GENERAL INFORMATION

LORAN STATION

SYLT, GERMANY

COMMANDER
COAST GUARD ACTIVITIES EUROPE
LONDON, ENGLAND

DEPARTMENT OF TRANSPORTATION
U.S. COAST GUARD

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:

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LETTER OF PROMULGATION

1. This publication was written for the general enlightenment of interested personnel and to provide relevant information for Commanding Officers and Liaison Officers or enlisted men preparing for assignment to this Loran station.

2. In addition to operational and military responsibilities particular to this station, information of a more general nature is included. Men assigned to this station must adjust to native customs and attitudes. A picture is given of the people unique to this area, the topography of the surrounding country, the prevailing climatic conditions and the available recreational facilities. Familiarization with these aspects will enable the prospective relief to prepare himself for his new surroundings.

3. This publication was compiled from information submitted by men actually engaged in active duty on the Loran station. Very few alterations have been necessary, and perhaps one of the values of this publication is to be gained through the tone and manner of expression of the author, who, in many cases, is found to be interesting, informative and imaginative. The insights offered are based on first-hand experience and should prove valuable to an American living in a foreign country.

4. It is requested that errors and omissions noted, as well as suggestions for improvement, be addressed to Commander, Coast Guard Activities, Europe, Box 50, FPO, New York, N.Y., 09510.

R. E. HAMMOND
CAPTAIN, U.S. COAST GUARD
COMMANDER, COAST GUARD ACTIVITIES, EUROPE

LORAN TRANSMITTING STATION, SYLT, GERMANY

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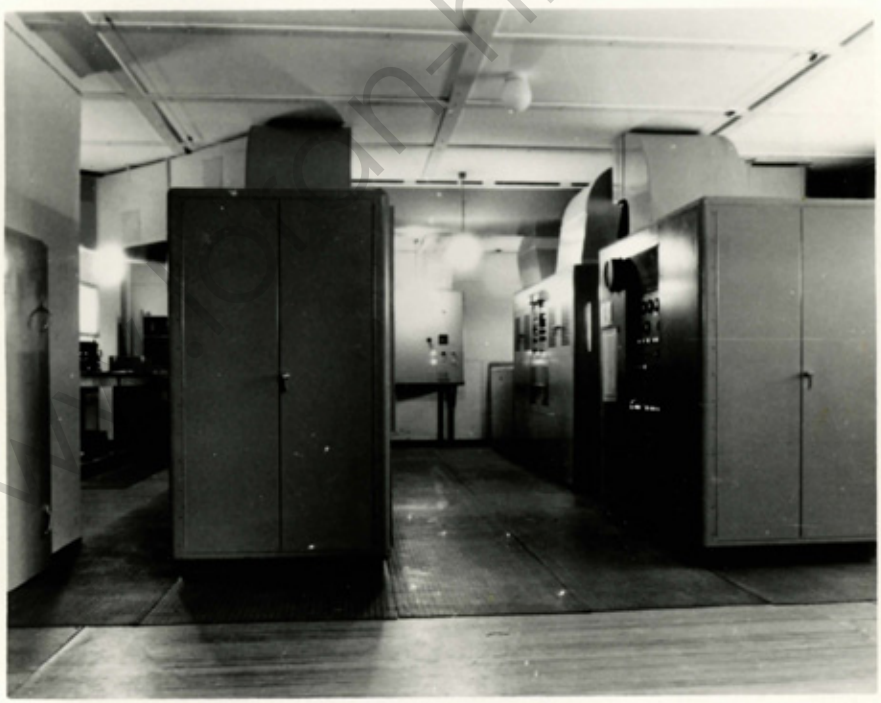

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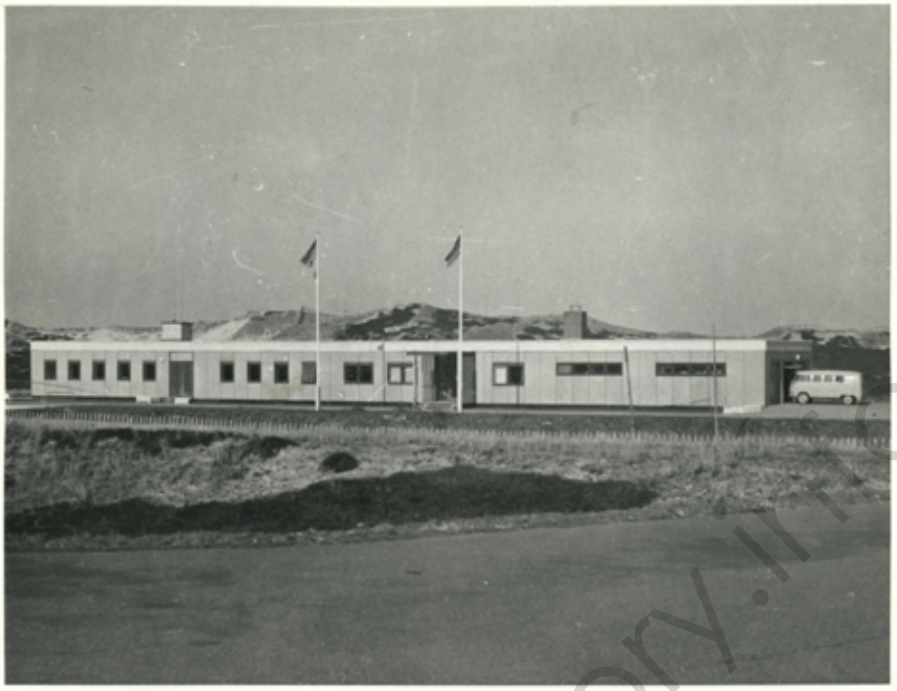

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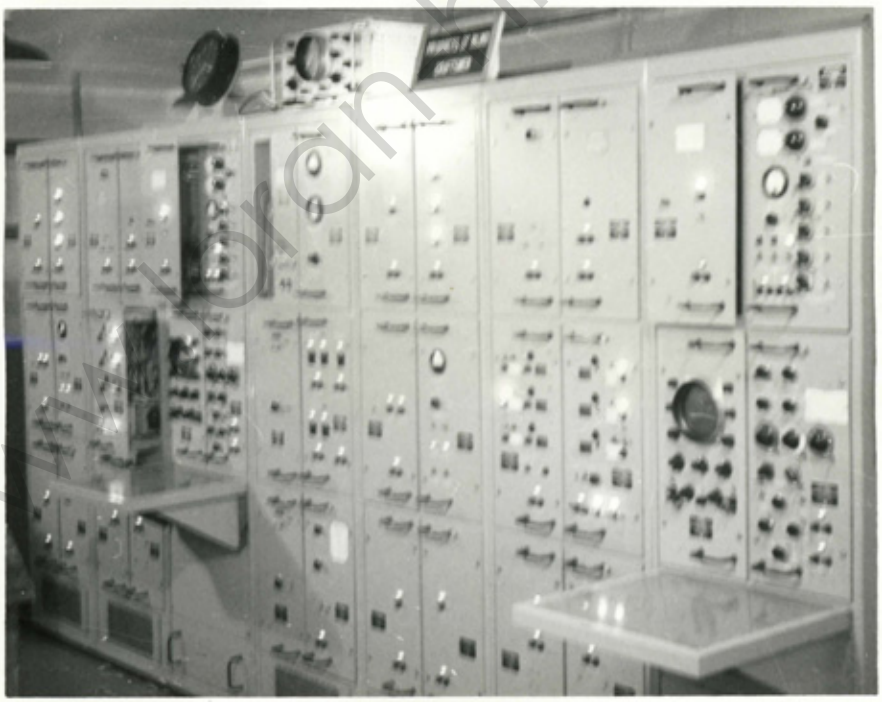

LORAN TIMERS AN/FPN - 41M

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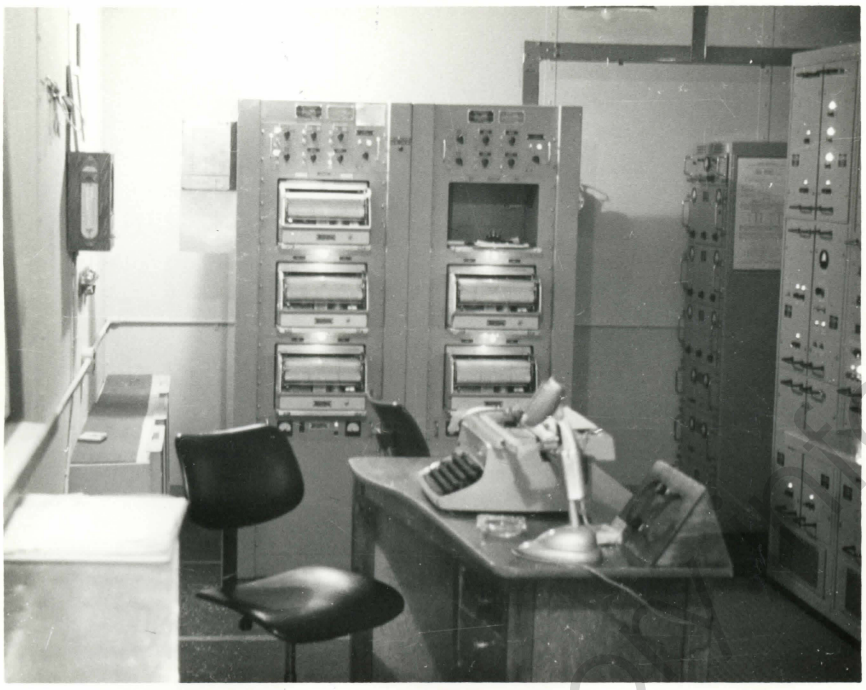

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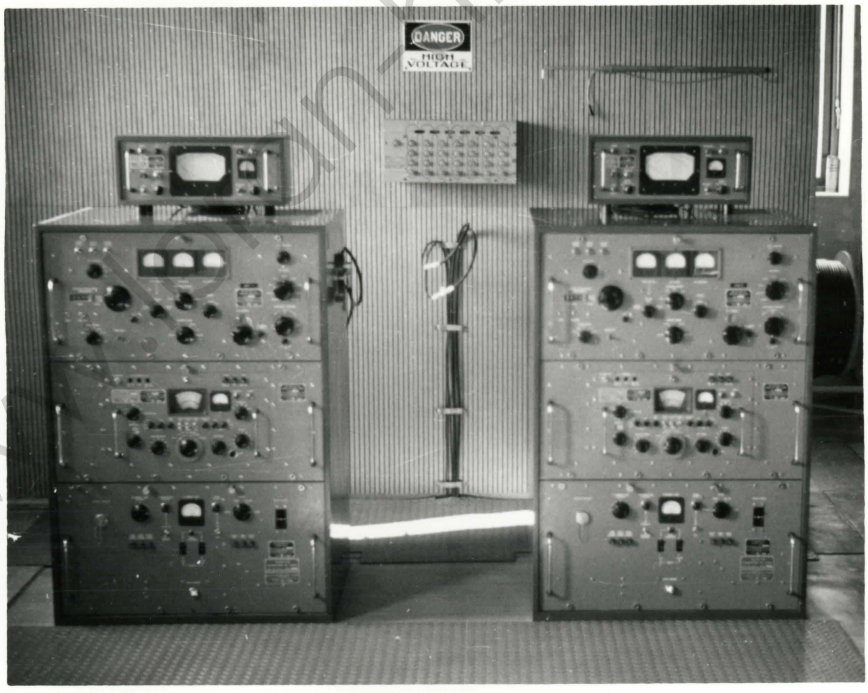
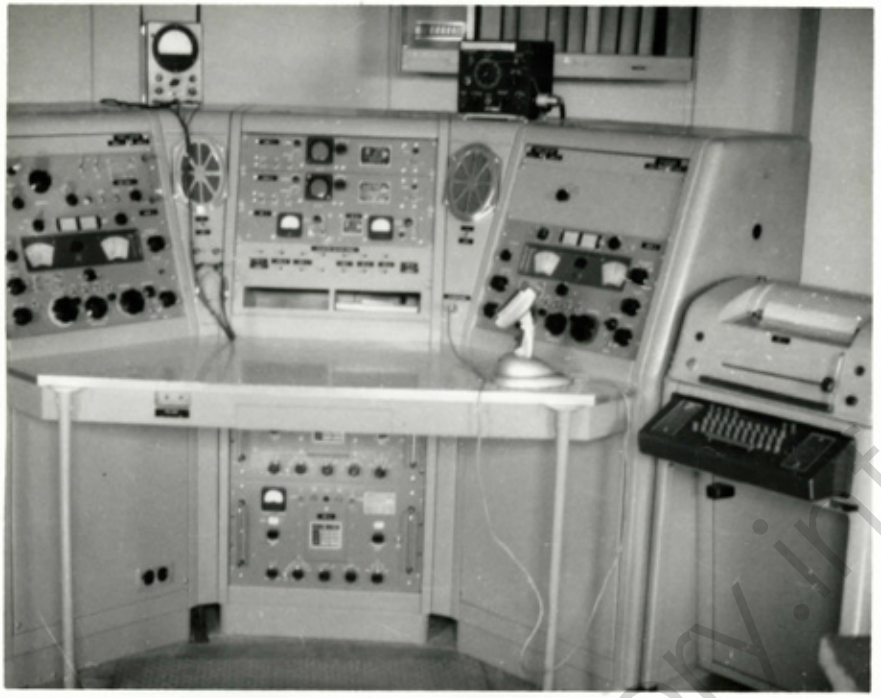


COMMUNICATIONS TRANSMITTERS AN/URT-17



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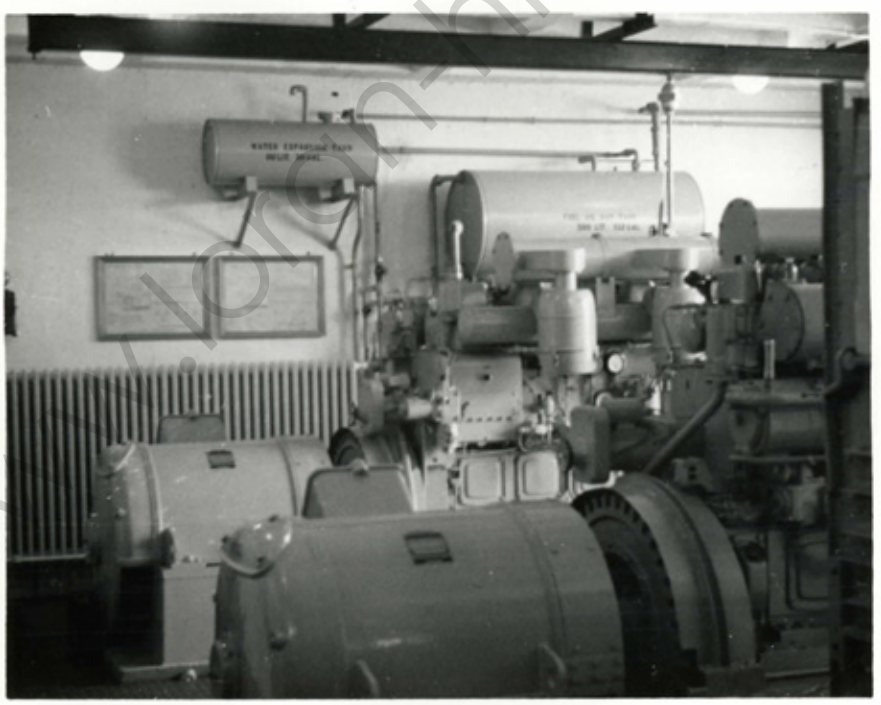

EMERGENCY GENERATORS

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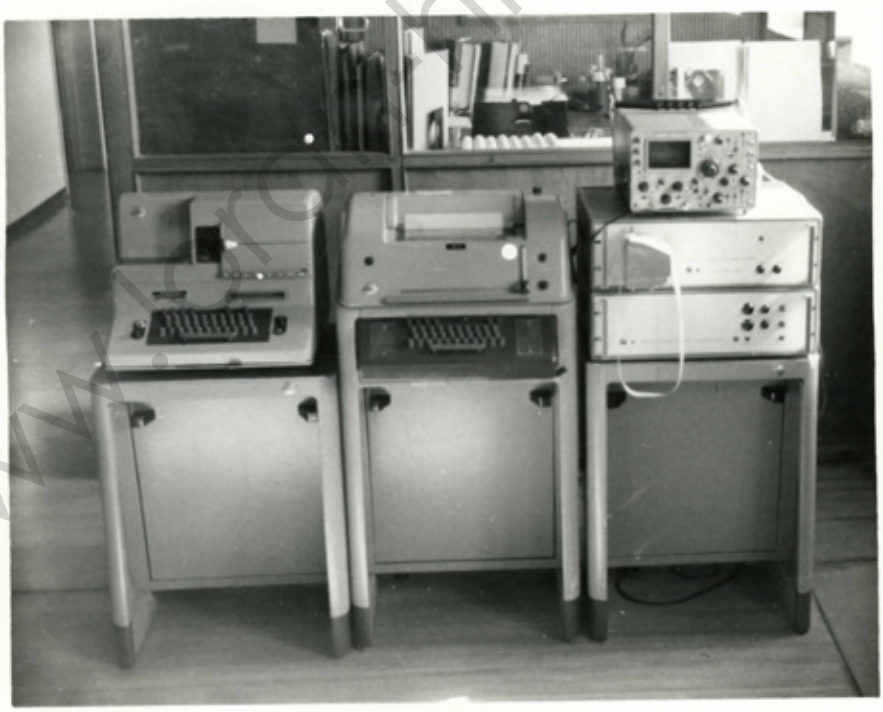
MESS DECK



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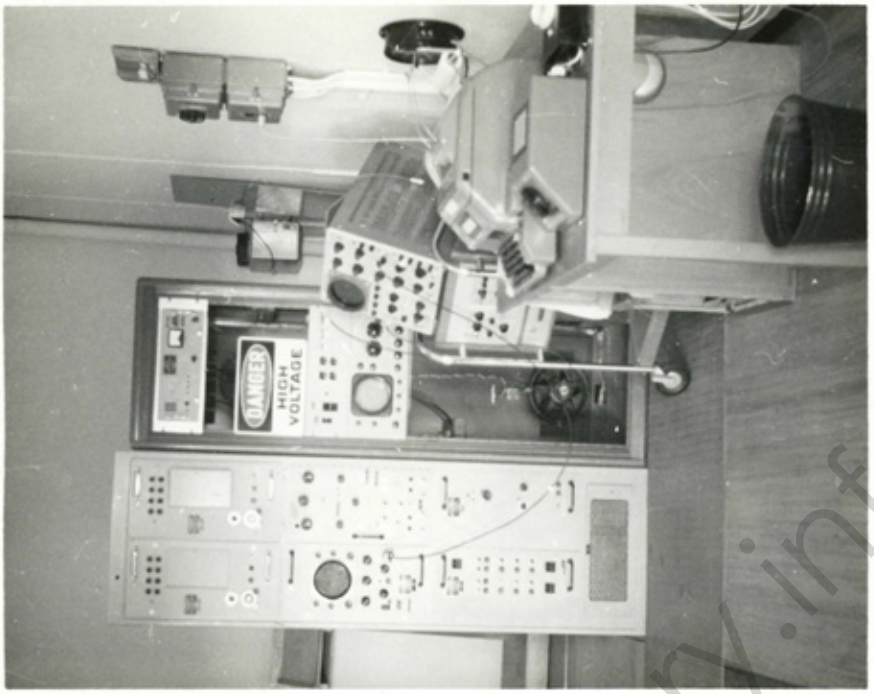


DECCA BUILT PG'S AND DECCA MONITOR

UNITED STATES COAST GUARD
LORAN TRANSMITTING STATION SYLT, GERMANY
GENERAL INFORMATION BOOKLET

Chapter I - General Information.

A. Geographic Location

The island of Sylt, Germany, is located in the North Sea just below the Danish border. It is the northernmost of the German Frisian Islands and is connected to the mainland by a 7 mile long railroad causeway known as the Hindenburg Damm. The island is 23 miles long in the north-south direction. It has breadth only at the center where the railroad from the mainland runs into the city of Westerland. From here the north-south extensions thin out to as little as ½ mile in places. The station is located on the southern extension at a location named Puan Klent, about 8 miles from Westerland.

B. Topography

Sand dunes comprise the characteristic surface of the island, particularly along the weather shore and on the north-south extensions. The station is located in an area such as this, with dunes ranging 30 to 60 feet in height, covered with grass and a tough growth called "Heide". Where this cover suffers erosion it is replanted, as here: "dune defense is island defense". Harbors are located at the northern and southern tips, with dockage for freight barges, fishermen, ferries, naval patrols and SAR craft. All areas are linked by roads, except to the mainland. A small train runs from one tip of the island to the other, and is used mainly by tourists. Westerland, however, is the terminal station on the main railroad line to Hamburg. The railroad handles over 90% of the passengers, freight and vehicle traffic to and from the island. The only access links are ferries to the islands of Rømo, Denmark, and Helgoland, as well as the summer aircraft flights to Hamburg and Berlin, Germany, and London, England. Vehicles to and from the island are carried aboard trains provided for this purpose by the railroad. The station is located on Federal Land in an area more or less designated as a nature reserve. In addition to migrating bird flocks, the area is inhabited by deer, pheasant, foxes, rabbits (as large as kangaroos), rats and field mice.

C. Weather

The weather is generally cool in the summer and moderate in winter. It is regulated by an ever present wind form the North Sea with winter temperatures running as low as 0°F and summer temperatures as high as 85°F. The air is maritime moist with rain at any time (and without warning) throughout the year. The fall season is generally the wettest. Snow is light most winters but can be significant with large drifts such as in the winter of 1962 and 1965. The most significant factors in the Sylt weather are wind strength, frequency of rain, and long periods of fog or overcast skies. The latter mostly in fall and winter. At this time the shortest days of the year, (0900 to 1600) combines with the clouds to produce the characteristic "gray" effect common to the North Sea area.

For compensation, however, we have the long summer days (0400 to 2200 in June) and their pleasant evenings to boast of. Included is a climatic table for the year 1964 for sample weather statistics.

D. Nearby Civilian Civilization

The city of Westerland/Sylt has a winter population of approximately 10,000. Its main industry is vacationers, similar to Atlantic City or Wildwood, and so its population increases about five times during the summer. Besides the tourists seeking the climate and fresh air away from the cities of the mainland, there are those present seeking cures for bronchial diseases as well as the various fresh air and sun cults which stress physical fitness and health. Foremost in evidence are the Freikorperkultur (free body cults) which operate nudist beaches. Large cities such as Hamburg and Cologne also operate fresh air camps for children. The only neighbor to the station in Puan Klent is one such camp. Over 300 children are here in the summer. Each child is here for a period of two to three weeks along with his school classmates and teacher. (The German school year begins in April). In addition to Westerland there are many small villages throughout the island, bringing the permanent island population to 20,000. Besides this, hotels and guest houses have a total of 40,000 beds available for the summer guests. Our nearest village to the north is Rantum/Sylt and to the south it is Hörnum/Sylt, each about three miles distance.

Americans have been well received and the islanders helpful and friendly. One natural difficulty, of course, is the language problem. We therefore find it necessary to learn the rudiments of the host language, with some station personnel achieving the conversational level in a short time. Extra study is required for this, but the results are well worth the time and effort.

E. Nearby Military Civilization

While there are no other American service personnel on the island, the German military do have a rather large establishment. The largest of these is the Luftwaffe Airbase (Fliegerhorst) in Westerland. This contains a supply regiment of some 600 men as well as operating base for aircraft flying to conduct air to surface firing in the water areas adjacent to the island. The airfield is capable of handling USCG C-130s and has been utilized in the past from time to time. The base has an officers' club, enlisted canteen, and a golf course.

CLIMATIC TABLE FOR THE YEAR 1964 ISLAND OF SYLT

MONTH	TEMPERATURE						PRECIPITATION				CLOUDS			THUNDER SHOWERS	WIND		WATER TEMP.
MONTH	avg. °F	max °F	min °F	#days max over 77°F	#days min under 32°F	#days max under 32°F	months total mm*	#days rain	#days snow	#days rain & snow	#hours sun shined	#days less than 2/10	#days more than 8/10	#days occur	#days force 6 or more (BEAUFORT)	#days force 8 or more	month avg. °F (in bay)
JANUARY	35.1	43	20		25	2	31.0	16		3	36.4	2	20		14	1	34.3
FEBRUARY	34.2	45	21		10	5	13.0	13	3	3	93.9	2	11		21	3	33.6
MARCH	31.8	40	22		23	4	13.8	8	2	2	88.9	3	20		18	6	32.9
APRIL	44.2	64	30		3		22.2	12	2		180.1	2	8	1	13		43.3
MAY	52.5	71	40				20.8	10			270.0	2	10	1	18	1	53.8
JUNE	57.6	74	45				84.2	15			240.1	2	10	3	22	2	60.6
JULY	59.0	76	48				78.4	17			189.0	2	14	2	18	1	61.0
AUGUST	59.7	80	50	1			62.1	12			220.0	2	7	8	15	2	62.4
SEPTEMBER	56.1	71	45				58.4	16			188.8	5	10	4	19	5	57.7
OCTOBER	47.7	58	34				58.3	15			125.7	5	12	7	13	2	49.5
NOVEMBER	43.4	52	32				49.5	21			69.4	2	12	3	14	1	44.4
DECEMBER	37.2	50	16		15	3	80.7	19		3	47.5	2	14	2	10	2	38.7
							*mm liters per sq. meter				Total 1791 hours						

Sylt, Germany

The German Navy operates a training school for storekeepers, yeomen, and corpsmen at the northern harbor of List/Sylt. This base contains an officers' club as well, and has offered use of its swimming pool to Coast Guard families. At Hörnum the German Navy has a "Marina" or base, which is mainly for training reserve Hospital Corpsmen during their summer tour of active duty. This base has a permanent staff of approximately 100 men and swells to 1000 during the summer. In addition to these larger units there are several smaller units hosted or scattered about the island. A list of various units and the rank of their commanding offiers is indicated below. All units have offered friendly assistance in the past and the Fliegerhorst provided helpful assistance during the construction of the station.

UNIT	RANK OF C.O.
Westerland, Fliegerhorst II/Luftwaffenversorgungsregiment 7 (Air Force Supply Regiment 7)	*LTCOL
Schiessplatzstaffel Sylt (Shooting Range Staff, Sylt)	MAJOR
Hubschrauberbereitsschaft (SAR Helicopter Squadron)	HAUPTBOOTSMANN (CPO under List)
Standortverwaltung Westerland (Area General Services Administration)	AMTMANN (Civil Service)
Marineversorgungsschule (Naval Supply School)	Fregattenkapitan (LCDR)
Marinefliegergeschwader 5 Aussenstalle List (SAR Craft List under Naval Air Squadron 5)	Kapitanleutnant LT
Sanitatsbataillon 901 (Medical Battalion 901) (Naval Reserve)	Oberstabsapotherker (LCDR Naval Med. Corps)
Marinefernmeldestelle 622 (Radar Station 622)	Stabsbootsmann (Warrant Officer)

*Senior Area Commander

The senior American military command for this area is the Commanding Officer, U.S. Army Terminal Command, Europe, located at Bremerhaven, Germany. This unit comes under his cognizance in the conduct and control of military personnel and dependents as related to this area. Bremerhaven provides assistance in matters of medical, legal, criminal, [illegible], housing, household

Sylt, Germany

Bremerhaven provides assistance in matters of medical, legal, criminal, mail, chaplain, household goods, PX, Commissary and other personnel services as availability and the distance (174 miles) make practical.

Sylt pay records are maintained by the Navy Disbursing Office at Bremerhaven. A cross service agreement is in effect with this command for logistics support and services as are available (stationery supplies, some common maintenance and cleaning supplies, fuel and transportation). MSTS shipments from Brooklyn are also handled by Bremerhaven. A vehicle is sent to Bremerhaven from Sylt about once every two weeks for APO mail, commissary and PX supplies, and various support items.

The Commanding Officer,U.S. Naval Security Group, Bremerhaven, is the senior Naval Officer in this area at the present time. This unit, also deriving support from Bremerhaven, has provided assistance and advice. The security group operates a small store, and provides disbursing on our Deutsche Mark payments to various firms, and administers our pay records. This includes proccessing all personnel travel claims.

Some additional American military requiring mention are:

MSTS Officer, Bremerhaven

USCG MMD, Bremen

USA Artillery Adv. Gp., Itzehoe

USN Security Group Activity, Todendorf (Near Kiel)

USN MAG, Kiel

Liaison Officer, Naval Academy, Flensburg

Liaison Staff to COMNAVBALTAP, (Rendsburg)

F. German Government-Federal, State, Local

In the operation of the station, contact ensues with all levels of the German government in the form of federal agencies, state agencies, and of course, with our immediate local hosts. The governmental system is complex, highly bureaucratic and functions overlap so that a single project may need proccessing through many different offices.

Some federal agencies coming in contact at the station level are the Bundespost, Wass-und Schiffahrtsamt, Bundesbahn (railroad) and Zollamt (customs). The Bundespost covers federal communications including post, telegraph, radio and television as well as frequency allocations and control. Naturally the functions of a Loran Station lie in these areas.

Sylt, Germany

The station was planned and constucted under the direction of the Post's regional engineering office, Oberpostdirektion, Kiel. This office continues to provide guidance in matters pertaining to the original construction and contractor guarantees. The Bundespost Funkkontrol-Messerstelle No. 1 in Itzehoe, monitors this area for control of radio frequencies and interference. The Bundespostfernmeldeamt, Flensburg, has overall authority concerning installation and repair of the station's telephone and telex equipment. Of course, repair personnel and assistance for our immediate needs are taken care of by the post office (Postamt) in Westerland.

Contact with the Wasser-und Schiffahrtsamt has not been extensive, however, there remains the district office, Wasser-und-Schiffahrts-direktion, Kiel, and the group office for the Sylt area is Wasser-und Schiffahrsamt, Tönning.

Contact with the railway and customs are of course in the area of service. There are several other federal agencies which have cognizance; for example, the stations underground fuel tanks have an oil leakage alarm system in order that it may comply with federal regulations concerning water pollution.

Germany is divided into principalities, whose governments parallel to some extent the functions of our state governments. A German state is called a "Land". Sylt is in the Land Schleswig-Holstein, with the capital at Kiel. While the station is on federal property, the state and local governments do concern themselves with the utilization of same. The main contact with the Land is with the state prosecutor (Staatsanwalt) in Flensburg for criminal and traffic violations. Again, there are other Land agencies and regulations such as the regulations concerning radio-active materials with which the stations ionic smoke detectors must comply.

Sylt is also in the Kreis (county) of Südtondern. The city of Tondern lies in Denmark with the county split by the most recent of the German-Danish borders; so the county seat is now in Niebüll, and the county is called "South" Tondern. The road past the station is one of the areas of county jurisdiction.

On the island is the city of Westerland and the various villages with their Burgermeisters (mayors) and councils. Un-incorporated areas, such as where the station lies and some of the smaller villages come under a single official (Amtmann). The office of the Amtmann is usually held by a native of the area (often many generations worth) and in this respect is singularly most important. Fire and police coverage are from the village of Rantum backed up by Westerland. Trash and garbage go via a dump in Hörnum and the chimney sweep arrives from nowhere every six months to pass his brush through our chimney. Coast Guard personnel register their families and receive local services such as school for children in the villages where they live.

G. The NATO Status of Forces Treaty for the Federal Republic of Germany

The status of Forces Treaty has broad coverage and is nearly all inclusive concerning the conduct of and provisions for allied forces in Germany. The U.S. Coast Guard is included therein as an allied military service. Items such as construction, transportation, customs and most important criminal jurisdiction are covered.

All U.S. personnel are subject to being arrested by the German police for violations of German law. Personnel arrested should request that the police notify the military police. Legal status cards with this request in German are provided to assist in this respect. Military police report the incident to the area Staff Judge Advocate (Bremerhaven). Military police are quite distant from Sylt so the station CO normally handles the incident reporting. In addition, local liaison has been quite effective in obtaining custody release.

After notification of an incident, it is up to the Staff Judge Advocate to establish liaison with the local prosecutor (Staatsanwalt, Flensburg, for this area). Provision is made for the German authorities to automatically waive prosecution after a period of 21 days. Should they desire to prosecute, they recall the waiver within the time limit. The trend is for German authorities to prosecute in an increasing number of cases. If the case is waived by the German authorities and is punishable under the UCMJ, then the Commanding Officer is responsible for proceeding. On final disposition of the case, the local prosecutor is to be notified via the Staff Judge Advocate.

By a supplementary agreement to the NATO Status of Forces Agreement, all cases involving minor traffic violations, not punishable under the UCMJ, are in exclusive jurisdiction of the German authorities and there is no waiver provision. However, in most instances after notification of local administrative action, such as suspension or revocation of driver's license, the state prosecutor has dropped the case. Commanding Officers have this administrative authority under USAREUR Regulations (registrations and licenses for private vehicles of military personnel in Germany are issued by the U.S. Army).

H. Outline of Station History

On 5 July 1962 the prospective Commanding Officer arrived to find the buildings being marked out with string by the contractor, Hammers and Peters. This date culminated a long period of negotiating, funding, site surveys, training and philosophizing. The final site survey and ground borings had secured the previous October and over the winter the Bundespost, Kiel, had formulated its plans and arranged for contractors to build the station. The contractor had arrived for on site work on the 12th of June.

Sylt, Germany

The station's architect was the chief of OFD Kiel's Civil Engineering Section, Mr. BASADOV, who as a matter of interest, is said to have also built the fortifications for the City of Danzig, during the war. On site was his representative, Mr. CHRISTIANSEN, the project engineer (Postbauleitung) and there ensued a progression of some 25 contractors and sub-contractors until final completion. Construction progressed slowly in relation to normal construction times for Loran Stations and it wasn't until three years later that all items were finished. This was due to the normal overextension of the building industry in Germany, the labor shortages and traditional working habits. Despite the long term the Coast Guard was able to install and operate its equipment as soon as the buildings existed and we have now the final product at Sylt.

In August and September 1962 the first crew members of the prospective station began arriving, as well as the initial electronics equipment by Coast Guard aircraft. Joe WALSH from Sperry and Mr. KOEPPE from Page Engineering arrived for technical assistance. The first tower sections started in September. The electronics equipment had to wait, however, as there were no floors in the buildings to put it on. Even so, this was rushed a little. This is the reason that you now find a "Step-down" screen room.

In November the modified version of the AN/FPN-42 transmitters arrived from the Sperry Plant. The tower was up. The timers were in operation with temporary power from the contractor, as the station had no power of its own yet. On December 4th the remainder of the station's military complement arrived and the main portion of its civilian German personnel had been recruited. The "Plank Owners" of what was then called USCG Navigational Facility, Sylt, should be mentioned here:

LT W. M. FLANDERS	P.R. FRITZ, SN
ETCS K.G. HUNTELMAN	H.J. SCHOLZE, SN
ETC A.L. BOYD	R. J. NEWMAN, SN
ET1 D.L. GEIGLE	J.R. BOWLES, SA
ET2 W.E. JONES	HR W. ZIESING, Administrative Assistant.
ET3 E.J. WEISNER	HR. G. KORER, Electrician
ET3 G.E. BEDROSIAN	HR. F. KOVAR, Mechanic
ET3 J.L. MEEKINS (later, Dec 62)	HR. K. PFEIFFER, Cook
ET3 M.J. HOFFMAN (later Dec 62)	HR. E. CLAUTH, Laborer

Sylt, Germany

On Thursday, December 6, power was led into the transmitter building and on Friday the floors were ready enough to walk in the transmitters. Here assistance was received from some Luftwaffe personnel and forklift. By Monday one transmitter was ready for testing. To our dismay, however, the modifications performed by Sperry refused to operate. In addition, the normal arrangement of power relays were very cantankerous in accepting the 50 cps power frequency. There followed a period where all hands earned their pay under conditions which they probably will not have to face again. The transmitters were rebuilt and the Sperry mods forced to operate. This was done in breadboard fashion on the deck while the hod carriers detoured their wheelbarrows around the electronics work. There were no doors or windows to keep out Sylt's "coldest winter in ten years". All hands performed admirably, gaining here the experience and setting the tradition by which henceforth the electronics problems at this station have been licked.

On December 23 the transmitters were ready. However, there ensued a period whereby we could only transmit for 15 minutes at a time while German monitors and the DECCA system perfomed tests and measurements. After convincing everyone that the equipment and its modifications could perform as stated, the station entered the calibration phase with the monitor aircraft. On 7 February 1963 the station was declared operational for full navigational use, and has continued so since.

Other notable occasions which followed are also to be indicated. In January the station's heating plant was put into operation. In approximately April the sewer system was ready. The completion of interior facilities now marked a major changing point to personnel as the "shell" now appeared more like "our" station.

In May 1963 the Commandant visited the station. On 11 June 1963, in a Protocol session, the Bundespost turned responsibility for the station, complete in most respects, and such mechanical equipment as was operational, over to the Coast Guard.

The Bundespost remained host agency until such time as another agency was ready to take over the station or the station commissioned. Work continued on the installation of mechanical equipment and a discrepancy list. In October 1963 the diesel generators were installed and provisional connections allowed their use for emergency power. This was a major step in insuring the reliability of the Sylt signal. The station was commissioned as USCG Detachment Sylt at 1300 on 3 December 1963. On 23 October 1964 acceptance trials of the generator plant were performed satisfactorily and in January 1965 the construction was accepted as complete in all respects from the Bundespost. At 1100 on 4 August 1965 the station was renamed U.S. Coast Guard Loran Transmitting Station, Sylt.

With the decision that the Coast Guard will continue to operate this station, a phase of interim operation of the station came to an end.

Sylt, Germany

Chapter II - Operations

A. Aids to Navigation - Functional Information

1. General. The Loran "C" Transmitting Station, Sylt, Germany operates in the Norwegian Sea, Loran "C" chain as the "Whiskey" (W) slave on rate SL3, under the operational control and administrative control of Commander, Coast Guard Activities, Europe. (COMCOGACTEUR).

2. Reference Names:

a. Official: USCG Loran Transmitting Station, Sylt

b. Geographic: Often referred to in COMCOGACTEUR OPLAN 1-YR and certain communications by geographic location, i.e., "Sylt", "Sylt Loran", or "Lorsta Sylt".

c. Functional: CSL3-W - or WHISKEY slave.

d. German: Navigationsfunkstelle, Insel Sylt or "Funkstelle" Puan Klent.

3. Station Operational Functions

a. Transmit eight (8) slave pulses with 1000 microsecond spacing as WHISKEY slave to the master station at Ejde, Faeroes Island as per COMCOGACTEUR OPLAN 1-YR, annex K, to provide navigation information in the CSL-3-W coverage area.

b. Transmit these pulses through the use of a special pulse generator designed and built by DECCA Navigator Ltd., London, England, to provide minimum interference to Local DECCA navigation chains.

c. Transmit within the assigned Loran-C frequency band, tolerances, pulses, shape, etc., as set forth in CG-222, appendix C, and other applicable directives.

d. Monitor the German and Danish DECCA chains continuously to assure a minimum of interference to them.

e. Nominal values for the AN/FPN-42M transmitters are:

Output power: 425 KW

In band power: 99.5%

Pulse peak: 6th cycle

Rise time: at 30us = 60% of peak

Pulse width: approximately 250 us.

Sylt, Germany

4. Loran Synchronization Control Information

a. Repetition rate: SL3, 79,700 microseconds

b. Coding delay, W: 26,000us (between X and Y)

c. Primary control station: Monitor Station, Eigeroy, Norway;
Standard number: 28720.4 ENV, 0.36 CYC
Tolerance: ± 3us ENV, ± 0.15us CYC

d. Secondary control station: Master Station, Ejde, Faeroes

Standard time differences: 34128.7 ENV, 7.42 CYC

Tolerance: ± 3.0us, ENV, ± 0.15us CYC

e. Local

Standard time difference: ENV 26001.2, CYC 3.00

Tolerance: ± 3.0us ENV, ± 0.15us CYC

f. Predicted time differences at Sylt for other stations and normal readings observed:

M-X RAY Predicted: 16142.64
Observed: ENV 16276.9
CYC (2.18)

M-YANKEE Predicted: 51881.93
Observed: ENV 51867.5
CYC (5.00)

M-ZULU Predicted: 65751.00
Observed: 65762.00

5. Geographic and Other Important Measurement Information

a. Location of Sylt tower. The exact location of the Sylt tower was determined by the USN Hydrographic Office to 2nd order accuracy by triangulation from a 2nd order bench mark located next to Haus Nösse in Morsum, Sylt, in September 1962. The precise geographic location was not provided. However, from German navigational charts the tower is located at: 54° 48'35.5" N, 08° 17'32.5" E. The tower height above sea level is 194.58 meters, or 638.22 feet. The height of point 0.0, at the insulator base, above the water table varies between a normal: 8 feet (June) to 4 feet (November).

Sylt, Germany

b. The bearing and distance to the Master Station is 319.4°T @ 654.9 miles.

c. The bearing and distance to the monitor station is 341°T @ 231.7 nautical miles.

d. The bearing and distance to the Danish DECCA Green Slave is 059°T @ 17.2 nautical miles.

e. Composition and location of the receiving antenna system:

The receiving antenna system is composed of three units. Two 35' whip/loop combination units for distant signals (referred to as northern and southern elements); one 35' standard whip for the local signal.
Each array element consists of a 33-ft whip in the center of a 33-ft high triangular loop with a 64-ft base. The plane of each loop and both array elements is in line with the tower and bears 004°T from the tower. The horizontal distance between elements is 1226.6 feet, with the southern element approximately 50 feet higher than the northern.

f. An aircraft calibration marker has been located by triangulation of the USN Hydrographic Office. Subject marker is lcoated at the Luftwaffe airbase in Westerland/Sylt. The marker consists of a small plate anchored in the cement parking area adjacent to the control tower, just inside the taxi-way entrance.

6. Operational Performance

The Sylt station operates in an area of high interference to Loran-C. There are about 27 signals observed from day to day in the reception band 70 to 130 Kcs. The strongest signals, DECCA, range up to 31 db above the master station signal. Closely flanking 100 Kcs are OLT-2 on 98.6 Kcs and OUA on 101.5 Kcs. Prior to construction, on-site receiver tests indicated the improbability that Sylt would be able to synchronize on its own. However, a special directional loop receiving array was built and receiver performance has been improved to reduce interference to a mere annoyance rather than an operational deterrent. With this arrangement some anomalies remain, such as large diurnal envelope variations and unexplained time difference shifts, however, tolerance is maintained.

Sylt, Germany

Several modifications to the transmitting equipment have been made and differences in the transmitted signal over a normal slave station signal are plainly evident. The AN/FPN-42 transmitters were modified at the Sperry plant to provide for special control of the pulse shape and transmitted spectrum. This was required prior to commencement of on-air transmissions in order not to interfere with already established operators in the frequency band. Unfortunately, time limitations enforced contract criteria around that which was known at the time. Knowledge in this area advanced rapidly. The basis for variable control of pulse shape thus became obselete even prior to equipment delivery.

The original pulse shaping equipment and DECCA blankers were removed from the equipment in May 1966 and special pulse generators designed and built by DECCA Navigator Ltd., were installed. These pulse generators provide the same shaping adjustments as the original AN/FPN-42 equipment with the additional provision to reject frequencies within the DECCA navigational spectrum of 80 to 135 Kcs.

The pulse generators accomplish this by creating a frequency on a specific DECCA frequency (85, 113, etc., etc.) 180 degrees out of phase with the normal Loran signal. These signals being 180 degrees out of phase cancel, thus we do not transmit on the DECCA frequencies. In effect, we are "chopping holes" in the frequency spectrum on any specific frequency we desire, simply by adjusting the amplitude and phase of the "DECCA frequency" being created in the pulse generator.

In addition to the pulse generators, DECCA designed and built a 100 watt pre-amp for the AN/FPN-42M transmitter. This pre-amp raises the input signal voltage to the transmitter which in turn allows Sylt to provide approximately 425 KW peak power from a transmitter that was originally designed for 300 KW. Of course, several other modifications were made to the transmitter to accomplish this, including a bias pedestal and the use of P.A. tubes (8597s) in the first and second I.P.A. stages.

The greatest advantage of the "DECCA MOD" is that we can now adjust our pulse to an almost perfectly shaped pulse for Loran operations.

If in the future a modification is promulgated to provide additional plate storage for the transmitter, it is conceivable the "42M" would be capable of 600 KW without any strain.

Sylt, Germany

B. Communications

1. The station is provided with single sideband voice, radio teletype, high speed Loran communications and commerical telex equipment for communications. Telephone is also provided.

Five radio frequencies are designated for use between stations of the chain:

3607.0 Kc
4857.5 Kc
7357.5 Kc
10337.5 Kc
13423.0 Kc

Each frequency is approved for a band width of 6 Kc, allowing both upper and lower sideband use for a total of ten communication channels. For the most part however, operations seldom shift from 7.3 Mcs USB primary frequency and the 4.8 Mcs USB secondary frequency. These frequencies generally fade each evening until the following morning. In addition, all frequencies contain a high level of interference and are often jammed by the recording of "Moonlight in Moscow". As a result, total radio communications efficiency generally runs about 40% with Master only slightly better with the monitor. Poor communications are the greatest single factor contributing lost time on the MW rate. The installation of the "Loran High Speed Communications" equipment in December 1966 provides for better communications between Sylt and Ejde, however the monitor has no provision for this equipment as it uses the loran transmitter for its transmission.

A three element Telerex beam antenna is to be installed in the near future which we hope will improve our HF communications on SSB to the master.

An additional method of communications is presently being planned where Sylt will be tied into a NATO landline circuit. This will provide for handling of traffic to units other than Ejde and Eigeroy. At present, for messages to Headquarters, Supply Center, Brooklyn, or other various units, it is necessary to relay traffic through Ejde and Keflavik.

For backup, Sylt, Eigeroy and Ejde have commercial telex equipment installed. This channel has allowed for monitor control when radio is ineffective, but it is not amenable to operational type traffic since it takes several minutes to dial the other station up. As it happens, the line may be busy when you need it the most. The telex also enables connection with London and service is satisfactory for traffic to COMCOGACTEUR.

Sylt, Germany

Radio equipment consists of:

AN/URT-17A transmitters - 2 each
R-840 receivers - 2 each
CV-591/URR SSB convertors - 2 each
Teletypewriters and associated frequency shift convertors - 2 each
Perforator and reperforator - 1 each
Tunable whip antennas, 35 feet - 2 each
Inverted "V" antennas - 2 each
40 meter beam - 1 each
Teletypewriter and associated receivers and transmitters for high-speed Loran Communications - 1 each

The transmitters and receivers are crystal tuned. Generally the transmitters and receivers are paired with a whip tuned to either 7.3 or 4.8 Mcs. All equipment and antennas are interchangeable, however with no difference in performance.

C. Law Enforcement and Intelligence

1. Law enforcement is a matter of compliance with German Law. Local police provide law enforcement and protection. The UCMJ covers U.S. Coast Guard personnel when not in conflict with German jurisdiction or where prosecution is waived. The UCMJ, of course, does not cover dependents who are subject to German law without recourse to the waiver system.

Singular differences in the procedures for arrest and trial that can catch American Personnel, used to a different code, unawares. For example, the policeman on the street has the authority to levy small fines. It is proper procedure to pay the policeman who asks for 5.00 D-Marks when he stops your car for a minor traffic violation. A person may be held in jail pending a hearing on any offence. On the other hand, a person sentenced to a jail term may not be able to start serving that term if the jail is full. In the courtroom it tends to be the judge, in lieu of the lawyers, who asks the questions and cross examines the witnesses. Indoctrination of personnel and keeping posted with the laws are then the major objects of the Commanding Officer in the legal area.

2. Intelligence operations are carried out by the Federal Republic of Germany. U.S. Military Intelligence maintains close liaison. The major involvement with the U.S. Coast Guard C.O. is the security clearance of the station's civilian personnel and security clearance for personnel desiring to marry German Nationals. In addition, it is the duty of all personnel to provide information for the USAREUR Soviet Mission Reporting System. This involves movement coverage of the Soviet and Red Bloc military and diplomatic corps, mainly vehicle sightings.

Sylt, Germany

D. Search and Rescue, Emergency Assistance

1. A full search and rescue establishment, including several aircraft and helicopter , operates on the island. In view of this, the ability of the station to provide much assistance is minimal. The major emergencies are severe storms which threaten the island itself. These storms have caused extensive damage and flooding. A storm in February 1962 passed waves over 40 ft dunes and even across the island at one spot. Major flooding occurred as waters from the constricted bay passed over dikes behind the island and up through the storm sewers. Extensive funds have been expended to repair and reinforce the dunes and dikes. A rather thorough self-defense organization is in existence. Here the station has been able to provide direct help in designating communications equipment available for emergency use at dune watch posts. Crystals for the FM handi-talkies on the civil defense frequency were procured by that organization. Results have been excellent at drills and two recent storms.

2. Occasional assistance of the station force is available for reporting and fighting dune fires in the area of the station and the watch has been called upon on several occasions of motor vehicle accidents or just plain motorists stuck in the sand. With the youth camp, we are the only buildings and possess the only telephone on a six mile stretch of road. Vehicle accidents are recurrent.

E. Vehicles and Boats

1. The station possesses two 1963 Volkswagen, 9 passenger Micro-buses, and a 1½ ton International Harvester stake-body truck. One of the Micro-buses has been surveyed and a replacement 4 wheel drive ½ ton pickup with snowplow attachment is on order. In winter the snowplow will earn its keep as the island has only a few trucks available during the snowstorms for snow removal. Many a time, Coast Guard personnel have been unable to get out of their houses due to snow. In addition, the road from the operations building to the transmitter has become impassable on occasions, necessitating personnel to walk the ¼ mile in cold, cold weather.

The Micro-buses are used for light hauling and personnel carriers both on and off the island. The 1½ ton truck is used for our heavy hauling and logistics trips to Bremerhaven twice monthly

Many of the station personnel possess private vehicles as a means of getting to and from work, and normal recreation driving. Civilian personnel are paid about $12.00 a month commuter's allowance, because the station is located in an uninhabited area.

2. A 16 foot outboard motorboat is on the station's allowance list and should be ordered in the not too distant future.

F. Classified Material

1. The station has limited provisions for the storage of classified material.

Sylt, Germany

Chapter III - Personnel

A. COMPLEMENT

The authorized personnel complement is as follows:

MILITARY	CIVILIAN LOCAL NATIONAL
1 LT	1 Administrative assistant
1 CHRELE	1 Diesel mechanic
1 ETC	1 Carpenter
1 EN1 (RAC)	1 Assistant cook
2 ET1	2 Labourers
2 ET2	
1 SK2	
1 HM2	
1 CS2	
3 ET3	
5 SN/SA	

The normal tour of duty at Sylt is three years with family and two years without. Personnel in pay grades E-4 (with four years service), and up, are allowed to bring families.

B. Administration of Personnel Records

Military Service Records. All service, educational, and health records are maintained at the station.

Military Pay Records. Pay records are maintained by the U.S. Navy Disbursing Office in Bremerhaven. Pay checks are deposited with the American Express Company Banking Facility in Bremerhaven where most of the personnel have checking accounts. Personnel that do not have checking accounts have their pay checks mailed to the unit by the Navy. The checks drawn on AMEXCO may be drawn in either dollars or Deutsch Marks as needed. This system has worked very well.

Civilian Personnel Records. Civilian personnel records and reports for Local Wage Rate employees are kept current at the station as directed by the Civilian Personnel Office in Bremerhaven. Personnel action requests for promotions, proficiency allowances, revision of job descriptions, etc., are a function of the station. It has also been necessary for the CO's at Sylt to recruit and train their own civilian personnel under this system. There have been no major problems in the administration of civilian personnel records and working with the Civilian Personnel Office. The major portion of this work is accomplished by the station's administrative assistant.

Sylt, Germany

Civilian Pay. Civilian personnel are paid by the German Defense Cost Office (Amt für Verteidigungslasten) on transfer of funds from the U.S. Military. Their salaries are deposited in each individual's bank at Sylt. A basic problem exists in that these local wage rate employees are not paid the local wage rate. This is caused by two factors: (1) the German Federal Tariff rates lag the rapidly rising economy and (2) our employees are paid a wage rate for Schleswig-Holstein and not Sylt, which is a high cost area. The primary effect of this lower pay is the hindrance of the station's ability to compete in the local labor market.

C. Quarters Facilities

Unmarried personnel occupy rooms at a rooming house (Pension) in Westerland. These rooms are rented for them by annual contract. Each room is furnished with normal bed, wardrobe, wash basin, etc., accomodations "hotel style". There is a common bath facility and a dayroom shared by all guests. (Presently the Coast Guard rents all the rooms in the house so there are no other people to share the dayroom). Refrigerator and cooking priveleges for snacks are provided.

Married personnel and their families live on the economy in accomodations wherever available about the island. Accomodations are scattered and housing very hard to find, however no one has gone without a roof over their heads.

D. Medical Facilities

A Hospital Corpsman is assigned to the unit to handle first-aid, emergency treatment, and the everyday "aches and pains". This treatment is extended to dependents and civilian workers as well as the military personnel. Serious emergencies are handled by local German doctors, the local hospital (Nordsee Klinik), or patients can be air evacuated to the U.S. Army Hospital in Bremerhaven or Frankfurt. If requested we also have the use of an ambulance from the U.S.N. Security Group Activity Todendorf (near Kiel) for transportation to Bremerhaven. Dental care for military personnel is done either at the local German Air Force base or in Bremerhaven. Free dependent dental care is offered at Bremerhaven or the local German dentists are utilized. It is also arranged to have a semi-annual visit by a Army dentist from Bremerhaven to determine the extent of dental work needed by the military and their dependents. The CO then makes appointments for personnel requiring dental work with the dental clinic at Bremerhaven. Additionally, we are visited once a year by a Army doctor who administers influenza shots, other required immunizations, and makes a preventative medicine study to insure we are meeting the European theater medical requirements.

Sylt, Germany

E. Training and Education

Training and education is carried out in accordance with a unit training program differing little from normal Coast Guard practices. USAFI lessons are submitted through USAFI Frankfurt, eliminating turn around time to the states. As the Sylt Loran equipment differs greatly from other stations, classes are conducted for all ET's. This has been carried out with no particular difficulty and it has been found good practice to repeat the basics taught at Loran "C" school at intervals.

F. Morale and Welfare

1. Outdoor recreation

With minimum facilities, personnel play volleyball, handball or softball in the antenna field whenever the weather is favorable. Family gatherings for barbecue are enjoyed (sometimes) in the summer months. Facilities will undoubtedly improve in the course of time as money and the new buildings are completed. In Westerland there are tennis courts and the boardwalk on the beach with its summer band concerts. Dotted about the island are small open-air cafes, handy too is a favorite German pastime for relaxation - walking. Generally however, outdoor recreation is seriously hampered by weather. Not taking advantage of a favorable opportunity means a long wait until the next time the weather is good enough to go outside.

Regulations covering hunting and fishing licences are rather complex but not altogether unattainable. One previous station member joined the local fishing club allowing him to fish in a lake, (ex seaplane basin) stocked and maintained by the club. Surf casting is rewarding with sea trout, codfish and mackerel being caught in season. If you are lucky you may catch some salmon also. A small boat is on order for the use of the station personnel and should arrive sometime in the near future.

A glider club operates during the summer utilizing facilities at the airbase. This offers a unique sport for those interested and able.

2. Indoor recreation

Sea prints are obtained for movies in English at the station and are shown four nights a week. The station also has a TV, radio/record player (stereo), and a ping-pong table. Other station recreation items have not been ordered as yet until the new building is completed as space is at a premium. We are hoping to see a pool table and other "goodies" eventually.

In town are German movies, a swimming pool, and various night spots from simple pubs to a rather elaborate gambling casino. As in most areas of this nature, the establishment is geared to the influx of tourists during the season and for the most part, is not within the economical reach of military personnel.

There is also a well established amateur radio club on the island. There are reciprocal agreements for German qualification of American licensed personnel to operate in Germany. There is also provision for unlicensed personnel to take the German examinations in English. Here again we hope to establish a club on the station when space becomes available. We also make use of the German Navy's swimming pool in List and their gymnasium in Hörnum on a regularly scheduled basis.

3. Mail

The local post is utilized for most normal mail service, however the APO in Bremerhaven provided an important link for offical mail from CONUS, mail order packages, hometown newspapers, and CARE packages from home. The APO holds Sylt's mail for pickup by our vehicle on its regular logistics run.

4. Exchange and Commissary

If anyone tells you that you that you will be making trips similar in length as New York to Washington just to go to the store, don't disavow it as improbable - you may receive orders to Sylt. This is the distance between Sylt and Bremerhaven, our nearest PX and Commissary.

We presently have a small commissary at the station that stocks most items, however each logistic run finds a list from most of the personnel for specific items. Here again, the new construction will allow us to carry a more complete line of items.

During April 1967 the station opened a small PX (very small) which carries the basic need for both the military and their dependents. We will continue to send lists down to Bremerhaven for items not stocked at the station. When the new building is completed, the larger PX will make the PX shopping list to Bremerhaven almost obsolete. Without this PX we would be faced to pay the very high prices on the economy which also has the drawback of not carrying many of the goods we are used to Stateside.

G. Health and Sanitation

Water is obtained from a well and filtered prior to use as are most island water supplies. A spray type filter with carbon elements eliminate "mud gas" (H_2S) which otherwise causes a very unpleasant odor. Water samples have been submitted to the University of Kiel, U.S. Army, and U.S. Navy channels for analysis. Although the present filter system is not up to USPH standards, we have never had a water sample returned with a positive reading. Sewage is handled by a small septic tank distribution and filter field (leeching) type installation and is cared for by a local contractor.

Sylt, Germany

Problems in health and sanitation at the station itself are minimal as there is no one quartered there except the duty section (4 men). The greatest problem that has arisen is the fact that our hot water heater is too small for the amount of people using it. This is a 20 gallon heater with 19 men using it. This coupled with the galley puts quite a strain on the heater to provide us with sufficient hot water throughout the day.

Sylt, Germany

Chapter IV - Engineering

A. The Electrical Power Plant, General

1. Station Electrical Power Sources

Electrical power for this station is primarily derived from the local commercial power company. For specifics, one is referred to the power contract. In general, the company supplies 100,00 KWH per month at a nominal 15,300 volts, 50 cps to the station from the local Sylt network (Netz). This power is supplied to the island by cable from a generating plant on the mainland. Coal is utilized for the power development. This power is subject to: (a) short breaks caused mainly by lightning, (b) failure at times during the year of the cable network, and (c) voltage variations, particularly between phases.

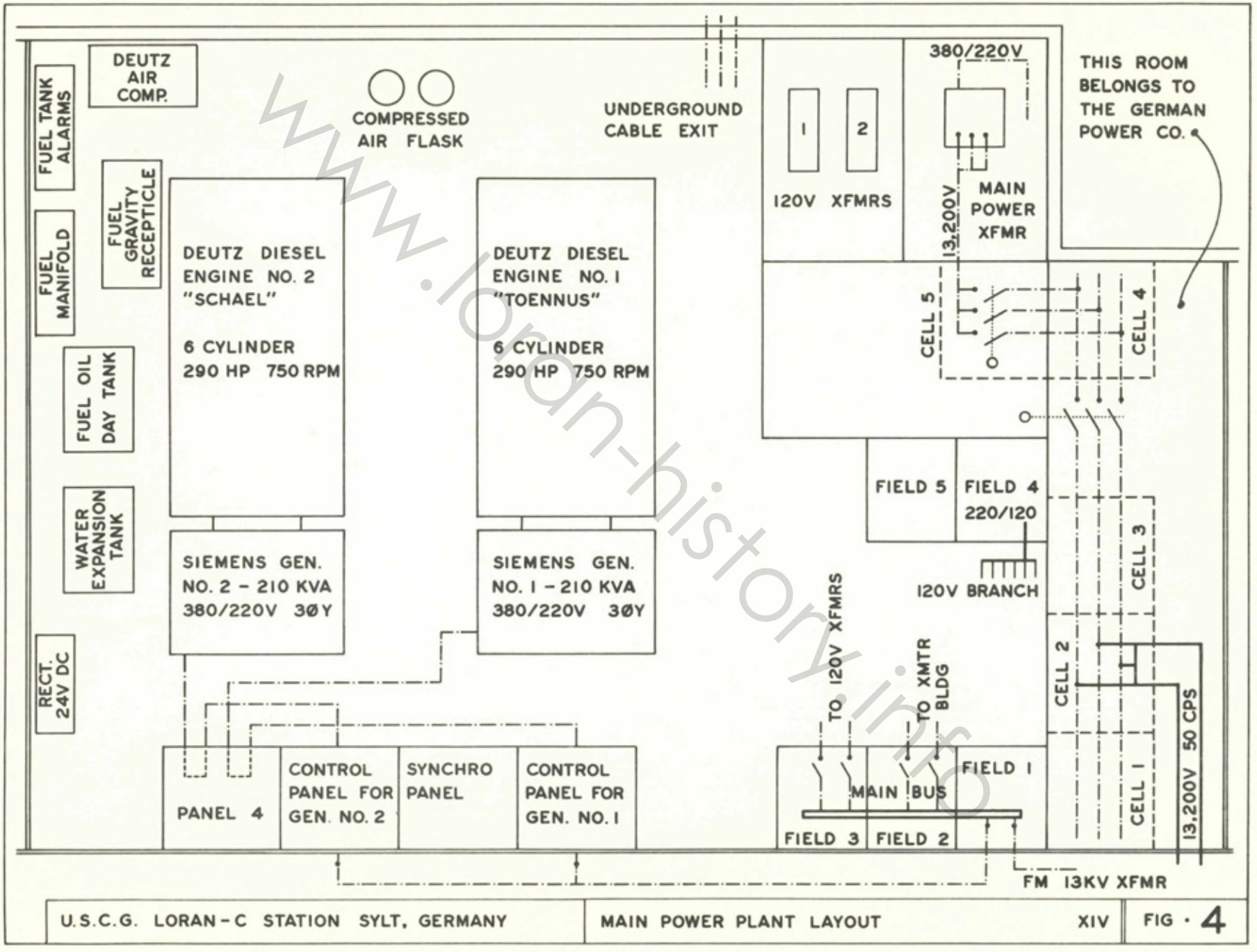
For these reasons, an emergency generator plant in the operations building is ever in readiness to take over during abnormal periods. This system consists of two German type 210 KVA diesel generators with control circuitry developed as nearly automatic as possible without entering into the more costly area of a no-break system. However, due to many power failures over the last two years, a no-break system is being studied for this station. The average station load is approximately 85% of the full load of a single generator. Running with one generator, the station has a fuel capacity for approximately 90 days operation.

A reference diagram is included to indicate the general layout of the power plant for orientation and reference purposes.

2. Responsibility of Personnel for Station Power Plant

a. The station Officer of the Day is responsible for proper operation of the power plant equipment during his watch. He insures correct operation and periodic checks by members of his watch. All rated personnel shall be qualified in the operation of the equipment as soon as possible after reporting for duty. For extended periods of operation of the diesel plant, either the diesel mechanics or the engineman shall be recalled to the station to stand watch or make periodic checks as current station orders dictate.

b. Maintenance of the power plant as assurance that it is ready for use by the watch at all times is the responsibility of the diesel mechanics and enginemen. These personnel are accountable to the Executive Officer who is the station Engineer Officer.



U.S.C.G. LORAN-C STATION SYLT, GERMANY | MAIN POWER PLANT LAYOUT | XIV | FIG. 4

Sylt, Germany

B. The Diesel Engine-Generators

1. Basic Description

The generators are 50 cycle alternators manufactured by the SIEMENS-SCHUCKERT Company, Frankfurt, in 1963. Siemen's type designation is F2924-8D. Serial numbers are: #1 - 757181 and #2 - 75182. The generators are self excited and contain voltage regulation equipment in the excitation network. Some control of the excitation (control #11, generator panels) enables variation of the output between 360 and 400 volts. The generator supplies 189 Kw, 210 Kva, in a 3-phase, 4-wire, Y-connected system with a nominal 380 volts between phases, 220 volts each phase.

The diesel engines were built by KLOCKNER-HUMBOLDT-DEUTZ in 1963. The Deutz type designation is A6M528. Serial numbers are 3453-720-725 and 3453-726-731 for numbers 1 and 2 respectively. They are six cylinder, single acting, four stroke and provide 290 hp at 750 rpm. Control and monitoring of the engines except for certain gauges, is done at the generator control panels. A series of safety warning indicators are also mounted on each panel. A single push button puts the diesel into action wherein it is ready to receive a partial load in a few seconds (timers) and full load (transmitters) within five minutes. On power failure, the operate engine starts automatically but is placed on the line by hand. For the quick load assumption, the engineroom is kept heated above 70°F and the lube oil pumps are automatically run at intervals. The engine stands and all piping to the diesels are vibration damped.

2. Diesel Air Intakes and Exhaust

The cylinder heads are joined by the common air induction manifold, and on the opposite side they have their outlet into a common exhaust manifold. Intake air from outside the building is filtered by three oil bath filters. Exhaust gases exit the building underground to outlets in the field 100 feet from the building.

3. Engine Lubrication

Lubrication of the engine is done in a circulatory forced feed system by means of a gear driven pump. The cylinder liner working surfaces and injector pump are supplied with fresh oil from a mechanical lubricator. Lubrication oil is circulated by the oil pump from the crankcase through a heat exchanger, using raw water cooling, and through an oil filter to the moving parts in the engine. The running engine expends one liter of lube oil per hour which must be replenished every six hours in a small tank at each engine. All bearings need priming before the engine is started. This is done by an electric pump and can also be done by a hand operated pump. The electric pump operates automatically at intervals to keep the engine primed and ready for instant starting.

Sylt, Germany

4. Fuel and Fuel Manifold System

This station is equipped with five diesel fuel oil storage tanks. Each is a double shell, underground tank with a 25,000 liter capacity and may be filled to within 97% of this. Filling is accomplished through the fill connection in the dome pit. When all tanks are filled to 97% of their capacity, the generator power plant may be operated continuously for approximately 90 days. A deep suction pipe is also provided for drainage of water and contaminated fuel.

Each tank is equipped with a leakage indicator which is mounted in the corner of the generator room over the fuel manifold. This added protection is a requirement of German oil pollution regulations with which the installation complies. The space between the tank shells and the leakage indicators is filled with a control liquid. The float of the leakage indicator is flooded by this control liquid which keeps up the green disk in the visigauge (optical indicator), which in turn keeps open a switch controlling an audio alarm. In case of leakage the control liquid level falls, the float presses the green disk down and leaves a red disk up. The switch contact actuates the audio alarm.

In addition to the pipe for the leakage detector, there are two pipe lines from each of the tanks to the fuel manifold. One is a supply line to the manifold and the other a return to the storage tank. There is a valve on each and a locking mechanism which allows utilization of only one tank at a time. Needless to say this "plumber's nightmare" arrangement does not allow transfer of fuel from one tank to another. Therefore an additional vertical valve arrangement named "Transfer Manifold" is located on the left hand side for this. A piping diagram is posted on the bulkhead near the manifold and all pipes are exposed so it is not too difficult to trace out a path for whichever operation you propose.

From the manifold, fuel passes through a filter to either an electric pump or a hand pump. The discharge side of the pumps can be routed to the day tank for filling, or back to any storage tank for transferring fuel. Note that the day tank will not overflow as it has an overflow back to storage via the valve manifold. Also suction can be taken to pumps from the Fuel Return Collection Tank back to the day tank. This Collector is located under the floor plates for gravity return of fuel from the diesels. It has a "dip stick" and fills in five hours. In addition, an emergency drain line for the day tank is provided. This line runs from the bottom of the day tank through a heat sensitive valve to all five return lines. In case of fire, the heat sensitive valve would open allowing the fuel to flow to all the storage tanks at once, quickly removing fuel from the danger area. On the right side of the manifold a duel filter is mounted to filter fuel from the day tank before going to the engines. The day tank has a low level alarm installed, however, do not wait for the alarm before refilling.

Sylt, Germany

5. Compressed Air System

For starting the engines, a separate diesel-air compressor unit is installed at this unit. This supplies air to two storage flasks. One of those receptacles is normally feeding air to the engines and recharged when necessary because of use or air leakage. Flask pressure is normally maintained at 30 Kg/cm^2(427 psi).

The air compressor is driven by a single cylinder diesel engine (8hp at 1600 rpm) manufactured by the Deutz Company. The diesel is manually started by crank and ignition cartridge.

6. Diesel Cooling System

a. Circulating Water System

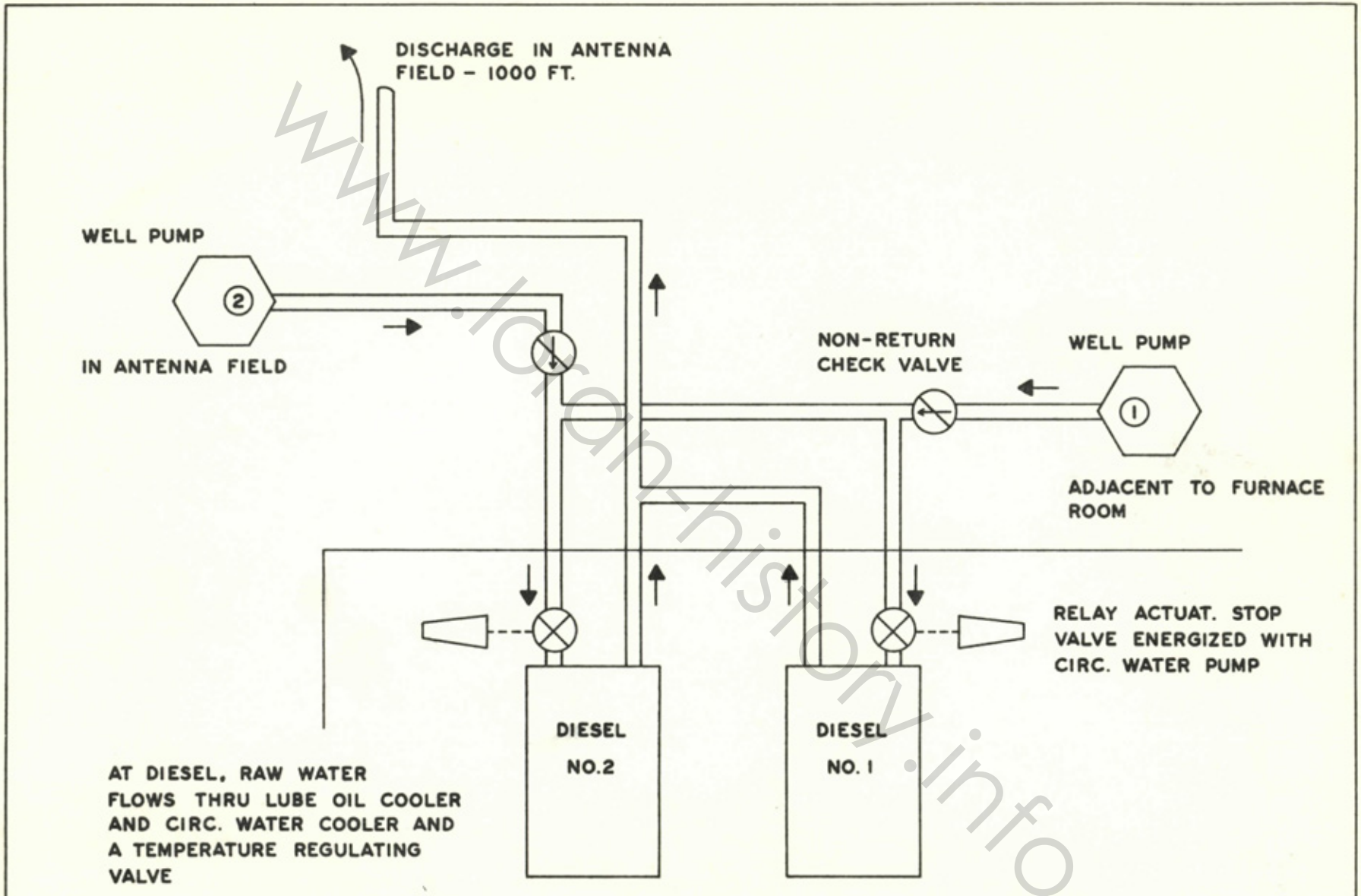
Critical areas of the engines are cooled by a closed circuit cooling water system. An electric circulating water pump provides flow through engine and heat exchanger. A flow indicator, expansion tank, temperature regulating by-pass valve, and ball check valve for air venting are also in the system. The circulating pump operates on generator start. A temperature sensitive relay will shut down the engine on failure of the cooling system. An indicator light on the generator panel board notifies the operator that the cooling system is the cause for "shut down". A time delay relay continues circulating water flow for 15 minutes after a normal securing of the engine. The engineroom is maintained at normal room temperature (never below 15°C/ 59°F) by the regular building heating plant. This provides effective prewarming of water and engine components for rapid load assimililation on emergency starts.

b. Fresh Water System

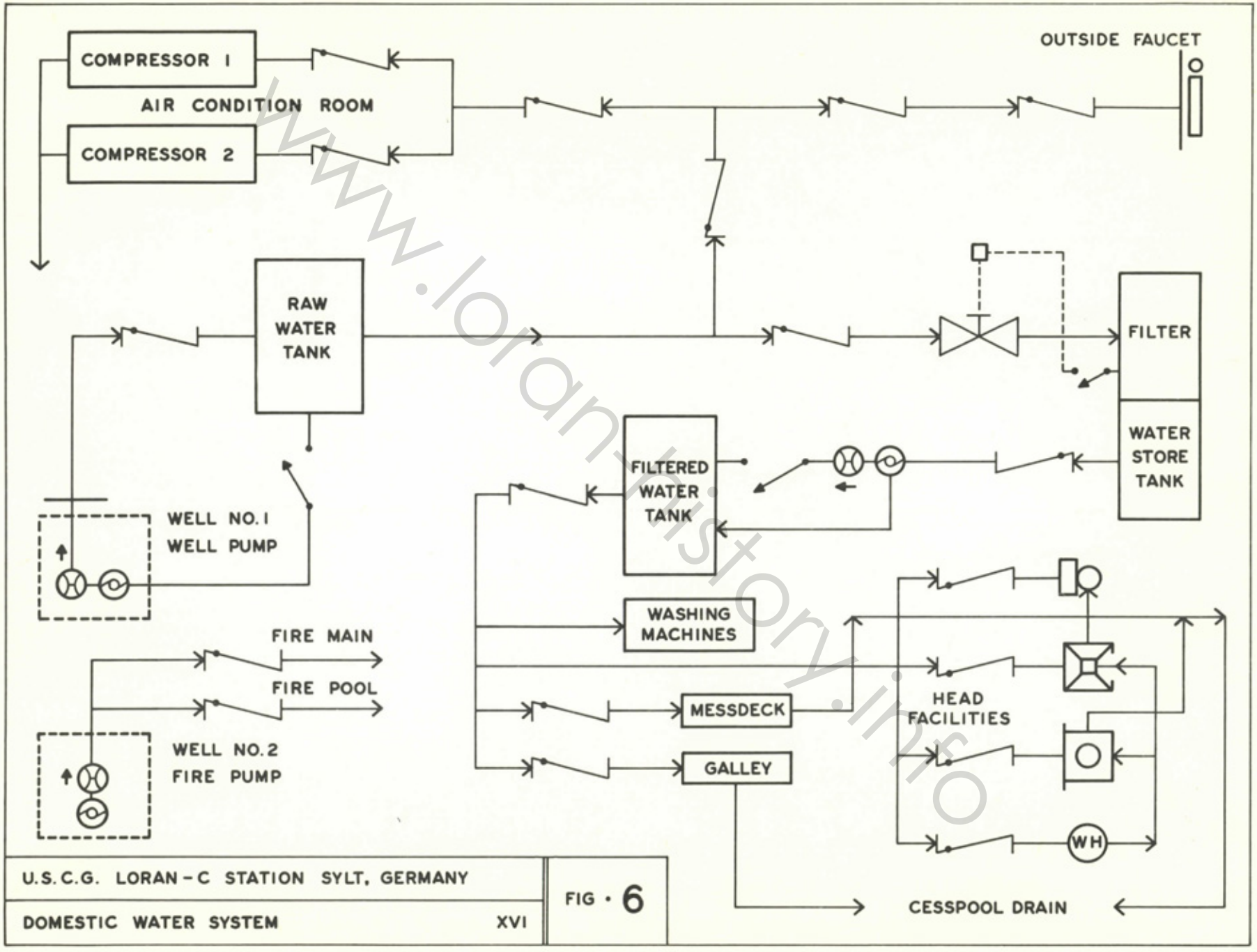
The heat exchangers for engine circulating water and lube oil are cooled from fresh water wells. The discharge is then fed back onto the station grounds. A diagram of the fresh water system is included for information. Wells and pumps serve each engine. A non-return check valve in each line allows interchange of either pump to either diesel engine. It must be noted that both pumps are required for sufficient flow when both diesels are on the line. Switches provided on the generator panel boards enable the operator to utilize an energized bus for pump power under all conditions. Normally the switches are left "ready" at their respective generator positions in case of power failure.

C. - Station Electrical Distribution

Electrical power at the station is distributed at varying voltage levels. Caution is required of station personnel when working with or referring to the various distribution circuits. In tabular form, the differing lines are as follows:



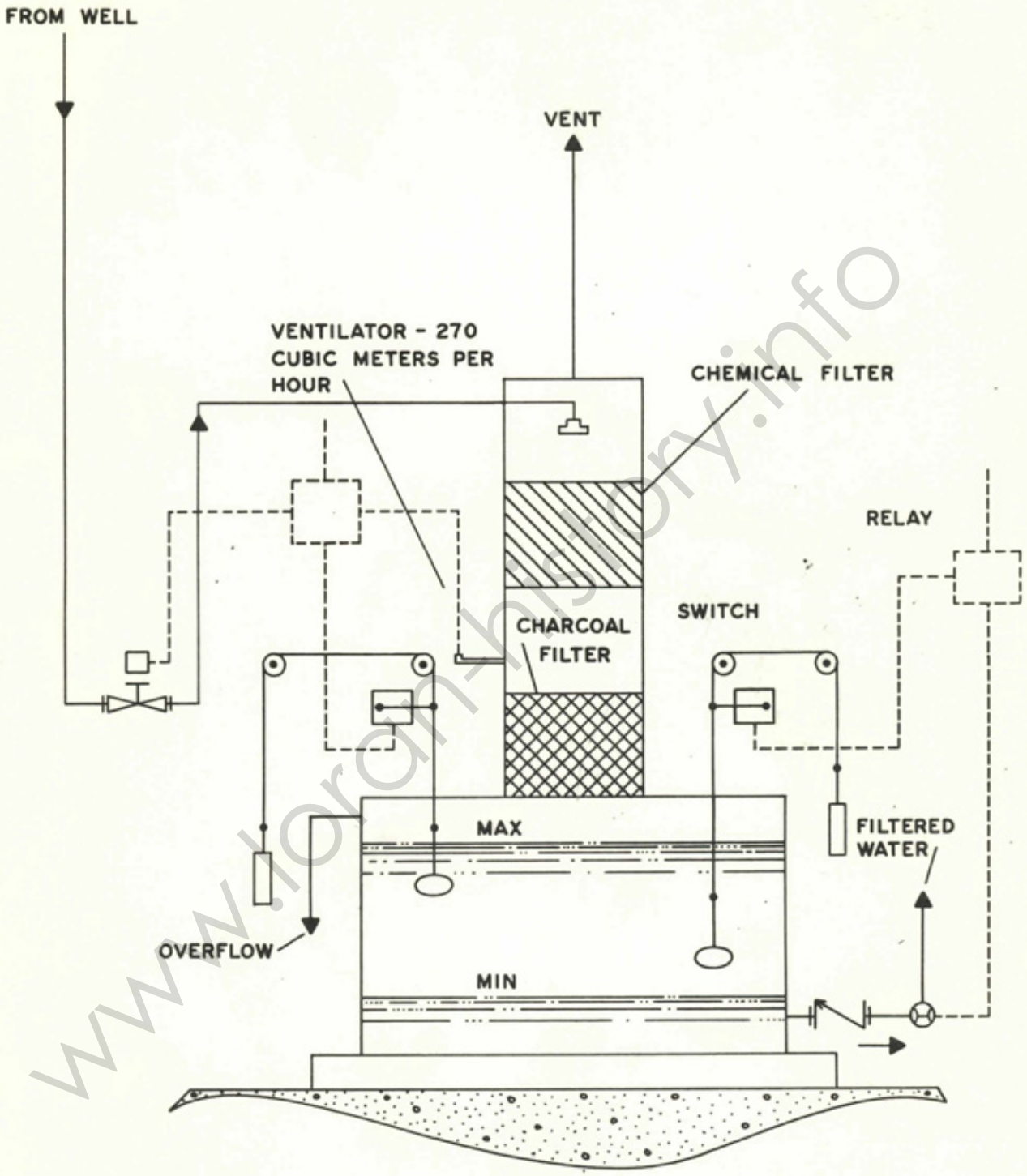
U.S.C.G. LORAN-C STATION SYLT, GERMANY	FIG · 5
RAW WATER COOLING SYSTEM TO DIESEL XV	



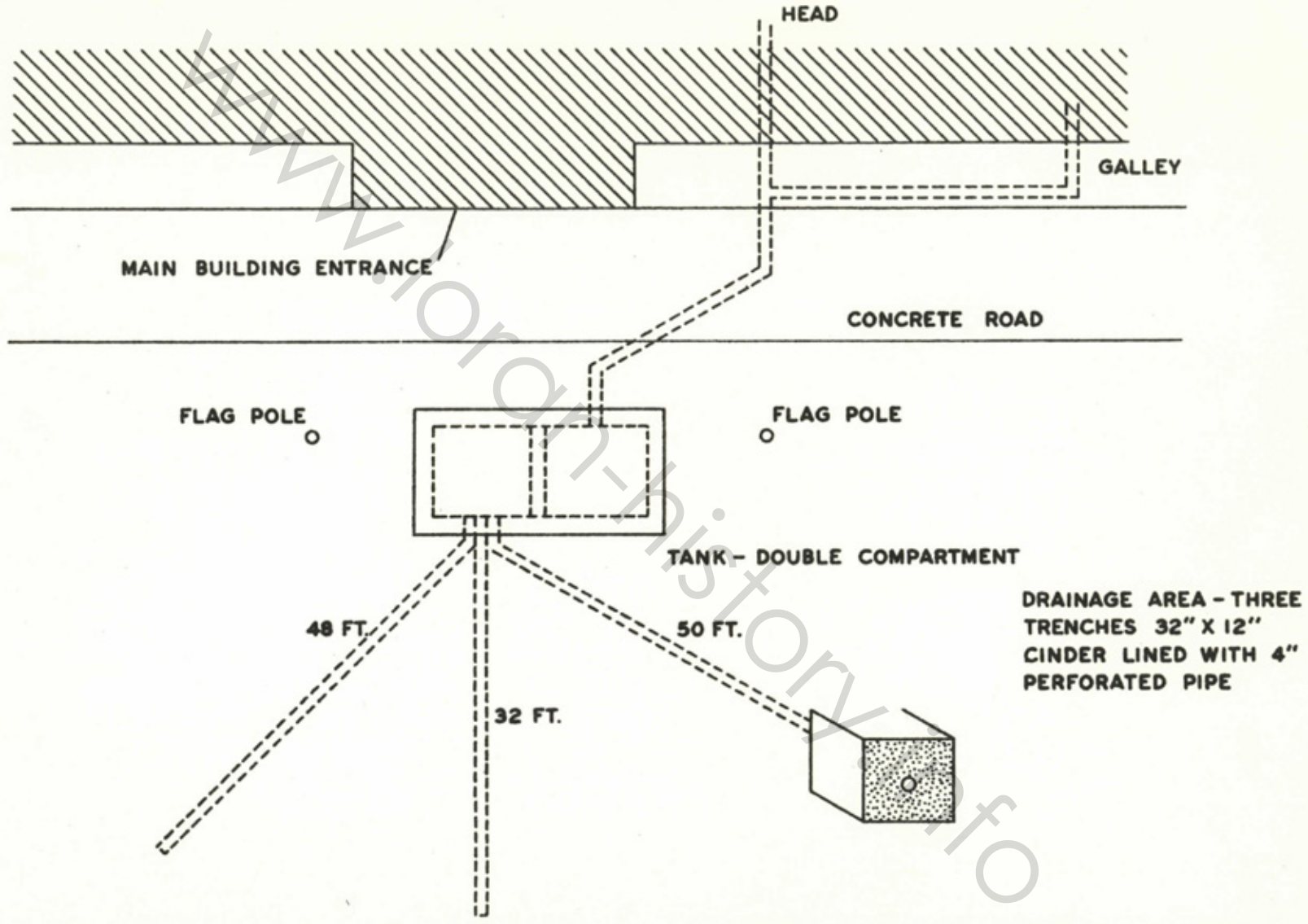
U.S.C.G. LORAN-C STATION SYLT, GERMANY

DOMESTIC WATER SYSTEM XVI

FIG · 6



U.S.C.G. LORAN-C STATION SYLT, GERMANY	FIG · 7
DRINKING WATER FILTRATION SYSTEM XVII	



U.S.C.G. LORAN-C STATION SYLT, GERMANY	FIG · 8
SEWAGE SYSTEM XVIII	

Sylt, Germany

Short reference:	Number of phases:	Voltage between phases:	Voltage to ground:	Config:
High voltage (Netz)	3	15,300v	8,800v	5 wire Y
Main buss & pumps	3	380v	220v	5 wire Y
Lighting and utility	1		220v	3 wire
Transmitters	3	208v	110v	2 wire
Electronic and U.S. equipment	1		110v	2 wire
Work lighting	1		42v	2 wire
Alarm and indicators			24vdc	

A frequency of 50 cps is common throughout the station. All power transformers and generators are "Y" connected. Reference to 5 wire, 3 phase and 3 wire, single phase configuration includes a separate ground lead required in the German electrical code for all voltages above 200 volts.

One room at the station is completely under the jurisdiction of the local power company with access of the station personnel not allowed (similar to seals on the KWH meter). In this room aparatus for the high tension feed to the station is located. The main cutout breaker is also located here with the control handle extending through the bulkhead into the engineroom. The 15,300 volts is stepped down to 380 volts through the main power transformer in a separate enclosure. The transformer and its associated output breaker have safety devices for high current, high temperature and low oil level provided. All safety enclosures and breakers have a safety key system. Keys for enclos enclosures affected by each breaker may not be removed from the locks on the breakers until they are open. The breakers will not close until all keys are re-inserted. The breakers must also be closed in sequence as a key must be freed at one breaker and used for closure of the other.

The 380 volts from the 15 Kv transformer load breaker is then fed to the main busses via a commercial power and generator changeover network. Here the main monitors for phase voltage, current, power and power factor are installed. Feeders carry electric power throughout the station from breakers or fused lines off of these busses. Two separate lines carry 380 volts to the transmitter building where duplicate step-down transformers for 208 volts are located. Duplicate step-down transformers adjacent to the engineroom also provide 208/110 volts for the screen room, communications equipment, workbench, and various outlets throughout the operations building. Feeders for 220 volts single phase utility and lighting are branched at the two fuse panels in the operations building and a single panel in the transmitter building. Color coding for feed lines are complicated by differences from the American codes. The interchange of colors and extra caution necessary may be visualized in the following tabulation:

Sylt, Germany

1. Bus bars:

Green	phase R
Yellow	phase S
Violet	phase T
Grey	neutral
Black/wt.	ground

2. Three phase, three wire for motors and other equipment:

Black	phase R
Red	phase S
Grey	phase T

3. Three phase, four wire for feed lines carrying neutral:

Black	phase R
Red	phase S
Blue	phase T
Grey	neutral

4. Three phase, five wire feed lines:

Various or:

Black	phase R
Black	phase S

Always:

Grey	neutral
Red	ground

5. Single phase wiring for lighting and utility outlets:

Black	hot phase or (+)
Grey	return or (-)
Red	ground
Blue	extra wire (with four strand cable)

D. Utility Systems

1. Domestic Water System

The domestic water system services a small head and shower, and interim galley, drinking fountain, washing machines, and cooling water to the screen room air-conditioning plant.

Sylt, Germany

An 18 meter driven well with submersible pump provides sufficent water to meet these requirements. The water is filtered, and from the filter pumped to a 500 liter tank from which the remainder of the system is supplied by gravity. The filter is a spray type arrangement to eliminate gas from the water. After the spray, the water drops through a carbon chip filter, and the gas is vented out of the building. Cooling water for compressor cooling in the screen room air-conditioning, by-passes the filter. Diagrams of the domestic water system and filter are provided for information purposes.

2. Heating System

The operations building is heated by hot water radiators located in t the various rooms. An oil furnace manufactured by ELCO Oebrennerwerk, Ravensburg, Germany, type I 12 BN 0157/59, supplies the basic heat. Fuel is stored in a 10,000 liter undergroundtank. The fuel is available from local firms, normally ESSO Heizoel Extralight DIN 51603.

The transmitter building is heated by the transmitters with no additional requirements necessary although a 1000 watt space heater is installed along wi with a small de-humidifier in the spare parts room.

3. Screen Room Air-Conditioning

This is a closed air system to minimize the amount of sand and dust in the electronic equipment. Exhaust air is cooled by a refrigeration plant with centrifugal blowers providing the forced circulation. It was installed and is serviced by Brown, Boveri and Cie A.G. (BBC), Flensburg, Germany.

4. Transmitter Ventilation

Two large centrifugal blowers and a common plenium chamber provde 31,00 cubic meters of air through a fine mesh filter to the main section of the transmitter building. Inside, the transmitter blowers pick up the air and force it through the equipment. The heated air is deducted outside the building by two exhaust fans (one on each transmitter), which are capable of exhausting 30,00 cubic meters of air per hour. This 1,00 cubic meter per hour difference provides a positive pressure differential in the building which in turn keeps sand and dirt from entering the building around the window frames. Even with this system, frequent cleaning of the equipment is required to remove the silica dust that does enter the building.

5. Sewage System

Refuse from the head and galley is handled by a double compartment septic tank with leeching field. All units are buried. The leeching field co consists of three, four inch perforated plastic pipes as shown in the included diagram.. During 1965 (after two years of operation), the sand bed was found to have formed a hard clay around the pipes damming nearly all filtering. The pipes were relaid in cinders and have functioned 100% since that time.

The pipes were relaid in cinders and have functioned 100% since that time. The septic tank is cleaned and emptied quarterly by a local contractor. The discharge from the washing machines is forced under the road behind the operations building and emptied about 50 ft from the building.

E. Fire Protection Systems and Equipment

1. CO_2 System, Transmitter Building

In the event of fire, the transmitter room is to be filled automatically with CO_2 from nozzles mounted on the overhead. Also on the overhead are detectors consisting of small strips of fusible metal mounted in series in a wire which is kept under tension. At 140°F the detector elements melt releasing the wire tension to activate the system. A siren alarm warns personnel to leave the building. A rotating cam delays the CO_2 release for 30 seconds to allow evacuation or time enough to throw a safety switch to stop the CO_2 from discharging, as desired. An alarm is also sounded in the operations building. When the system activates, the exhaust ducts and intake blowers are closed to prevent the CO_2 from being expelled from the building before putting out the fire. On loss of cooling air, the transmitters shut down automatically. CO_2 pressure releases door stops on the access doors and they in turn close. The charge is contained in 12 bottles, each having 66 lbs. of CO_2 . Each bottle is suspended in place on a scale which indicates any change in weight as percentage of capacity remaining.

The system has been tested using one bottle. From this test there remains a certain amount of speculation at this station concerning the strength of the building versus a charge of all 12 bottles. In any event, the system is certainly a thorough one. Service and inspection is performed by the installing company, Firma NETLITZ, Kiel.

2. Smoke Detector System

The fusible metal detector elements of the CO_2 system are additionally backed by two other forms of fire detection. There are two thermal relays which actuate an alarm in the operations building when their present temperatures are exceeded, and there are ionic smoke detectors installed. The ionic system was installed by Sieman and Halske, Hamburg, and the detectors were installed by Coast Guard personnel. The equipment is made by Pyrotronic Company, Switzerland. The installation covers four zones; one for each transmitter, one in the spare parts room, and one in the transformer room. The four zones have a total of 13 detectors through the building, which are adjusted to report the smallest trace of smoke in the equipment of building. This is an outstanding system, and will be extended to the operations and barracks building during the time the new barracks are built. The monitor unit contains and maintains charge on its own batteries. It provides alarm both in the transmitter building and operations building and has the integral circuitry for testing reliability.

3. Dry Powder Extinguishers

Eight portable 12 Kg and two large (ansul cart type)dry powder extinguishers form the station's primary fire defense. The capabilities of dry powder have proven highly satisfactory for the type and amount of combustible material at the station. Recharge and service are provided by Firma Netlitz in Kiel. The powder does tend to cake inside the canister so it has been found a good practice to open the canister on a quarterly basis and stir loose the powder.

4. Electric Fire Pump, Mains and Equipment

An electric pump located over well #2 serves to provide a backup system for fighting fires. Fire mains are located in the engineroom and the furnace room in the operations building. The main in the furnace room is provided with a hose reel capable of reaching either end of the building. Pressure and fitting are sufficient to "Y" gate the hose as desired. Fog nozzles as well as all new hoses and fittings are on order to change over to all standard Navy equipment.

This pump is also utilized to keep full a 10,00 gallon fire pond adjacent to the operations building. A "DC" box is located at the fire pond as a convenient exterior location for all necessary implements.

5. Portable Fire Pump

A gasoline driven portable fire pump is provided which takes suction from the fire pond. The pump is manufactured by Klockner-Humboldt-Deutz. It provides 53 gal/min at 71 lbs/in pressure.

6. Fire Bill

With only four man watch available at night to fight fires, the fire fighting plan and training of personnel is based on the capability and initiative of the OOD. Drills require the assertion of his abilities and a proven knowledge of equipment and procedures prior to qualification as OOD. Drills and instructions carried out on a weekly basis develop this knowledge in all station personnel.

The effectiveness of dry powder to preserve electrical equipment, its proven capability for all types of fire and the rapidity with which the small watch can bring it to bear, establishes it as the first line of defense. CO_2 in the transmitter building and water in the operations building back up the dry powder. The local fire companies then complete the protection available. The village of Rantum possesses a VW truck with pump and volunteer fire brigade, and the village of Hornum has two larger trucks with a volunteer brigade. The city of Westerland and the German Air Force base in Westerland possess more complete equipment in the event it is required.

Sylt, Germany

F. Vehicles

Routine maintenance and lubrication of the station vehicles is performed by the station's diesel mechanics and engineman. Repairs requiring special tools or otherwise beyond the station's capabilities are performed by a garage in Westerland. Gas coupons for local purchase of gasoline (BP) are procured from the Army Quartermaster in Bremerhaven on a cross-service agreement.

G. Buildings and Grounds

The two buildings were contructed with poured concrete interior walls and roofs having steel reinforcement. The outside walls are precast concrete slabs. The buildings' exteriors are covered by "Eternit" panels laid over a glass wool insulating material. The roofs are flat with asphalt paper roofing material filled at the seams with tar.

Steel pilings reinforce each diesel engine bed. Exterior fittings for windows and doors are varnished wood with double "thermo pane" windows installed. Interior walls are finished with fiber board in the office and lounge areas,and acoustic pressed wood fiber boards in the operations area and smooth cement in all other areas except the transmitter building which utilizes in addition a fire resistant type of paneling. The floors are formed in several layers. Underneath sand is contained by the building foundation and laid over with gout, then cement, insulation, and a final cement layer covered with asphalt tile.

A road is laid from the public road and connecting the two buildings The road is blacktop laid over precast concrete strips laid "corduroy" fashion. The road also crosses a railroad track just outside our main gate. This crossing is made with cobble stone. Warning signs are maintained here by the station both in English and German. A cement pavement for vehicles surrounds the operations bulding and covers the front of, and one side of the transmitter building. The station area is enclosed by a six foot high fence made of pretreated wood in natural color.

Ground areas where construction work disturbed the natural dune cover have been replanted with grass or new"grass plant" planted. Attempts to grow grass in the sandy soil have been difficult, however, the "spot of green" achieved so far is applauded by islanders having paramount interest in preserving the appearance of this dune area. Gradual expansion will be continued anually as conditions allow, until the public side of the station is covered. Patches of wild roses have been started along the station road for flavor.

Sylt, Germany

H. Tower

The tower base and anchors are of reinforced conrete mounted over steel pilings driven in the sand. The tower is a Wind Turbine type 6000S. It was erected by the firm Hein Lehmann of Düsseldorf under the engineering control of Peters Windels, Hamburg. Some initial consternation on its proximity to the airfield landing pattern and possible additional markings for better visibility have been resolved in favor of the standard configuration. However, the photocell has a manual override switch to allow the beacon lamps to be turned on whenever directed by the Fliegerhorst (German Air Base) control tower. The photocell has been remounted on the north wall of the transmitter building to provide easy access for maintenance, and to remove power from the isolation transformer when the tower lamps are off. This in turn provides for longer life and less chance of overheating the transformer. An elapsed time meter has also been installed to provide the actual hours on any lamp, rather than "guesstimate" when lamp replacement is required, and to keep a record on the guarantee life of the lamps. Tower inspection and control is carried out by station, Coast Guard, and civilian personnel on various schedules depending upon the degree of inspection or work to be completed.

Sylt, Germany

Chapter V - Comptroller

A. Commissary

A general mess was started on 1 April 1966 and brought to end one of the few "S & Q" loran stations in the Coast Guard. The mess operates quite well, even though we have a severe equipment and storage deficiency. The majority of the commissary purchases are made at the U.S. Army Commissary store in Bremerhaven and transported via station vehicle to Sylt on a twice monthly basis. A few items such as pastries, bread, and fresh vegetables are purchased locally and paid for through the unit's imprest fund. This system works quite well, the only drawback being the small dry stores and refrigeration storage area available in the present building. With the new building we will enjoy a modern upto date galley and mess deck with all the latest in culinary equipment.

B. Supply

1. Electronics support is provided by Supply Center Brooklyn. Requisitions are prepared utilizing the same form (COMCOGACTEUR 006) as the other Northern European Stations, however a change to milstrip requisitions is currently underway. Turn-around time for requisitions runs generally 90 days. This time is progressively increasing from a previous 30-day fulfillment.

2. Support other than electronics was to have been provided by the German Host Agency in the initial planning for the station. In this respect, the initial outfitting list generally assigned to Loran stations was chopped to provide only electronics items. All mechanical equipment, fitting out and furnishing of the buildings was done by the Bundespost on the initial contract. Since that time, a variety of procurement methods for maintenance and support of this equipment have been utilized without the assistance of the host agency. The U.S. Army in Bremerhaven has provided fuel, stationery and cleaning material under a cross service agreement. An imprest Cash fund provides for minor local purchases and more expensive billings go to COMCOGACTEUR to be paid for through the U.S. Navy in Bremerhaven. Support is also obtained from Brooklyn, GSA, and the U.S. Navy on milstrips for various items.

C. Transportation

1. Emergency electronics shipments have been, and can be received at Sylt from Brooklyn three days after message request. This is done by utilizing Pan American or other airlines flying New York to Hamburg. With shipping information, normally sent by message from Brooklyn, this unit can expedite the material through Schenker and Co., GMBH, Hamburg. Schenker and Co. then forwards the material express to the railhead at Westerland where the station delivers the local customs agent who is completely familiar with procedures and makes customs clearance "on the spot".

When other procedures are used, such as routing to Frankfurt or Bremen, delays ensue. Customs may require a deposit or U.S. Army paperwork which can only be obtained by written request through Bremerhaven, a frustrating process.

2. Routine shipments can be routed commercial in 30 to 45 days. Commercial surface transport via United States Lines comes to Hamburg or Bremerhaven. From here, the station truck picks the shipments up on the logistic run and carries them back to the station.

D. Fuel and Lube Oil

Normal fuel requirements and storage capacities are as follows:

Type Fuel:	Requirements:	Storage Capacity:
Fuel Oil, Diesel Grade DFI	8000 gallons per year	32100 gallons (97%) in 5 tanks.
Burner Fuel Oil ESSO Heizoel, Super F-815 or Mobil Heizoel DIN 51603	1300 gallons per quarter	2642 gallons in one tank
Gasoline	3500 gallons per year	20 gallons in four 5 gallons cans
Lube Oil	2 ea. 54-gallon drum per quarter	800 gallons in one tank.

Diesel figures are for normal requirements of 50 hours each diesel per month. Should commercial power fail, the use rate will increase by a factor of approximately thirty times. Ninety days of operation are allowed for in the diesel storage capacity.

Lube oil is procured from the U.S. Army and transported to station by truck. Supply is also available locally. Heating fuel and diesel fuel is being delivered by local dealers. The basic contract for the heating fuel is by U.S. Army Bremerhaven Post Engineer with Esso, Hamburg. Gasoline is procured locally as needed using coupons requisitioned from the U.S. Army. Diesel fuel is bought through the unit imprest fund on a local contract.

Sylt, Germany

Chapter VI - Administration

A. Station Organization

1. Authority and Responsibility

Organization Plan. An organization chart is included outlining the functional responsibilities of all personnel and channels of command within the unit. Personnel are guided in their specific duties within this general framework by instruction, orders, assignment letters and job descriptions, issued where necessary.

Collateral Duties. Personnel are assigned from time to time, to duties collateral with their basic assignment. Those duties not specifically assigned remain with the Commanding Officer. Some duties may be out of the ordinary profession or job description of the person involved when this becomes necessary to accomplish the mission of the unit.

B. Duties of Key Personnel

1. Executive Officer

a. The next officer in rank to the Commanding Officer shall assume duties as Executive Officer of this unit and shall be prepared to assume command in the absence of the Commanding Officer. Normally this officer is a CHRELE, who shall be Engineering Officer/Senior Technical Officer of this command.

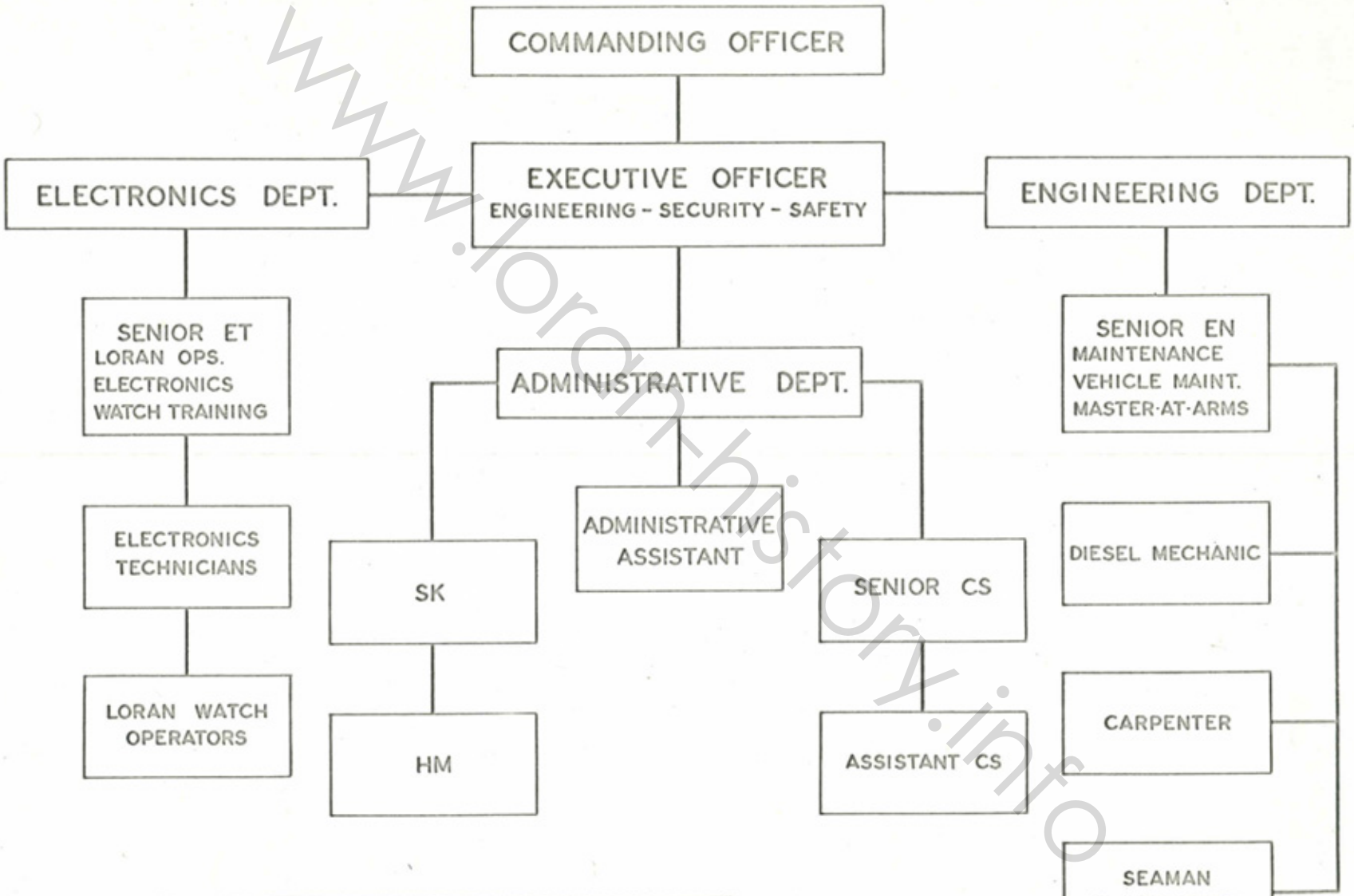
b. All orders issued by the Executive Officer shall have the same force and effect as though issued by the Commanding Officer. He shall have the responsibility of keeping the Commanding Officer informed of all significant matters pertaining to the unit. He shall be responsible, under the Commanding Officer, for the co-ordination of effort, performance of duty, good order and discipline of the entire command.

c. As Engineering Officer, he is responsible for operation, maintenance and repair of all electronic-electrical equipment, structure repair and maintenance, the performance of engineering/technical personnel and the administrative records, logs and reports of these areas.

d. He shall carry out duties as Safety Officer for this unit.

e. Other duties such as property officer, training officer, etc., may be assigned as necessary.

f. Normally those executive duties in personnel, financial, commissary and related areas shall be retained by the Commanding Officer except for specific details thereof as assigned.



U.S.C.G. LORAN-C STATION SYLT, GERMANY

ORGANIZATION CHART XIX

FIG. 9

2. Senior Technician

The Senior Technician shall be the senior electronics technician assigned, normally an ETC. He shall:

a. Be responsible for the efficient operation, maintenance and repair of all Loran and associated electronics equipment.

b. Insure the proper execution of duties in accordance with existing instructions by all electronics personnel and Loran operating personnel assigned.

c. Make periodic inspections of Loran equipment, antennae, ground systems, spare parts, etc., and report these conditions. Report immediately to the Commanding Officer any condition requiring a report to higher authority.

d. Inspect all completed Loran logs, failure reports and operationsl reports for compliance with instructions.

e. Maintain or supervise the maintenance of such electronics records, equipment history, antenna measurements, etc., in accordance with existing instructions.

f. Insure proper watchstanding procedures by watch personnel and require reports from Watch Supervisors as necessary to insure a high degree of performance.

3. Senior Engineman

The senior engineman will normally be an EN1 and shall be responsible to the X.O. for the maintenance of the station's buildings, vehicles, electrical, and engineering plant. He will usually act as MAA.

4. Maintenance Technicians

Under the senior technician are assigned maintenance technicians to be responsible for routine maintenance, calibration, work reports and cleanliness of certain primary equipment. They are qualified and assigned by letter setting forth their specific duties. in additon they keep track of, co-ordinate or supervise repair work done by the watches and are answerable for the efficiency of their equipment.

C. Watches

1. Assignment to Watches

Personnel shall be assigned to watch sections to carry out operational commitments, meet emergency situations, and protect the security of the unit. In this, no less than three men (normally four men) shall be on duty at all times at the station. These shall consist of a OOD, a watch technician, and a a watch operator.

In addition, a generator watch shall be employed as needed in accordance with Engineering Instructions.

2. Watchstander Qualifications

a. The OOD is a petty officer, qualified by reason of demonstrated technical competence and leadership ability. Such qualification is made by the Commanding Officer. Step by step procedures ending in qualifications are a demonstrated competence with the operation of each important electrical, mechanical and safety equipment at the station as well as a thorough knowledge of all emergency procedures. Equally important is the proven ability to maintain a taut watch and demonstrated responsibility sufficient to take control of the station during the night-time absence of the Commanding Officer and other senior personnel. It is the intention that all petty officers assigned shall after a qualification period become so qualified. While only the senior-most personnel will normally stand the watches, the progress of junior personnel towards qualification will be reflected in evaluations of their performance. For assistance, drills, training periods and instructions are provided for this.

b. The Watch Technician (Maintenance Watch) is an ET who has received training competent to make "operational" repairs to the Loran and Loran support equipment. He is competent to properly maintain Loran operations during the period of his watch. He shall be a qualified Watch Operator with the ability to evaluate log, indicator, and voltage data for sign of any present or pending equipment derangement. He is additionally able to carry out routine preventative and corrective maintenance with or without supervision as directed during the period of his watch. He has full knowledge of equipment switching functions and emergency procedures including emergency power operation. He carries out his watch in accordance with watchstanding instructions and is responsible for the supervision and training of the Watch Operator.

c. The Watch Operator is a Loran Watchstander who performs under the supervision of the Watch Technician. He is trained in basic Loran operation such that he is qualified for the following:

(1) Observe normal equipment operation and the various equipment monitors, indicators and alarms for any difficulty, report and/or correct same.

(2) Maintain logs and recording entries in accordance with instructions.

(3) Know all panel controls and indicators of his equipment.

(4) Be able to shift operate and standby equipment.

(5) Be able to synchronize a timer with the master signal from an out of synchronized condition when directed.

(6) Be familiar with communications procedures sufficient to carry out voice radio and teletype communication with other Loran stations. After basic qualification in the above, the Watch Operator shall further, through "on-the-job" training, gain ability to do the following:

(7) Make minor adjustments and carry out full operator's maintenance on the equipment, tuning communications receivers and other basic technical duties.

(8) Be able to take correct and immediate action on master jump, of air, shift or other common Loran-C failure without assistance.

D. Reports and Logs

Reports and logs are prepared as required by COMCOGACTEUR OP PLAN. Some local logs:

1. Transmitter log
2. Station log
3. Electric power log
4. Communication log
5. Interference log
6. Correlated number log
7. Standard deviation records
8. Diesel operating log
9. Long distance telephone log
10. Aldist file
11. ET Work log
12. Telex log.

E. Station Bills

Fire
Visitors
Cleaning
Berthing
Rescue and Assistance
NBC
Power failure
General Quarters

F. Safety

A safety officer and safety board are designated to stress the application of safety at the unit. The safety board forms informally during weekly station inspections and a formal meeting is held monthly. The weekly checks gauge the progress of initiated projects and uncover areas for futher development of the safety program. Topics are thus generated for discussion and planning at the monthly meeting, the minutes of which are forwarded to COMCOGACTEUR.

G. Flags

The American and the West German Flag (1848 Ensign, Black, Red, Yellow, without Federal Indicia) are flown adjacent and equal at the station. The Coast Guard Ensign is also flown.

Sylt, Germany

H. Visitors and Public Relations

The station is in an area where tourists from all over Germany, Denmark and several other countries arrive each summer. The tall tower is an attraction and the station must be prepared for visitors throughout the season. The word LORAN has surely spread to new areas since construction of the station. In addition, the station hosts visiting military. The press have had their turn, and the station has appeared on regional TV on several occasions.

Most important however, is the reception of the local islanders in a program which progressed from impressions of "Secret Missile Site" to a continuation of the feeling, as expressed by a local press title, "Unsere lange Ami" (our long friend - the tall tower) in Puan Klent, and "U.S.-Station Ohne Geheimnisse" (U.S. Station without secrets).

Sylt, Germany

Chapter VII - Information for Personnel Enroute Sylt, Germany

A. Foreword

All hands wish to extend beforehand a hearty "Welcome Aboard" with the hopes that the information provided will answer many questions. First the move to Sylt is not so unique, but it is considered that the station is for Coast Guard personnel. Of the half million Americans in Germany, the Coast Guard has 22 men and an average of 25 dependents at 2 units. We find this unique assignment rewarding in the opportunities present for broadening home bred viewpoints on other lands and people, learning another language and becoming accustomed to the habits of a way of life other than our own. Living in the large American complexes of southern Germany can hardly be described as a tour of duty in Germany as can Sylt. Americans are thin in' this area. Our activities are intermixed with the German community recreation, stores, schools, neighbors, etc. We have renamed our own special mixture of German and English as "Puan Klent Deutsch", the language of the common work of the Germans and American personnel at the station.

The location of the station is also opportune for travel. Scandinavia is open to the north. Once off the island, one can cross Denmark to Norway and Sweden in a day's drive. Automobiles are carried on the ferry to Southampton, England, which can be boarded just up the coast of Denmark. Berlin is only a short drive to Hamburg and a twenty dollar plane trip. A few days leave is all that is necessary to cover the tulip season in Holland. Four lane highways bring you from Hamburg the Rhein River and then on to the Alps.

True, we miss the large department stores and some of the conveniences that we are accustomed to back home, but these problems are circumvented where possible by common Coast Guard resourcefulness. The main point is, "This sure beats isolated duty".

B. The Island

The island of Sylt/Germany is located in the North Sea just below the Danish border. It is the northernmost of the German Frisian Islands, and is connected to the mainland by a long railroad causeway known as the Hindenburg Damm. It is long and narrow (24 miles north-south), with one city in the center, Westerland, and several other smaller communities. The station is located on the southern extension of the island at a place called Puan Klent. The city of Westerland has a population of approximately 8,000 in winter. Its main industry is vacationers, similar to Atlantic City or Wildwood, and so its population increases about three times in the summer season. Besides the tourists seeking the healthy climate and fresh air away from the cities of the mainland, there are those present seeking cures for bronchial diseases as well as the various fresh air and sun cults which stress physical fitness and health. Foremost in evidence of these are the Freikorperkultur (free body cults) which operates nudist beaches throughout the island.

Sylt, Germany

C. Language

Americans have been well received and the islanders have been very helpful and friendly. One natural difficulty of course, is a language problem, since few speak English. We therefore find it necessary to learn at least the rudiments of the host language, with some station personnel achieving the conversational level in a short time. The USAFI language courses have been quite helpful in this respect.

D. Weather

The weather is generally cool in summer and moderate in winter, similar to, but with less extremes, than New England. It si regulated by an ever present wind form the North Sea with winter temperatures running as low as 0°F and summer temperatures running up to 85°F. The air is maritime moist, with rain at any time (and without warning) throughout the year. The fall season is generally the wettest. People have said that it doesn't snow, but this station's first winter was one of the worst this area has seen, and there was plenty of snow.

E. The Station

Sand dunes comprise most of the island surface. The station, therefore, consists of two buildings, a tower and sand dunes. Installed Loran equipment is of the AN/FPN-41½ and 42½ variety, with the ½s standing for the many, many modifications which make it more or less unique. For example, our signals are received via loop array. They are transmitted with a peculiar pulse generator that creates signals 180 degrees out of phase with the frequencies used by another navigational system called DECCA. By doing this we can cancel out the DECCA frequencies we create, thus we will not bother DECCA. The present complement consists of 20 Americans and 6 German personnel. A four man watch is stood, two men at the equipment for an eight hour period and a senior petty officer in-charge of the station for a twenty-four hour period. Civilian clothes must be worn off the station while on liberty but uniforms are worn on duty and while on TAD to Bremerhaven or other U.S. Military facilities.

F. Tour of Duty

The tour of duty is two years without family and three years with family.

G. Housing

Housing is extremely scarce. There is no housing provided at the station or available in the immediate vicinity. However, the Coast Guard is in the process of building houses in a village called Hörnum approximately 3 miles south of the station. At the same time we are building a barracks, mess deck galley and recreation area all in one building which will be located on the station next to the nearest building.

So far we have all however, been able to find something with a roof on it. As a result, 3 families are located in Hörnum, 3 in Westerland, two in Morsum and one in Archsum. Thus the families are spread out. Commuting times and lack of telephone tend to put each on their own as well as adding an extra watch at the station. The German families are also spread out from one tip of the island to the other.

The winter months are about the only time for locating houses with October and November being the best. Many houses normally free in the winter, will not rent year round unless you pay the $100.00 to $150.00 rent during the summer time. Otherwise once located, the rent is not excessive with some families paying as little as $55.00 per month. A basic problem in housing other than the fact that Germans don't move as much as we do, is the long waiting lists of the local Luftwaffe. However, housing is available fairly reasonable if one looks hard enough.

For concurrent travel purposes, a successful method in the past has been a letter to the C.O., giving basic data, such as, number of children, ages, type of housing desired, type of household effects etc. Then the station searches for a place to best suit the description. Once a house is found it is rented and held pending your arrival. This may mean a loss of about $150.00 or so but it serves its purpose. The houses or apartments are generally small and lack central heating. Normally, a centrally located coal stove is a common form of heating. Kitchens are small and rudimentary, a small gas or electric stove is usually provided but a refrigerator is not. We have arrangements with the Army in Bremerhaven to provide refrigerators at no cost to personnel. Closets are non-existent as most German families use a wardorbe type of arrangement. Utility prices are comparable to those in the U.S. except for coal which runs about $40.00 a ton.

In general, the standards of living compare to those of the U.S. of perhaps the 1930's. Prices are very high for the Germans here as this is one of the most expensive spots in Germany; however, they are comparable to the U.S. Food and clothing are more expensive but we make up for this by occasional safaries to the PX and Commissary in Bremerhaven. All food stuffs may be bought at the station from the dry stores and a small PX will be added shortly. Most expensive are electrical appliances. We all have transformers from the exchange to adapt our own electrical appliances to the 220 volt supply. The frequency is 50 cps, but our washing machines and refrigerators don't seem to mind too much. NOTE: Next to you PCS orders, a Sears & Roebuck or Montgomery Ward catalog is the most important item to bring.

H. Shipment of Household Effects

There are few furnished houses available, however, you will find your own furniture more comfortable. It takes from one to two months for HHG to arrive from the States. Shipment to temporary storage in Bremerhaven is suggested. Be sure to find out the name of the Bremerhaven agent that your HHG will go to from your shipper.

Sylt, Germany

This information is supposed to be provided but usually isn't, and it means a lot of tracing on this end. So far shipment by "Container Transport International" has been the best and "King Van Lines" the worst. A temporary lodging allowance is provided if your furniture has not arrived before you.

I. Automobiles

The roads in this portion of the country are narrow, have high crowns and many hidden corners which make driving rather difficult. The location of the station, however, makes an automobile a necessity. Gasoline prices are high, about 50 to 60¢ per gallon. But we register the cars with the Army in Bremerhaven and are are able to buy ESSO coupons which makes the price about 25¢ per gallon. On a ration type allowance system. American cars because of the larger motors are allowed 100 gallons per month and the smaller foreign cars are allowed 50 gallons per month. This is more than enough. The garages on the island can more or less repair an American car. Although difficult items must be done at the exchange garage in Bremerhaven. Several people have purchased German cars and thus face the requirement of shipping them back at their own expense. This costs $150.00 to $200.00. Do not expect a good price on a used American car because they just don't sell. Southern Germany has used car lots filled with those from other Americans who had precisely that idea. In case you are not aware of this you have deliver your car to the Navy in Bayonne, N.J. about 10 days prior to shipment. It takes about 15 days for shipment to the staging area at Bremerhaven. Here it takes about a day to get it out of hock, register it and take a U.S. Army Europe driving test. NOTE: It costs about $15.00 for a round trip ticket on the railroad when you want to leave the island. You can figure about half of that for the initial trip from Bremerhaven. Due to the physical separation of the housing areas and station, an automobile is <u>almost a must</u>.

J. Medical

There are several doctors and dentists and one hospital on the island. The nearest military facility is the Army Hospital in Bremerhaven. Due to the distance (eight hours) we rely upon the local doctors and hospital and are confident of their care as a result of treatment from time to time. Under medicare we must first pay the bill and then submit a claim. One baby was delivered here by a midwife, and it is also possible for an expectant mother to stay at the dependents hotel in Bremerhaven until hospital time. An HM' is presently assigned and will take care of the majority of the aches and pains.

K. Schools

There are no English language schools available, but the German Kindergarten starts at the early age of 3 (six days a week). The German school systems are considered excellent and American children have made out fine up to the age of about 13, where the language problem is no longer easily overcome. Other than this you must resort to correspondence courses.

Sylt, Germany

L. The Trip to Sylt

Besides the normal necessary items to be taken care of on that side of the ocean, we have compiled a few hints from the experience of the trip ourselves. Attempt to get your civilian clothing allowance before you leave the States so that you can buy cheaper clothes with a nicer selection over there. One exception, some nice suits are available from an English tailor at the PX in Bremerhaven. They cost from $45.00 to $60.00 and take six weeks to deliver. It is easier to travel MATS of MSTS in uniform unless your orders specifically prohibit this. It saves a lot of misunderstanding and then you can change into civilian clothing for the rest of the trip. If you fly MATS, you will land in Frankfurt and the Air Force will not provide air travel to Hamburg so you will have to make the thirteen hour train trip from Frankfurt to Sylt. Be prepared: babyfood, etc. for this trip. Call the station and hotel reservations on Sylt will be arranged. The easiest phone number to reach is Hörnum 303 (the station number) or dial direct 04653-303. The trains to Westerland are labeled so on the outside of the cars from Hamburg, and do not worry about missing your station because Westerland is the very last stop. Have sufficient funds to defray expenses; hotels, meals, etc., for not only your trip but about two weeks after your arrival to allow time for your pay record to get to Bremerhaven and the first pay check to be mailed back. Do not forget the possibility of having some things sent air express to the station as one of the HHG Shipments. One final important note: Take care that your overseas checkoff list is executed properly before leaving you unit. Otherwise you may find yourself tied up at Base, Governors Island as much as three weeks for some forgotten item, a dilemma which has faced others before you.

Sylt, Germany

BACHELOR INFORMATION

M. Quarters and Meals

The unmarried portion of the American crew live in a house in Westerland, the main city on the island. This about 19 K (12 miles) from the station. The rooms are rented by the Coast Guard. Because of the distance from the enlisted quarters to the station, the men are allowed to carry various night rations to the house if they so desire, however most meals are eaten at the station.

N. Liberty and Recreation

The island offers a number of liberty attractions in the summer with fewer in the winter, this being a resort island. There are local amateur radio and sport fishing clubs to which one or two of the station personnel belong. The Luftwaffe Base also permits station personnel to use its golf course. The city of Westerland has a boardwalk with band concerts and open air restaurants. Additionally there are several movies and of course the main drag with its nightlife, including two roulette casinos. The beaches around the city of Westerland can only be entered by paying or with a beach card which most of the men at the station have. The rest of the beaches on the island are "two way beaches", that is you can either wear a bathing suit or if you prefer, go nudist. These beaches cost nothing. Additionally, there are Navy sea prints shown at the station several nights a week.

O. The trip to Sylt

The paragraph in the previous section under this heading is generally applicable to you, except of course the baby bottles. Additionally, each man should be prepared for various expenses as he will not receive pay until about two weeks after arrival at Sylt.

Naturally we are all interested in your arrival so please let us know when you are coming and what your plans are. We will do as much as possible to assist where we can. If ther are questions, a letter should clear them up.

Correspondence can be directed to:

Commanding Officer
USCG Loran Station
2284 Puan Klent/Sylt
Germany

(International mail)

Commanding Officer
USCG Loran Station
APO, New York 09069