

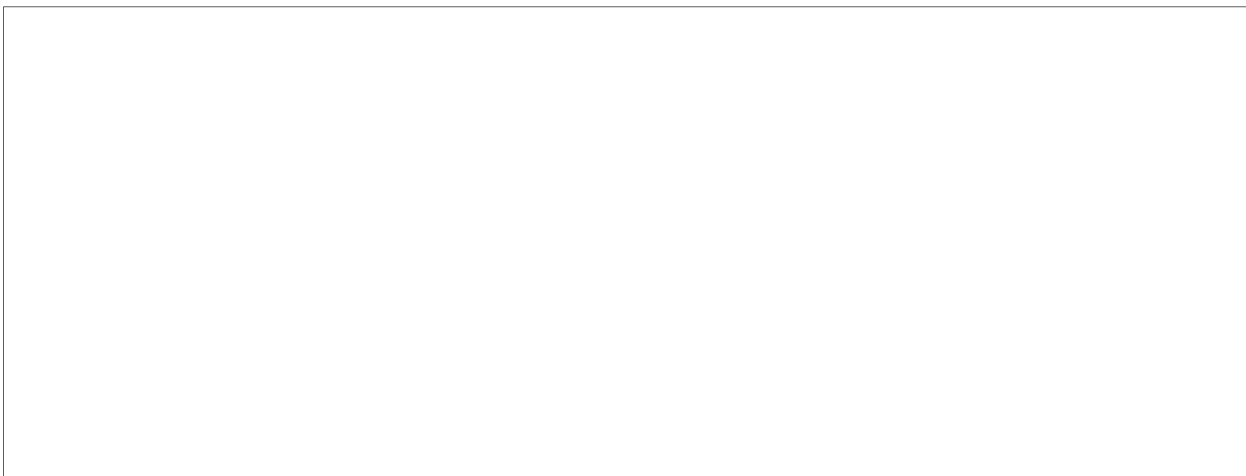
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13 June 1958

MEMORANDUM FOR THE RECORD

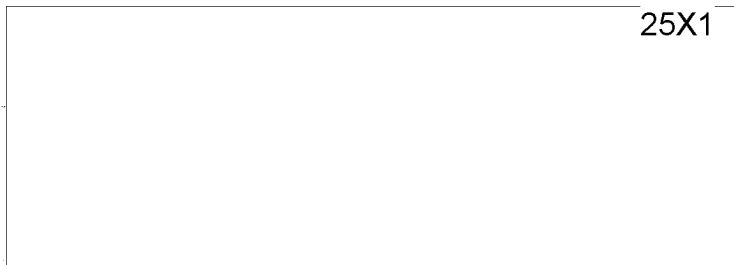
SUBJECT: Air Force Influence Fuse (MB-1) as a Possible Intelligence Gathering Device

1. Air Force R&D reports concerning the development of their (MB-1) influence fuse have been studied with the intent to determine the adaptability of this device or its basic principles to intelligence collection. Development work on this fuse was started in (52) and work was carried out by Case Institute in Cleveland and some subcontracting by Eastman Kodak Company. It was conceived as a device for attack against railroad locomotive. It was to be mounted in a special bomb casing designed to penetrate deeply into the earth when dropped from low altitude by bomber type aircraft. Presumably this penetration would occur close enough to a railroad track so that detonation of the bomb would destroy the locomotive. The fuse was to be activated by pressure impulses in the ground set up by the passage of a locomotive. This pressure sensitivity was also to serve as an anti-disturbance feature. Later developments tended toward making the fuse into an all purpose anti-disturbance fuse that would be used against all tracked or wheeled vehicles as well as train locomotives.



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3. A major portion of the development effort has been directed towards establishing the amount of pressure that various targets transmit through the soil at various depths and distances and on the type of bomb configuration that will allow deep penetration of the soil when dropped from low altitude.



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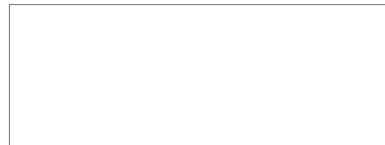
4. It is apparent that the principle of operation of this device can be utilized for intelligence gathering wherever pressure sensing of sub soil will produce useful information. It is considered probable that the pressure sensing can be made reasonably selective as to type of targets and subject to this supposition the following are suggested possible applications:

- (a) device planted along side track counts trains and establishes tonnage carried
- (b) same on highway and airstrip

Possible place of application would be on a known freight line to uranium mining area where tonnage moved might be measured.

It is expected that the most severe problem would be calibrating the unit for use in various sub-soil types and recovering the information from the unit after it has been emplaced.

5. The undersigned is currently in the process of inquiring into the existance of devices similar to this in functioning or application and the possible requirement for this type of operation. APD has indicated that there are several devices that are similar in function but no device to accomplish this function has been discovered to date.



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Explosives Gen'l File

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