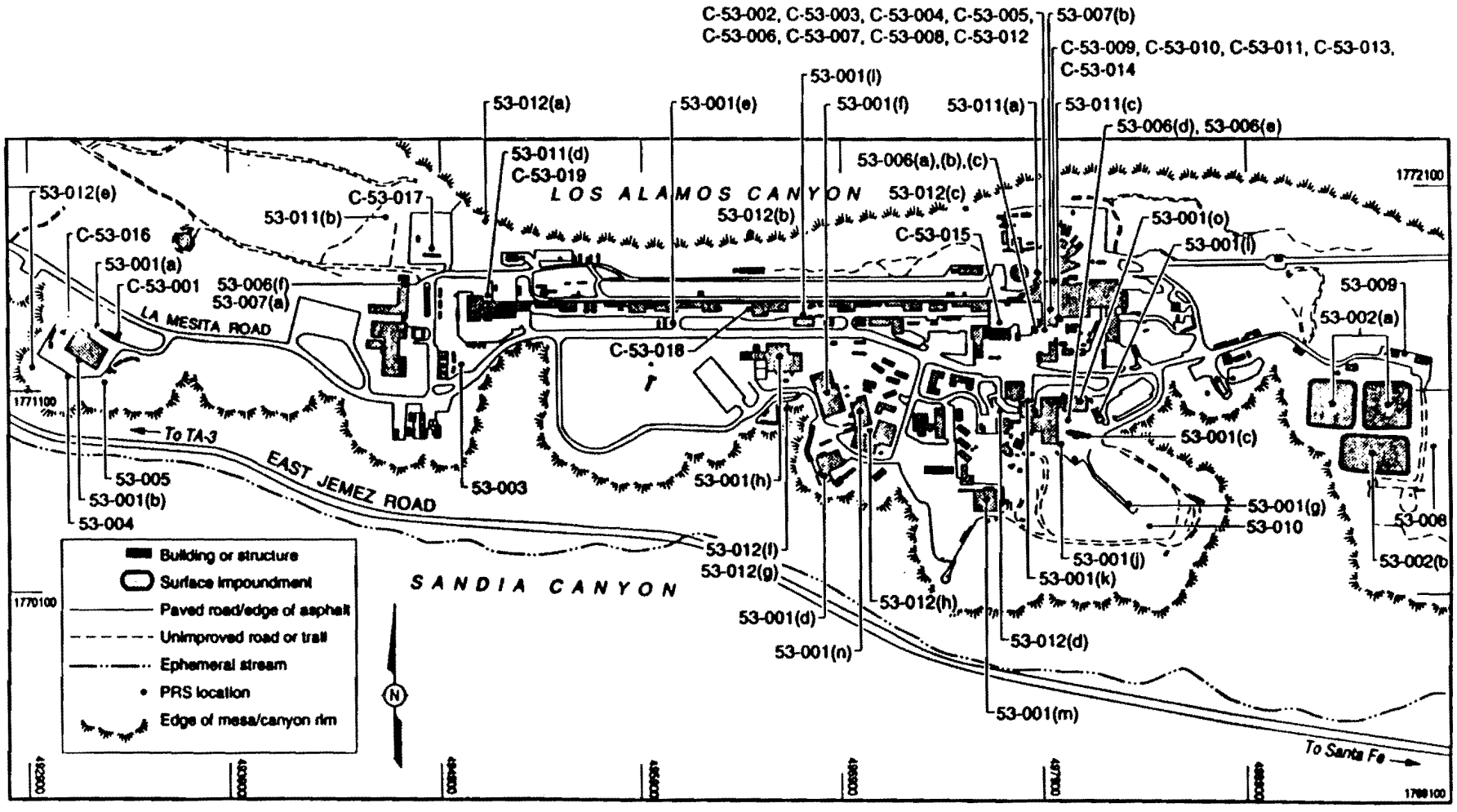
1618

OPERABLE UNIT 1100 -- TECHNICAL AREAS

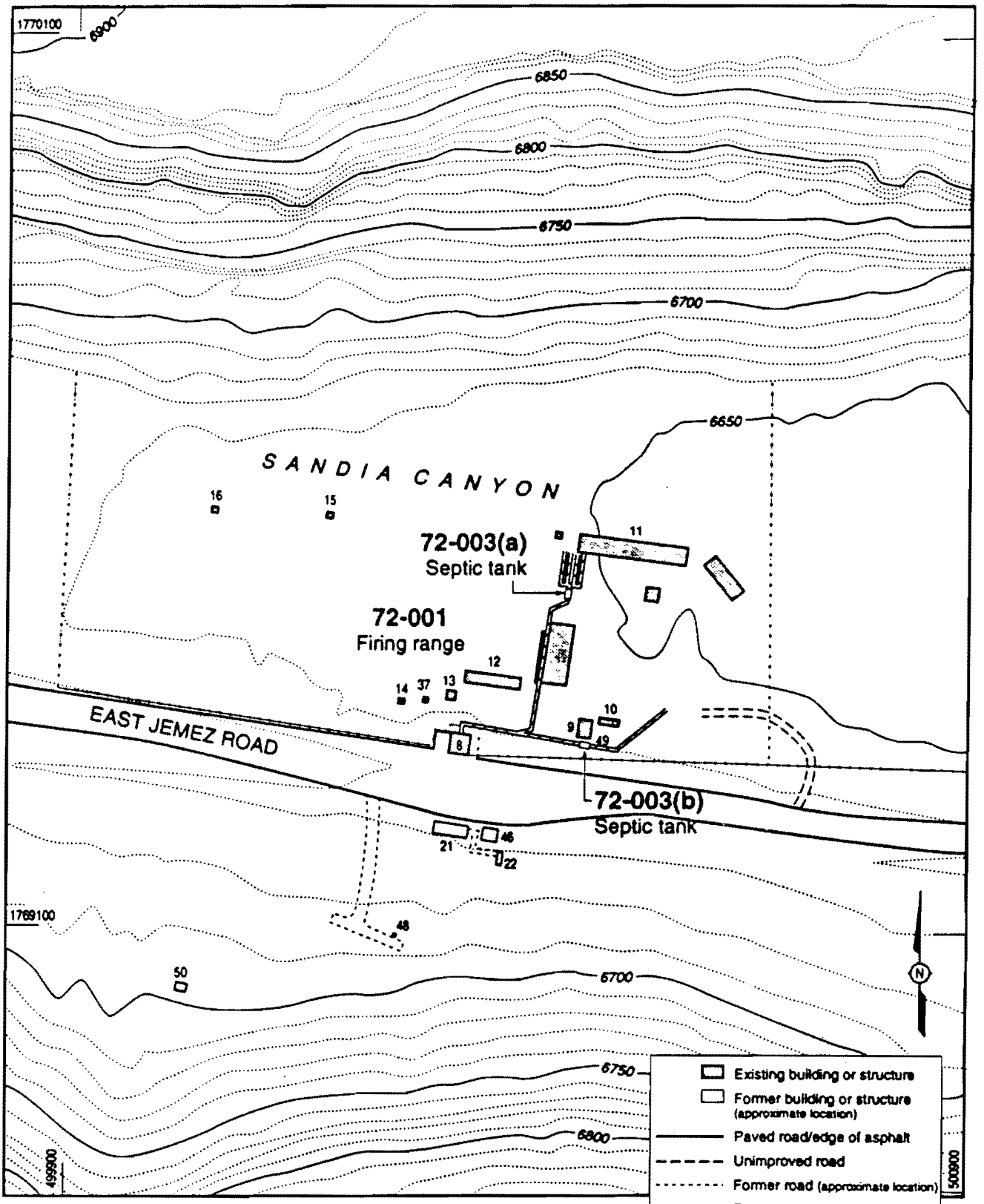
- TA-20
  - WW-II firing site used for initiator development
  - Active 1945 to 1948
- TA-53
  - Los Alamos Meson Physics Facility
  - Active 1967 to present (first operation 1971)
- TA-72
  - Protective Force small-arms firing range
  - Active 1966 to present


SANTA FE NATIONAL FOREST
LOS ALAMOS
Diamond Drive
Trinity Drive
West Jemez Road
East Jemez Road
Pajarito Road
SANTA FE NATIONAL FOREST
OU 1100
Former Site of TA-20
BANDELIER NATIONAL MONUMENT
SAN ILDEFONSO INDIAN RESERVATION
White Rock
BANDELIER NATIONAL MONUMENT
To TA-57 (Fenton Hill)
501
502
4
N
0 0.5 1 2 mi
0 0.5 1 2 km
cARTography by A. Kron 3/11/94
Los Alamos National Laboratory boundary
Technical area boundary
Major paved road
Laboratory road
TAs within OU 1100


To TA-3
20-002(b)
Dumbo and mount
20-001(c)
Area 3
20-002(a)
Recovery pit
Manhole
Manhole
Manhole
Platform and yoke
20-002(d), 20-003(d)
Firing site
20-003(c)
Navy gun firing site
20-001(b)
Area 2
Barricade
C-20-001
Storage building
C-20-002
Storage building
20-003(b)
20-mm gun firing site
20-002(c)
Firing site
20-003(a)
Control building
Pull box
Laboratory
20-005
Septic tank
C-20-003
Magazine
EAST JEMEZ ROAD
20-001(a)
Area 1
Guard house
20-004
Septic tank
To State Road 4
Removed, aboveground structures
(all structure numbers have prefix TA-20)
Paved road
Unimproved road
Fence
Former electrical line
Manhole
Pipeline
Edge of mesa/canyon rim
Source: LASL 1953, ENG R-138, Rev. 5
Modified by: cARTography by A. Kron 3/11/94
0
500
1000 ft



Source: FIMAD 1993 G101407
Modified by: cARTography by A. Kron 3/11/94



Sources: FIMAD 1993 G101407
LASL 1959, ENG R-138(?), Rev. ?
LASL 1955, ENG R-138, Rev. 8
LANL 1989, ENG-R7126

0 100 200 300 ft

Modified by: cARTography by A. Kron 12/10/93

OPERABLE UNIT 1100 -- ENVIRONMENTAL SETTING

- Mesita de los Alamos (TA-53)

  - Underlain by Bandelier tuff
  - Approximately 1000 feet to main aquifer
  - Perched aquifer suspected
  - Runoff to Sandia and Los Alamos Canyons

- Sandia Canyon (TA-20 and TA-72)

  - Ephemeral stream, perennial flow in upper reach
  - Alluvial aquifer suspected, but not confirmed

- Los Alamos Canyon

  - No PRSs

OPERABLE UNIT 1100 -- PRS AGGREGATES

- A -- Sandia Canyon Landfills
- B -- Firing Sites
- C -- Waste and Product Storage Areas
- D -- Underground Storage Tanks
- E -- Septic Systems
- F -- Outfalls
- G -- Surface Impoundments

AGGREGATE A -- SANDIA CANYON LANDFILLS

- 3 Suspected Burial Areas
- Wastes Consist of Metal Debris and Gun Barrels
- Sites Reportedly Excavated During 1948 Cleanup

AGGREGATE B -- FIRING SITES

- 4 Firing Sites (Dumbos, Steel-Lined Pit, Firing Points)
- 2 Gun Firing Sites (20-mm and Navy Guns)
- 1 Impact Area
- 3 Associated Structures (Storage Buildings, Magazine)

AGGREGATE C -- WASTE AND PRODUCT STORAGE

- 15 Satellite Storage Areas
- 1 Bead Blaster
- 1 Liquid Waste Pit
- 2 Aboveground Liquid Low-Level Waste Tanks
- 1 Boneyard
- 2 Oil Storage Areas
- 24 Oil-Filled Electrical Equipment

AGGREGATE D -- UNDERGROUND STORAGE TANKS

- 5 Liquid Low-Level Waste Tanks
- 1 Ion-Exchange Tank

AGGREGATE E -- SEPTIC SYSTEMS

- 1 Active Septic Tank and Leach Field
- 1 Active Holding Tank
- 2 Inactive Septic Tanks

AGGREGATE F -- OUTFALLS

- 8 NPDES-Permitted Outfalls
  - 7 Cooling tower blowdown
  - 1 Noncontact cooling water

AGGREGATE G -- SURFACE IMPOUNDMENTS

- 3 Surface Impoundments
  - 2 Inactive clay-lined sanitary waste
  - 1 Active plastic-lined radioactive liquid
- All RCRA Interim Status Mixed Waste Impoundments
  - Closure plan submitted for sanitary waste impoundments
  - Radioactive waste impoundment to be closed rather than permitted

DISPOSITION OF PRSs

- 83 Total PRSs
- 20 Phase I Screening Assessments
- 12 Deferred Investigation (Includes Closures)
- 51 Recommended NFA

RFI Work Plan for Operable Unit 1100

Environmental Restoration Program

May 1994

A Department of Energy
Environmental Cleanup Program

FINAL DRAFT

Los Alamos
NATIONAL LABORATORY

LA-UR-94-1097

HSWA LANL 2/1100

TV

NA

TABLE 1-3

OU 1100 PRSs PROPOSED FOR PHASE I INVESTIGATION OR DEFERRED INVESTIGATION

PRS No.	1988 SWMU No.	HSWA Permit Table A SWMU No.	Work Plan Figure No.	Work Plan Section No.	Description
Aggregate A - Landfills					
20-001(a)	20-001(a)	20-001(a)	1-3	5.1	Sandia Canyon landfill Area 1
20-001(b)	20-001(b)	20-001(b)	1-3	5.1	Sandia Canyon landfill Area 2
20-001(c)	20-001(c)	20-001(c)	1-3	5.1	Sandia Canyon landfill Area 3
Aggregate B - Firing Sites					
20-002(a)	20-002	20-002	1-3	5.2	Firing site
20-002(b)	20-002		1-3	5.2	Firing site
20-002(c)	20-002		1-3	5.2	Firing site
20-002(d)	20-002		1-3	5.2	Firing site
20-003(b)	20-003(b)		1-3	5.2	Gun firing site
20-003(c)	20-003(c)		1-3	5.2	Gun firing site
72-001	0-015(a)		1-5	5.2	Firing range
Aggregate C - Waste and Product Storage Areas					
53-001(a)	53-001(a)	53-001(a)	1-4	5.3	Waste accumulation area
53-001(b)	53-001(b)	53-001(b)	1-4	5.3	Waste accumulation area
53-001(c)	53-001(c)		1-4	6.4	Waste accumulation area
53-001(d)	53-001(d)		1-4	6.4	Waste accumulation area
53-001(e)			1-4	5.3	Waste accumulation area
53-001(g)			1-4	5.3	Waste accumulation area
53-001(k)			1-4	6.4	Waste accumulation area
53-005	53-005	53-005	1-4	5.3	Waste disposal pit
53-008	53-008		1-4	5.3	Boneyard
53-009	53-009		1-4	6.4	Oil storage area
53-010			1-4	5.3	Oil storage area
Aggregate D - Underground Storage Tanks					
53-006(a)	53-006(a)		1-4	6.4	Underground waste tank
53-006(b)	53-006(b)	53-006(b)	1-4	6.2	Underground waste tank
53-006(c)	53-006(c)	53-006(c)	1-4	6.2	Underground waste tank
53-006(d)	53-006(d)	53-006(d)	1-4	6.2	Underground waste tank
53-006(e)	53-006(e)	53-006(e)	1-4	6.2	Underground waste tank
53-006(f)			1-4	6.4	Underground waste tank
Aggregate E - Septic Systems					
20-004	20-004(b)		1-3	5.5	Septic system
20-005	20-004(c)		1-3	5.5	Septic system
Aggregate F - Outfalls					
53-012(e)			1-4	5.6	Outfall
Aggregate G - Surface Impoundments					
53-002(a)	53-002(a)	53-002(a)	1-4	6.2	Surface impoundment
53-002(b)	53-002(b)	53-002(b)	1-4	6.2	Surface impoundment

TABLE 1-4

OU 1100 PRSs PROPOSED FOR NO FURTHER ACTION

PRS No.	1988 SWMU No.	HSWA Permit Table A SWMU No.	Work Plan Figure No.	Work Plan Section No.	Description
Aggregate B - Firing Sites					
20-003(a)	20-003(a)	20-003(a)	1-3	6.1	Gun firing site control building
20-003(d)	20-003(d)		1-3	6.3	Firing site
C-20-001			1-3	6.3	Storage building
C-20-002			1-3	6.3	Storage building
C-20-003			1-3	6.3	Magazine
72-002	0-011(f)		1-5	6.3	Impact area
Aggregate C - Waste and Product Storage Areas					
53-001(f)			1-4	6.3	Waste accumulation area
53-001(h)			1-4	6.3	Waste accumulation area
53-001(i)			1-4	6.3	Waste accumulation area
53-001(j)			1-4	6.3	Waste accumulation area
53-001(l)			1-4	6.3	Waste accumulation area
53-001(m)			1-4	6.3	Waste accumulation area
53-001(n)			1-4	6.3	Waste accumulation area
53-001(o)			1-4	6.3	Waste accumulation area
53-004	53-004		1-4	6.3	Bead blaster
53-007(a)	53-007(a)	53-007(a)	1-4	6.1	Waste tanks
53-007(b)	53-007(b)	53-007(b)	1-4	6.1	Waste tanks
53-011(a)			1-4	6.3	PCB transformer
53-011(b)			1-4	6.3	PCB transformer
53-011(c)			1-4	6.3	PCB transformer
53-011(d)			1-4	6.3	PCB transformer
53-011(e)			1-4	6.3	PCB transformer
C-53-001			1-4	6.3	PCB oil leak
C-53-002			1-4	6.3	PCB oil leak
C-53-003			1-4	6.3	PCB oil leak
C-53-004			1-4	6.3	PCB oil leak
C-53-005			1-4	6.3	PCB oil leak
C-53-006			1-4	6.3	PCB oil leak
C-53-007			1-4	6.3	PCB oil leak
C-53-008			1-4	6.3	PCB oil leak
C-53-009			1-4	6.3	PCB oil leak
C-53-010			1-4	6.3	PCB oil leak
C-53-011			1-4	6.3	PCB oil leak
C-53-012			1-4	6.3	PCB oil leak
C-53-013			1-4	6.3	PCB oil leak
C-53-014			1-4	6.3	PCB oil leak
C-53-015			1-4	6.3	PCB oil leak
C-53-016			1-4	6.3	PCB oil leak
C-53-017			1-4	6.3	PCB oil leak
C-53-018			1-4	6.3	PCB oil leak
C-53-019			1-4	6.3	PCB oil leak

TABLE 1-4

OU 1100 PRSs PROPOSED FOR NO FURTHER ACTION (concluded)

PRS No.	1988 SWMU No.	HSWA Permit Table A SWMU No.	Work Plan Figure No.	Work Plan Section No.	Description
Aggregate E - Septic Systems					
53-003	53-003		1-4	6.3	Septic system
73-003(a)			1-5	6.3	Septic system
73-003(b)			1-5	6.3	Septic system
Aggregate F - Outfalls					
53-012(a)			1-4	6.3	Outfall
53-012(b)			1-4	6.3	Outfall
53-012(c)			1-4	6.3	Outfall
53-012(d)			1-4	6.3	Outfall
53-012(f)			1-4	6.3	Outfall
53-012(g)			1-4	6.3	Outfall
53-012(h)			1-4	6.3	Outfall

TABLE 1-5

APPROXIMATE CONVERSION FACTORS FOR SELECTED SI (METRIC) UNITS

Multiply SI (Metric) Unit	By	To Obtain US Customary Unit
Cubic meters (m^3)	35	Cubic feet (ft^3)
Centimeters (cm)	0.39	Inches (in.)
Meters (m)	3.3	Feet (ft)
Kilometers (km)	0.62	Miles (mi)
Square kilometers (km^2)	0.39	Square miles (mi^2)
Hectares (ha)	2.5	Acres
Liters (L)	0.26	Gallons (gal.)
Grams (g)	0.035	Ounces (oz)
Kilograms (kg)	2.2	Pounds (lb)
Micrograms per gram (mg/g)	1	Parts per million (ppm)
Milligrams per liter (mg/L)	1	Parts per million (ppm)
Celsius (°C)	9/5 + 32	Fahrenheit (°F)