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STS-AMCHITKA

CANNIKIN

PRE-OPERATIONAL INFORMATION

LAS VEGAS DIVISION
EG&G, INC., 680 E. SUNSET RD., LAS VEGAS, NEV. 89101

NOTICE

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25 March 1971

STS-AMCHITKA
CANNIKIN PRE-OPERATIONAL INFORMATION

By

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Approved for Publication:

W. S. Barak Jr.

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W. S. Barak Jr.

CONTENTS

ILLUSTRATIONS

TABLES

1. INTRODUCTION

This information document has been prepared for the use of EG&G personnel participating in Project Cannikin, an LRL/Sandia STS-Amchitka (Site A) weapon test. Cannikin field operations are scheduled to begin in late June 1971.

EG&G also supported two earlier Amchitka events. The first was a 1965 nuclear seismic detection experiment called Longshot, a DASA-directed ARPA project.* Milrow, a LASL/Sandia calibration shot, was conducted in 1969.**

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*L. P. Donovan, "Pre-Operational Plan, Longshot," EG&G, Inc., Las Vegas, Nevada (1965).

**W. C. Roper and C. E. Young, "STS-Amchitka, Milrow Pre-Operational Information," Tech Memo No. L-239, EG&G, Inc., Las Vegas, Nevada, 27 June 1969.

2. AMCHITKA ISLAND

Amchitka Island belongs to the Rat Island group of the Aleutian Islands (see Figure 1), which extend from the Alaskan Peninsula about 1,000 miles toward the Soviet Union's Kamchatka Peninsula in the North Pacific and form the Southern limit of the Bering Sea. In the order of their proximity to Alaska, the five groups in the Aleutian chain are the Fox, Four Mountains, Andreanof, Rat, and Near Islands. Inhabited islands nearest Amchitka are Adak (190 miles east) and Shemya (240 miles northwest).

Amchitka is 42 to 45 miles long and has a maximum width of about 4-1/2 miles (see Figure 2). Very low in the southeast portion (351 feet above sea level at highest elevation), the island is relatively high and hilly in the northwest, where peaks rise to a height of 1,200 feet. Mid-island is characterized by rolling tundra and flat tableland dotted with shallow ponds and small lakes that vary from a few to several hundred acres in area and are from one to five feet deep. Reefs and kelp beds fringe most of the coast, and the shores are generally steep and rocky (see Figure 3).

Moss, grass, and sedge (see Figure 4) are the typical ground cover. Geologically, the island is characterized by several types of volcanic materials, including ash, tuff, breccia, and lava deposits, that are either exposed or covered by a soil mantle composed of clay and organic materials. Thickness of this surface mantle varies between less than one foot and an estimated 20 feet. Where the ground cover has been broken, the unstable mantle can be negotiated only by specially designed tracked vehicles.

Amchitka's weather, which is characterized by persistently overcast skies, variable high winds, and violent storms, is extremely local; over a distance of 20 miles, fog, high winds, rain, snow, and clear weather (a rarity) may be encountered. The northern shore has markedly better weather than the southern. The warm Japanese current moderates winter temperatures and maintains the surrounding waters mostly ice-free.

The mean annual temperature is 40° F; extremes of 15° F and 65° F have been recorded. The annual precipitation of 30 to 35 inches includes an average annual snowfall of 70 inches.

The average cloud ceiling is less than 1,000 feet. Visibility, which is less than three miles 60% of the year, in summer increases to 83%. Wind velocity averages 20 to 25 miles per hour in summer and is much higher in winter, when velocities exceeding 100 miles per hour sometimes occur.

The wind chill factor should be considered when determining the type or amount of protective clothing needed. For example, Amchitka's mean temperature

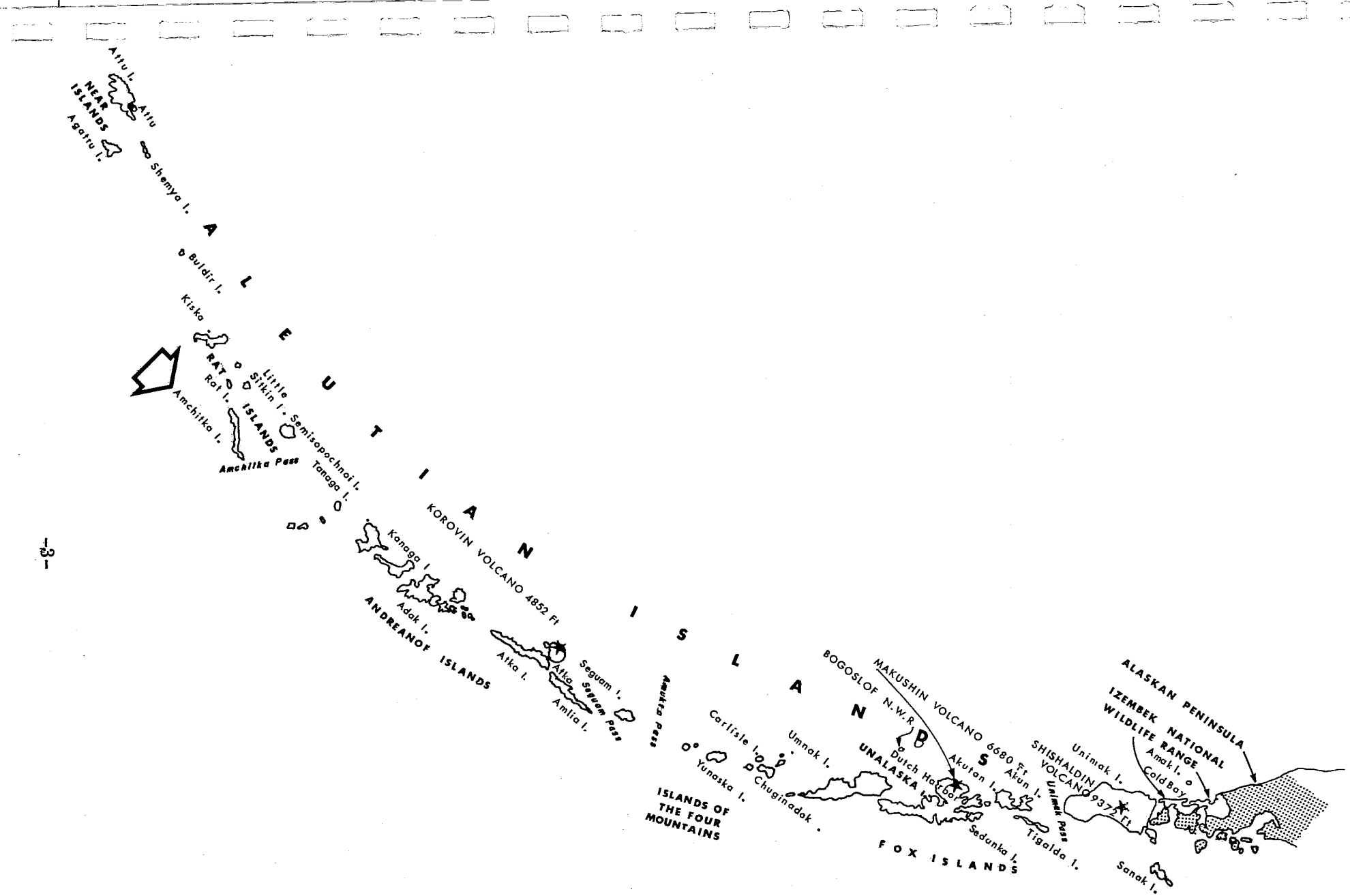

Figure 1. The Aleutian Islands.

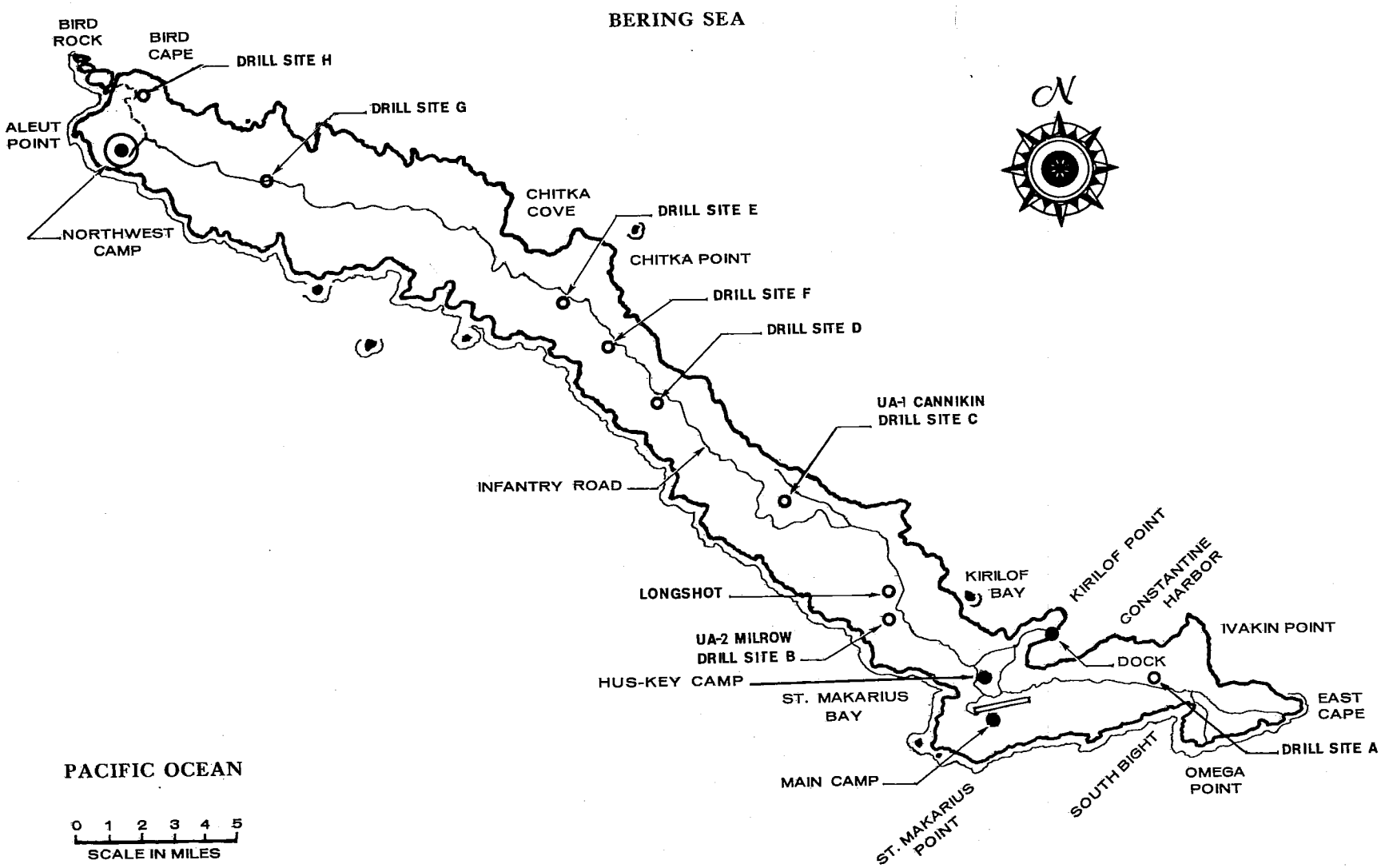

Figure 2. Amchitka Island.

Figure 3. Amchitka's southern shoreline (typical).

Figure 4. Typical ground cover.

of 40°F, when combined with a typical wind speed of 25 mph, results in a temperature equivalent of +12°F.

Wildlife is plentiful on and around Amchitka. Marine mammals include the sea otter (see Figure 5), harbor seal, and sea lion. The American bald eagle, the ptarmigan, and several varieties of duck and goose are found. The deeper lakes contain various types of freshwater fish, among them the Dolly Varden trout. Ocean fish include the halibut, cod, and greenling.

Amchitka's original Aleut inhabitants were evacuated by the U. S. Government during World War II. They have not returned. On demobilization, numerous quonset-type buildings, miles of asphalt runway and taxiway, hardstands, and several aircraft hangers were abandoned. The southeastern landscape is littered with military remnants.

The presence of anti-personnel (punji) stakes embedded on both sides of the low-lying barbed wire scattered about the island (see Figure 6), and unexploded ordnance buried in underground bunkers throughout the island, are ample reason for exercising care while exploring Amchitka.

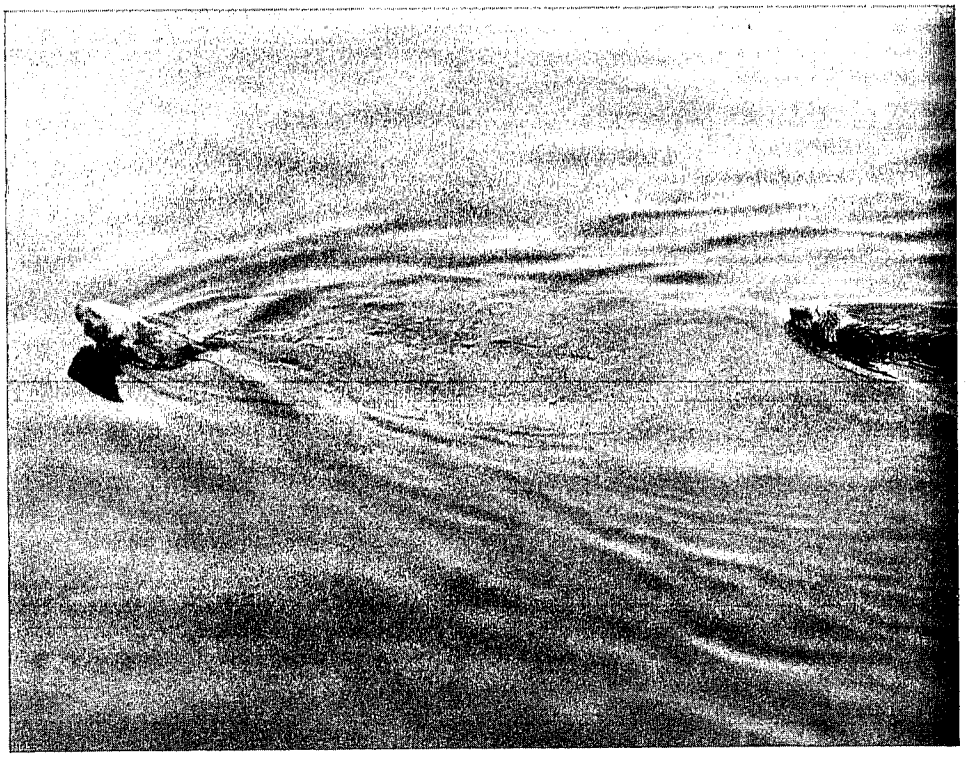

Figure 5. Sea otters.

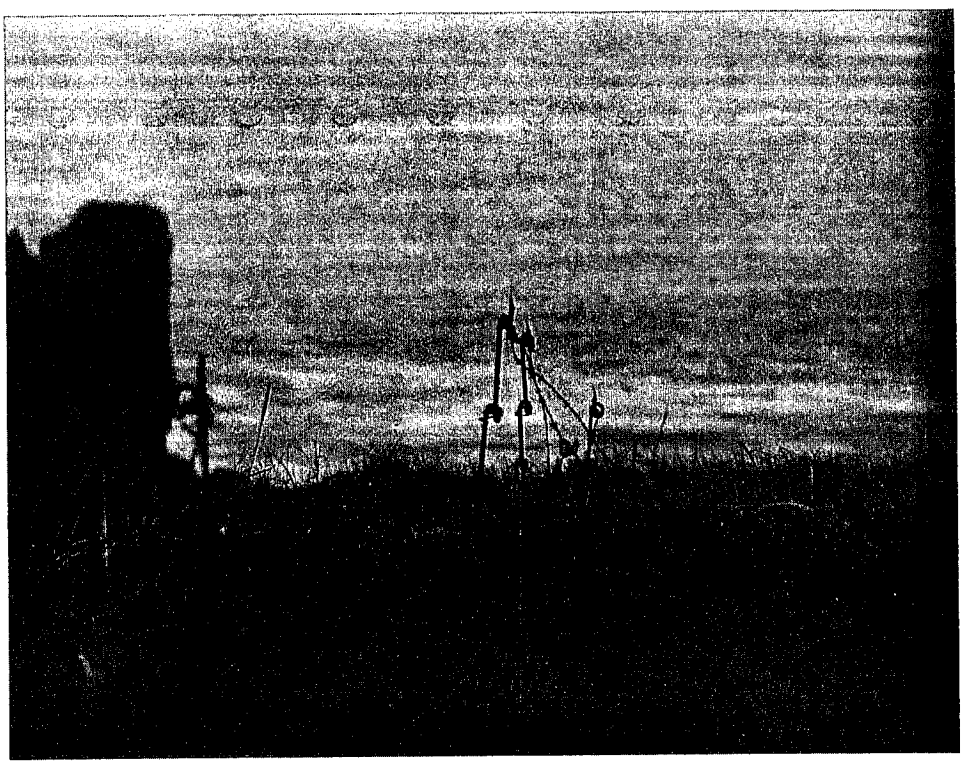

Figure 6. WW II barbed wire.

3. AMCHITKA'S FACILITIES AND ORGANIZATIONS

Amchitka's principal facilities are the base camp area and the northwest camp, which are connected by Infantry Road (see Figure 2). All shot drill sites, including Site C (UA-1, Cannikin) are located along this road, which runs the length of the island.

The base camp facilities incorporate several hardstands (as building foundations), two hangars (used for storage), and the Baker runway, which has been reconditioned to handle modern air traffic. The base camp area (see Figure 7) includes the following facilities:

1. Main Camp (see also Figures 8 and 9) - Living quarters for more than 700 men, mess hall, laundry room, barber shop, post office, offices and reproduction unit, and multipurpose building, including recreation hall; most of these facilities are connected by covered walkways.

2. Support Facilities (see also Figure 10) - Warehouses and storage facilities, power plant and substation, telephone exchange, LASL/LRL compound, fire station and fire pump house, motor pool, guard shack, and sewage lagoon.

3. Airport (see also Figure 10) - Runway, terminal and control tower, lighting systems (runway, approach, and sequential flashing), ground-controlled approach (GCA) radar site, and Air Resources Laboratory (ARL) facilities (radome, antenna, and office/briefing room).

4. Hus-Key Temporary Camp - Living quarters for 160 to 200 men, dispensary, storage facilities, kitchen/dining room, and offices.

5. Dock Area (Constantine Harbor) (see also Figure 11) - Docks and storage tanks.

The northwest camp (see Figures 12 and 13), which contains living quarters for about 200 men, a kitchen/dining room, a first aid station (not shown), utility and vehicle maintenance facilities, fuel and water storage tanks, and a generator bank, also includes an underground shelter, a helicopter pad, the CP compound, and a communications trailer park.

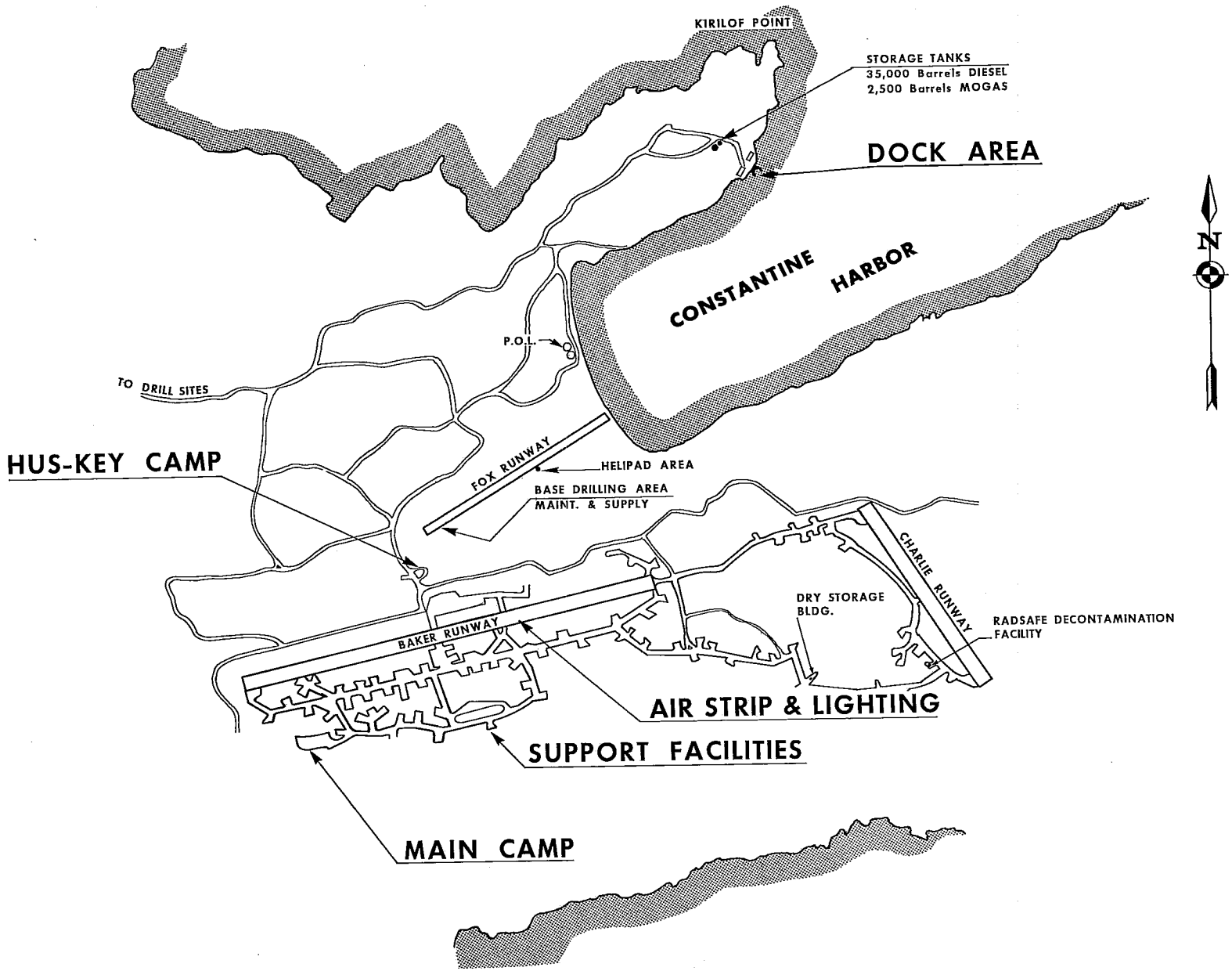

Figure 7. Base camp area.

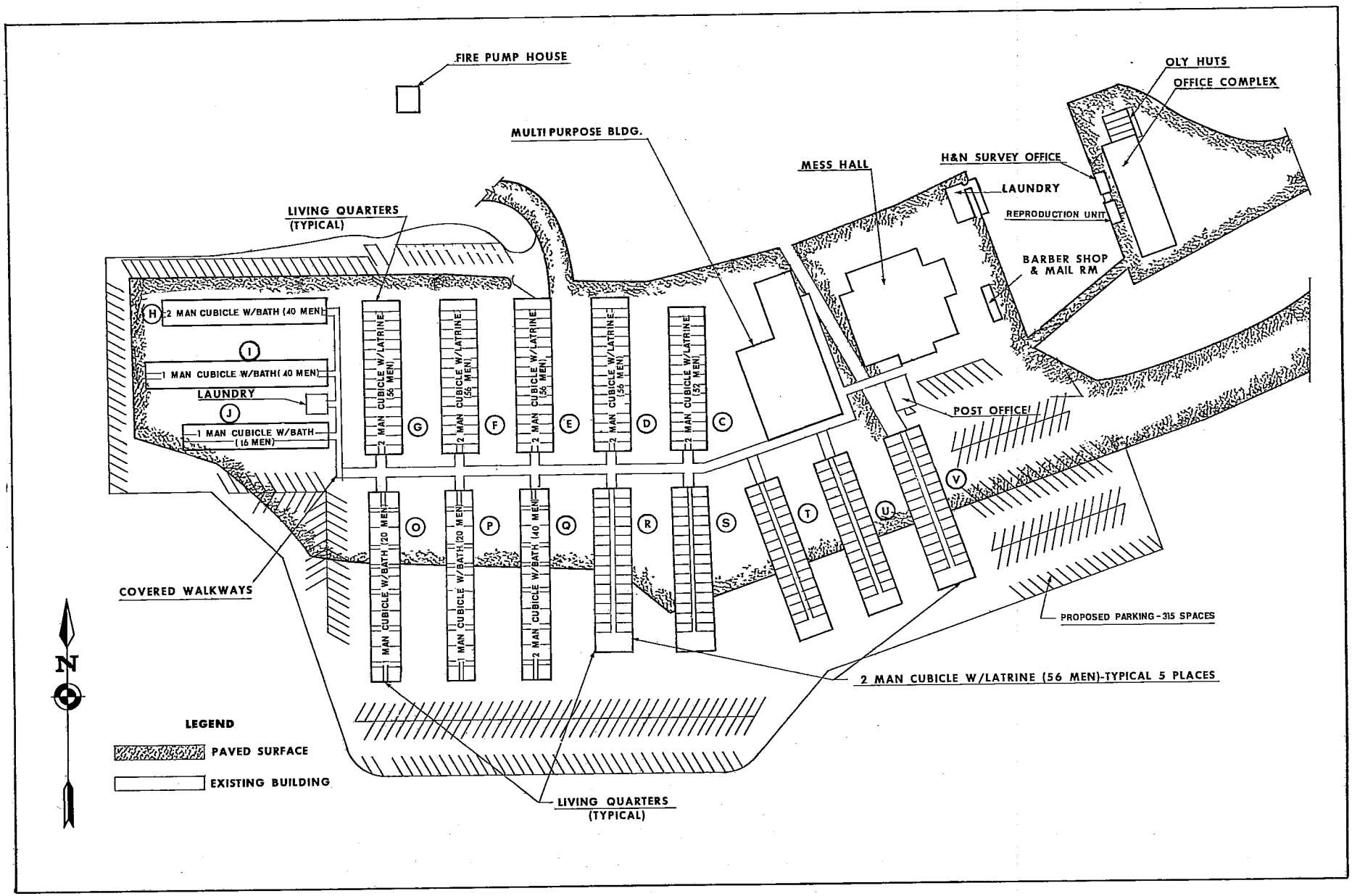

Figure 8. Layout of main camp.

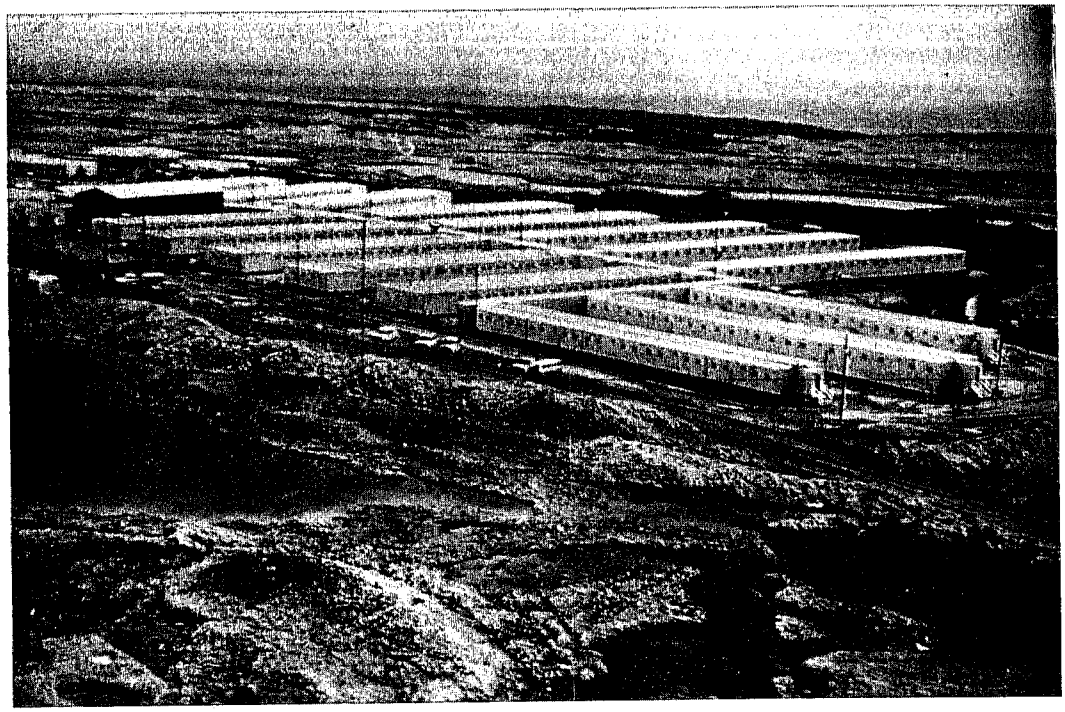

Figure 9. View of main camp.

Holmes and Narver (H&N) and its subcontractors (Universal Services and B-E-C-K - C-R-K & Associates (BECK)) are responsible for site management, maintenance, and operation and for logistics, supply, housing, and feeding. In general, H&N's operations are similar to those performed by REECo at NTS.

The medical facilities (dispensary, first aid station) are maintained by Eberline Instruments (EIC), which is also responsible for the RAMS and air sampling portion of the technical program.

The AEC has overall administrative jurisdiction on Amchitka, and oversees drilling, mining, and support operations. The AEC administrative center, which is located in the main camp, is shown in Figure 14.

The principal "user" organizations on Amchitka are LASL (Los Alamos Scientific Laboratory) and LRL (Lawrence Radiation Laboratory), EG&G's primary customer on Cannikin.

Other government agencies represented on the island include the Corps of Engineers (COE), the Department of the Interior (Fish and Wildlife), the U. S. Geological Survey (USGS), the Environmental Science Services Administration/ Coast and Geodetic Survey (ESSA/C&GS), and the Earthquake Mechanism Laboratory (ESSA/EML).

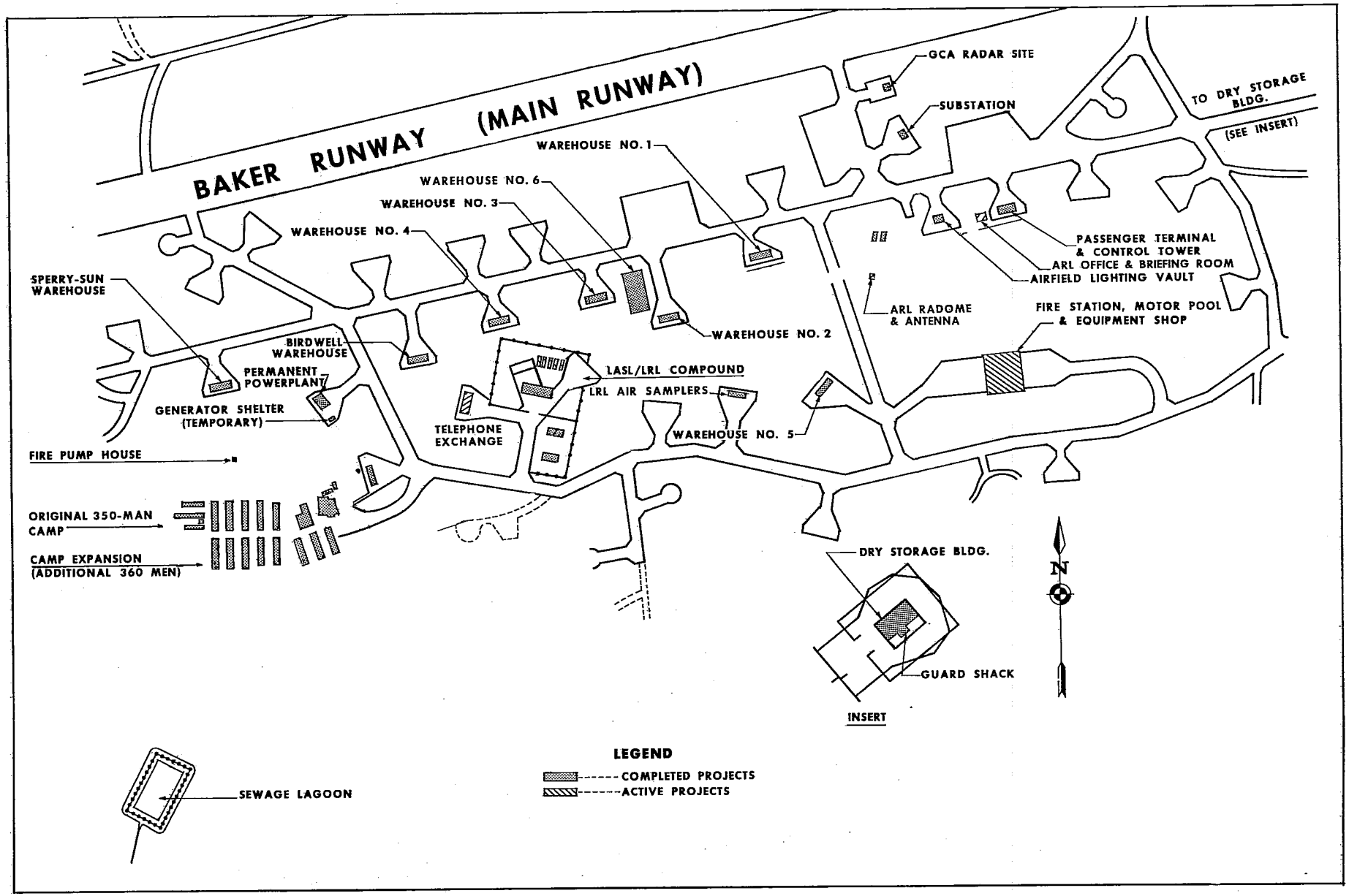

Figure 10. Base camp support facilities.

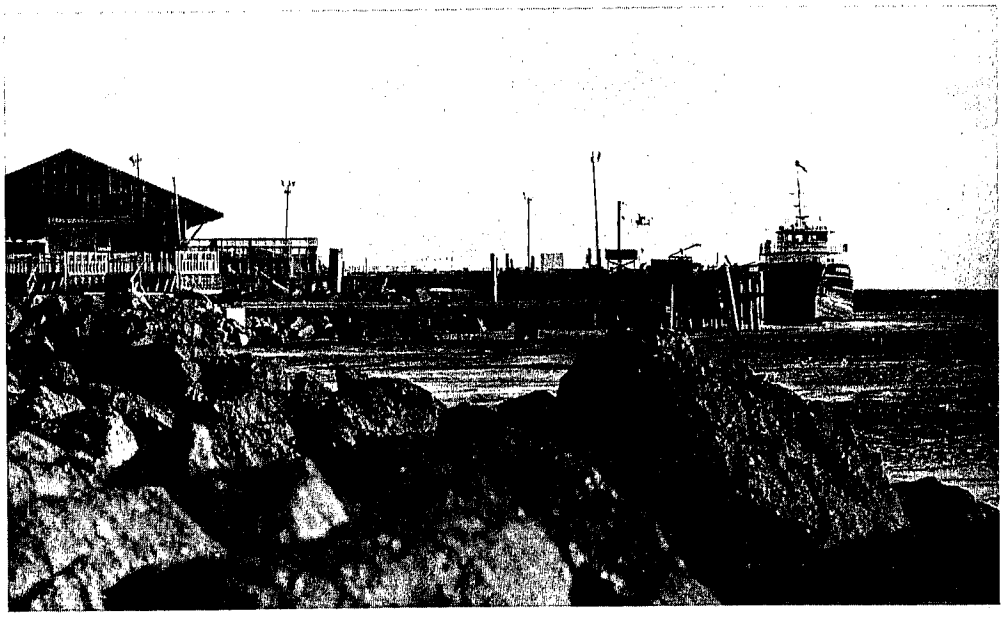

Figure 11. Dock area.

ESSA/C&GS has installed seismic stations on Amchitka and neighboring islands, and an alarm system actuated by seismic disturbances. Any person feeling an earthquake after working hours is requested to notify this agency at Telephone No. 310.

ESSA/EML is participating in a study of the Aleutian arc's strain pattern and its relationship to local earthquakes. Four strain measuring sites have been constructed, two on Amchitka, one on Adak, and one on Rat Island.

Drilling and mining operations are performed by various companies under the responsible architect-engineer, Fenix & Scisson.

The State of Alaska is represented by two duly appointed magistrates located in the AEC administrative center (see Figure 14) and two Special Officers of the H&N plant protection force, which is responsible for island security and enforces AEC regulations. One or two members of the Alaska Highway Patrol are also assigned to Amchitka.

Wackenhut Services (WSI) personnel will function as uniformed armed guards on Project Cannikin at locations determined by the AEC Chief Security.

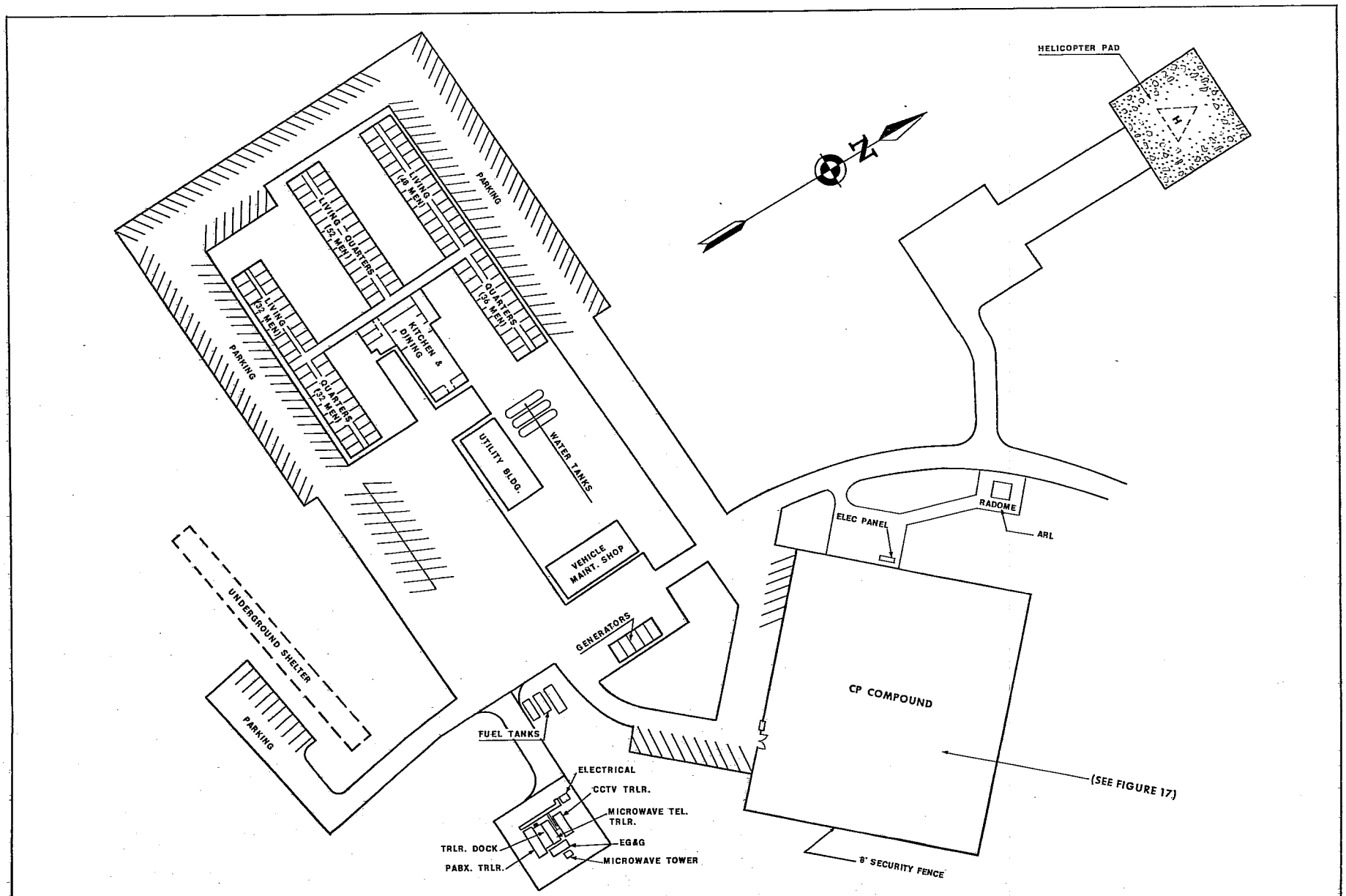

Figure 12. Layout of northwest camp.

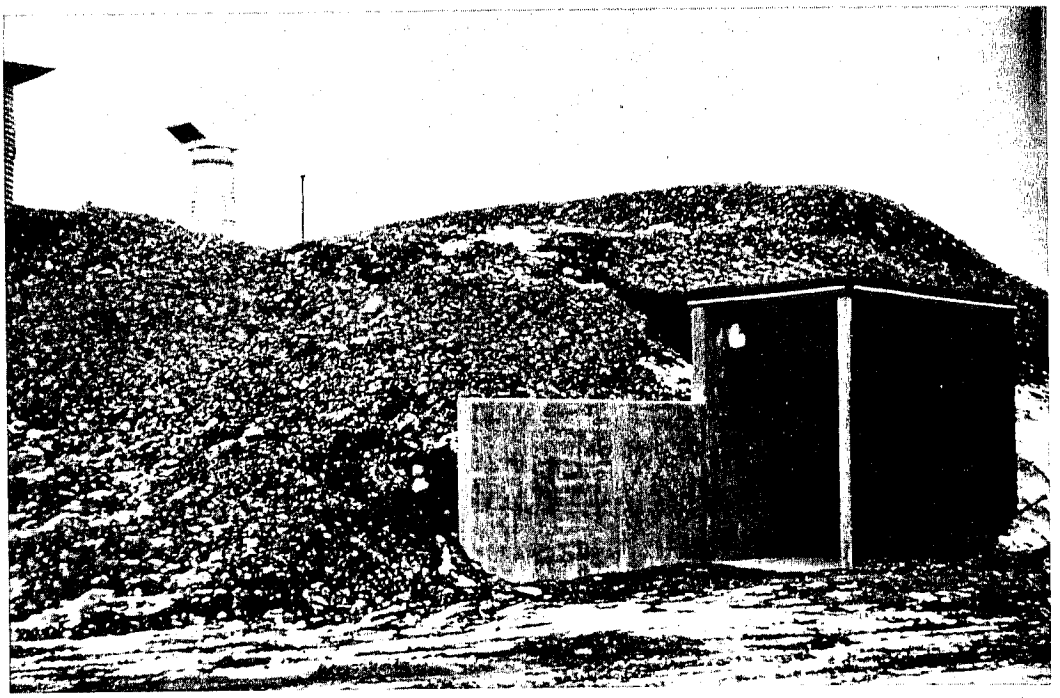

Figure 13. Underground shelter (northwest camp).

Figure 14. AEC administrative center (white house).

4. PROJECT CANNIKIN

4.1 EXPERIMENT GOALS

LRL's primary goal on Cannikin, a nuclear weapon test, is the measurement of device performance. The secondary objective is to obtain ground motion data for use in predicting the magnitude of ground motion that would be sustained on future tests.

4.2 TECHNICAL PROGRAM*

The Cannikin technical program will cover the following areas (see Figures 15 and 16):

1. Prompt (High-Speed)Diagnostics (LRL/EG&G) - Data obtained by device canister/diagnostic canister detectors (single LOS) will be recorded on a total of about 205 oscilloscope channels in four diagnostic trailers at the recording trailer park (RTP).

2. Hydrodynamic Yield (LRL/EG&G) - To be measured at UA-1-DW.

3. Radiochemical (Rad-Chem) Yield (LRL) - To be obtained from analysis of samples collected during post-shot drilling at UA-1-P1.

4. Stemming Motion (LRL/Sandia) - To be monitored during stemming of UA-1 on downhole strain gages and load cells.

5. Free Field Motion (Sandia) - To be measured by UAE-1 instrumentation.

6. Close-In Ground Motion (Strong Motion) (Sandia) - Data is to be acquired at seven surface stations located at 50, 1,000, 3,000, 6,000, 12,000, 18,000, and 32,800 feet from surface zero.

7. Surveillance Photo (Pan Am)** - Coverage will be provided by two ground camera stations. No. 113 will be set up 12.8 miles from base camp about

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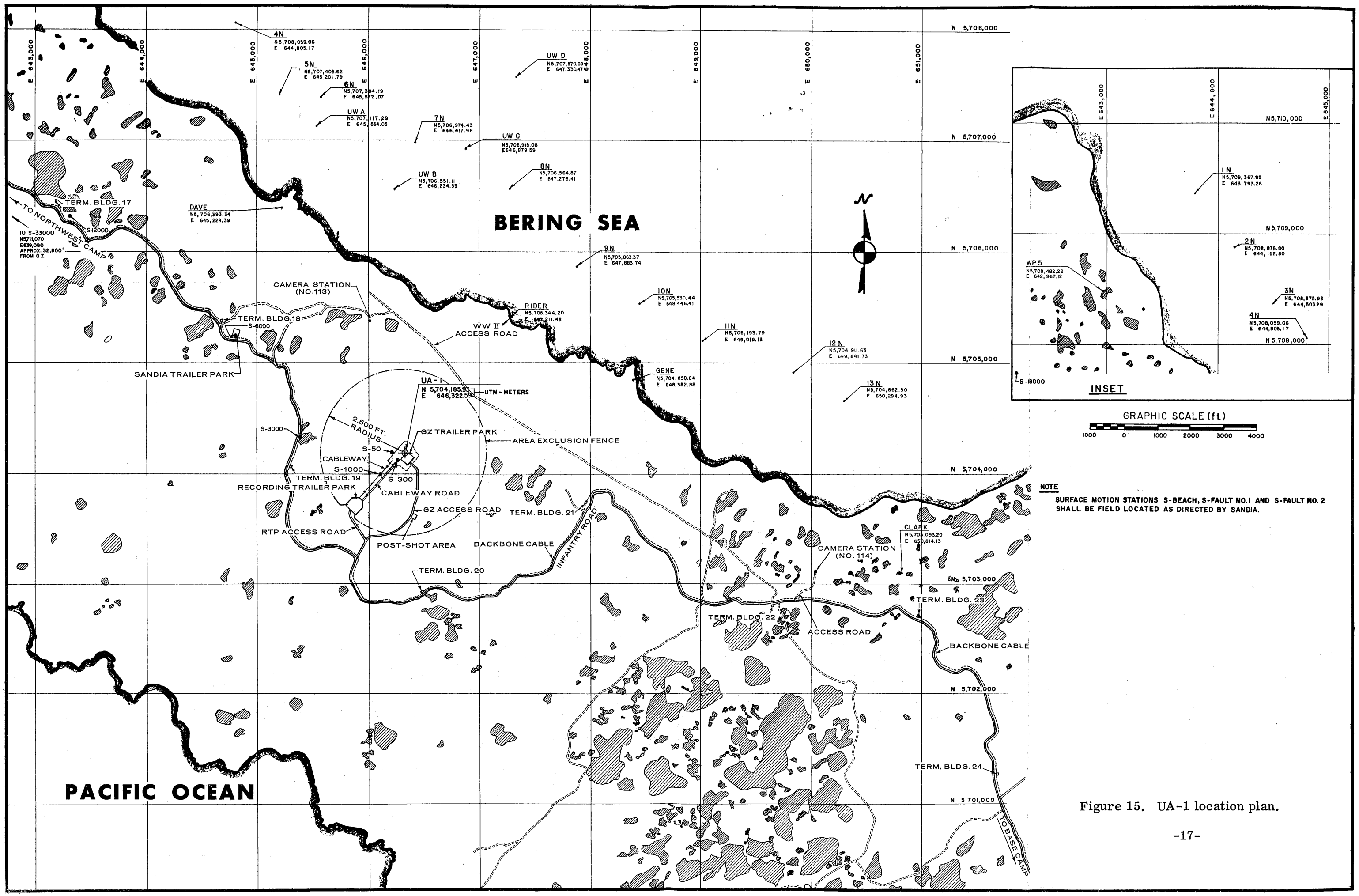
*The NVOO-funded Amchitka Bioenvironmental Program will also be active on Cannikin. The program's objectives are the documentation and evaluation of Cannikin's bioenvironmental effects.

**The U. S. Navy (based on Adak Island) will perform a pre-shot aerial survey, maintain standby readiness during the shot, and fly a post-shot survey. The NVOO-funded NC-135 Photo Program, which will use two aircraft (based at Elmendorf AFB, Anchorage) to survey the ground zero area, the island in general, and Amchitka's coastline and surrounding waters, will document shot-related phenomena of interest.



NOTE

SURFACE MOTION STATIONS S-BEACH, S-FAULT NO.1 AND S-FAULT NO. 2 SHALL BE FIELD LOCATED AS DIRECTED BY SANDIA.

Figure 15. UA-1 location plan.

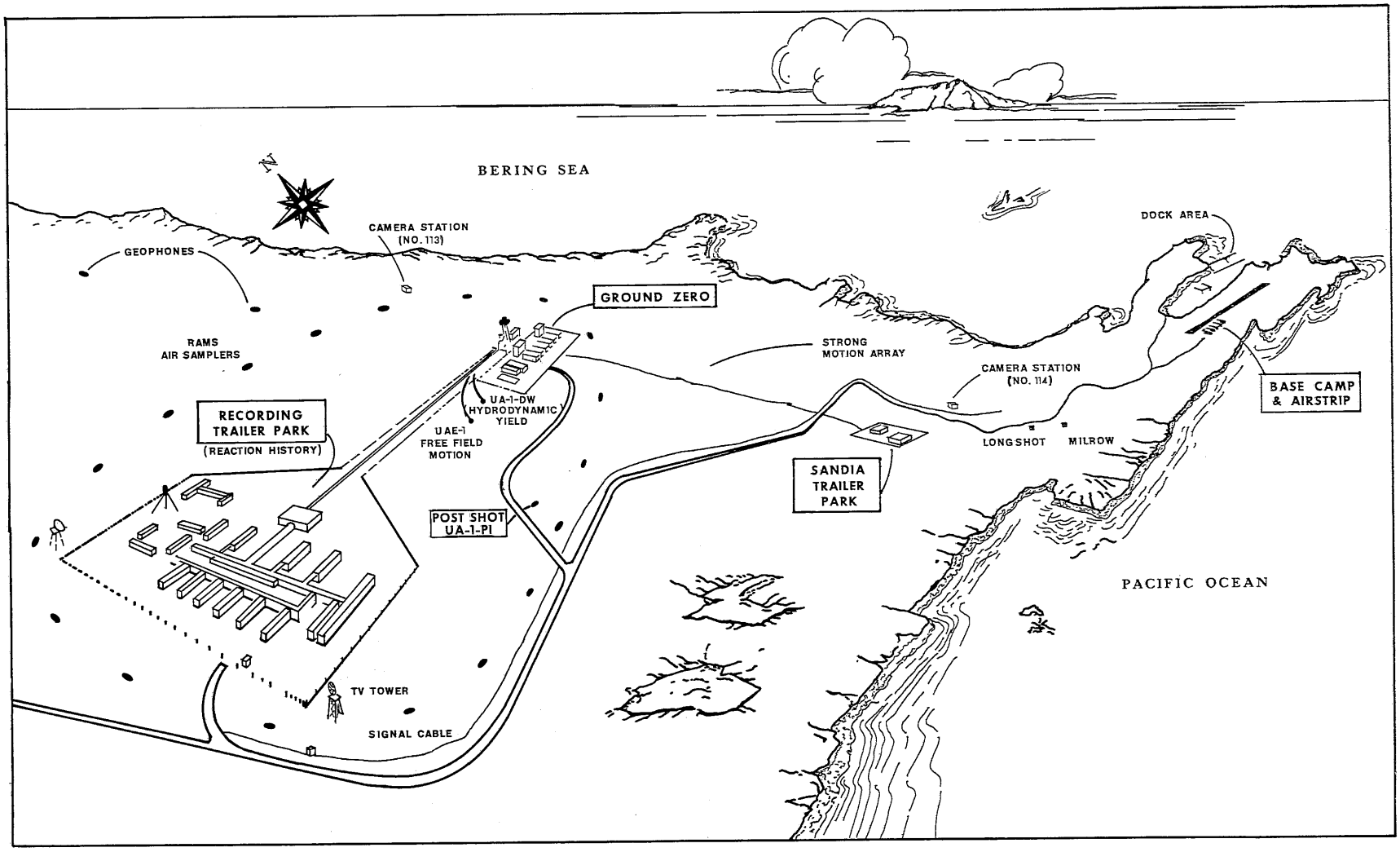


Figure 16. UA-1 technical facilities.

4,150 feet northwest of surface zero near a freshwater lake in the vicinity of the White Alice Fault. No. 114 will be positioned about 12,750 feet southeast of SZ at Infantry Road, about eight miles from base camp.

8. Technical Closed-Circuit TV (CCTV) (LRL) - Two tower-mounted stations will be located near the RTP to provide surface zero surveillance at shot time.

9. Remote Air Monitoring System (RAMS) and Air Samplers (EIC) - An array of 18 RAMS and nine self-contained air samplers will be fielded encircling the RTP and surface zero at an approximate radius of 2,500 feet. Air samplers will also be located at the RTP and at surface zero, and facilities will be installed to monitor wind speed and direction at surface zero for display and recording at the CP.

10. Geophones (LRL) - Three geophones will be emplaced two, six, and 10 miles northwest of surface zero (along Infantry Road toward the CP) to measure post-shot collapse information. Data will be read out and recorded both at the CP and the TGDOC (the Test Group Director's Operations Complex at base camp).

11. Arming and Firing (A&F) (EG&G) - The hardwire command/multiplex monitoring system, which will be controlled from the CP, will require the use of one timing station at the RTP.

A red shack at the zero site will house the associated zero rack and SAMBO equipment.

4.3 TECHNICAL FACILITIES

Cannikin's principal technical facilities consist of a control point (CP) compound, a Sandia recording trailer park (STP), an LRL/EG&G recording trailer park (RTP), and a zero site or surface zero area (SZ) (see Figures 12, 15, and 16).

The CP compound (see Figure 17), which is located about 20 miles northwest of surface zero, will contain the A&F control trailer and associated power supply and work trailers, facilities for Rad-Safe and weather monitoring support, and an office trailer (to be shared by Sandia and EG&G).

The STP (see Figures 15 and 16) will contain facilities for recording signals from the Sandia underwater and ground motion programs.

The RTP (see Figures 15, 16, and 18), a graded, stabilized, and fenced area located about 2,000 feet south of SZ, will contain four diagnostic (data acquisition) trailers, a photo trailer, an A&F trailer (timing station), two instrument power trailers, and office and miscellaneous support facilities. The instrument

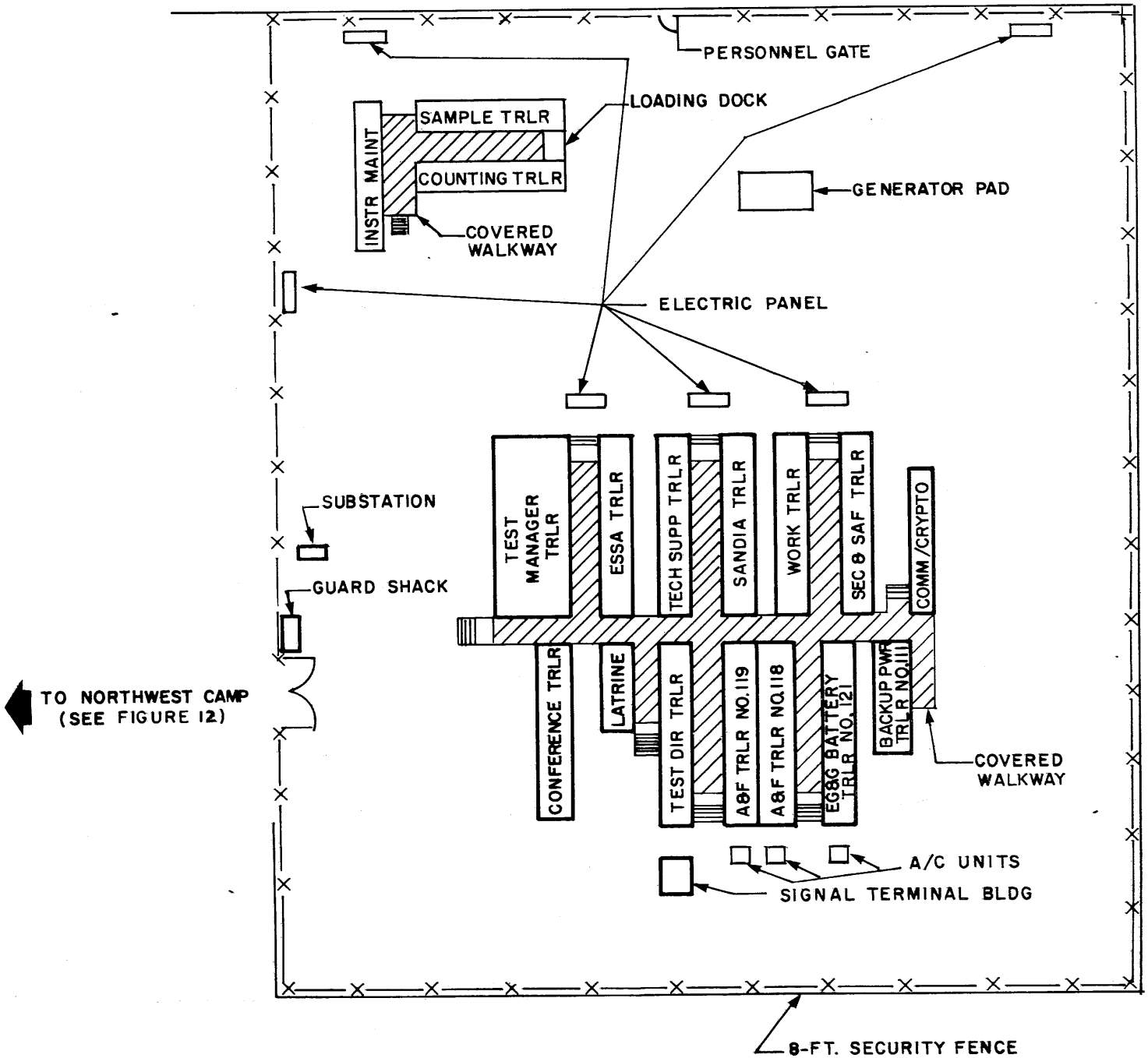
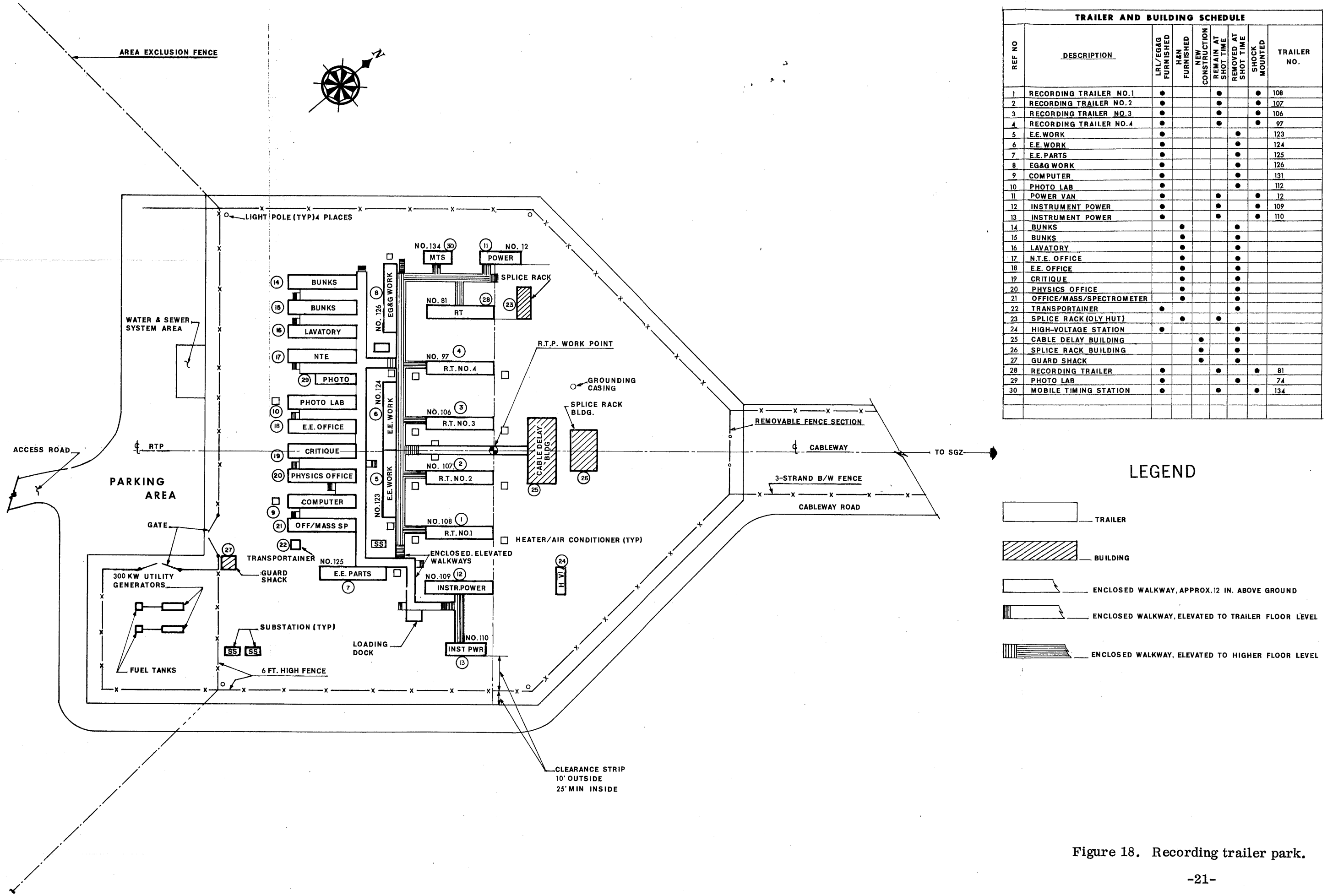


Figure 17. CP compound.



TRAILER AND BUILDING SCHEDULE

REF NO	DESCRIPTION	LRL/EG&G FURNISHED	H&N FURNISHED	NEW CONSTRUCTION	REMAIN AT SHOT TIME	REMOVED AT SHOT TIME	SHOCK MOUNTED	TRAILER NO.
1	RECORDING TRAILER NO. 1	●			●		●	108
2	RECORDING TRAILER NO. 2	●			●		●	107
3	RECORDING TRAILER NO. 3	●			●		●	106
4	RECORDING TRAILER NO. 4	●			●		●	97
5	E.E. WORK	●				●		123
6	E.E. WORK	●				●		124
7	E.E. PARTS	●				●		125
8	EG&G WORK	●				●		126
9	COMPUTER	●				●		131
10	PHOTO LAB	●				●		112
11	POWER VAN	●			●		●	12
12	INSTRUMENT POWER	●			●		●	109
13	INSTRUMENT POWER	●			●		●	110
14	BUNKS		●			●		
15	BUNKS		●			●		
16	LAVATORY		●			●		
17	N.T.E. OFFICE		●			●		
18	E.E. OFFICE		●			●		
19	CRITIQUE		●			●		
20	PHYSICS OFFICE		●			●		
21	OFFICE/MASS/SPECTROMETER		●			●		
22	TRANSPORTAINER	●				●		
23	SPLICE RACK (OLY HUT)		●		●			
24	HIGH-VOLTAGE STATION	●				●		
25	CABLE DELAY BUILDING			●		●		
26	SPLICE RACK BUILDING			●		●		
27	GUARD SHACK			●		●		
28	RECORDING TRAILER	●			●		●	81
29	PHOTO LAB	●				●		74
30	MOBILE TIMING STATION	●			●		●	134

Figure 18. Recording trailer park.

power trailers will supply the recording trailers and the timing station, for which backup power will also be available. Utility power will be supplied by the existing solar power plant at the surface zero area.

The Cannikin surface zero area (see Figures 15, 16, 19, and 20) is located about five miles northwest of Milrow's. This approximately 430- by 420-foot area will be graded, stabilized, and fenced. Zero rack and device functions will be performed in the red shack and the device assembly trailer, and two NTS long houses and two multideck buildings will be used for final canister preparations. Machine shop, office, and other support trailers will also be located at surface zero. Red shack instrument power will be supplied from the RTP.

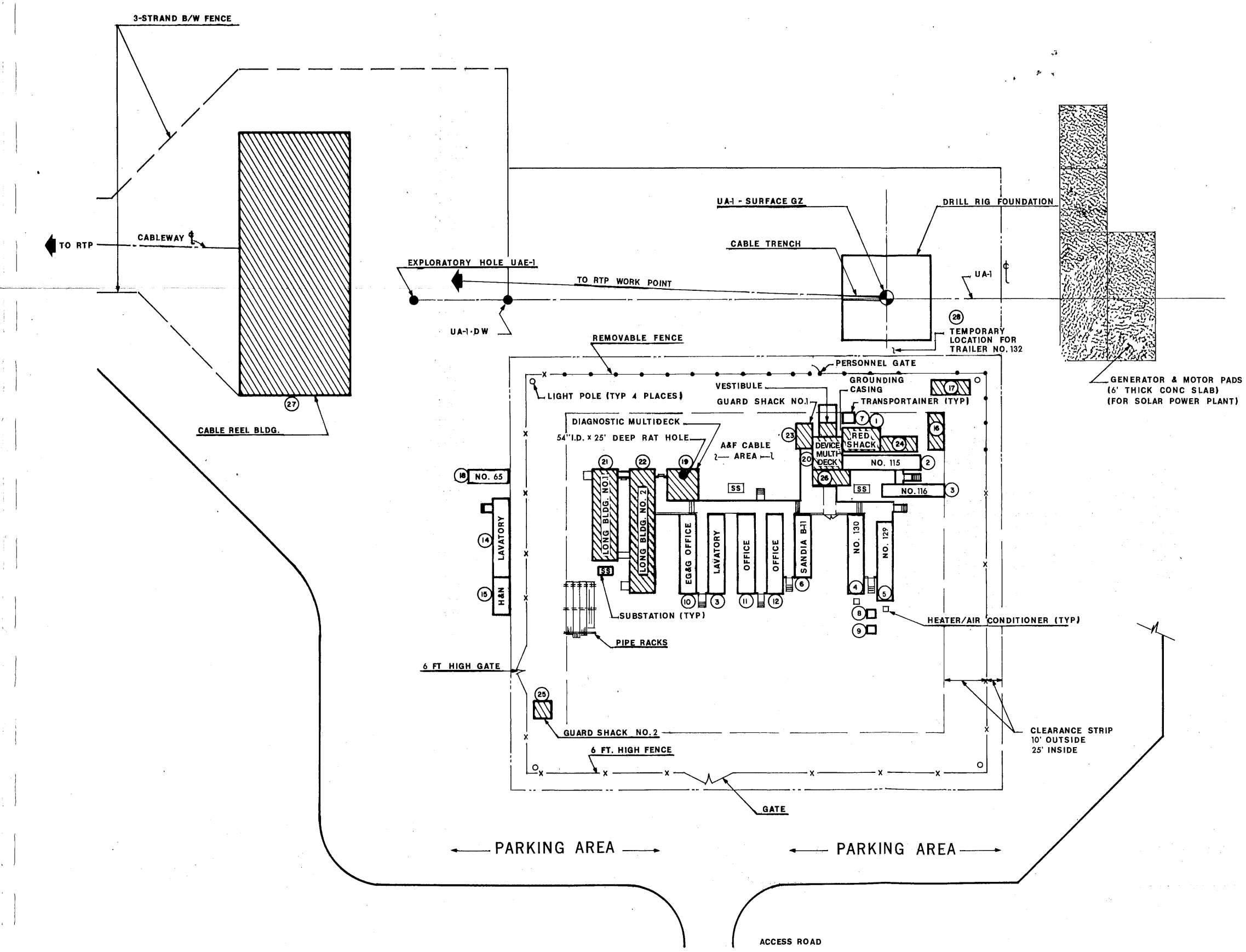
Using a drill rig, the device and diagnostic canisters will be emplaced in a 54-inch cased hole (UA-1) about 6,104 feet deep. The emplacement system will include necessary centralizers, cable guards, and cementing hardware attachments.

A 26-foot minimum radius unlined sphere will be mined in the UA-1 shaft. The sphere's center will be at a depth of about 5,875 feet. A sump about 203 feet deep will be located below the sphere. The existing concrete pad around UA-1 at the surface will be trenched toward the RTP to provide a cable trough.

A 120-foot long pump drift connecting UA-1 to the dewatering and instrumentation hole (UA-1-DW) will be mined at a depth of 5,917 feet. The drift will contain an instrument alcove. A 9-3/4-inch diameter hole will be drilled between the alcove and the sphere, providing a radial LOS between the alcove and the center of the sphere for the measurement of hydrodynamic yield.

UA-1-DW, which will be drilled obliquely from a surface point 250 feet southwest of UA-1, will also junction with UA-1 at a depth of 5,990 feet, the sump midpoint. Submersible pumps and associated cable and tubing will be installed, along with six instrumentation cables, in this 9-5/8-inch cased hole.

The existing exploratory hole (UAE-1) will be instrumented, then filled with cement.



TRAILER AND BUILDING SCHEDULE

REF. NO.	DESCRIPTION	LRL/EG&G FURNISHED	H&N FURNISHED	NEW CONSTRUCTION	REMAIN AT SHOT TIME	REMOVED AT SHOT TIME	SHOCK MOUNTED	TRAILER NO.
1	RED SHACK			●	●			
2	DEVICE ASSEMBLY	●				●		115
3	DEVICE UTILITY	●				●		116
4	MACHINE SHOP	●				●		130
5	MACHINE SHOP	●				●		129
6	SANDIA WORK	●				●		B-11
7	TRANSPORTAINER NO. 1	●				●		
8	TRANSPORTAINER NO. 2	●				●		
9	TRANSPORTAINER NO. 3	●				●		
10	EG&G OFFICE		●			●		
11	OFFICE		●			●		
12	OFFICE		●			●		
13	LAVATORY		●			●		
14	LAVATORY		●			●		
15	H&N OFFICE (OLY HUT NO. 3)		●			●		
16	VACUUM SUPPORT HUT		●			●		
17	LRL TV/W.E.S. HUT		●			●		
18	ENG. OFFICE	●				●		65
19	DIAGNOSTIC MULTIDECK			●		●		
20	DEVICE MULTIDECK			●		●		
21	LONG BLDG. NO. 1			●		●		
22	LONG BLDG. NO. 2			●		●		
23	GUARD SHACK NO. 1			●		●		
24	VACUUM SHACK		●		●			
25	GUARD SHACK NO. 2			●		●		
26	DEVICE SYSTEM HUT		●			●		
27	CABLE REEL BLDG.			●	●			
28	HIGH-CAPACITY VACUUM STA.	●				●		132
29	EG&G PARTS	●				●		130A

LEGEND

- TRAILER
- BUILDING
- ENCLOSED WALKWAY, ELEVATED APPROXIMATELY 12 IN. ABOVE GROUND
- ENCLOSED WALKWAY, ELEVATED TO TRAILER FLOOR LEVEL

Figure 19. Layout of surface zero area.

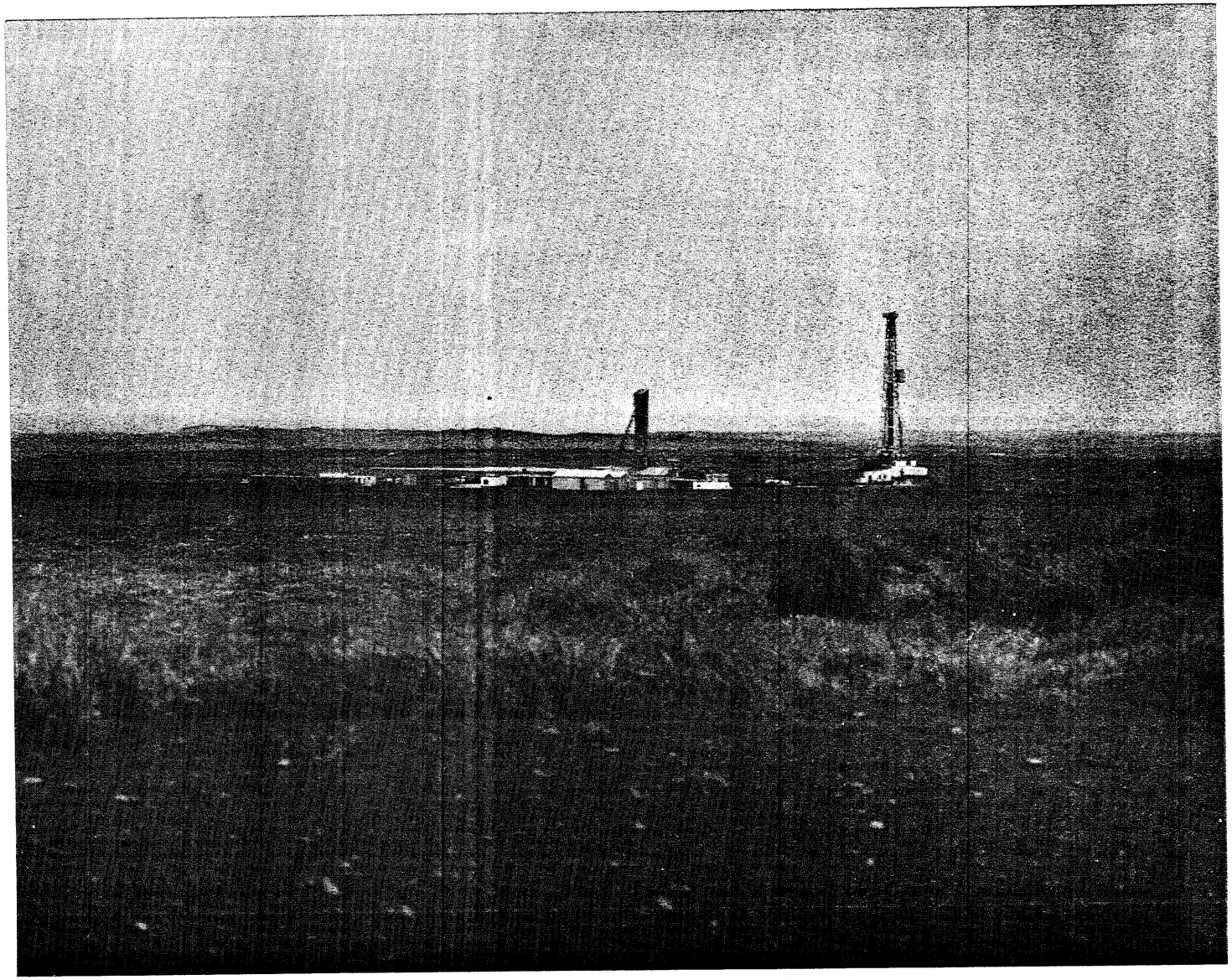


Figure 20. View of surface zero area.

5. EG&G PARTICIPATION

5.1 GENERAL

On Cannikin, EG&G will provide LRL with prompt diagnostics, arming and firing (A&F), mechanical, electro-mechanical, and administrative support.* EG&G will furnish IRIG support only to Sandia. Table 1 identifies the participating EG&G personnel and the tasks they are to perform on Amchitka.

About 80 EG&G personnel have been assigned to Amchitka. Except for persons from Albuquerque (ABQ), San Ramon (SRO), Santa Barbara (SB), or Las Vegas Engineering (Division 2000), the participants belong to NTS Operations (Division 5000). EG&G personnel are scheduled to work on Amchitka as defined in Table 2.

Instead of establishing an EG&G technical operations coordination net similar to Milrow's, EG&G personnel will share an existing net with LRL.

W. S. Barak, Manager of the LRL High-Speed Diagnostic Operations Department (5200), has been designated Cannikin Project Manager (Department 5800). On Amchitka, Mr. Barak will provide overall coordination of EG&G field operations. Administrative and logistic problems should be referred to W. D. Mathews (see Table 1) for resolution or channeling to higher authority.

Equipment and spares required for Cannikin will be allocated from EG&G stock, fabricated in Las Vegas, or ordered, as necessary. Las Vegas Materiel Services (9530) or NTS Operations Administration (5450) will inventory the 23 trailers (which are to be sent to Amchitka containing equipment), secure the contents and install shoring, and arrange for trucking of the trailers to Seattle. Six transportainers containing cameras and other sensitive equipment, and 33 heating/air-conditioning units, will also be trucked to Seattle. In Seattle, these items will be placed on barges for transshipment to Amchitka. The barge trip will take about six weeks. For reasons of economy, shipment by C-130 aircraft will be minimal.

On arrival at Amchitka, all barge consignments will be inspected by EG&G personnel. Several one- or two-man short-duration trips to the island have been scheduled to accomplish this task.

Adequate warehouse space will be available to EG&G in the LRL and LASL warehouses at the base camp area (see Figure 10). Items to be fielded at the

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*At NTS, prompt diagnostics is termed high-speed diagnostics, A&F is command and data CP support or T&C, and electro-mechanical is command and data forward area support.

Table 1. EG&G personnel assigned to Amchitka.

Functional Area	Task	EG&G Engineer	EG&G Supervisor	EG&G Technician
Prompt Diagnostics	Bunker		W. Wraspir	D. Bonnet J. Donaldson E. Fienhold A. French P. Hamilton J. Henne D. Liles L. Lockwood P. Orton D. Silva R. Smiley O. Weeks
	Repair (Elec)			D. Chesley W. Johnson F. Racel
	(Photo)			
	Detectors & Cable	G. Allen (2000)	W. Wraspir	G. McCullough J. Tomadakis
	Equalizers	W. Kost	W. Wraspir	C. Green F. Pierce
	Trailer 131 (Computer)	R. Brower (2000)	W. Wraspir	R. Funk W. Payne (Programmer)

Table 1. EG&G personnel assigned to Amchitka (cont).

Functional Area	Task	EG&G Engineer	EG&G Supervisor	EG&G Technician
A&F	Trailer 118 (Control Point)	B. Wooldridge (2000)	R. Brown/L. Kelly	R. Berry J. Caldwell L. Cole H. Harper K. Roesner
	Trailer 134 (Timing Station)	B. Wooldridge	R. Brown/L. Kelly	
Mechanical	Canister	R. Webb (SRO) (Project and Field Eng)	TBA	G. Neisewander (Instrument Maker) G. Smallridge
	Vacuum System	R. Webb (Project Eng) W. Ruvalcaba (SRO)	TBA	A. Fletcher P. Taney
	Trailer 132 (High-Capacity Pumping Station)	N. Wilson (SRO) (Project and Field Eng)	R. Nakanishi	A. Fletcher
	Power System	S. Mortensen (SRO)	TBA	E. Buskirk
	Trailers 129 & 130 (Shop)		TBA	E. Cheney P. Vavra
	A/C Units		TBA	(E. Buskirk)*
Electro-Mechanical	Vacuum Systems	M. Nishimura (SRO) W. Purcell (SRO) (Project Eng)	H. Waite	D. McCraw C. Pruitt J. Thomson

Table 1. EG&G personnel assigned to Amchitka (cont).

Functional Area	Task	EG&G Engineer	EG&G Supervisor	EG&G Technician
Electro-Mechanical (Cont)	Power Systems	W. Purcell	TBA	None*
	Red Shack	B. Wooldridge (Project and Field Eng)	H. Waite	M. Lukens F. Perkins G. Schmidt
Administration		W. Barak (Project Mgr)		
	Operations Coordination	C. Laino (Project Eng)	J. Baxter (Field Adm) J. Davis (Field Adm) R. Snure (Eng III)	None
	Clerical		W. Mathews	W. Carpenter (Clerk)
	Logistics		W. Mathews	R. Schneehagen (Material Handler) A. Stumpf (Storekeeper)
Ecology Photo	**	R. Meibaum (2000) (Project and Field Eng)	D. Crandall, R. Lynn, W. Rhoads - SB Scientific Specialists	J. McKellar
NC-135 Photo	**	D. Wood (ABQ) (Project and Field Eng)	D. Wood	12

*Technician support is to be provided by permanent on-island personnel, who will coordinate with EG&G.
**NVOO-funded activities (see Section 4).

Table 2. Amchitka work schedule (tentative).

Type Work	No. Persons	Go Amchitka (D-Weeks)	Leave Amchitka (D-, D+ Weeks)
Prompt Diagnostics			
Supervisor	1	D-10	D+1
Bunker Technicians	12	D-10	D+1
Repair Technicians	3	D-10	D-0
Det and Cable Engineer	1	D-6	D-1
Det and Cable Technicians	2	D-10	D+1
Equalizer Engineer	1	D-10	D-5
Equalizer Technicians	2	D-9	D-5
Computer Engineer	1	As required	
Computer Technician	1	D-10	D+2
Computer Programmer	1	D-9	D+2
A&F			
Engineer*	1	D-9	D-0
Supervisor	1	D-10	D-4
Supervisor	1	D-4	D+2
Technicians	2	D-10	D+2
Technician	1	D-9	D+2
Technicians	2	D-9	D-0
Mechanical			
Canister Engineer	1	D-9	D-0
Supervisor	1	D-10	D+1
Canister Technicians	2	D-10	D-3
Vacuum Engineer	1	D-10	D-0
Vacuum Technicians	2	D-10	D-3
Trailer 132 Engineer	1	D-17	D-15
		D-5/D-3	D-0
Power Engineer	1	D-20	D-19
		D-9	D-8
		D-5	D-4
		D-2	D+1
Power Technician	1	D-10	D+2
Shop Technicians	2	D-12	D-0

Table 2. Amchitka work schedule (tentative) (cont).

Type Work	No. Persons	Go Amchitka (D-Weeks)	Leave Amchitka (D-, D+ Weeks
Electro-Mechanical			
Vacuum Engineer	1	D-6	D-4
		D-3	D-1
Supervisor	1	D-10	D+1
Vacuum Technicians	2	D-10	D+1
Vacuum Technician	1	D-10	D-8
		D-5	D-2
Power Engineer	1	D-10	D-8/D-6
		D-4	D-2/D-0
Red Shack Technicians	2	D-10	D+1
Red Shack Technician	1	D-10	D-8
Administration			
Project Manager	1	D-12	D+2
Operations Coordination	1	D-9	D+1/D+2
Operations Coordination	1	D-5	D+0
Operations Coordination	1	D-5/D-2	D+0
Supervisor	1	D-17	D+2
Clerical	1	D-11	D+2
Logistics	2	D-11	D+2
Ecology Photo	5	D-3	D-1
		D-0	D+2
NC-135 Photo	13	D-1	D+1
	80 Total		

*This engineer also functions as the red shack engineer (electro-mechanical).

northwest camp are not to be unsecured until they reach this location, nor is trailer shoring to be removed before the stations have been placed in their field locations.

5.2 PROMPT DIAGNOSTICS

Cannikin prompt diagnostics will include technician support of the LRL-engineered alpha systems and detector, cable and electronic hardware, equalizer, and repair support.

Buildup and checkout of the four diagnostic trailers (Nos. 97, 106, 107, and 108) (see Figure 18) will be performed at NTS during January and February 1971. On completion of these tasks, the trailers will be shipped to Amchitka.

Field operations will begin about D-10 weeks, when bunker and detector and cable personnel will arrive at Amchitka (see Tables 1 and 2). These personnel will make the diagnostic system fully operational, complete all cable terminations, and participate in dry runs until D-O. Additional technicians will provide camera and electronic repair support during this period. From about D-9 through D-5 weeks, equalizer personnel will be on Amchitka to install and check the approximately 73 equalizers (58 matched, 15 reflective) and perform cable measurement functions.

At shot time, alpha data will be transmitted from 38 canister detectors at ground zero on about 205 channels to oscilloscopes located in the four diagnostic trailers at the RTP.

Routine post-shot work (e.g., d-c calibration, simultaneity checks) will be done as required.

5.3 A&F

Cannikin A&F will be accomplished at the CP compound (see Figure 17) using a control trailer (No. 118) cable-connected to a mobile timing station (No. 134) at the RTP (see Figure 18). The channel breakdown of this hardwire system (programmed commands, PCM/multiplex binary and analog monitors) is given below.

No. Channels	Channel Type
40	Plus or minus programmed command signals
80	On-off (binary) monitors with indicating lights and strip chart recording at the CP
69	Analog monitors with meter displays and strip chart recording at the CP
35	Manual control
224 Total	

Two IRIG systems will also be supported on Cannikin, one for LRL at the CP compound (time codes A, B, and C) and the other for Sandia at the STP (time code B).

The A&F system will be built up and checked at NTS, then sent to Las Vegas for shipment to Amchitka.

Pre-shot A&F field operations to be performed by EG&G personnel (see Tables 1 and 2) will include equipment and systems checkout, making all cross-connections from the CP through the timing station, and conducting dry runs.

RAMS and rollup will be supported for about two weeks post-shot.

5.4 MECHANICAL OPERATIONS

The Cannikin canister was originally fabricated to meet SRO's design requirements on Adagio, a cancelled Central Nevada (Site C) event. This canister is being extensively modified in Las Vegas; also, the LOS pipe is being weatherized and additional lead shielding installed. Detector trial fit and installation are also to be done in Las Vegas.

In March 1971, the canister will be sent to NTS for dry run testing of all mechanical systems. Shipment to Amchitka will follow.

A high-capacity mobile pumping station (Trailer 132) is being designed and built up in Las Vegas for operation on Cannikin. This station will be used both in the March tests at NTS and at Amchitka.

During field operations on Amchitka, mechanical personnel (see Tables 1 and 2) will provide machine shop support at surface zero (see Figure 19), maintain the styrofoam shock-mounting systems of the trailers scheduled to remain at the RTP during the shot (see Figure 18), and perform all necessary canister and down-hole pipe operations, including vacuum pumpdown and leak checking.

5.5 ELECTRO-MECHANICAL SUPPORT

Electro-mechanical personnel (see Tables 1 and 2) will provide the following support at Amchitka starting about D-10 weeks:

1. Zero Rack/SAMBO - The red shack systems (zero site portion of the A&F system) (see Figure 19) will be set up, crossconnected, and compatibility checked.

2. Canister Vacuum System - The vacuum shack (see Figure 19) will be set up to handle 25 signals (13 manual commands, 9 monitor signals, and 3 timing signals). The low-speed PCM monitoring system will be installed, checked, and maintained operational. A canister landing fixture will also be installed and instrumented.

Additional vacuum responsibilities will include maintenance of the new high-capacity mobile pumping station (Trailer 132) (see Figure 19) and an LRL vacuum monitoring (mass spectrometer) trailer located at the RTP (see Figure 18).

Pre-shot operations will also involve participating in dry runs (including the FPFF), canister pumpdown and cleanup, and operation of the downhole system.

Post-shot, equipment will be recovered and operational support provided as necessary.

5.6 ADMINISTRATION

5.6.1 Operations Coordination

Operations coordination support is to be provided starting about D-9 weeks, with 24-hour coverage to be furnished from about D-5 weeks until shot time (see Tables 1 and 2). Rollup activities will occupy a few days post-shot.

5.6.2 Clerical and Logistic Support

On Amchitka, administrative/clerical personnel (see Tables 1 and 2) will serve EG&G technical personnel in the areas of housing coordination and paycheck distribution, and as a source of general information and assistance.

Logistic personnel, under the direction of W. Mathews (see Table 1), will be responsible for distribution and storage of equipment and parts.

6. GENERAL INFORMATION

Amchitka's remote location and unpleasant weather make working there a challenge. The comfortable accommodations, good and plentiful food, various types of indoor and outdoor recreation, and certain financial benefits help to compensate for personal dislocation and inconvenience.

This section contains information covering pre-departure requirements and suggestions, travel and communications, living accommodations and services on Amchitka, and the governing laws and regulations. EG&G's work schedule and pay policy are also discussed.

6.1 PRE-DEPARTURE INFORMATION

Within one year prior to departure, an employee going to Amchitka on an assignment exceeding seven days is required to have had a physical examination and to have been immunized against the following: smallpox, typhoid-paratyphoid, diptheria, influenza (AB Asian), and poliomyelitis.

Each employee assigned to Amchitka should make Seattle-to-Amchitka travel arrangements (10 days in advance) through W. S. Barak's NTS office (CP-45, 986-2083). This office will handle travel requests through H&N and the AEC, issue a substantial travel advance on the day of departure or the last working day prior thereto, and resolve any outstanding administrative details with assigned personnel on their return from Amchitka.

As directed by the participant, paychecks covering Amchitka work will be deposited in the employee's bank, mailed to his home, or issued on Amchitka. Paychecks sent to Amchitka will be mailed weekly; however, the usual interval between time worked and receipt of pay will be extended by one week. Also, cashing large checks on Amchitka is somewhat difficult.

EG&G's mailing address on Amchitka will be:

EG&G, Inc.
Box 5004
Amchitka, Alaska 99695

Prior to departure, each participant should notify the LVO Industrial Relations Department of any change in the family's address. EG&G Employee Services will assist any employee who wishes to file a will or power of attorney. Personal problems occurring among EG&G employees or their families during the Amchitka assignment should be referred to R. E. Harkins of Personnel (telephone 736-8111, x507).

H&N or its subcontractors (Universal Services, BECK) will issue the following AEC-owned foul weather clothing to personnel arriving at Amchitka: parka (with hood) or heavy jacket, a two-piece rain suit with cap, rubber boots, and heavy wool socks. These items (except the socks) must be returned when the recipients leave Amchitka.

The individual should bring his hard hat and safety shoes, which must be worn in construction areas. It is also suggested that he bring gloves, long underwear, heavy shirts and trousers, and any gear (e.g., overshoes) that he prefers to the issue. The available laundry services do not include dry cleaning or pressing, so taking perma-pressed clothing is advised.

It is also suggested that the employee take recreational items (e.g., books and magazines) to supplement the island's offerings. Personal cameras may be used except in secured areas; firearms are not allowed on Amchitka.

EG&G will maintain an Amchitka petty cash fund on which individuals may draw to meet unforeseen situations. Reimbursement will be arranged when personnel return from Amchitka.

On departure for Amchitka, each participant should have with him an active U. S. Government Motor Vehicle Operator's Identification Card (driver's license), a state-of-residence vehicle operator's license, his NTS film badge (with dosimeter up to date), and any necessary personal effects, including items needed for an overnight stay in Seattle.

H&N will brief and assign living quarters to new arrivals on Amchitka. The NTS badge meets Amchitka badging requirements.

6.2 TRAVEL

Travel to and from Amchitka is by air from Seattle via Anchorage. Alaska Airlines uses Boeing 727 jets to provide round trip AEC charter service twice weekly (Tuesday and Thursday) on a reserved space basis. Reeve Aleutian Airways (DC-6B's) makes commercial flights between Anchorage and Amchitka on Monday and Friday and returns to Anchorage Tuesday and Saturday, stopping at Amchitka on return only if there are outgoing passengers.* H&N approves travel requests and furnishes charter travel passes or air tickets.

Each travel request (preferably a TWX), which will be submitted to H&N (Seattle or Anchorage) at least one week in advance, should include the following: name of traveler, departure date, length of stay, purpose of trip, security clearance status, and support needed on Amchitka. This support should include any requirements for on-island vehicles, of which H&N maintains a limited pool.

*Use of Reeve Aleutian Airways is restricted to emergency travel.

If it is anticipated that personnel traveling to or from Amchitka must stay overnight in Seattle or Anchorage, H&N-Seattle should be requested to make appropriate reservations, preferably (in Seattle) at the SEA-TAC Thunderbird Motel. The individual traveler is responsible for arranging travel (through his organization) to and from his city of residence and Seattle (SEA-TAC airport), and for honoring (or cancelling, if not used) the motel reservation.

Personnel boarding aircraft at Seattle or Anchorage for Amchitka should be prepared to present proper identification (e.g., NTS badge) to the H&N boarding agent, who is authorized to refuse boarding permission to unsatisfactorily identified persons.

The flight schedules (local times*) are shown below.

Alaska Airlines

Seattle-Amchitka (AM)		Amchitka-Seattle (PM)	
Leave Seattle	7:30	Leave Amchitka	12:30
Arrive Anchorage	8:30	Arrive Anchorage	4:30
Leave Anchorage	9:30	Leave Anchorage	5:30
Arrive Amchitka	11:30	Arrive Seattle	10:30

Amchitka-bound passengers must check in not later than 7:00 AM in Seattle or 8:30 AM in Anchorage.

Reeve Aleutian Airways

Leave Anchorage	9:15 AM	Leave Amchitka	10:00 AM**
Arrive Amchitka	5:05 PM	Arrive Anchorage	7:15 PM

The Amchitka travel office, which is located in the white house (see Figure 14), is open from 7:00 AM to 5:00 PM daily (except Sunday) and on Wednesday prior to arrival of the charter aircraft. Before approximately 2 June 1971, departures from Amchitka should be handled through H&N Travel at the airport terminal building; after this date, an EG&G Administrator will be on Amchitka to clear departure requests with H&N and the AEC.

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*Amchitka is on Bering Standard Time, which is one hour earlier than Anchorage time and three hours earlier than Pacific Standard Time. Amchitka changes to Bering Daylight Time in the spring to coincide with similar changes in most of the nation.

**Or later, depending on time aircraft arrives from Shemya Island.

6.3 COMMUNICATIONS

Telephones, which will be available in all work areas requiring the presence of EG&G personnel, will be located in the main camp area (warehouses and offices) and in many trailers at the technical facilities. Emergency telephones are located in the splice houses (terminal buildings), which are found at intervals of one mile along the cable run adjacent to Infantry Road.

Two-way radios of the LRL communications network (see Section 5) will be located in many of the EG&G-assigned vehicles as well as in at least one facility in each of the work areas named above.

Official telephone and teletype communications with CONUS are handled by REECo long haul radio to Mercury, Nevada, where tieline services are available. The Corps of Engineers (COE) provides radio contact with Anchorage. These services are available from 10:00 AM to 8:00 PM Monday through Saturday and from 10:00 AM to 4:00 PM Sunday.

Emergency calls to and from Amchitka; i.e., calls made during the hours radio telephone service is not available, are handled through the U. S. Naval Communications Station on Adak Island. Outgoing emergency calls, which must be approved in advance by the AEC Site Manager, are made from the airport control tower in the presence of the REECo Communications Superintendent and must be collect calls or charged to a credit card number or an AEC billing code. The Adak operator patches the call to CONUS over commercial telephone facilities.

Personal calls can be made on Sunday at the main camp's MARS shack (KL7GFN) (see Figure 21), which is operated by resident licensed hams. (The individual may not bring ham equipment to Amchitka.) The Sunday MARS schedule is given below.

Hours	Calls To:
9:00 - 11:30 AM	Alaska, west coast, midwest
1:00 - 4:00 PM	West coast, midwest
4:00 - 5:30 PM	Alaska

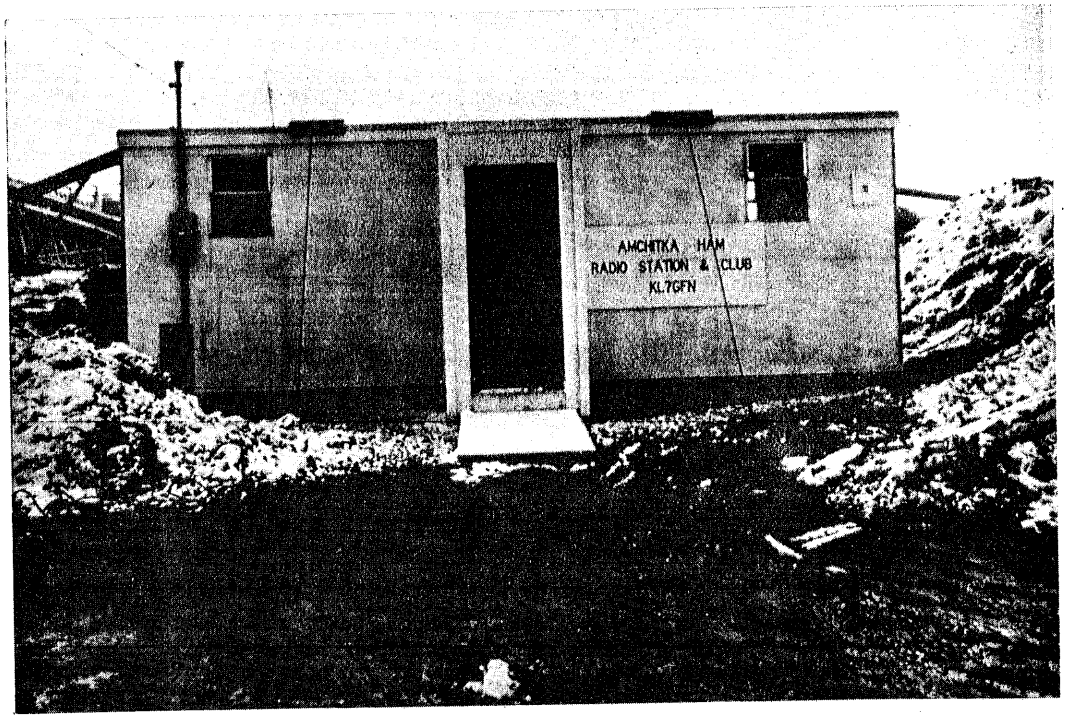

Figure 21. Amchitka's amateur radio station.

6.4 ACCOMMODATIONS AND SERVICES

Depending on the location of his work assignment, the EG&G employee will be provided with free living quarters in the main camp or the northwest camp.* He will also receive free laundry service, or may utilize the washer and dryer located in his dormitory. Soap powder and bleach are also provided.

All rooms are comfortably furnished. Main camp dormitory P has 20 single rooms, and Q contains 20 double rooms; each of the 40 rooms has a bathroom with shower. These dormitories have a capacity of 20 and 40 men, respectively. All rooms in the northwest camp are double.

The Hus-Key camp's dispensary, which is staffed by a physician and medical attendants 24 hours per day, is equipped to give first aid, treatment for minor ailments, and preliminary treatment for more serious conditions.**

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*Most EG&G personnel will stay at the main camp in dormitories P and Q (see Figure 8). A&F personnel working in the CP compound will live at the northwest camp (see Figure 12), at which additional EG&G personnel (about 17 total) will stay on shot night.

**Dental treatment is not available on Amchitka.

The northwest camp's first aid station is staffed by a medical attendant. If serious illness or injury occurs or a dental emergency arises, the patient will be promptly evacuated to the Adak Naval Air station or to Anchorage. A helicopter (see Figure 22) is available for rescue missions.

Figure 22. Rescue helicopter.

There is no charge for cafeteria meals. Mealtimes are 5:30 to 7:00 AM, breakfast; 11:30 AM to 1:00 PM, lunch; and 5:30 to 7:30 PM, dinner. On Sunday, brunch is served from 5:30 AM to 1:00 PM. Coffee is available in the field as well as at the cafeterias, which are located in both the main and northwest camps and are open 24 hours per day.

Items such as toilet articles, film, and cigarettes are sold for about Anchorage prices at the commissary (PX). Limited stocks of jewelry (rings, watches), radios, and safety shoes are carried, or such items may be ordered. PX hours are 11:30 AM to 1:00 PM and 5:00 to 7:30 PM daily.

The package liquor store is open from 5:00 to 7:30 PM daily except Sunday. Personal checks in amounts up to twenty dollars are cashed both here and at the PX.

The Rat Island Roost, a bar located in the main camp, is in operation 33 hours per week; viz., between 5:00 and 9:30 PM Monday through Friday, from 5:00 to 10:30 PM on Saturday, and from 1:00 to 6:30 PM on Sunday.

Stamps, money orders, and box number assignments are available in the post office, which is located in the main camp. Parcel post is also handled. Packages to be sent to the island should be addressed to the appropriate individual and/or organization at:

Amchitka Island
Alaska 99541

The H&N terminal is the point of initial receipt.

On incoming mail-flight days (Monday and Friday), the post office will open about two hours after mail arrival; i.e., subsequent to receipt and sorting of mail. Mail leaves Amchitka on Tuesday and Saturday. Daily post office hours are 11:00 AM to 1:00 PM and 5:00 to 7:30 PM.

The barber shop is open variable hours, as posted therein.

Both the recreation hall and the library are open 24 hours daily. The recreation hall contains pool, shuffleboard, and ping-pong equipment. Games such as checkers and chess may be played here or in the library, which also offers current newspapers, magazines, and novels.

Additional 24-hour facilities in the multipurpose building (see Figure 8) include the health spa and the lapidary shop. The spa is equipped with gymnastic, boxing, and weight-lifting equipment. The lapidary shop, which contains modern equipment used in rock cutting and polishing and jewelry-making, also offers evening classes for beginners -- contact the H&N recreation director for information. The director also schedules basketball and volleyball games, which take place in the theater between movies.

The recreation director should also be contacted for information about the photo darkroom, which is equipped for developing black and white film.

Movies, including some first run films, are shown three times daily (9:30 AM, 7:30 PM, and 9:30 PM) in the recreation hall. Four movies, including a 1:30-PM matinee, are shown on Sunday. The same feature appears at all main camp showings on a given day. A movie is also shown twice every evening (from 7:00 PM) at the northwest camp.

Amchitka AM radio (KABO, 570 on dial) features daily musical programs. Local TV (channel 10), which offers the latest in Armed Forces Radio and Television Service (AFRTS) programs, may be viewed from 6:00 PM daily and 1:30 PM Sunday. Weekly TV schedules are published. EG&G plans to take four TV sets to the island.

Additional recreational possibilities include fishing, beachcombing, and sky-watching. But be careful.

Persons wishing religious guidance may take advantage of the periodic visits of a traveling clergyman.

6.5 LAWS AND REGULATIONS

Amchitka, as a part of Alaska, is under the laws of that state. These laws, which apply to all persons working on Amchitka, are enforced by H&N Special Officers and the Alaska Highway Patrol.

The island is a national wildlife refuge, therefore no hunting is allowed. The Antiquities Act forbids tampering with or removing from its natural location any original native artifact without the permission of the U. S. Department of the Interior. The Bald Eagle Act prohibits possession of any eagle, dead or alive, or any part thereof. It follows that possession or use of firearms or other weapons (e.g., pellet guns, bows and arrows, and knives with blade lengths exceeding three inches (except as required to perform assigned work)) is prohibited; such items landed on Amchitka will be immediately confiscated and returned to the owner only when he leaves Amchitka.

Personnel engaging in the following activities are subject to arrest and prosecution under Alaska or federal statutes, as applicable:

1. Gambling, which is illegal in any form.

2. Use or possession of narcotics or dangerous drugs.

3. Public intoxication, when the offender is belligerent, disturbing the peace, or refuses to go to and remain in his quarters when advised.

4. Driving under the influence of intoxicants or drugs.

5. Theft, embezzlement, illegal possession, or unlawful destruction of government property. Government property comprises all equipment and materials (including scrap) used on prior events or during previous government occupation of the island.

Anglers must obtain an Alaska state fishing license, which can be purchased for ten dollars in Anchorage, or on Amchitka (at the white house) between 7:00 AM and 5:00 PM Monday through Saturday.

Personnel driving AEC vehicles must have in their possession a valid U. S. Government Motor Vehicle Operator's Identification Card (driver's license) and a valid state-of-residence operator's license. The speed limits on Amchitka are 35 miles per hour in the daytime and 30 at night. In the camp areas, the limit is 15. Only emergency vehicles; viz., ambulances, fire trucks, security and police vehicles, are permitted to exceed these speed limits.

Rules and regulations applying to island personnel are enforced by H&N uniformed plant protection officers. Violations are reported to the individual's employer and to the AEC.

Camp rules (in general, those relating to living quarters) are as follows:

1. Quiet hours are from 10:00 PM to 6:00 AM, or as posted on the dormitory doors.

2. Cooking of food is prohibited. Food shall be kept in closed plastic or glass containers.

3. Use of multiple sockets at electrical outlets, which would overload the wiring, is prohibited. Electrical wiring can be modified only with written authorization, and the work must be done by a qualified electrician.

4. Radio antenna wires shall not be attached to power or telephone poles.

5. All litter will be placed in waste baskets or butt cans, as appropriate.

6. "No Smoking" signs will be strictly complied with. Smoking in bed is strictly prohibited.

7. Alcoholic beverages may be consumed only in the bar or in quarters. Excessive drunkenness, drinking while at work, or fighting will be grounds for summary banishment from Amchitka.

8. Housing (Telephone No. 287) must be contacted if room assignment problems arise or a room change is desired.

6.6 SECURITY AND SAFETY

6.6.1 Security

Effective 4 January 1971, access to Amchitka will be limited to Project Cannikin-connected U. S. citizens who, at minimum, have an "L" access authorization or an "L" authorization in process, or have a Confidential clearance or a Confidential clearance in process. On this date, personnel not meeting this clearance requirement will not be permitted to board Amchitka-bound aircraft; if already on Amchitka, such personnel may be required to depart. Personnel who are to participate in downhole activities on Amchitka must be "Q" cleared.

Due to the classified nature of the work performed on Amchitka, strict security measures are enforced, and must be complied with by all personnel on the island.

Uniformed H&N plant protection officers patrol Amchitka and report security violations and breaches of camp regulations. WSI guards are stationed at sensitive locations and also conduct roving patrols.

Binoculars, telescopes, and other optical instruments using a set of lenses to bring distant objects into clear view are controlled items. Personnel requiring these instruments in their work must have in possession a valid optical instrument permit (obtainable at the white house) while transporting or using them.

Personal cameras are allowed, and pictures may be taken of friends, quarters, clubs, scenery, and wildlife. Classified information or any security features (e.g., fences, guard posts, lighting facilities) may not be photographed.

Because the Cannikin zero site is about twice as far from the base camp area as Milrow's (10 miles versus five), the main camp will not be secured at Cannikin shot time.

6.6.2 Safety

All incoming personnel receive a safety indoctrination lecture on arrival at the Amchitka air terminal. However, safety is considered the responsibility of all personnel working on Amchitka. Any unsafe practice should be reported immediately to the offending individual's supervisor.

The base camp area (see Figure 7) is served by a fire alarm system. Call boxes are located in every building except for a few in the Hus-Key camp, where four pole-mounted telephones are connected directly to the fire station.

Individuals beachcombing or exploring Amchitka should exercise care. As explained in Section 2, buried punji stakes (see Figure 23) and unexploded ordnance present dangers. The decayed condition of some of the World War II structures could also cause personal injury (see Figure 24). Persons discovering unexploded ordnance should mark the location and immediately notify the H&N safety engineer, who will arrange for disposal.

Figure 23. Punji stake.

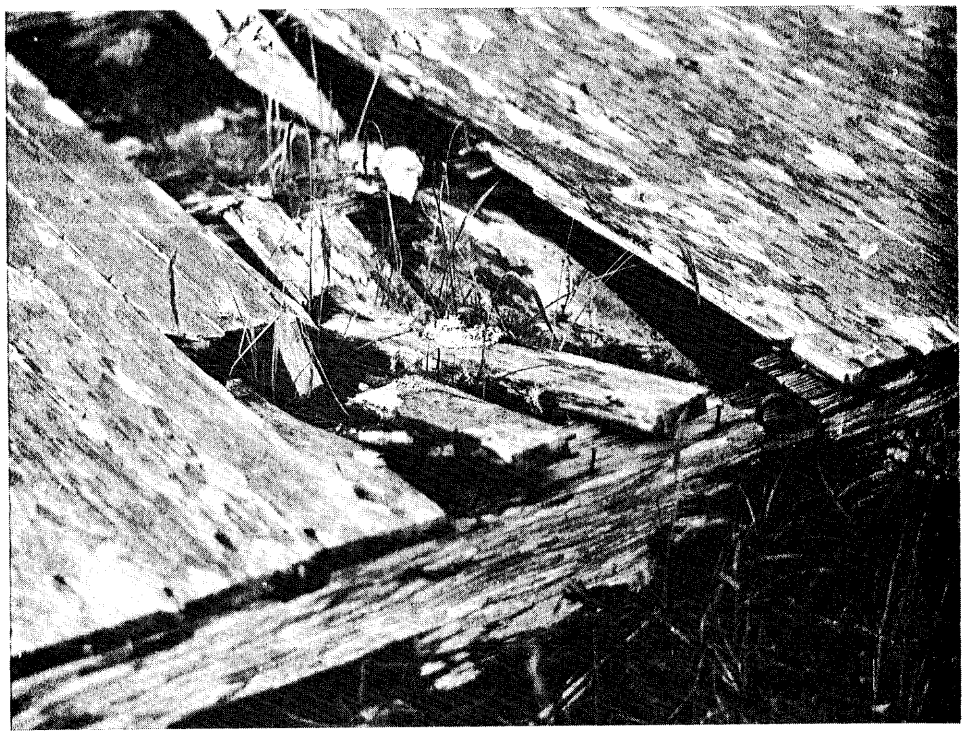

Figure 24. Deteriorated WW II structures (sheet 1 of 2).

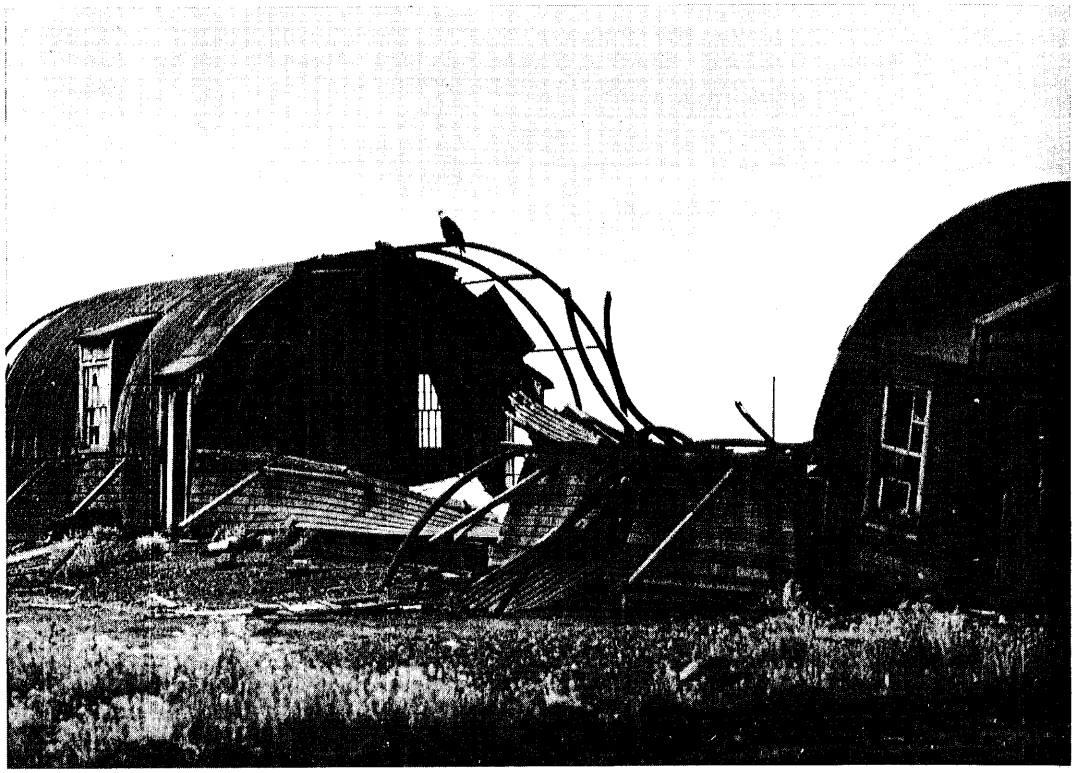

Figure 24. Deteriorated WW II structures (sheet 2 of 2).

Driving on Amchitka can be hazardous. Poor visibility is common, and Infantry Road (see Figure 25) is primitive. It is advisable to drive cautiously, utilizing under adverse conditions (e.g., fog, rain, snow) all emergency equipment afforded by the vehicle, including headlights. The following rules, which will be observed by drivers to ensure safe vehicle operation, are enforced as part of the body of Amchitka regulations:

1. Yield right-of-way to loaded trucks and heavy equipment.

2. When leaving vehicle, turn off ignition, place the transmission in gear, and set the emergency brake.

3. Operate vehicles only on maintained roads, except during an emergency or when necessary in the performance of assigned tasks.

4. If vehicle is to be driven beyond Site F (see Figure 2), do not leave base camp without a full tank of fuel. During inclement weather, the driver shall advise his supervisor of trip schedule.

5. Do not pass a barricade without approval.

6. Except in an emergency, do not park in a parking area posted restricted. At the air terminal, park in the west lot unless authorized to park in front.

7. Report all accidents involving AEC vehicles, regardless of amount of damage, to immediate supervisor, H&N safety engineer, and H&N Special Officer.

8. Do not drive a vehicle onto the runway. Authorized emergency and maintenance vehicles only are allowed thereon, with prior control tower approval.

9. Do not cross surface-laid cables with a vehicle.

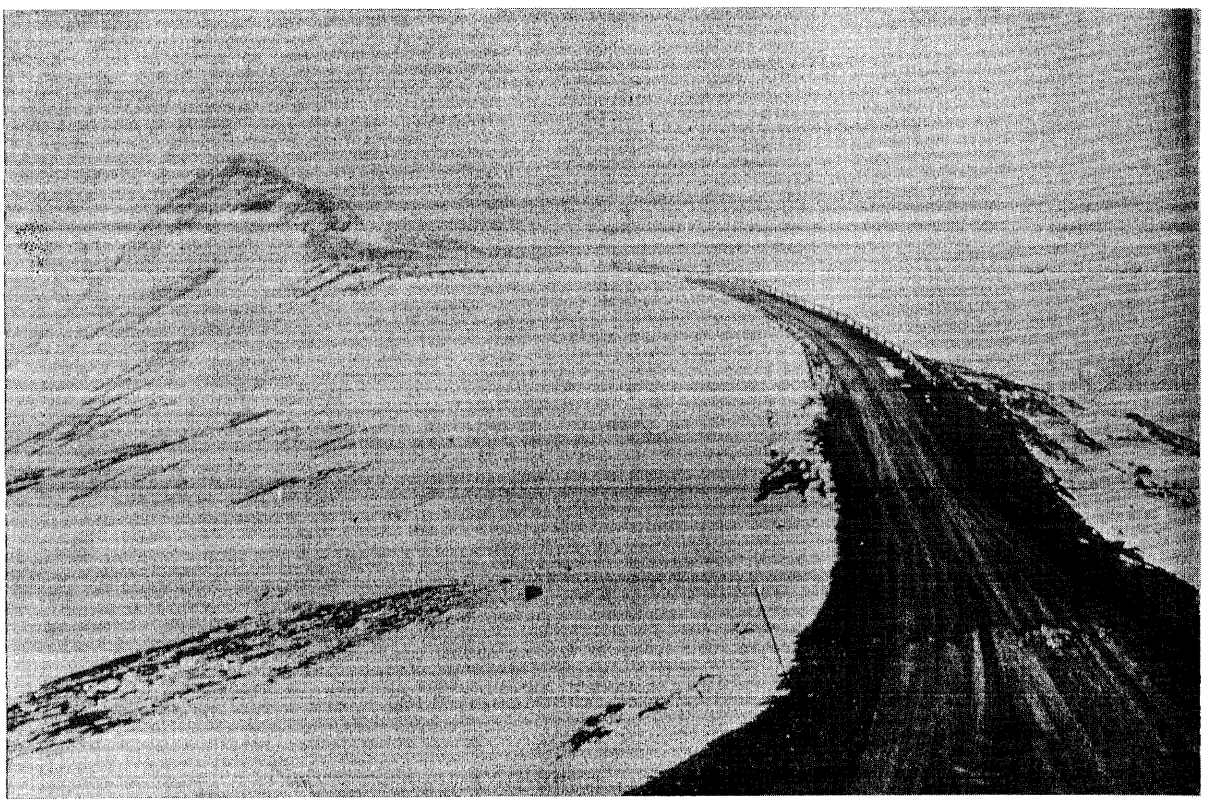

Figure 25. Infantry Road (mid-island).

6.7 WORK SCHEDULE AND COMPENSATION

A six-day, 54-hour workweek (Monday through Saturday) has been established for EG&G personnel assigned to Amchitka.

The base pay of both hourly and salaried employees will be increased by a 25% dislocation allowance for Amchitka work. Hourly employees working to the above schedule will be paid for 40 hours at the 25% higher straight time rate and for 14 hours at time and one half this rate. Salaried employees will be paid for 40 hours at the increased hourly rate and for 14 hours in accordance with the appropriate overtime schedule (see EG&G Employee Handbook, page 17).* All personnel will receive $2.50 subsistence for each day spent on Amchitka.

If additional overtime is scheduled, payment will be in accordance with NTS practices (see Division 5000 Guidelines). No work will be considered out-of-shift, however.

Compensation for work performed on Amchitka is subject to an Alaska state tax levied at a rate of 20.5% of each individual's federal tax deduction. In addition, a $10.00 school tax must be paid. The federal and state taxes will be deducted (withheld) from all paychecks issued for Amchitka work. The school tax will be deducted from the first check or paid out of petty cash. It will be necessary to file an Alaska state tax return for 1971.

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*A salaried person's overtime rate (e.g., straight time) will be determined by the category into which his base weekly salary falls. In calculating actual pay, his base hourly rate will be increased by 25%.

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