

RR [REDACTED]
DE [REDACTED] 1992 0430515

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R 120514Z ✓

FM DSD

TO [REDACTED]

INFO [REDACTED] D OF C RAN.
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~~CONFIDENTIAL COMINT CHANNELS~~

INTERFERENCE AT [REDACTED] YOUR 100756.

YOUR QUESTION IS DIFFICULT TO ANSWER IN SPECIFIC TERMS DUE TO THE
PRESENCE OF MANY UNKNOWN FACTORS. NO RELEVANT ACCURATE INFORMATION
IS HELD AT DSD. HOWEVER IT IS POSSIBLE TO GENERALISE AND
INDICATE EXTENT TO WHICH YOUR SITE COULD BE COMPROMISED
UNDER WORST CASE CONDITIONS.

2. THE 3 HP MOTORS YOU MENTION ARE LIKELY TO BE THREE PHASE SQUIRREL
CAGE INDUCTION MOTORS WHICH ARE ESSENTIALLY NOISE FREE. IF HOWEVER
THEY ARE OF THE WOUND ROTOR TYPE AND/OR EMPLOY STARTING OR SPEED
CONTROL EQUIPMENT THEY WILL GENERATE SIGNIFICANTLY MORE RADIO NOISE
AND COULD BE AUDIBLE IN YOUR ANTENNAE FARM.

3. THE WELDING EQUIPMENT CONSTITUTES A SERIOUS THREAT TO YOUR
OPERATIONS. ALTHOUGH GARBLED IN TRANSIT IT IS UNDERSTOOD YOUR
100756 DESCRIBES EQUIPMENT AS 250 AMP TRANSFORMER TYPE AC ARC
WELDERS. THIS TYPE OF EQUIPMENT STRIKES AT AN ELECTRODE VOLTAGE
OF FROM 80 TO 100 VOLTS RMS. THE ARC IS THEN MAINTAINED AT 25 TO 45
VOLTS. THE POWER DISSIPATED IN THE ARC IS THEREFORE OF THE ORDER
OF 5 KW AND MAY THUS PRODUCE CONTINUOUS HIGH LEVEL RADIO NOISE
OVER A WIDE SPECTRUM. THIS PROBLEM HAS OCCURRED AT [REDACTED] WHERE A
SIMILAR LIGHT ENGINEERING PLANT EMPLOYING SMALL ARC WELDERS HAS
BEEN AUDIBLE (WITH DEFINITE EFFECT ON OPERATIONS) AT RANGERS UP TO
AND EXCEEDING ONE AND A HALF MILES.

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