

## DYE Four Welcome

THE MEN OF DYE FOUR WELCOME YOU. ALL PERSONNEL HERE ARE CIVILIAN EMPLOYEES OF RCA OPERATION AND MAINTENANCE SERVICE, INC., PRIME CONTACTOR FOR THE DEW LINE. WE HOPE YOUR STAY WILL PROVE BOTH INFORMATIVE AND ENJOYABLE. FEEL FREE TO ASK QUESTIONS OF ANY ONE OF US AND WE WILL DO OUT BEST TO ANSWER THEM.

### LOCATION:

Kulusuk Island, comprising approximately twenty square miles of rough and rocky terrain, is located off the Eastern Coast of Greenland just a few miles south of the Arctic Circle. Dye Four is near the Southern tip of the island at an elevation of 1080 feet.

### Climate:

Dye Four has the most moderate temperature on the Dew Line. Generally the season from May to October runs from 26 degrees F. to 44 degrees, with a possible high in the low 60's in July or August. During the winter, temperatures from minus 10 degrees F. to plus 35 degrees are common.

The winds reach extremely high velocities. Gusts of 70 to 90 knots are not unusual and 120 knots or more occur several times per year. The wind has been estimated at over 200 knots on at least one occasion.

### Composite Site:

The main building is a 109 by 176 foot, two story galbestos covered structure with the Radome mounted on a seven story central tower. This building contains electronic equipment, the power house, warehouse, shops, and offices, as well as all personnel living and recreation facilities.

The Radio Terminal Building is a 44 by 79 foot, one story structure containing the Eastward link of the Lateral Communications system. It is connected to the main building by a covered passageway.

The Survival Building is a 40 by 81 foot two story structure located approximately 300 yards Northwest and below the main building. Used primarily as a garage, it also houses the Radio Beacon, Disaster Radio, Emergency Generator, and Work Shops.

On the Westside of the Site are two 60 foot Parabolic (Billboard) Antennas beamed toward Dye Three (194 miles away). On the Eastside, flanking the Radio Terminal Building, are two 120 foot Antennas beamed toward Iceland (440 miles away).

### Communications & Electronics:

The primary mission of the station is the detection and reporting of aircraft. For this mission the station is equipped with the AN/FPS-30 Radar and the AN/FRC-39A (V) Lateral Communications System (10 KW West and 50 KW East). Over the years communications has become increasingly important; we now carry sixty channels of communications between Iceland and Dye Three, as well as Multiplex, Air-to-Ground Radio, Nav-Aids, Teletype and Telephone. All C&E equipment is remoted to the Control Console which serves as the Electronic Nerve Center.

### Power Supply Systems:

The Main Generating Plant, located on the first floor of the Main Building, contains nine Burmeister & Wain type 20-MTBS-30, 150 KW Generators with Woodward Governors. The Emergency Generator, located in the survival building, is a Cummins NHC-4-1P, 45 KW. It automatically furnishes power to the Survival Building when the main power is lost.

### Water Systems:

Two 345,000 gallon insulated tanks are located on the North side of the main building. The water source is a lake at the 389 foot level, about one and a half miles from the station. A pumping station located at the lake contains two Midland model 12M-2C-1, single stage self priming pumps powered by Briggs and Stratton engines. These fill a surge tank from the lake. From this tank, a Worthington type KCA horizontal Triplex pump powered by a G.E. Diesel pushes the water up the hill through a permanent pipe line connected to the station tanks.

### Fuel Oil System:

One 525,000 gallon tank (55 feet in diameter and 30 feet high) is located West of the Main Building and another at the Beach area. Fuel oil is transferred from a ship to the Beach tank and two Fairbanks Morse Rotary Transfer Pumps lift it to the station tank. The pipeline is approximately four and one half miles long and takes five and one half hours to fill.

#### Heating & Ventilation System:

The Main Building is heated by a forced hot water system which utilizes heat recovered from the Generator Exhaust. Two oil fired hot water boilers comprise a supplementary system. Ventilation is forced air, with thermostatically controlled louvers. The Survival Building is heated by a Dravo Oil Furnace.

#### Transportation:

The usual method of transportation is by contract airlift operating from Sondrestrom, except for the Sea Lift during the Summer, we look to this for mail, movies, fresh meat and vegetables and all of our creature comforts.

#### Station History:

In August, 1958, the joint venture of Crow-Steers-Shepherd began construction of the lower camp, a 3900 foot airstrip and the six mile road to the station area. In November these facilities were essentially completed. In March, 1959, the Danish Arctic Contractors began work on the station and continued until October, when winter weather forced the work to cease. DAC left a custodial crew at the lower camp until work resumed in March, 1960. The station was completed and turned over to the U.S. Air Force in November, one and one half months prior to the target date. Additional construction including the Radio Terminal Building, the two 120 foot Antennas, and nineteen pole type Radio Antennas, were added to the contract during construction with no change in completion date.

#### Surrounding Area:

The Lower Camp area, including Kulusuk International Airport and all roads are operated and maintained by the Danish Civil Aviation Agency, under contract to the U.S. Air Force.

The Iceberg laden Denmark Straits can be seen to the Southeast. Looking toward the Northwest across Angmagssalik Fjord you can see the highest mountains in Greenland (up to 13,000 feet), the largest visible being the 12,000 foot Montforel. The Icecap covering most of Greenland is sometimes visible. The highest peak on Kulusuk Island is 2200 feet (near the Northeastern end of the Island).

West of the Lower Camp and visible from the road is the village of Kap Dan. Here lives the world's most recently discovered group of Eskimos. Just before the turn of the century this tribe was discovered, where they had remained isolated and retained their primitive way of life peculiar to the Arctic. This village is the home of the "Tupuluk", a fascinating carving, patiently carved from the tusk of the Walrus or tooth of a Whale by the crudest of tools. These have through the ages been made in many varied and weird forms each equal to the imagination and desires of the carver. Other peoples have copied the art, but Kulusuk is the home of the original. Lack of interest among the young make this carving a dying art and soon the Tupuluk will be carved no more; the object will become a collector's item of great value.