



COAST GUARD

Loran Station **FRENCH FRIGATE SHOALS**



General Information Book



GENERAL
INFORMATION
BOOK

TABLE OF CONTENTS

CHAPTER I - GENERAL INFORMATION

- A. GEOGRAPHY AND CLIMATE
- B. TOPOGRAPHY
- C. ADMINISTRATION
- D. STATION HISTORY
 - 1. DISCOVERY
 - 2. ISLAND CONSTRUCTION
 - 3. ESTABLISHMENT OF PRESENT STATION

CHAPTER II - OPERATIONS

- A. AIDS TO NAVIGATION
- B. COMMUNICATIONS
- C. LAW ENFORCEMENT AND INTELLIGENCE
- D. SEARCH AND RESCUE
- E. VEHICLES AND BOATS

CHAPTER III - PERSONNEL

- A. COMPLEMENT
- B. ADMINISTRATION AND PERSONNEL RECORDS
- C. MEDICAL FACILITIES
- D. TRAINING AND EDUCATION
- E. MORALE AND WELFARE
- F. BERTHING FACILITIES
- G. CLOTHING
- H. PERSONAL EFFECTS
- I. COMPENSATORY LEAVE

CHAPTER IV - ENGINEERING

- A. SIGNAL POWER BUILDING
- B. GENERAL ENGINEERING
- C. ELECTRICAL SYSTEM
- D. AIR CONDITIONING AND REFRIGERATION SYSTEM
- E. FUEL OIL SYSTEM
- F. FRESH WATER SYSTEM

- G. SANITATION
- H. POTABLE WATER
- I. FIRE FIGHTING

ELECTRONICS ENGINEERING

- A. LORAN A
- B. LORAN C
- C. RADIOBEACON
- D. COMMUNICATIONS
- E. TEST EQUIPMENT
- F. SPARE PARTS

CHAPTER V - COMPTROLLER

- A. COMMISSARY
- B. SUPPLY
- C. PLANT PROPERTY
- D. FUEL AND LUBE OIL
- E. TRANSPORTATION
- F. PAY

CHAPTER VI - ADMINISTRATION

- A. GENERAL
- B. REPORTS AND LOGS
- C. OFFICIAL CORRESPONDENCE
- D. STATION BILLS
- E. DELEGATION OF AUTHORITY
- F. SAFETY

CHAPTER VII - GUIDANCE FOR RELIEF PERSONNEL

- A. MAILING ADDRESS
- B. STAMPS
- C. FAMILY FACILITIES
- D. RECOMMENDATIONS AFTER RECEIPT OF ORDERS
- E. RECOMMENDATIONS FOR THE PROSPECTIVE COMMANDING OFFICER
- F. TRAVEL TO AND FROM THE STATION

CHAPTER VIII - STATION DIAGRAM

CHAPTER I

GENERAL INFORMATION

A. GEOGRAPHY AND CLIMATE: French Frigate Shoals is located 500 miles West-Northwest of Honolulu, Hawaii. Tern Island, the home of French Frigate Shoals Loran Transmitting Station, makes up just one part of the ten or so little islands which comprise the whole of French Frigate Shoals. The Shoals in turn comprise the approximate middle portion of the finger-like extension called the Hawaiian Archipelago which extends to Midway and Kure Islands. As is true of the Archipelago the shoal area began as a result of volcanic action, which while erupting from its ocean bed, continued to spew lava upwards until it broke the surface, extending the crater many hundreds of feet above the ocean. With the volcano finally extinct, the ocean began the continuing process of erosion, wearing away the crater, finally all but removing it. The only portion of it still remaining is La Perouse Pinnacle, the 122 foot sentinel and land mark of the area. As the ocean was wearing the crater away, the denizens of the deep which in death form coral were building up the small islands which comprise the Shoals. What might have been a volcanic crater eighteen miles across is now only a scattered group of sand and coral islands. The excellent weather that is the rule is a redeeming factor in the isolation of French Frigate Shoals. Brilliant sunshine prevails with occasional rain squalls. When winter comes the squalls get longer and more frequent. Prevailing trade winds of 15 knots keep the station comfortable and free of flies and mosquitoes. The temperature is generally in the 70's during the day with cooler nights.

B. TOPOGRAPHY: Tern Island, in its original state, resembled a small crescent approximately 100 feet long and 80 feet wide. Early in World War II, the Navy decided to establish a U. S. base of operations, sufficient to provide a landing strip for carrier aircraft, for the invasion of Midway. The Seabees started construction by bulldozing the island out of coral rock, reshaped the island into its present carrier-like appearance, and placed steel pilings around the perimeter of the island. Thus Tern Island was transformed into its present state: the length of the runway and island is 3,100 feet and the width 410 feet. Mean elevation is approximately 9 feet above sea level.

Vegetation is sparse, although there are scattered bushes and patches of grass. There are five horsetail pines that provide some shade as well as a "fall-out" area for the numerous species of birds that inhabit the island.

C. ADMINISTRATION: Officially, Tern Island and French Frigate Shoals are part of the City and County of Honolulu, Hawaii. However, French Frigate Shoals is included as part of the Hawaiian Islands National Wildlife Refuge which is administered by the Bureau of Sport Fisheries and Wildlife, U. S. Department of the Interior. The Refuge was established in 1909 by President Theodore Roosevelt under Executive Order 1019. The Refuge exists today to provide sanctuaries for endangered species of birds, turtles, seals, and other marine life and to maintain the native wildlife of the islands.

D. STATION HISTORY:

1. DISCOVERY: A Frenchman is responsible for the discovery of this area, hence the natural evolution of the name. Jean Francois de Galup, Comte de la Perouse, a famous explorer of the Hawaiian Pacific Area, literally stumbled across the Shoals while on a voyage in the Pacific. On 6 November 1786, Le Comte was sailing briskly along in his flagship, the BROUSSOLE, accompanied by the ASTROLABE. Two days prior, the ships had come upon Necker Island and were continuing west. To quote from his narrative of the events, "Since our departure from Monterey, we had never experienced a finer night, or a more pleasant sea; but this tranquillity of the water was among the circumstances which had nearly proved fatal to us. Toward half past one in the morning we saw breakers at the distance of two cable lengths ahead of my ship. From the smoothness of the sea they made scarcely any noise, and some foam was perceptible only at distant intervals. The ASTROLABE was a little farther off, but she saw them at the same instant as myself. Both vessels immediately hauled on the larboard, and stood with their heads south-southeast; and as they made way during the maneuver, our nearest distance from the breakers could not, I conceive, be more than a cable's length." The Comte made a very careful survey of the area the next day and on that day christened it "Basse des Frigates Francais", the shoal of the French Frigates, "it had nearly proved the final termination of our voyage."

There is no record of any earlier inhabitants of this area. Necker Island, the island discovered two days earlier by de Galup, was inhabited by early Polynesians and relics of religious ceremonies have been found. Evidently these islands were never used for any purpose until the twentieth century. The only inhabitants seem to have been birds and seals. Both these former residents still predominate. Until this century, French Frigate Shoals was just a passive witness to the passing of time. (The name was adopted officially by the

United States Geographic Board on 1 October 1924.) The Provisional Government of Hawaii leased the area for twenty five years in 1894. On 13 July 1895, it formally was made a part of the Republic of Hawaii by Captain J. A. King. In 1898 it was included among the islands acquired by the United States when Hawaii became a territory. In 1909, it was made a part of the Hawaiian Islands Bird Reservation; a function it still serves. A 1923 survey of the islands indicated that the total area of the group comprised 46 acres, 17 of which were covered with sparse grass and other low vegetation, a total of six species of herbs and vines. The highest elevation was twelve feet. The population consisted of thousands of sea birds, most of them terns. It was on this 1923 expedition that the islands were given their present names. Tern Island derived its name from the White Tern which can be found roosting in the Horsetail Pines on the island. Some of the other islands names are East Island, Shark Island, Whale Island, and Disappearing Island. The shoals form a rough crescent with La Perouse Pinnacle in the center.

2. ISLAND CONSTRUCTION: Tern Island's history began with the advent of World War II. The Japanese were the first to discover the tactical possibilities of controlling this area. They used the Shoals as a submarine rendezvous and for refueling seaplanes. The seaplanes continued eastward for nuisance raids on the big islands and to locate the ships of our Navy. There were also big plans to build a launching pad here for another attack on Pearl Harbor. Our Navy, at the same time, was developing plans for the invasion of Midway. Admiral Nimitz ordered two destroyers and two AVPs ahead to scout the shoals and establish a U. S. base of operations, sufficient to provide a landing strip for carrier aircraft. Two months after the second attempt - unsuccessful this time - on Pearl Harbor on 4 March 1942, three Japanese submarines cruised into the area to find the AVPs resting at anchor with our seaplanes in the air controlling the Shoals. No further Japanese activities were reported in this area. During the construction, the crew remained anchored off the south shore in barges. Navy Seabees arrived, and transformed Tern Island to its present state.

3. ESTABLISHMENT OF THE PRESENT STATION: About the time the Navy decided to leave, the Coast Guard began its Pacific Loran program. In August 1944 we built and established the Loran Transmitting Station which is famous in legend and song; French Frigate Shoals - reputed to be the most isolated Loran Station ever built. The first station was located on East Island, about six miles south-

east of Tern Island. This patch of coral is 1800 feet long and 330 feet wide, just enough room for the buildings and antennas. East Island was supplied logistically by sea with mail drops by PBY aircraft. The crew was rotated every six months if they desired and sent to another station to finish their year of isolated duty. On April Fools Day 1946 a tidal wave struck the island. Quite fortunately, no personnel casualties were suffered although the station itself was damaged severely. The station was rebuilt and continued to operate without incident until 1950 when in August the entire station was evacuated due to typhoon warning which proved to be a false alarm. In 1952, the Coast Guard, recognizing the superiority of Tern Island over East Island, leased Tern Island from the Hawaiian Aeronautical Commission for an indefinite period. In March of that year, the specifications of this station were accepted and shortly thereafter construction was started on the new French Frigate Shoals Loran Station. The contractor was C. W. WINSTEAD LTD. This station was built using the existing abandoned structures as the nucleus of the base with those additions particular and peculiar to a loran station being added. During station rehabilitation projects the crew has found old newspapers dating from 1942 to 1944. On 14 October 1952 the station was accepted and placed in commission. After it was certain that everything was functioning properly, the East Island site was decommissioned. This occurred on 6 November 1952. One antenna pole of the abandoned station is still standing. A visit to this island is in order during a tour of duty. It will be the only time station personnel will refer to Tern Island as "home". Due to its landing strip and location, Tern Island has been utilized by other government agencies. On 15 December 1960, the Pacific Missile Range established a tracking site on the east end of the island. It remained in active operation until late in 1962 and was completely disestablished in August 1963. The Atomic Energy Commission set up an observation post during tests in 1962, which has since been disestablished. Station rehabilitation work was accomplished by the M&R Detachment from Coast Guard Base Honolulu during 1964. Many of the 1952 buildings were replaced by sturdy concrete block buildings and the sea wall was reinforced. During the predawn darkness of 1 December 1969 the island was hit by heavy waves which washed completely over Tern Island. The stations crew and their three dogs (Ferd, Dummy, and Runt) were rescued from the roof of the SP building by a helicopter from the New Zealand Frigate HMS WAIKATO on the morning of 2 December and taken to Midway and then to Honolulu. The damage was repaired and the station was operational on 15 January 1970. Thus it was determined that this station required rehabilitation

which commenced in June 1972, and was completed in August 1973. The new barracks subsistence building and the signal power building are constructed on a raised foundation of approximately four feet to prevent a reoccurrence of the 1969 flood.

CHAPTER II

OPERATIONS

A. AIDS TO NAVIGATION:

1. LORAN: French Frigate Shoals serves as the double pulse master transmitting station for Loran A rates 2L6 and 2L7 with the respective secondary stations located at Kauai and Johnston Islands. Output power is approximately 800 KW. The 125 foot antenna (aluminum transmitting) is located east of the signal power building. The Loran A receiving antenna is located some 1000 feet east of the transmitting antenna. In addition, French Frigate Shoals serves as the cross rate monitor for Loran A rate 2L5 for Kauai and Upolu Point transmitting stations.

French Frigate Shoals serves as the system area monitor (SAM) for the Central Pacific Loran C chain, rate S-1 with stations at Johnston Island (Master), Upolu Point on the island of Hawaii (XRAY), and Kure Island (YANKEE). SAM is responsible for maintaining continuous readings of the MASTER-XRAY and MASTER-YANKEE legs and insuring that readings remain within critical tolerances with regard to pulse transmission, timing, and shape. If an out-of-tolerance exists, SAM initiates corrections to the respective stations to regain in-tolerance conditions. There are three receivers on station, and the receiving antenna is located on the roof of the old signal power building.

2. RADIOBEACON: A radiobeacon keying ^FSS on 320 KHZ transmits continuously. The radiobeacon antenna is located approximately 500 feet east of the loran transmitting antenna.

B. COMMUNICATIONS:

1. Primary communications are furnished with two AN/URT-17A transmitters. Radio teletype equipment provides rapid communication with Radio Honolulu (NMO). A high frequency transceiver is installed for ship/shore traffic and is used to maintain communications with the Central Pacific Loran chain. Portable FM transceivers are utilized for small boat communications.

C. LAW ENFORCEMENT AND INTELLIGENCE: French Frigate Shoals is located in the Hawaiian National Wildlife Refuge which is closed to all marine traffic and fishing. The station is responsible for notifying the District office with regard to any vessel seen in the vicinity of the leeward islands.

D. SEARCH AND RESCUE: A continuous radio guard is maintained on 2182 KHZ. The station is to conduct search and rescue operations, to render assistance to persons, vessels and aircraft in distress to the fullest extent possible, regardless of primary tasks.

E. VEHICLES AND BOATS: The station is provided with an M37 cargo truck and a John Deer tractor with front loader and rear fork lift. An Ansul cart with dry chemical fire extinguishing agents is provided primarily for aircraft crash drills. Small boats are limited to a 14 foot SKM Boston Whaler with a 20 HP outboard, and a 16 foot SKB Boston Whaler with a 40 HP outboard.

CHAPTER III

PERSONNEL

A. COMPLEMENT: The Commanding Officer, assisted by a Chief Warrant officer, two chief petty officers, and two first class petty officers, operates the station as any other command. The CWO serves as the EMO and chairman of the safety and training boards. As the EMO, the CWO is responsible for insuring that reliable loran operations are maintained through rigorous administration, maintenance, and engineering of the Loran installation and the training of Loran operating personnel. The BMC acts as the supply officer, MAA, as well as being head of the deck departments. The BMC is also responsible for the daily routine, and maintenance of the station grounds and buildings. The ETC, as head of the electronics (operations) department, is responsible for the operation and maintenance of all electronics equipment, and control of electronic spares and supply, and serves as an assistant to the EMO. The EN1 is responsible for the operation of the engineering department, vehicles attached, and fire fighting equipment. The HM1 acts as the medical officer and administrative assistant to the Commanding Officer. Personnel allowance is as follows:

Officers: 1 - LTJG
1 - CWO4 (ELC) Total: 2

Enlisted 1 - BMC
1 - ETC
1 - EN1
1 - HM1
2 - ET1
1 - SS1
2 - ET2
1 - RM2
1 - ET3
1 - ETN3
1 - EN3
4 - SN/SA
1 - FN/FA Total: 18

B. ADMINISTRATION OF PERSONNEL RECORDS: Enlisted service records are maintained by the administrative assistant to the Commanding Officer. Allotment requests, enlisted assignment data requests, shipment of personal items, etc., are done through the station office. Diary

entries are made by message to the district personnel office. Officers maintain their respective service records.

C. MEDICAL FACILITIES: Station sickbay can provide treatment for a number of injuries and illnesses of a limited nature. Certain immunizations may also be administered. Personnel requiring emergency medical care beyond station capabilities must be sent into Honolulu for medical TAD. In most cases, medical TAD is not authorized unless an emergency situation prevails.

D. TRAINING AND EDUCATION: The training board is comprised of the EMO, who acts as the chairman, the department heads, and the IML. The training board submits a monthly training schedule to the Commanding Officer for approval. Station drills, lectures, and departmental instruction are included in the monthly training schedule. Department heads administer the training within their respective departments and submit a monthly breakdown of departmental training conducted to the Commanding Officer.

The Commanding Officer is the educational services officer (ESO), and is responsible for indoctrination of station personnel regarding educational opportunities available. The ESO administers end-of-course tests, USAFI tests, and service-wide examinations.

Professional correspondence courses through the Coast Guard Institute and the Navy are available for both officers and enlisted men. USAFI courses and college accredited courses through participating colleges and universities in cooperation with USAFI are available at a nominal fee to the individual. All courses may be ordered through the ESO.

E. MORALE AND WELFARE: Due to the temperate climate, swimming, skin-diving, and water skiing are year-around activities. Scuba diving is permitted only if the individual is an accredited diver with qualification card. The station has no diving equipment, but interested personnel can order fins, snorkel, and masks through the exchange at Base Honolulu. Fishing is not encouraged in that the station is located in the Wildlife Refuge.

An outdoor recreation court adjacent to the barracks building provides playing courts for tennis, volleyball, badminton, and basketball. Night lights permit use of the court at any time of the day. The "Play-boy Club of the Pacific" is located on the beach area behind the recreation court and, with a roofed porch, provides a lounge where the crew can have a beer or two and play a little pool.

Indoor recreation is limited to pool, shuffleboard, and ping pong. The station library is well stocked with a vast variety of paperbacks. The station receives Time, Newsweek, Sports Illustrated, True, Playboy, as well as the Navy Times and the daily Honolulu paper for diversified reading.

The station dark room is available for photography enthusiasts who desire to develop, print, and enlarge their own photos and film. At the present time, the materials on hand are for black and white film only.

The station also has an amateur radio station with the call sign KH6ABH. Under usual conditions, it is not difficult to complete phone patches to the mainland for anyone desiring to call family, relatives, or sweethearts.

A movie is shown nightly on the mess deck, but plans are being made to erect an outdoor screen to allow for outdoor viewing on the more tropical evenings. Movies are supplied through the Naval Motion Picture Service, and are generally fairly recent full length features.

Mail is delivered and sent out weekly with the logistics flight. Stationery and stamps are available through the station exchange. Personal registered and insured mail as well as packages are mailed for the station by the comptroller at Base Honolulu. The postage costs are paid for by the Canteen fund which in turn bills the individual.

The Canteen is a cooperative fund composed of the personal funds of station personnel. The money is used to purchase items for the station exchange as well as beer and soda. The motion picture operators, the exchange operator, and the beer and soda operator, are all paid through the Canteen with profits from Canteen operations. Individual accounts are kept recording deposits and all other transactions. Personnel can request checks to be written for them by the Commanding Officer who is the Canteen Manager.

The station exchange stocks primarily toilet articles, film, and other various small items, which are ordered through the exchange at Base Honolulu. Special items may also be ordered through Base Honolulu. Mail ordering can be done through PACEX, Pacific-Mail Order System, Sears, Montgomery Wards, as well as thru the neighboring exchanges in Honolulu.

Beer and soda are stocked in a reefer on the mess deck. Members mark a tally board each time a beer or soda is taken. Beer is only permitted during off duty hours. Hard liquor is not permitted without the expressed permission of the Commanding Officer.

F. BERTHING FACILITIES: The barracks building has central air conditioning on the mess deck and individual air conditioning units in rooms. The Commanding Officer and CWO each have separate bedrooms while sharing a bath and living room. The BMC and ETC have similar accommodations. The remainder of the crew are in separate wing with each man having a private room.

G. CLOTHING: Uniform for officers and chief petty officers is working khaki long, with shorts permitted during the summer months. Uniforms for E-6 and below is dungarees, work shoes and chambray shirts during the winter months, with "hemmed up" shorts and tee shirts during the summer. Blue baseball caps are standard for E-6 and below and optional for officers and chiefs. Tennis shoes are optional attire for all personnel. Officers and chief petty officers will also be required to have tropical khaki long and tropical white long with ribbons for official occasions. Uniforms for E-6 and below for official occasions is tropical white long with ribbons.

It is highly recommended that a more than adequate supply of uniforms, especially dungarees, be purchased prior to reaching the station. The Canteen is able to order most uniform items through the Base Exchange or the small stores issue at Base Honolulu. However, delivery is slow, and often requests for odd sizes cannot be filled.

Civilian clothing is authorized during off duty hours. Bermuda shorts, light summer clothing, and bathing suits are recommended. During the winter, temperatures remain mild, but heavy winds make a sweater or windbreaker necessary during the evenings. Wellington boots and tennis shoes are recommended footwear.

H. PERSONAL EFFECTS: Incoming personnel are advised to ship their personal effects six to eight weeks prior to their arrival on station to avoid arriving ahead of their personal effects. Smokers are advised to bring 3 weeks supply of cigarettes or tobacco, as these items must be ordered by the individual through the Canteen. Hobbies are encouraged, space permitting. Stereo equipment is recommended. Under good atmospheric conditions, a radio with a strong receiver is able to tune in the stronger Honolulu radio stations. The station has a tape recorder and record player for those wishing to bring tapes and

records. Many personnel find a portable tape recorder helpful in corresponding with relatives.

I. COMPENSATORY LEAVE: Compensatory leave is accrued at the rate of 2 1/2 days per month while on isolated duty. Present station policy permits a man to take a maximum of 14 days compensatory leave between the end of his sixth month on station and the end of his ninth month on station. Compensatory leave will be granted as requesting, providing personnel strength does not drop below 10% of authorized strength and no hardship is placed upon operational responsibilities

CHAPTER IV

ENGINEERING

A. SIGNAL POWER BUILDING: The signal-power building is the location of the engine room, and the loran receiving and transmitting rooms. Electronic and engineering store rooms, and offices are also located in this building. Similar to the barracks building, the SP building is constructed on a raised foundation four feet in height.

B. GENERAL ENGINEERING: Station power is supplied by one of three Caterpillar 353 engines. Each Caterpillar engine is equipped with a Kato 250 generator. The remaining two Caterpillars are in a standby status. Each generator can supply a continuous output of 250 KW at 1400 engine RPM. The normal station load ranges from 140 to 180 KW.

Each generator has a separate switchboard in the control room thus permitting any combination of generators to be started, paralleled, or stopped. Automatic shutdown devices are installed in the event of low lube oil pressure, high cooling water temperatures, and engine overspeed. The overspeed and the lube oil alarms are reset manually while the water temperature alarm is reset automatically. In the event of fuel oil pressure failure, the engine will also shut down. All engines are equipped with woodward governors.

Preventive maintenance checks are conducted every 500, 1000, and 2000 operating hours as well as monthly, quarterly, and semi-annually.

C. ELECTRICAL SYSTEM: Main circuit breakers for the entire station are located in the engine room control booth. Each building on station as well as each building section also has a main control panel and a supporting panel. Therefore electrical power may be secured to any building on the station from any one of three locations.

D. AIR CONDITIONING AND REFRIGERATION SYSTEM: A central air conditioning unit supplies the mess deck and galley areas of the barracks building. Two central A/C units are available to supply the loran receiving and transmitting rooms in the SP Building, with one unit operating at any given time. To switch A/C units, the sump heater on the standby unit must be energized two hours prior to starting the Compressor unit. In that only one A/C unit can operate at a

time, the operating unit must be secured before the standby unit, including the sump heater, can be energized. The area beneath the raised floor in the loran receiving room and transmitting room is designed to serve as a cold air duct for the refrigerated air. All centralized A/C units operate with Freon 22. Individual bedrooms have General Electric window type units. There are four walk in refer units on station: number one and two chill boxes, and number one and two freezer boxes. All four units use Freon 12 for operation.

E. FUEL OIL SYSTEM: There are five 27,000 gallon capacity fuel oil storage tanks located on the west end of the island. Tanks are stripped weekly and painted annually. A fuel oil transfer pump in the engine room transfers fuel oil to the day tank (also located in the engine room) for engine operation. Soundings are taken weekly on the fuel oil storage tank in use. Fuel oil is consumed at an average rate of 400 gallons per day.

F. FRESH WATER SYSTEM: Fresh water collection comes from two sources, rain water catchment, and distillation of sea water. Rain water drain-off from the roofs of the SP and barracks buildings and the recreation court is collected in a catchment tank. The water then is pumped into one of eight raw water tanks.

Fresh water produced from distillation is the primary means of producing fresh water. A HJ120 evaporator (rated daily output of 900 gallons of fresh water) is located in the engine room and utilizes heat from the engine cooling water to produce fresh water. The fresh distillate is then pumped into a 100 gallon receiving tank in the engine room. From the receiving tank, the distillate is then pumped to one of the raw water storage tanks. A DCV-8 evaporator is used to supplement the HJ120. Distillate from the DCV-8 is pumped into the catchment tank.

There are five 20,000 gallon capacity tanks and five 10,000 gallon capacity fresh water tanks on station. One 10,000 gallon and one 20,000 gallon tank are treated water tanks and supply water to the barracks and SP building. The remaining tanks are raw water tanks. Water from these tanks is filtered and chlorinated before it is pumped into the treated tanks. All water pumps are located in the pumphouse adjacent to the SP building.

G. SANITATION: At this unit waste disposal is accomplished by a water-treatment/carriage system, whereby the wastes materials are

airiated and broken down by inverse, bacterial decomposition. After this process is completed, they are passed out of the system thru an overboard discharge.

H. POTABLE WATER: Filtration, chlorination and micro-pore testing are strictly controlled, logged and reported. Because of the large and varied demands for fresh water aboard this unit, all personnel are constantly aware of the needs to conserve this basic necessity.

I. FIRE FIGHTING: Both the SP and barracks building have two fire main systems with water pressure readily available. A salt water system with fire mains located at strategic locations on the exterior of the buildings, is designed for outside uses. A fresh water system connected to the raw water tanks is used inside both buildings. Fresh water mains are located in both wings of the barracks, and the engine room. Dry chemical and CO₂ extinguishers are located in the engine room, loran receiving and transmitting room, and the galley.

Smoke detection devises are present in bedrooms with heat detection devises present in all remaining spaces. A flame detection unit is installed in the engine room.

The station is divided into eight zones: the master fire alarm panel is located in the loran receiving room. Whenever a detection devise is activated, the master panel indicates the zone where the alarm has been tripped. Fire horns are activated in all spaces. The loran watchstander will pass over the station sound powered telephones the zone and the location of the fire.

As a secondary means of fire fighting, an Ansul cart equipped with dry chemical extinguishing agents and light water is available. Primary use of the Ansul cart is aircraft crash emergencies.

ELECTRONICS ENGINEERING:

A. LORAN A: French Frigate Shoals is a high power, double pulse master operating on rates 2L6 and 2L7. Four AN/FPN-30 Loran A timers provide timing and monitoring functions. A highly stable 100 HZ reference is generated by two rubidium vapor atomic oscillators. Timer switching is accomplished by loran switching group AN/FPA-2.

Two T-325A/FPN transmitters and two GCF-T-138A amplifiers, with a rated power of 800 KW, supply the 125 foot aluminum tower. Transmitters are switched by the GCF-RLL-1403 B auxiliary switching unit.

B. LORAN C: Three AN/SPN-29A Loran C receivers are installed to monitor rate 51. These receivers are scheduled to be replaced by three AN/SPN-30 receivers. Envelope and cycle time delays are recorded on three AN/USII-9 recorders. The receiving antenna is located on top the old signal power building with an alternate site west of the fuel oil tanks.

C. RADIOBEACON: This station transmits the characters FSS continuously on 320 KHZ. Two T-801A/FRN transmitters provide a maximum of 1.5 KW to a modified cage L antenna. Local monitoring of the signal is provided by the BZ-54/GRN alarm/monitor.

D. COMMUNICATIONS: Five R-1735/URR strip receivers and one Collins 651-S-1A receiver are installed for monitoring various frequencies. Two teletypewriters, with associated equipment, provide rapid radio-teletype communications with COMSTA Honolulu and other loran stations. Two AN/URT-17A 1 KW transmitters are installed. AN/PRC-59 FM sets are provided for portable and emergency drill communications. All operational traffic is conducted on single sideband, with the majority of message being sent and received via TTY.

E. TEST EQUIPMENT: A wide variety of general and special purpose test equipment is on board. Calibration services are provided by EST Honolulu.

F. SPARE PARTS: A 90 day supply of maintenance parts are stored in the signal power building. Parts and supplies are ordered from Navy sources and USCG SUPCEN Brooklyn.

CHAPTER V

COMPTROLLER

A. COMMISSARY: The Commanding Officer acts as the commissary officer and is assisted by the SS1, the commissary petty officer, in the administration of the station general mess. The commissary officer is responsible for the proper, effective, and efficient administration and operation of the general mess. The commissary petty officer is responsible for making out menus, managing the galley crew, spaces, equipment, and related functions and tasks for proper food service, and performing the basic paperwork connected with ordering and using food supplies.

Food supplies are ordered through Base Honolulu. Bulk dry stores are usually ordered quarterly through NSC, Pearl Harbor.

B. SUPPLY: The station operates under the Subhead 30 concept which permits the unit to allocate its own funds for requisition of supplies. With the SH 30 funds, the unit is required to requisition supply items less than \$250.00 per unit in order to maintain the unit at the desired operational level. Requisitions are made by milstrip, Requests for Procurement (RFP) for commercial purchases, and work orders.

The BMC acts as the supply officer and is responsible for the operational and maintenance supply functions of the command. Department heads determine the supply needs within their departments, and submit their requisitions to the supply officer for processing.

C. PLANT PROPERTY: The Commanding Officer serves as the plant property officer and is responsible for the proper administration of the Plant Property Record and related files. Department heads as property custodians, are responsible for the custody, care, and accounting of their respective property.

Survey requests are initiated by the respective custodian and are submitted to the Commanding Officer who appoints a board of survey. Property is surveyed in accordance with current publications and directives. Upon approval of a survey by the cognizant authority, the property is stricken from the Plant Property Record, and copies of the approved survey are maintained by the custodian and property officer.

D. FUEL AND LUBE OIL: Procurement of diesel oil is funded through SH 85 under CCGD14(f). Lube oil, AVGAS, and MOGAS are all purchased with SH 30 funds.

E. TRANSPORTATION: The FAA has been contracted by CCGD14 to provide a weekly logistics flight to French Frigate Shoals. Transfer of goods and persons to and from the station on the weekly FAA flight is at no cost to the station. Special logistic flights are scheduled whenever a heavy back-log of supplies occurs or for medical evacuation or other special personnel transportation. Periodic logistics and refueling trips are also made by the CGC BUTTONWOOD from Honolulu.

F. PAY: The crew is paid semi-monthly by check. Pay checks are usually deposited to the individual canteen accounts.

CHAPTER VI

ADMINISTRATION

A. GENERAL: The Commanding Officer, assisted by the executive officer or the administrative officer and the administrative assistant to the Commanding Officer, is responsible for the proper preparation, handling, maintenance of correspondence, reports, publications, and directives, records and files of the unit.

All required directives, forms, publications, records, and files for the command shall be maintained in accordance with current directives by the station office except those required for a specific department which shall maintain them in accordance with current directives.

B. REPORTS AND LOGS: Required reports for the command including references, responsibilities, and submission scheduled are promulgated in the Reports Required Index (FFS PUB-2). All reports and logs to be submitted shall be reviewed and endorsed by the Commanding Officer.

C. OFFICIAL CORRESPONDENCE: All official correspondence of the command shall be in accordance with appropriate regulations and directives. The Commanding Officer shall endorse all official correspondence. In his absence, the executive officer shall endorse all official correspondence. Correspondence files are maintained by the station office.

All incoming official correspondence, directives, and publications are initially routed to the Commanding Officer, or his designee who shall determine what should be seen by the various station personnel.

D. DELEGATION OF AUTHORITY: The Commanding Officer is charged with the responsibility of insuring the proper performance of the command in carrying out its assigned missions. When the regularly assigned Commanding Officer is not available for duty, the commissioned officer or commissioned warrant officer who is next in line shall assume command. A warrant officer or petty officer who is next in line to succeed to command shall assume command with the authority of an officer-in-charge. During the temporary absence of the regularly assigned Commanding Officer, the standing orders and routine of the command shall not be changed, except as may be required by the situation or by orders of competent authority.

The commissioned warrant officer in the electronics field specialty is designated as EMO, but has the same status and authority of an executive officer in accordance with Coast Guard Regulations. The EMO is responsible for effectuating the policies and orders of the Commanding Officer, and shall keep the Commanding Officer informed of all matter pertaining to the command. In the absence of the EMO, the senior chief petty officer will be designated as the executive petty officer who shall assume the responsibilities and authority in accordance with Coast Guard Regulations.

Department heads are delegated the authority to enable them to carry out their assigned responsibilities. The next senior petty officer becomes acting department head during the absence of the regularly assigned department head.

D. STATION BILLS: Administration and emergency action organization is provided by numerous station bills. Administrative bills have been promulgated in the following categories: paperwork management, supply, communications, inspections, cleaning and maintenance, station equipment such as boats and vehicles, and utilities and sanitation.

Emergency action plans are grouped as either Disaster Control Recovery Plans (DCRP) or Defense Preparedness Plan (DPP). The DCRP is designed to maintain operational status of the station to the fullest extent possible in the face of disaster, reduce the probability of damage, minimize effects, and initiate recovery. The following areas are incorporated into the DCRP:

1. Alarm Signals
2. Shelters
3. Fire Bill
4. Aircraft Emergency and Ground Bill
5. Power and Electronics AtoN Failure Bill
6. Boat Emergency Bill
7. Hurricane and Heavy Weather Bill
8. Tidal Wave Bill
9. Evacuation Bill

The DPP is designed to promulgate station readiness organization in the event of attack, a declaration of war, or an increased defense posture. The following areas are incorporated into the DPP:

1. GENERAL QUARTERS: To defend the station in case of a surface attack by a small armed party and to enable the command to carry out emergency destruction of classified material.

2. NBC DEFENSE BILL: To delineate action to be taken in the event of a nuclear, biological, chemical attack or accident, to enable the station to perform its assigned mission and provide maximum safety to station personnel.

E. SAFETY: The safety board, comprised of the EMO who acts as chairman, department heads, and the IMI, and other station interested personnel, meets monthly to discuss station safety improvements. Unsafe practices and conditions are discussed, and the appropriate action is recommended. A written report of the conditions and recommendations is submitted to the Commanding Officer. Upon approval of the submitted report by the Commanding Officer the appropriate department heads are instructed to correct the discrepancies and to notify the Commanding Officer when corrective action has been completed.

CHAPTER VII

GUIDANCE FOR RELIEF PERSONNEL

A. MAILING ADDRESSES: Personal mail should be addressed as follows:

Name of Individual
USCG Loran A/C Station
Box 48
FPO San Francisco, CA 96610

Incoming personnel desiring additional information are encouraged to address their inquiries to the Commanding Officer.

B. STAMPS: Airmail stamps may be purchased through the station exchange. The comptroller at Base Honolulu will prepare parcels and letters to be registered and insured for mailing, and bill the canteen. Postage charges are then deducted from an individual's account.

C. FAMILY FACILITIES: In that French Frigate Shoals is a restricted duty station, no family facilities are available.

D. RECOMMENDATIONS AFTER RECEIPT OF ORDERS: Due to the remoteness of the station and the fact that logistics flights with mail are on a weekly basis, it is often difficult to handle one's personal affairs in a prompt fashion. Therefore, it is recommended that after receipt of orders to French Frigate Shoals, incoming personnel consider the following suggestions:

1. All incoming personnel must pass an overseas physical which includes a medical and dental examination. Any possible medical or dental problems should be resolved before arrival on station. After arrival on station, personnel are not sent into Honolulu for medical treatment unless problems of an emergency nature arise.
2. Those personnel requiring eye glasses should bring at least two pair. If the lens prescription is known, glasses can be ordered.
3. Personnel requiring prescription medicine, i.e., allergy shots, etc., should notify the command well in advance of arrival to enable the medicine to be ordered. Such personnel should bring with them an adequate supply in the event that the needed medicine is not on hand upon their arrival.

4. Financial obligations are most easily handled through allotments. It is recommended that allotments be made for loan repayments, insurance premiums, etc., to insure their timely payments. Married personnel find that an allotment to the wife is the most convenient means of providing the family with money. Personnel are advised to file for their allotments early enough so that the allotment payments will have begun by the time the member arrives on station. The man's present unit or district finance office can provide all the required information on allotments, as well as initiate the allotment requests.

5. Personnel may consider giving a power-of-attorney to their wives or next of kin to expedite any legal problems that could arise during their tour. Through a power-of-attorney, the individual acting in one's absence is free to acquire and dispose of one's personal funds and possession's as directed and sign legal documents on his behalf. The individual is free to restrict the use of the power-of-attorney to any degree he desires. A power-of-attorney can be obtained at no cost through the district legal office.

E. RECOMMENDATIONS FOR THE PROSPECTIVE COMMANDING OFFICER: The prospective Commanding Officer (PCO) finds himself in a unique position upon receiving his orders. In most cases, the PCO will have approximately 22 months commissioned service upon his arrival. He is going from a position on his previous unit of limited responsibility to his tour at French Frigate Shoals of total responsibility. Loran school and district orientation prior to his arrival on station provide a great deal of helpful information but seemingly never enough. Change of command procedures can be accomplished within a week; however, during this period, the PCO will be familiarizing himself with station routine and instructions, reviewing past correspondence, conducting inventories, and examining the material condition of the station. Once the change of command is completed, the new CO may very well find himself in a daze and unaware of the administrative procedures he must follow as Commanding Officer.

To minimize the possibility of such a situation occurring, it is strongly recommended a PCO have a working knowledge in the following areas prior to his arrival on station:

1. COMMISSARY ADMINISTRATION AND OPERATION: The appropriate chapters of the Comptroller's Manual Vol. 4 (CG-264) concerned with commissary operation should be thoroughly reviewed. Examination of the commissary operation on your present unit will also be helpful.

2. PLANT PROPERTY ADMINISTRATION: Again, the appropriate chapter of the Comptroller's Manual Vol. 4 (CG-264) should be reviewed.

3. SUPPLY ADMINISTRATION: Familiarity with SH 30 funding is a must. Any knowledge of the federal stock system and procurement procedures (milstrip, RFP, and standard work order, etc.) is helpful.

4. PERSONNEL ADMINISTRATION: A thorough understanding of the Personnel Manual (CG-207) is required, especially those sections pertaining to transfer, advancements, and enlisted service records.

5. OFFICE ADMINISTRATION: The Correspondence Manual (CG-199) which outlines the formats for all official correspondence, should be familiar to a PCO. The Paperwork Management Manual (CG-416) provides information regarding station files, retention of reports and letters, and filing of instructions and notices.

6. CLASSIFIED MATERIAL CONTROL: It is essential that a PCO understand the handling and administration of classified material. A thorough understanding of OPNAVINST 5510.C is recommended strongly.

7. MANUAL FOR COURTS MARTIAL: Instances will arise when the Commanding Officer must invoke non-judicial punishment and/or court martial proceedings upon the personnel of his command. An understanding of the Commanding Officer's responsibilities and restrictions, especially with regard to NJP, cannot be minimized.

Upon receipt of orders to French Frigate Shoals, it is recommended that the PCO write the Commanding Officer requesting specific information not covered in this booklet. Copies of the station organization manual, station publications, and instructions are available if requested.

The final suggestion for the PCO is to enjoy his brief stay in Honolulu. It will be a while before he will return to Honolulu for the Commanding Officer's Conference.

F. TRAVEL TO AND FROM THE STATION: All personnel arrive and depart the station by the FAA logistics flight. Incoming enlisted personnel normally report to Base Honolulu upon arrival in Honolulu. They are assigned TAD and provided quarters at the Base until transportation is arranged on the weekly logistics flight. Officers report to the district, and must stay in a commercial hotel. Unless advance per

diem has been received, it is recommended that officers have sufficient personal funds during their stay in Honolulu as prices are quite high. The per diem rate which is presently \$31.00 per day with no quarters or messing facilities available, is a good estimate to use for daily expenses.

