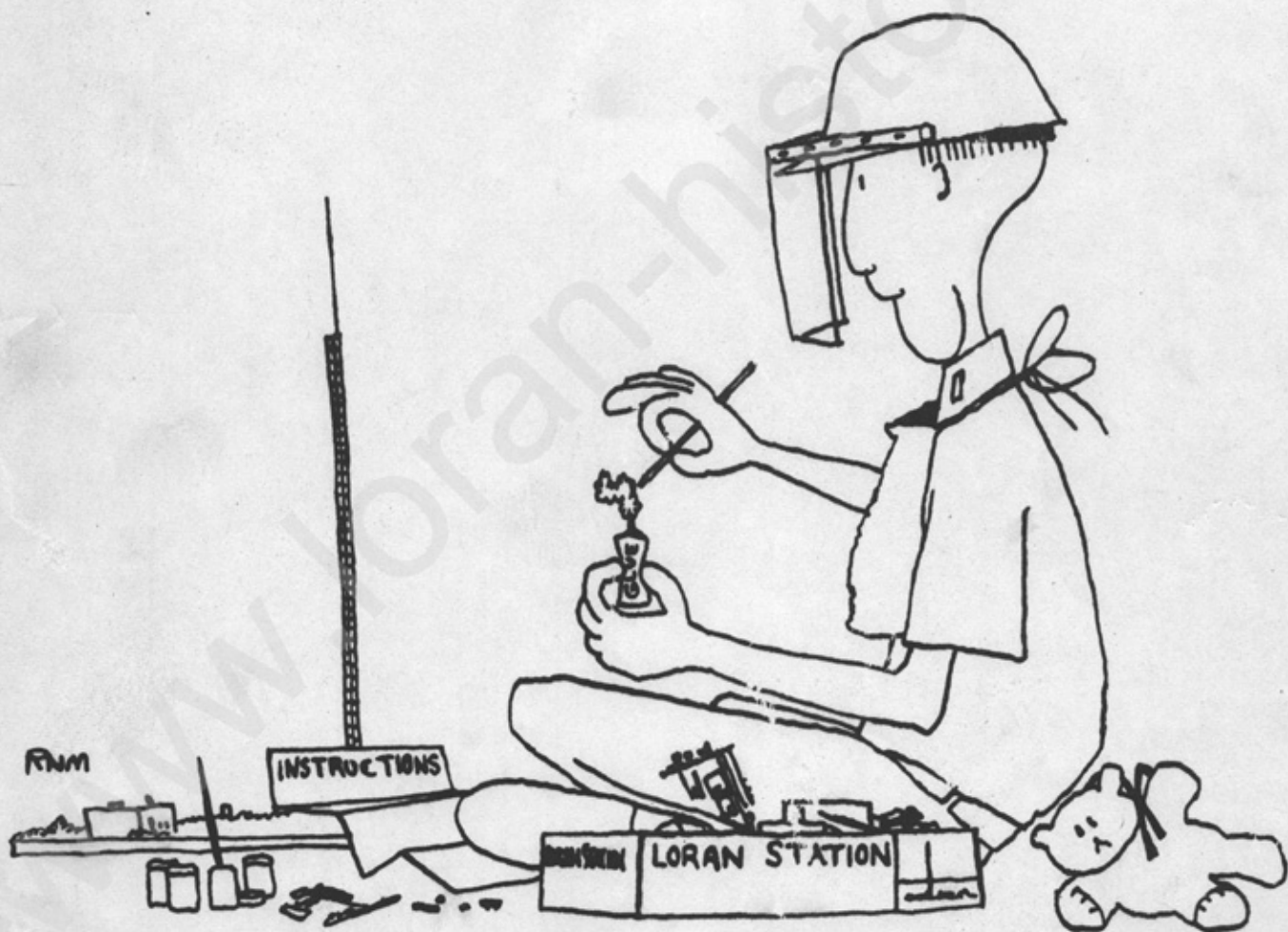




COAST GUARD

Loran Station **YAP**



General Information Book

TABLE OF CONTENTS

CHAPTER I - GENERAL INFORMATION

- A. Geographical Location
- B. Topography and Weather
- C. Brief History of Yap Islands
- D. Brief Station History
- E. Yapese Customs
- F. Some Yapese Taboos

CHAPTER II - OPERATIONS

- A. Aids to Navigation - Loran
- B. Additional AtoN Responsibility
- C. Law Enforcement and Intelligence
- D. Search and Rescue
- E. Public Relations
- F. Vehicles and Boats

CHAPTER III - PERSONNEL

- A. Complement
- B. Personnel Records
- C. Medical Facilities
- D. Training and Education
- E. Morale and Welfare
- F. Health and Sanitation

CHAPTER IV - ENGINEERING

- A. Power Plant
- B. Electrical System
- C. Air Conditioning
- D. Refrigeration
- E. Fuel System
- F. Fresh Water System

CHAPTER V - COMPTROLLER

- A. General
- B. Source of Supply
- C. Pay
- D. Fuel
- E. Transportation

CHAPTER VI - COMMAND

- A. Loran Operational Control
- B. Internal Operations
- C. Yap Island Administration
- D. Emergency Procedures
- E. Reports and Logs

CHAPTER VII - GUIDANCE FOR RELIEF OF PERSONNEL

- A. Mail
- B. Family Facilities
- C. Things to DO After Receiving Orders
- D. Buildings, Associated Departments and their functions
Map of Station Grounds

CHAPTER I

GENERAL INFORMATION

A. Geographical Location: USCG Loran A/C Transmitting Station Yap is centrally located 240 acres on the island of Gagil-Tomil (Yap group) in the Western Caroline Islands. The Yap Islands lie about 450 miles South-west of Guam and are composed of four major islands: Yap, Gagil-Tomil, Rumung, and Map. Gagil-Tomil is connected with the main island of Yap by means of a bridge over Tageren Canal. Both Map and Rumung can be reached only by water. This entire group of islands comprise approximately 38.7 square miles and are surrounded by a fringe like reef. The following page contains a rough sketch of the islands.

B. Topography and Weather: The station is located on what is referred to locally as the "High Desert" due to the lack of vegetation, however, this is misleading, since there is a great deal more plant life on Gagil-Tomil than you would expect to find in many sections of the USA. A series of hills, the highest being only 585 feet, separates the East Coast of Yap proper from the West, and the south end flattens out into a fertile plain. One main road extends from the north end to the south end of the main island and on thru Gagil-Tomil, but rains and ruts make it difficult to traverse. There are two distinct seasons here, the rainy and dry, although many of the natives insist there are four; two summers and two "winters". The average temperature during the day is 88° and at night it settles to around 75°. A good breeze blows in across the island most of the day and effectively mitigates the heat normally experienced in a tropical area. Showers occur sporadically during the dry season from December to May, and from June thru October rain can be expected daily. This rain, however, falls quickly in torrents, then the sun comes out again immediately thereafter.

C. Brief History of Yap Islands: The early history of these islands is obscure. Both Yap and Ulithi were probably discovered by the Portuguese Captain Diego Da Rocha in 1526, and subsequently visited by Spaniards, Englishman, and Germans. Perhaps the most colorful of the westerners to touch at Yap was Captain David O'Keefe (Native of Savannah, Georgia), who established himself on Tarang Island in Tomil Harbor, and gained considerable wealth and power transporting crystalline stone money from the Palau quarries to Yap, and gathering copra and trochus shells to ship to other ports. The origins of these people are undetermined and their folklore sheds little light on the question; however, most of the natives themselves claim to be a mixture of mongoloid and negro descent. The Yapese experienced a severe population decline after contact with Europeans which continued during the Japanese administration. This decline has since been arrested and a slight population increase has been noticeable over the past two decades. The majority of the Yapese subsist on an economy of

YAP ISLANDS

N

9°25' N

RUMUNG

MAP

YAP *
LORAN

GOBIL

TOMIL

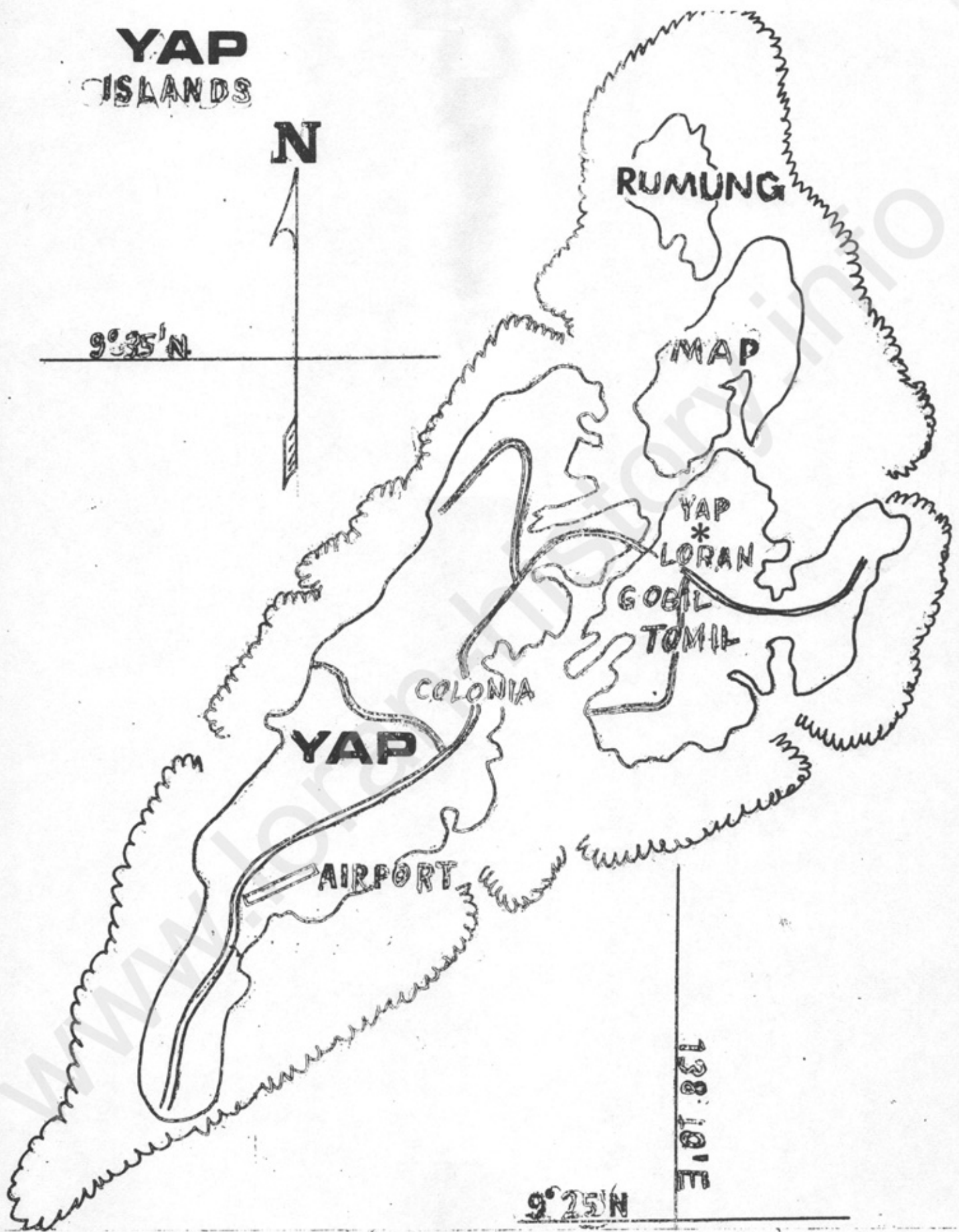
COLONIA

YAP

AIRPORT

138°10' E

9°25' N



gardening, harvesting, and fishing. Crops include taro, yams, sweet potatoes, bananas, polynesian chestnuts, breadfruit, papaya, oranges, tapioca, coconuts, pineapples, tobacco, and cane. Chickens and pigs are raised, but are usually eaten only on special occasions. Among the various fishing techniques employed are traps, spears, large nets, the usual hook and line, and stone fish weirs which appear from the air like huge arrows in the shallow waters of the lagoon. The above described subsistence economy includes home building without the use of nails, canoe and boat building, and the weaving and making of clothing. Yap is, at times called "The Land of Stone Money". The large doughnut shaped stones were brought from Palau before European times on canoes and rafts (just under 300 miles of open sea), and later on in sailing ships similar to O'Keefe's. The value of the money depends not so much on the size as on the age and hardships undertaken to obtain it. Many Yapese have taken to wearing western style clothes, however, in the villages traditional types of clothing are worn. Yapese clothing is simple and scanty, but not without meaning. The men wear loin cloths (Thu), and upon reaching early manhood add strands of hibiscus bark to them. In the past, the color of a man's thu denoted his class standing. The women wear full grass skirts and upon reaching womanhood, add a black cord which is looped around the neck. The woman when in this native dress leave their breasts uncovered. The traditional Yapese house is large and hexagonal in floor plan, with a steep thatched roof which juts out at both top ends. This type of house, however, is quite rare today, and is gradually being replaced by smaller, flimsier houses of corrugated iron and plywood. Most villages have a large men's house where the elder men gather to chat and sleep.

D. Brief Station History: The general contractor for the construction of the station was Dillingham of Nevada, who worked from December 1963 to February 1965 with many delays due to weather, road conditions and the remote location. On 7 May 1964, the Loran C tower collapsed after reaching a height of 780 feet. The station was finally commissioned on 11 September 1964 and dedicated on 22 October 1964. During early January 1965, the new 1000 foot tower was completed by Beasley Construction Company and the Loran C commenced transmitting on Rate SS3-Z on 9 January 1965. Loran A transmission on Rates 2L1 and 2L2 commenced on air operations relieving the Loran A facilities at Ulithi Atoll on 1 February 1965. In early May 1965 the U. S. Navy Mobil Construction Battalion Detail departed after completing the road project.

E. Yapese Customs: Children seldom wear clothing until they are a year old. After that they are encouraged to wear Yapese clothing. Girls over one year old wear grass skirts or American style dresses, depending on where they are going. Most girls have their heads shaved or cut very short until they reach menstruation age, after which it is never supposed to be cut again. Some young women do wear their hair short but this is not according to Yapese custom.

When girls reach womanhood the black cord they wear around their necks when wearing the grass skirt is called a "marfau". It must be kept on at all times when the girl is wearing native costume, especially in the presence of men. It is not absolutely necessary to wear it when only the family is present, but it must never be removed in public as long as there are Yapese present.

A Yapese woman must not expose her legs above the calf - to do so would be an attempt to entice men. Consequently, Yapese women don't wear short grass skirts or American style shorts. Even in American style dress, the Yapese women prefer the skirts fairly long.

Women do not walk side by side with men in a village or public place, but follow a few paces behind. Men of low caste (or serfs) will, however, follow a few paces behind a woman of higher caste. A woman takes the caste of her family - or when she marries, of her husband. There are at least nine different castes on Yap. There are rules in relation to approaching, talking with, and behaving towards those of different castes.

It is the custom for women to bathe together but they do not expose themselves to each other unnecessarily, and many times bathe in their grass skirts.

Boys at the age of one are taught how to wear a single strand cloth Thu. The American counterpart of a Thu would be described as a loin cloth. As boys grow older, they may add strands to the Thu. By the age of seventeen the Thu may consist of three or four strands, all different colors. Red and white are the most popular colors, especially among the younger men. When a boy reaches manhood, around twenty, he may wear a "Gal or Kafar" in addition to his Thu. The Kafar is made of dry hibiscus bark strands which passes between the thighs and are attached to the front and back of the Thu.

As soon as a young man appears in his Kafar he is engaged in a tussle by some "Kafared" young men in order to determine whether he has reached manhood and can earn the right to wear the Kafar. In the ensuing struggle the attacked must try to keep his Kafar from touching the ground and becoming soiled. He is lucky if the attacker is a close friend or relative who will pretend to put up a good fight, but will always lose. If he is among strangers, especially ones stronger than he, they will make every effort to make his lose face. When a young man loses he does not stop wearing his Kafar, but he will never forget the moment and will be ashamed whenever it is mentioned. The attack is not meant to harm, but is only an attempt to get the Kafar in the dirt. No young man will be accepted to a position of prestige unless he wears a Kafar.

Once a person has added strands to his thu or has worn a Kafar he can never wear less strands or go without his Kafar. The only time he can

dress differently is in the presence of his immediate family - never in public nor when receiving guests.

When permission is requested to take a picture of women in Yapese dress, they usually hesitate, even though they may not mind. They usually respond to the request more readily if a copy of the picture is promised them. They also appreciate receiving cigarettes, candy, cookies, or beer.

Some Yapese Taboos: It is not acceptable for a person to step over another person's basket or belongings. In olden days, especially, one was very careful never to do this. People carry their "Bonod" (Magic) and precious belongings in their baskets; and it is considered disrespectful of a person to step over his belongings. This is true also regarding the person himself. One should never step over a person, a stretched out leg, etc. To do this is to liken the person to an animal.

In the men's house one should not sit on the logs that lie parallel across the house. People who sleep in the Men's house use these logs for pillows.

It is forbidden to sit or stand on top of the stone money that stands upright or to sit on the stones which are around the platform of the houses and are used for backrests.

When a relative dies the Yapese are reluctant to talk about the dead person and will never refer to their relationship with the person. For instance, they might, if necessary, refer to "that lady Maria" when they are speaking of their own mother. In fact, relationships are a touchy subject with Yapese and it is best to refer to people by name rather than by relationship at all times, i.e., "Where is John?" rather than "Where is your brother?" or "Where is Tinan?" rather than "Where is your mother?" Saying "Your Father" or "Your Mother" to a Yapese is used as a form of cursing. When speaking of any relationship great caution must be used to avoid being misunderstood.

Slapping a person on the back or patting him on the shoulders as the Americans express friendliness is not appreciated by the Yapese. If the Yapese is not aware of your presence it is considered impolite and offensive to touch him. He may get excited and kick, shout or flail his arms. If you wish to attract the attention of a Yapese before getting close to him, or to enter his house or yard, a slight cough or clearing of the throat will warn him that someone is near. It is always considered better manners for a foreigner to make an appointment to call at the home of a Yapese rather than just dropping in. However, if you are in the neighborhood and wish to visit a Yapese, you should remain outside his yard until you have attracted his attention and been invited in.

Shaking hands is not a Yapese custom. This practice started just before World War II and is now accepted by many Yapese. They seldom grip the hand firm and strong, however, as do the Americans.

Burping or hiccoughs are accepted by Yapese and are not considered impolite either in public or in the presence of company. They consider this as common as coughing.

When a person accepts a gift he is expected to give one in return; however, not at the time of receipt of the gifts unless the return gift was prepared ahead of time. A gift is often repaid by helping the donor on the occasion of a feast or celebration he may be giving, either bringing food or helping with the work. It is most impolite for the recipient not to repay the gift in some form. In accepting the gift one must hesitate, refusing it once or twice and saying he should not accept it. If the gift is still offered after two refusals it is customary to accept it with a word of thanks. This means the donor really wanted to give the gift and it was not just a gesture of politeness.

The Yapese has very few salutations. Some of the most common are: Kafel - (literally means correct or OK), a salutation of farewell, goodbye, or going away; "Ban'ene nge Falan" (literally, the object would be happy), a salutation meaning "God bless you"; "Kegabul" (literally, it is tomorrow), a salutation meaning "See you tomorrow" is commonly used in the afternoon or evenings; "Dam'od" (literally, let's die), a salutation meaning "Good Night", usually used when going to bed. The reply to all the above salutations is to repeat it. "Mogathin" (literally, say the word) is a means of asking for news or the purpose of ones visit. The reply is "Dariy" (literally, nothing) which is used by Yapese even if they have something they wish to say. "Mog Salpem" (literally, say your condition) is a salutation inquiring about ones health or problems, meaning "How are you" or "What can I do for you?" The reply can be "Karogog" (literally, about the same), "kayugurogog" (literally, I am fine) or "Dariy" (nothing) if replying to "What can I do for you?" or else state what can be done.

Yapese seem to appreciate Americans who make some attempt to use Yapese words occasionally. The least an American in Yap should do is use "Kammagar" for "Thank You" and "Dariy" for the response to "Thank You", as well as "Kafel" for hello or good bye, or "Kegabul" for see you tomorrow.

CHAPTER II

OPERATIONS

- A. Aids to Navigation: This station has been designed to be a highly effective Aid to Navigation. It accomplishes this by transmitting Loran signals (pulses) that are of the desired shape and at the correct time interval. These pulses are to be continually transmitted making the system accurate and reliable with a minimum of unusable time. This is done in the following manner. Yap Loran Station will operate as a double master Loran A Station on the following rates: 2L1 and 2L2. The former's slave station is CG Loran Station Angaur, the latter's slave CG Loran Station Guam, located at Orote Pt., Guam. Yap Loran Station will also operate as the Zulu slave in the Northwest Pacific Loran C chain on rate SS3. Other stations in the chain are Iwo Jima (Master station), Marcus Island (W slave), Hokkaido, Japan (K slave), and Gesashi, Okinawa (Y slave). Yap Loran Station will monitor a Loran A signal to insure correct time delays are being kept and monitor Loran C signals as the master directs. CG Loran Station Saipan acts as system area monitor for Loran C.
- B. Additional Aids to Navigation Responsibility: Area of responsibility - Yap Island. Loran Station Yap shall perform routine servicing at least once each month and correct operating deficiencies as necessary at Yap Island Light. Within the capabilities of available personnel, equipment and facilities, perform emergency servicing of all floating and unlighted fixed aids within the area of responsibility. Inspect all aids within the area of responsibility at least once per year.
- C. Law Enforcement and Intelligence: Loran Station Yap personnel must always maintain a state of readiness to perform law enforcement duties and be capable of gathering and forwarding intelligence information to proper authority. Since Yap Loran Station is located within the Trust Territory of the Pacific, all station law enforcement activities and intelligence activities shall be directed by Commander, CG Section Marianas.
- D. Search and Rescue: Although this station has no specific duties outlined as to SAR, just as any Coast Guard unit, it has a moral obligation to the public to assist in any rescue within the capabilities of the station and to notify higher authority if not able to effect rescue.
- E. Public Relations: (PIO) Being one of the two permanent military tenants on the island of Yap it falls upon the shoulders of CO, Yap LORSTA and all hands to set an excellent example in both conduct and proficiency in the highest tradition of the U. S. Coast Guard. The Commanding Officer is responsible to assure there is a maximum co-ordination and co-operation among Trust Territory, the native inhabitants, and USCG.

F. Vehicles and Boats: Currently this unit is served by three (3) M-37, 3/4 ton 4x4 trucks and two (2) M-34, 2½ ton dump trucks.

CHAPTER III

PERSONNEL

A. Complement:

1. Officers:

a. LTJG	1
b. ELC	<u>1</u>
	2 TOTAL

2. Enlisted:

a. BMC	1
b. ENC	1
c. ETC	1
d. DC1	1
e. EM1	1
f. EN1	1
g. CS1	1
h. ET1	2
i. HM2	1
j. RM2	1
k. EN2	1
l. ET2	3
m. ETN2	1
n. EN3	2
o. ET3	3
p. CS3	1
q. TT3	1
r. SN	9
s. FN	<u>2</u>
	34 TOTAL

3. Indigenous:

a. Kitchen Worker	1
b. Laborer, grounds	<u>1</u>
	2 TOTAL

4. Organization: The Commanding Officer is assisted by one ELC (W-4) who functions as Electronics Engineering Officer/Executive Officer, Communications Officer, Safety and Electronics Maintenance Officer; three Chief

Petty Officers who are designated department heads. ENC in Engineering, BMC in Deck, ETC in Electronics. The station office is located on the northwest corner of the barracks building adjacent to the BOQ, and is the primary place of business of the Commanding Officer. Engineering records are maintained in the Engineering Log Office, adjacent to the generator room, Commissary records are kept in the Commissary Office located in the department dry stores area, while sanitary and Health Records of personnel are maintained in Sick Bay, located adjacent to the CPO Quarters. The BMC assists other departments in ordering supplies while ordering for and supervising the deck department.

B. Personnel records are maintained by the HM in the station office. Pay Records are maintained by Commander, CG Section Marianas in Guam.

C. Medical facilities include a modern sickbay under direction of the Hospital Corpsman; the Yap Hospital is open to Coast Guardsmen and is served by two Trust Territory, U. S. doctors, one U. S. Peace Corps doctor and an assortment of native medical officers including a dental technician. Any cases requiring special knowledge, equipment, etc., are treated at the U. S. Naval Hospital in Guam.

D. Yap Loran Station maintains training program for its personnel. Included are the usual courses for advancement in rating and USAFI courses. Weekly all hands lectures, division training, and bi-weekly emergency drills are held. The EEO/XO is responsible for the detailed electronics training of all personnel engaged in Loran Operations.

E. Moral and Welfare:

1. Recreation: On station, indoor recreation is accomplished in two main areas, the mess deck and crew's recreation room. Recreation gear on the rec deck consists of a pool table with accessories, a stereo record player, and a ping pong table. Movies are shown on the mess deck nightly with double features on Fridays, Saturdays, and holidays. The mess tables are utilized as card tables for those so inclined. Within the mess deck is located a small storage room used as a projection booth. Sports enjoyed on the station consist of horseshoes, motor bike riding, shell collecting, and dark room photography. A larger concrete area used for water catchment is also utilized for outdoor basketball.

2. Off station recreation: The Island of Yap is a photographers dream. Aside from the beautiful flora, fauna and lagoons, colorful pictures can be taken of inhabitants in their native dances and ceremonial rites. These are performed many times a year.

3. Shell Collection: Many personnel spend much of their time and energy in the collection of beautiful Pacific shells. Shells are plentiful

and varied. A few of which include: Cowries, cones, clams, augars, etc.; both rare and common. In addition, shells from the surrounding islands can be obtained. Located about four miles from the station is a private beach accessible by vehicle, known as "The Coast Guard Beach". The beach was loaned to the Coast Guard by a local chief who resides in his village adjacent to the station. Swimming is enjoyed just off the beach within the coral reef that surrounds the island. Coast Guard beach parties are held periodically.

4. Other recreational gear not mentioned before includes boxing gloves, photographic enlarger, slide projector, radio receivers and numerous small games. Recreation is ample and more recreational outlets will probably be found in the future.

5. The town of Colonia, located 7 miles from the station is used by CG personnel for recreation during off duty hours. At present there are two establishments which sell food and beverages. Located in Colonia is a general store operated on the Co-operative plan, in which shells, carvings and artifacts, both local and from the surrounding islands, may be purchased.

6. Yap Island: LORSTA Yap is not isolated in the strict sense of the word. Colonia is located approximately seven miles from the station on the main road directly on the route to the airport. The town itself is not large (approximately 400 population) but it does offer many familiar conveniences. The Yap Co-operative Association has a large general store, grocery store, garage, shipping concern, all of which endeavor to provide for both native needs and those of the crew. Trust Territory Officials and quite a few natives have memberships. Two or three other "Saloons" are located in Colonia and the atmosphere is usually quite convivial. Yap radio broadcasts daily and the programming is pleasantly balanced with stateside and local music and commentary. Trust Territory maintains a Post Office in town and of course there is a Courthouse, constabulary, sanitation department, public works building, local hospital, etc., in addition to the various administrative offices. Mobil Oil Micronesia provides the Loran Station with diesel fuel, gasoline, and lubricating oil.

7. Harbor: A fairly narrow opening in the fringe like reef surrounding the island provides the entrance to Tomil Harbor. It's very scenic, and activity is usually at a minimum until the arrival or departure of one of the Inter-island vessels. Control over the harbor is exercised by the Trust Territory.

8. Airport: Located on the southeast part of Yap Island is the local airstrip. Originally built by the Japanese, bombed by the U. S. Navy, and rebuilt by the U. S. Coast Guard, the airstrip is now utilized on a scheduled basis by the Air Force for logistics and Air Micronesia for passenger and mail flights.

9. Pests: Tiny red ants, which do nothing more than annoy, and common house flies are the two most common insects on the island. Constant spraying eliminates most of them and also rids the station of the few cockroaches which manage to hitch a ride to the island on a log flight. Rats are not a problem since coconuts provide an excellent diet for them. They are prevalent on the island but never come near the station, as they prefer the coconut groves where only 2% of the coconuts are harvested and the rest are available to them. Small lizard like "geikles" are actually quite cute and harmless. They abound on the island and are very beneficial as they feed on insects exclusively. Toads are nothing more than a nuisance, as they always seem to get under one's feet. Supposedly, monitor lizards up to six and eight feet live on the island, but no station personnel have ever experienced seeing one that large. They are non poisonous and according to all reports, harmless. No snakes live on the island of Yap, however, some poisonous fish, moray eels and poisonous cones do inhabit the waters off shore and it is prudent to be selective as to where one places his feet or hands when swimming or skin diving. There are also sharks in the local waters, however, they mostly remain outside the coral reef.

10. Pets: The station at present has seven dogs and cats and they are all well fed and cared for.

11. Wildlife: As is common on most Pacific isles, birds and fish abound.

12. Local Inhabitants: The customs and traditions of the island people, Yapese mainly, but also Ulithians and Palauans are really quite fascinating and also colorful to observe. Some of the dances and "Mit-Mits" (loosely translated as party) are "open" to the Loran Station personnel and this opportunity to study the local culture is rarely refused.

13. The unit has a morale committee composed of the CO, one CPO, and four enlisted men chosen by the crew. The committee meets monthly to determine recreational gear and activities of interest to station personnel and to delineate areas within the station operation which may improve unit condition and morale.

14. Mail service to Yap is excellent. Air Micronesia maintains three flights per week (Monday, Wednesday, and Friday) and the Air Force Logistics flight arrives twice a month. Surface mail arrives periodically by ship. Use of surface mail may take up to five months for delivery, however, the station may use SAM and PAL for rapid shipment as well as regular Air Mail. Since Yap is served by the U. S. Post Office, American, rather than international rates apply.

15. Crew members at Yap may make purchases thru PACEX at Tokyo or the Navy Exchange on Guam. Specific articles requested are ordered and paid for directly by the person.

16. Beer and Soda Mess: LORSTA Yap has an open beer and soda mess and bills are settled monthly.

F. Health and Sanitation: Yap LORSTA has its own septic tank for waste and sewage removal. The unit is also furnished with a 200,000 gallon rain catchment potable water system. Source for the water are the roofs of the barracks building, and signal power building, as well as the surface of the concrete tennis court.

CHAPTER IV

ENGINEERING

A. Power Plant: Four (4) Caterpillar D-398 A, SRSE (self regulating, self exciting) generators provide electrical power to meet station demands. Present power demands require the operation of two (2) of the generators in parallel.

The following is a brief synopsis of the technical data relative to this power plant. A more complete breakdown is maintained in the unit machinery index.

Engine: Caterpillar, V-12, Turbocharged-diesel. 32 volt starting system. Starters (2) mounted on right and left banks. Speed control through Woodward UG-8, remote control governor.

Generator: 500kw, 600kva, 3 phase, 60 cycle, 480 volts.

B. Electrical System: Depending on voltage requirements, the initial 480 volts output of the generators is either stepped up or down through a series of transformers located in the following positions.

1. Engine room: 3(ea) Westinghouse, indoor type "EP", single phase 25 kva. Primary - 240 x 480 volts: secondary 120 x 240. (1 ea) International - indoor dry type "F". 75 kva-3 phase. Primary 480V. Secondary 120-208 Volts, 60 cycle.

2. Engine room transformer pad: 2 ea. Standare Transformer Co., Outdoor, oil immersed, Type "AT". 750 kva - 3 phase HV -4160/2400-LV-480 Dial setting "C". 4160 V-104 Amp.

3. Loran C Transmitter Building: Outdoor Type - 2 ea (same as 2.).

4. Barracks Machinery Room: International, indoor dry type "F" (same as 1.).

Main feeder circuits to branch circuits are controlled through the engine room main distribution panels. Sections may be isolated or dropped without disrupting the power supply to the other portions of the station, i.e. Main barracks from signal power building, Loran A from Loran C of Loran C transmitter building from a signal power building.

Individual circuits may be secured from circuit breakers panels located in all buildings.

C. Air conditioning and refrigeration: The operation and maintenance of refrigeration and air conditioning equipment is the responsibility of the Engineering Department. Due to the amount of refrigeration and air conditioning equipment at this unit, it is essential that at least one (1) of the personnel assigned to the engineering billets have a RAC designator or be thoroughly knowledgeable in this field.

1. Barracks Building: The entire barracks building including the BOQ, is centrally air conditioned through the use of a TRANE, chilled water system. With the exception of the Mess Deck, Crew's head, Passageways and Closets, all rooms in the barracks building are equipped with one or more, TRANE, fan coil chilled water units. Mess Deck air conditioning is accomplished with the same chilled water system but utilizes an isolated, TRANE, vertical draw thru climate changer. In addition to the chill, coil, each fan coil unit has an additional coil installed for the circulation of hot water. Adjusting the pneumatic controlled thermostat of the fan coil unit allows room temperature control to the individual preference.

2. Signal Power Building: Only the electronics portion of the signal power building is air conditioned. Five (5), TRANE model SH 404A, Horizontal packaged climate changers are used. Two (2) Supply Loran A, Two (2) Loran C, and one (1) for the radio room. Since the operating temperatures of Loran C timer equipment must be maintained at prescribed settings, it is essential that the two units supplying this equipment be considered critical and be maintained accordingly. If major repairs are necessary, the complete unit can be removed and a spare installed within a reasonably short period without interrupting Loran C transmission. Recently installed line transmitters permit the use of either 440 volt or 220 volt models.

D. Refrigeration: Refrigeration and refrigerators equipment vary in size and capacity and are as follows:

1. Walk-In 1200 cu. ft. capacity Econo-cold with coplematic, semi-hermetic compressors, (2 ea) one (1) for frozen foods and one (1) for vegetables and dairy products. Both units are identical including controls. In the event of freezer failure the chill box temperature can be lowered to freezing while repairs are being made. Food previously stored in the chill box can be stored in smaller refrigerators.

2. One (1) commercial type refrigerator, totalling approximately 30 cu. ft. is located in the galley and galley storeroom area.

3. One (1) each, compact apartment size refrigerators in the BOQ and CPO quarters.

4. One (1) each compact combination electric stove and refrigerator in BOQ and CPO quarters.

5. One (1) ice cream maker and freezer chest on mess deck.

6. Five water coolers: (a) mess deck, (b) radio room, (c) garage, (d) transmitter building, and (e) barracks building.

E. Fuel System: The supply of diesel fuel for station generators and hot water boiler is stored in an area referred to as the "Tank Farm". Ten 30,000 gallon tanks giving a total storage capacity of 300,000 gallons are located on the western perimeter of the station. Tanks are filled through a six (6) inch fill line approximately four (4) miles long. The starting point of the line is located approximately 3800 feet off shore in Tomil Harbor. When the station is ready to receive fuel, the tanker passes its fuel line to the loading platform and the tank farm. Except for a few road crossings and the underwater portion of the line, the remainder of the 6" line is above ground allowing for periodic inspection of the entire line.

Fuel from the storage tanks passes through a 2", above ground line to a "day tank" located behind the signal power building. Generators fuel supply is drawn from this tank.

At approximately the half way point in the 2" line, the line is tapped with a 2" T. Under ground line and supplies a 250 gallon underground storage tank located behind the barracks machinery room. This storage tank supplies the station hot water boiler.

Average daily consumption of diesel fuel is approximately 1,000 gallons. In order to allow for a reserve supply of fuel for those unpredictable instances, refueling is scheduled at approximately six (6) month intervals.

F. Fresh water system: Potable water for station use is obtained from a rain water catchment system. The roofs of all buildings, the basketball court and the top of the storage tanks are used to trap and collect water during rainfall. The trapped water flows through down spouts and underground piping to the collection tank located at the end of the signal power building. Dirt and debris settle to the bottom of the tank and the water is passed to the storage tank manifold. What appears to be one large tank, is in reality five separate tanks. Each tank has a capacity of 40,000 gallons. Tanks #1 thru #3 are used for the storage of untreated water or raw water. Tanks #4 and #5 are equipped with suction service valves and transfer return valves. Tanks #1 thru #3 is transferred to #4 and #5 after being treated. Transfer pumps located in the pump house draw water from the tank or tanks selected. The water is discharged through a 2" line to #5 tank. Before the water is transferred to #5 it is filtered and chlorinated by a Wallace-Tiernan

Automatic Chlorinator installed on the discharge side of the transfer line. Fresh water service pumps located in the pump house, take suction on #5 tank and pump it to pressure tanks and thence to various outlets throughout the station.

Although water is plentiful during rainseasons, July thru January, it must be used sparingly the remainder of the year due to light or no rainfall.

CHAPTER V

COMPTROLLER

A. General: Normally, all supplies are delivered to the station via Air Force aircraft from CG Activities, Guam, twice monthly. Coast Guard buoy tenders visit the island quarterly to service Aid to Navigation, as well as to deliver or pick up heavy equipment and/or non priority items. There are also three Air Micronesian flights per week which may be utilized by COMARSEC.

B. Source of Supplies:

1. General and Housekeeping: U. S. Naval Supply Depot Guam, and commercial on Guam are the normal sources of supply. Coast Guard peculiar items are obtained from Coast Guard Base Honolulu, Alameda, California, Supply Center and Brooklyn Supply Center.

2. Commissary Stores: Commissary stores are purchased from U. S. Naval Supply Depot, Agana, Guam, and the Commissary Retail Store, Naval Station, Guam.

3. Electronics: Parts are ordered from Coast Guard Base Honolulu and Coast Guard Supply Center Brooklyn, N.Y.

4. Survey: When items are found inadequate or damaged, a board of survey is appointed to determine the proper disposition for the item and whether a replacement is required.

C. Pay: All personnel are paid every two weeks by check. Allotments are strongly recommended; however, postal money orders may be purchased at the Post Office in Colonia.

D. Fuel: Fuel is delivered to the 300,000 gallon capacity fuel tanks via a 6" pipeline leading from the loran station fuel farm to Tomil Harbor. The pipeline extends into the main channel of Tomil Harbor where Mobil Oil Micronesia tankers tie up to Coast Guard mooring buoys and discharge into the pipeline. Fueling operations occur two to three times per year. Fuel from the tank farm to the main generators is carried via a 2" pipeline from the tank farm to the Signal Power Building. Lube oil and gasoline are purchased in drums in Colonia at Mobil Oil bulk plant and transported to the station in the stake truck.

E. Transportation:

1. Aircraft: Commercial flights provided by Air Micronesia, regularly arrive on Monday, Wednesday, and Friday from Guam. Return flights to Guam

are on the same day and involve approximately two hours flying time.

2. Ships: Some supplies arrive periodically on commercial merchant vessels but most equipment is delivered quarterly by COMARSEC vessels, USCGC BASSWOOD, and USCGC MALLOW.

CHAPTER VI

COMMAND

- A. Loran Station Operational Control: The Commanding Officer, USCG Loran A/C Transmitting Station Yap is directly responsible to Commander, CG Section Marianas for operational matters; but is also under technical control of Commander, CG Section Far East on all matters pertaining to Loran C capability. Since LORSTA Yap is a double Master "A" station and a single slave "C" control is shared; COMARSEC for Loran A, administration, logistics, and station operation and COMFESEC for Loran C technical assistance.
- B. Internal Operations: The Deck, Engineering, and Electronics Divisions are under the direction of the BMC, ENC, and ETC respectively. The ETC is directly responsible to the EEO/XO whereas the BMC and ENC are directly responsible to the Commanding Officer.
- C. Yap Island Administration: Yap, in the Western Caroline Islands, is a part of the Trust Territory of the Pacific; a United Nations Trust under the administrative control of the United States. As such, it is equivalent to a foreign country and entry into the Trust Territory must be approved by the High Commissioner whose headquarters is located on Saipan. The entire Yap District (including the outer islands) is under the control of the District Administrator who is directly responsible to the High Commissioner. The Distad has his headquarters in Colonia and the Commanding Officer, LORSTA Yap maintains a close liaison both with the Trust Territory and the native population. On Yap the Coast Guard is tenant and as such must adhere to all Trust Territory regulatory procedures; however, operations are never hindered and a very beneficial relationship exists between the USCG, Trust Territory and the native Yapese. There is also a very substantial Peace Corps population on Yap.
- D. Emergency Procedures: Yap Loran Station maintains emergency bills for earthquake, fire, typhoons, power failure, fueling, general quarters, emergency destruction and emergency recall. Safety is stressed and there is a unit safety board which periodically check both the station and the remainder of the environment for conditions dangerous to unit personnel.
- E. Reports and Logs: Reports and Logs are submitted in accordance with current directives.

CHAPTER VII

GUIDANCE FOR RELIEF OF PERSONNEL

A. Mail: The mail service is generally quite good either by Air Force aircraft or Air Micronesia. Air has been known to arrive from the east coast of the U. S. in five days; but this varies from time to time. Two addresses may be employed:

U. S. Government (MARSEC)

Name
USCG Activities, Code 7
Box 76
FPO San Francisco 96637

Trust Territory (STATION)

Name
USCG Loran Station Yap
Trust Territory of the Pacific
Yap, Western Caroline Islands 96943

Stamps can be purchased at the local Post Office.

B. Yap Loran Station is located in a restricted area and no provisions have been made for dependents. However, the Trust Territory Administration is currently promoting tourism to Yap and there is a moderate hotel on the island. An entrance permit is required from the Office of the High Commissioner prior to entry into the Trust Territory.

The Yap Hotel: The Yap Hotel caters primarily to transients. In addition to board and room, it provides laundry service for its guests at established rates.

There are at present almost no accommodations for permanent residence on Yap; however, family members with particular skills may apply to the Trust Territory High Commissioner in Saipan for employment, and if accepted, housing maybe provided. Schools are not good. No travel is provided for less than a two year employment contract. There are some dwellings for rent but are substandard by American standards.

C. This station is run according to standard Coast Guard Regulations and Organization. The major things to complete prior to reporting to Yap are to obtain the necessary shorts and overseas check off procedures. Write the station for any particular details of station life or station duties. The recommendation is that you carry as much as permitted and anything shipped should be well crated and sent at least three (3) months prior to your scheduled arrival on Yap. Some suggested items that should come in handy, other than a full seabag, are as follows:

1. Cameras, extra film and mailers.
2. Extra tropical uniforms, dungarees and chambray shirts.
3. Swim trunks, mask, fins, and snorkel (if interested in diving).

4. Athletic shoes.
5. High lace shoes.
6. One or two extra pairs of regular shoes.
7. Sunglasses.
8. Adequate civilian attire (recommend short sleeve shirts, slacks, and shorts). No dry cleaner available, hence, bring wash n wear.
9. Extra socks and handkerchiefs.

The CO, XO/EEO and CPO's will usually spend time at O'CCGD14 and Activities Guam reviewing station policy and current problems prior to reporting to Yap. Travel is via MAC from Alameda, California.

D. Buildings, Associated Departments and Their Functions:

A. Barracks Building: Located on the north side of the station property overlooking the blue Pacific Ocean is the barracks building. Construction is basically of concrete block type (to withstand typhoon velocity winds) and the entire building is air-conditioned, making it quite habitable. Contained in the barracks, or more commonly referred to as the subsistence building, is the galley, mess deck, recreational area, crew's quarters, laundry, photographic dark room, beer mess, CPO quarters, sick bay, station office, BOQ, and air handling machinery room for the air conditioning system. The subsistence building generally provides this station with all the conveniences of home. The BOQ consists of the Commanding Officer's room, the Executive Officer's room and one spare guest room, head, Kitchenette and living room all of which is tastefully decorated and furnished. The station office contains the CO's desk and Yeoman's desk plus a station armory and all other office type conveniences, file cabinets, etc. The CPO quarters which is adjacent to the office, has a comfortable living area, kitchenette, head, and four large bedrooms. Located just down the open air passageway from the CPO quarters is Sick Bay, a modern well equipped station "hospital" with emergency table, head, desk, and storage areas. The mess deck is large and spacious and in addition to providing us with our main eating space also contains the beer mess, projection room. Movies are shown nightly on the mess deck. The galley is well equipped with two electric ranges, reach-in refer, automatic dishwasher, grill, deep fat frier, one large walk-in chill box and freezer, dry stores area, office space and head, and numerous small items such as toasters, coffee pots, etc. All in all, it lacks very little. The recreational area (rec deck) has a pool table, console stereo set, numerous couches and chairs, and small amounts of reading material and long playing record albums. The dark room is quite adequate, equipped with enlargers and all necessary paraphenalia for producing good negatives and prints. Two washing machines and two dryers are contained in the station laundry. With the normal allowance of men on board each crew member has his own room and is permitted to decorate it to suit his taste. These rooms are spacious and comfortable, each containing a desk, chair, lounge chair and holly-

wood type bed. The crew's head is centrally located just off the middle passageway.

B. Signal Power Building: The Signal Power Building is of similar construction to the Subsistence Building. However, not all spaces are air conditioned. (The Loran C screen room, communications area, office and Loran A timer room are.) Located in the S/P building, from north to south is the Loran C screen room, communications area, head, ET office, electronic repair parts storage room, Loran A timer room, Loran A transmitter room, engineering office, spare parts room, main generator space, DC shop, EM shop, Bos'n locker, vehicle Maintenance area, and vehicle storage space.

The Loran C Timer Room is equipped with the AN/FPN-46 timers, control indicator group, workbench, and chalk board space. The communications area is located adjacent to the screen room and is equipped with two URT-17 transmitters, one SSB Mark I transceiver with a linear amplifier, one GPR90RX receivers and CU-591 A/URR converters, three R-1235/URR receivers, and two CTT-28 ASR-AUX teletypes used in conjunction with the above, also FM capabilities are accomplished by an AN/URC-45 with the Communications Station in Colonia, and the Weather Bureau's station at the airport. With the URC-45 and AN/PRC 59's (all station vehicles are equipped with the AN/FPN-44 transmitter control group). The electronics office is strategically located next to the head and just down the passageway from the communications area. The EEO (ELC W-4) and ETC find this quite suitable to their needs and handle most of the Electronics "rough" paperwork there. Directly across the passageway from the electronics office is the spare parts storage room which is dehumidified to preserve electronic components. In the space adjoining this area is the Loran A transmitter room with AN/FPN-30 timers and immediately adjacent to this is the Loran A transmitter room with T-325 B/FPN type transmitters AN-1700 amplifiers and an AN/FPZ3B switching group. Traveling south down the passageway one encounters the main engine/generator area equipped with four 800 horsepower 500 kilowatts caterpillar diesels and the main station distribution panel. The Engineering Log Office is in the Northwest corner and the spare parts room in the northeast. The DC shop, Bos'n's locker, and Electrical shop lie between the engine/generator space and vehicle maintenance area. Equipment necessary for all station maintenance and repair is in this area and many of the crew utilizes these spaces for hobby work. The vehicle maintenance and storage spaces are well equipped and also provide for additional storage parts. Located just outside the vehicle maintenance space is the station "gas station". The diesel (ten 30,000 gal. tanks) fuel "Tank Farm" is on the western part of the property just past the entrance to LORSTA Yap. Twenty four hour continuous watches are maintained in the engineering spaces, Loran A, and Loran C areas, and in addition, the oncoming engineer watchstander makes a station security check. Located directly behind the Signal Power Building is the station's catchment system - 40,000 gallon capacity storage

tanks - and across the road from the tanks is the Pump House, containing a pumping system and all chlorination equipment. The Subsistence Building, Signal Power Building, and large concrete combination tennis court, and basketball court all serve as runoff spaces for the freshwater supply. With only moderate water conservation practiced, potable water is available year-round. Chlorine tests are made daily and quarterly water samples are sent to Guam for analysis. The station sewage system consists of a septic tank and tile field located on the northwest corner of the property.

C. Approximately 1300 feet in an easterly direction from the Signal Power Building stands the 1000 foot Loran C transmitting tower. The Loran C transmitter building is located at the base of the tower. Loran signals from the Transmitter Control Group enter the building via an underground cable-trench. The signals are of a low level and are amplified by the AN/FPN-45 Loran C transmitters and then fed to the CU-1106/FPN antenna coupler and thence to the 1000 foot tower, the peak amplitude being at or near 3,500,000 watts. Located outside the transmitter building are various transmitter support equipment such as the radiators for the transmitter secondary cooling system, a storage tank for the transmitter primary cooling system (water), and two 750 KVA transformers, since the primary power supply to the building input to the transformers is via buried cables. The three phase transformers step down 4160 VAC back to its original value of 480 VAC.

