

~~CONFIDENTIAL~~

AGR

| DSD | FILE | FOLIO |
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| 30  | 4    | 42    |
|     |      | 20    |

Note for File: 30/4/42

CDAА at SHOAL BAY

During trials recently conducted at Shoal Bay on the performance of the Plessey CDAА it was noted that during daily antenna reliability checks, signals generated from a centrally located whip antenna, and measured on each beam of the array by oscilloscope, varied significantly from beam to beam at some frequencies. In optimum conditions the signal strength received on each of the 24 poles of the array should be the same at all frequencies.

2. There are a number of factors which could cause the effect described, including:

- (a) the cable duct to the beam forming hut;
- (b) frequency dependency of either antenna or oscilloscope;
- (c) fact that the central whip antenna and the earth mat are not on exact vertical/horizontal plane and there may be some shielding effect.

3. Insufficient data to determine cause of signal loss on some beams is yet available and it is intended to work with the station through DNCD to perform further tests and gather more data.

4. An unqualified engineering opinion is that there are no operational implications - the antenna is functioning correctly and is up to specification. The main point made is that the generated signal emanates from within the CDAА and cannot therefore be compared with signals arriving from outside.

5. SER4 will speak with his chief with view to informing us of the matter by minute of known facts and opinion in order to alleviate any operational concerns before they eventuate.

DP2

23 March 1979

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