

MONTHLY REPORT

1 April - 30 April 1959

**SYSTEMS ENGINEERING BRANCH
ENGINEERING STAFF**

25X1A5a1

1. Engineering activity was normal during this reporting period with the exception of one "crash" requirement for rush procurement for antennas which were required for Project [REDACTED], necessitating a trip to [REDACTED] for the purpose of discussing the availability and price of rotatable beam antennas for the international 6 - 7 mc. broadcast band. Although the manufacturer stated no previous orders had ever been filled, he foresaw no difficulty in fulfilling the requirement. A trip report is attached.

25X1A2d

2. Bids were received and a contract awarded to the [REDACTED] Company, low bidder, on specifications for transmitters and antenna couplers for a packaged one KW broadcast station. The project involved the design of a broadcast station, for the medium and high frequencies complete with studio equipment and a quickly erected 100 foot base insulated vertical aluminum tower. The station will be housed in a 16 foot by 21 foot Butler Hut containing separate studio and transmitter rooms. The prototype unit will be installed temporarily for Agency inspection in the near Washington area when received.

25X1A5a1

3. The developmental program in conjunction with the AN-21 logarithmically periodic (3 - 30 mc.) antennas with the [REDACTED] Company is proceeding favorably and will probably be completed this summer. Test data is available at this time to initiate the basic design for four different types of AN-21 antennas which will vary in radiation angle, beam width and be suitable for use on various types of circuits, which will vary in path length. A full scale array will be erected this summer for a typical test path and subjected to operational tests at that time.

25X1A5a1

4. The Selective Calling equipment to be utilized with the SSB-1 transceivers, for Project [REDACTED] has been undergoing operational tests during this period between [REDACTED]. Difficulties have been experienced in obtaining the desired system reliability. Engineering/operational testing will continue to determine methods of improving the reliability.

25X1A6a

25X1A6b

25X1A6a

5. An inspection was made of several rhombic antenna kits, set aside in Allocation 22 for stockpile stations, which are stored at [REDACTED] and indicative of the condition of antenna equipment stored in warehouse areas where they are exposed to the weather. Upon examination, it was determined that some items would require replacement, other items will require refurbishing and the antenna kits repackaged. This action will be initiated in the immediate future to insure shipment of C-1 antenna equipment in the event of activation or installation of stockpile stations. More adequate storage measures will also be provided.

6. A meeting was held 16 April with representatives from OC-AD and OC-T to discuss the preliminary requirements for the establishment of an African DSCA Network. A general cost estimate will be established based on a network of 5 active and 4 inactive stations. Definitive requirements have not been established or formal approval received for the activity. A memorandum for file concerning the meeting is attached.

25X1A5a1

7. A modification has been developed which eliminates compromising intelligence from the transients appearing on the power line of the Flexowriter. The modification does not eliminate the transients but makes them of the same amplitude for all characters. In the same manner the modification makes the electro-magnetic energy radiated into space identical in nature for all characters. A Flexowriter has been modified in this way and no form of compromising intelligence could be found either on the power line or in the electromagnetic radiation. Necessary parts have been ordered from [REDACTED] to make up modification kits for 16 Flexowriters. The company representative has estimated 10 day delivery on these parts, however, this seems unrealistic since some of the components require special assembly at the factory. When the parts are received they will be taken to a local contractor for wiring and final assembly of the modification kits. The completed kits should be ready for shipment to the field in July.

25X1A9a

8. [REDACTED] traveled to Cedar Rapids, Iowa to witness the erection of the 237A-1 Logarithmic Periodic antenna at [REDACTED]. The experience will be utilized to provide supervision of future installations of this antenna at [REDACTED]. A memorandum to the file is attached.

25X1A2d1

9. A meeting was held with OL/RE&CD concerning coordinated relations when [REDACTED] installations are associated with [REDACTED] facilities. OL maintains records of [REDACTED] space allocations and it was agreed that RE&CD will be provided with information concerning all new and altered locations. Because of technical reasons Engineering may continue direct association with [REDACTED] Communications Staff.

25X1A5a1

25X1A6b

25X1C4a

25X1A2d1

25X1C4a

10. The Drafting Unit prepared 222 drawings during the month. Eighty of these were prepared for [REDACTED]

25X1A9a 11. [REDACTED] visited [REDACTED] in connection with the development of the all mechanical Two Tape to One Tape Combiner/Printer. A trip report is attached. Subsequent to this visit a memorandum was forwarded to the Office of Logistics requesting that a contract be established with [REDACTED] for the production of a prototype unit. Delivery is expected in approximately nine months.

25X1A

25X1A5

25X1A5

12. NEW PROJECTS

25X1A6a

E-5173 - Voice Carrier Telegraph System

E-5175 - [REDACTED] Radio Station

13. REACTIVATED PROJECTS

25X1A6b

E-5078 - Revised [REDACTED] Transmitter/Receiver Antenna Systems

E-5103 - Multiplex Systems for Base Stations to Sub-Base Stations

14. INACTIVE PROJECTS

E-5125 - Transmitter/Antenna Switching Systems

E-5112 - [REDACTED] 25X1A6a

E-5094 - RF Amplifiers (1000 Watt)

E-5115 - Standardization of VHF Equipment

15. COMPLETED PROJECTS

E-5010 - Receiving Antenna Multicoupler

16. Number of Projects Reported on During this Month - 38

17. ADMINISTRATIVE

TDY

25X1A9a

New York City - [REDACTED]
10 April 1959

25X1A5a1

TDY (Continued)

[REDACTED]

- Asebury Park, N. J. -
22 April 1959

[REDACTED]

25X1A5a1

[REDACTED]

20 April 1959

25X1A6a

25X1A9a

Miami, Fla. -
29 April - 1 May 1959

25X1A6a

Cedar Rapids, Iowa -
2 - 9 April 1959

[REDACTED]

25X1A5a

Chicago, Ill. -
29 April 1959

[REDACTED]

25X1A5a

PROCESSING

[REDACTED]

PCS [REDACTED]

25X1A6b

25X1A9a

- PCS [REDACTED]

[REDACTED]

25X1A2d1

EOD

[REDACTED]

27 April 1959

25X1A9a

RESIGNATION

[REDACTED]

1 May 1959

25X1A9a

18. TRAINING

[REDACTED]

- Basic Supervision No. 48
30 March - 10 April 1959

- Basic Supervision
13 April - 8 May 1959

- Basic Supervision
13 April - 8 May 1959

25X1A9a

[REDACTED]

SUBMITTED BY:

Chief, Systems Engineering Branch, OC-E

25X1A9a

ATTACHMENTS:
(See Attached Sheet)

ATTACHMENTS:

1. Report of Visit to NSA and Trip to [REDACTED]
2. Report of Trip to [REDACTED] Cedar Rapids, Iowa
3. Project [REDACTED]
4. Report on TDY Trip to [REDACTED], Mamaroneck, N.Y.
5. Proposed African DCSA Communications Activity
6. Projects and Activities of the April Monthly Report
7. Trip Report to [REDACTED] Asbury Park, N. J.

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