

16 November 1949
OAN 601

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Subject: New Marshalls Loran Chain; planning for

1. The purpose of this memorandum is to summarize the status of plans for relocation and improvement of the Marshall Loran Chain, to outline the recommendations and conclusions of the Aids to Navigation Division and to indicate a proposed method of procedure for carrying forward the planning for subject loran chain.

2. In letters to the Secretary of Defense, Atomic Energy Commission, and Civil Aeronautics Administration, dated 3 August 1949, these agencies were apprised of the Coast Guard plans for rebuilding the Marshalls Loran Chain. In these letters, it was indicated that the preferred sites are Peale Island, Wake Island; Eniwetok or Parry Islands, Eniwetok Atoll; and Kwajalein Island, Kwajalein Atoll. Paragraphs which follow summarize the information contained in the replies from CAA relative to Wake Island, AEC relative to Eniwetok and the Secretary of Defense relative to Kwajalein.

PEALE ISLAND, WAKE ISLAND (See NO Chart 6034 and CAA 9th Region Drawing 9 E-553)

3. Property can be made available on Peale Island. This island is connected to Wake Island by a bridge approximately five hundred feet in length. The bridge consists of steel "H" Piling with wood decking covered with steel matting. The bridge is believed to be in fair condition but will soon require chipping and painting and would, thereafter have to be maintained by the Coast Guard. The bridge has not been maintained since the end of the war.

4. Power of 30 - 60 kva, as requested by the Coast Guard, is not available from present Island facilities nor cannot be made available from the CAA power plant now under construction. The distance from the proposed loran site to the CAA power house is approximately 6600 feet.

5. No quarters or messing facilities are available from CAA. However, these can probably be provided by Pan American Airways or Transocean Air Lines at about \$5.50 per day per man. This figure is the present rate by CAA and includes quarters, meals, and laundry. The Coast Guard can, if they wish, build their own quarters in the CAA housing area and CAA could, in this case, provide utilities on a reimbursable basis.

6. The following additional information regarding services and facilities on Wake Island is of interest:

- (a) The Navy supplies logistic support at about 6 week intervals, and the CAA can provide lightering services on a prorated charge basis.

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- (b) GAA commissary facilities are available for Government employees and their families.
- (c) A dispensary and the services of a medical technician employed by the GAA is provided.
- (d) Petroleum products are available on Wake Island.
- (e) The Coast Guard should furnish sufficient automobiles for use for its personnel.

ENIWETOK ATOLL (See HO Charts 6033 and 2009)

7. Property is not available on Parry Island. Property is available, however, on Eniwetok Island but the exact location of the loran site must be subject to non interference with the primary roll of Eniwetok Island in the operation of the proving ground.

8. The AEC indicated that while it was hoped that the power of 30 - 60 kva, requested by the Coast Guard, could be provided it is possible that furnishing of such power might require installation of additional generators to the Island power supply with financing by the Coast Guard.

9. While not specifically indicated, it is presumed that quarters and messing facilities can be provided for Coast Guard personnel.

10. Installation and operation of a loran station on Eniwetok Island might be subject to the following special conditions:

- (a) Personnel would have to be cleared in accordance with the Atomic Energy Act of 1946.
- (b) During active test periods there it may be necessary to temporarily suspend loran transmissions.

KWAJALEIN ATOLL (See HO Chart 5428)

11. The reply from the Secretary of Defense concurred in principle with the Coast Guard Program for constructing loran stations at sites where facilities and logistics can be shared with local military facilities. It stated, however, that space limitations on Kwajalein Island would probably necessitate the utilization of Ebeye Island for the loran site and that the working out of the details of power supply, quarters and messing facilities, etc. should be accomplished by the local authorities concerned.

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12. Subject to the working out of local details, it appears practicable and desirable to install loran stations at Peale Island, Wake; Eniwetok Island, Eniwetok; and Ebeye Island, Kwajalein.
13. While exact details of the facilities on Ebeye are not yet available, it appears advantageous to relocate the Kwadack loran station on Ebeye even if it necessitates construction of a complete station at this new site. The advantages of such a relocation would outweigh the difference between the cost of this new construction and the cost of rehabilitating the Kwadack station. ✓

RECOMMENDATIONS

14. ~~Power~~- The original thoughts on "streamlining" the Marshalls Loran Chain visualized utilization, where possible of power supplied by other established facilities. It was intended, however, that equipment to supply standby power would be installed at these "streamlined" loran stations. In view of the power situation at Wake, Eniwetok and possibly Ebeye, as described above, it appears that it would be as practicable and economical to install primary as well as standby power at the loran sites. This would have the additional advantage of insuring voltage stabilized power for loran equipment operation which cannot be guaranteed if the equipment were operated from Island power lines. It is therefore recommended that plans for construction of these loran stations include installation of primary and standby loran power equipment. ✓

QUARTERS AND MESSING

15. No difficulties are foreseen with regard to provision of quarters and messing of Coast Guard personnel by local facilities at Eniwetok Island and probably Ebeye Island. With regard to the quarters and messing facilities at Wake Island it is considered that it would be more economical to arrange for quartering and messing of personnel by PAA or TAL rather than to construct and maintain Coast Guard quarters and messing facilities. It is recommended, therefore, that personnel assigned to the Wake Island loran station be placed on per diem -- justified by the fact that no Government quarters are available. ✓
16. It is recommended that the Commander, 14th Coast Guard District investigate and advise in detail what facilities are available on Ebeye Island for providing quarters and messing facilities, recreation, etc., to determine whether the Ebeye station should be of the "streamlined" type. ✓

FUTURE PLANNING

17. A conference should be called in the immediate future for discussion of the Marshalls Loran Chain project with representatives present from the Aids to Navigation Division, Shore Units Division, Electronic Engineering Division, Civil Engineering Division, and such other Offices and Divisions in Headquarters as may have an interest in working out the details of this project. ✓