DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND
5001 EISENHOWER AVE., ALEXANDRIA, VA. 22333

DRCSF-P/78-0065

15 June 1978

Director
Nuclear Materiel Safety and Safeguards
ATTN: Radioisotopes Licensing Branch
US Nuclear Regulatory Commission
Washington, DC 20555

Gentlemen:

Forwarded is US Army Electronics Research and Development Command, Fort Monmouth, New Jersey description of actions which will be taken to bring in-air irradiator, covered by Byproduct Material License Number 29-01022-07, in compliance with 10 CFR 20.203(c)(6).

Please acknowledge receipt of correspondence on enclosed NRC-46 Reply Card.

Sincerely,

DARWIN N. TARAS
Chief, Health Physics
Safety Office

1 Incl
as (dupe)

CF:
HQDA (DASG-HCH-E) WASH DC 20310
Dir, DARCOM FSA, Charlestown, IN 47111

FF/11

Ltr Exempt

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DEPARTMENT OF THE ARMY
HEADQUARTERS, US ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND
2800 POWDER MILL RD., ADELPHI, MD 20783

8 JUN 1978

DELSD-SF

SUBJECT: In Air Irradiator

THRU: Commander
US Army Materiel Development and Readiness Command
ATTN: DRCSF-P
5001 Eisenhower Avenue
Alexandria, Virginia 22333

TO: US Nuclear Regulatory Commission
Washington, DC 20555

1. Attached is a description of the actions which have been/will be taken to bring the in-air irradiator of this organization into compliance with para 20.203(c)(6), as amended, of Title 10, Code of Federal Regulations. This irradiator is authorized by by-product material license 29-01022-07.

2. A request for renewal of the license of this irradiator will be forwarded in the near future and will describe the facility with the changes included.

FOR THE COMMANDER:

Walter S. McAfee

1 Incl
as

WALTER S. MCAFEE
Office of Scientific Advisor, ERADCOM

The following alterations are being made to the in-air irradiator facility in Building 401, Evans Area: (Ref: Application for Byproduct Material License 29-01022-07 dated 5 May 76).

1. The mechanism for raising and lowering the lead storage plug above Source 1 (cobalt) (see fig E-6) is being changed from Master/Slave Manipulators and Bowden Cable (see page E-1 para 6) to a motorized assembly (shown in the inclosed diagram) mounted on the wall containing the zinc bromide window. A cable supporting the lead storage plug raises the plug by winding around a spool, which is turned (through a magnetic clutch) by an electric motor operated by the controls described below. The plug is lowered immediately by cutting power to the magnetic clutch. When the plug is lowered it knocks the source down into the storage container and completes shielding for storage.

2. The array of control switches on the console governing the operation of source 1 is being changed to comprise the following:

(a) Plug enable switch. This initiates a 10-second warning period, all during which an alarm bell sounds and a red warning light flashes in the exposure room.

(b) Plug raise switch. This switch, operable only after completion of the warning period, activates the motorized plug-raising assembly. A green light on the console indicates the completion of the 15-second plug-raising operation.

(c) Source control switch. A clockwise turn of this key switch, operable only after completion of the plug raising operation, activates the up air control, raising source 1 to the exposure position. Red lights on the console, the upper hallway, the outside of the building, and the earth mound remain lighted as long as the source is up. A counter-clockwise turn activates the down air control, lowering the source.

(d) Plug drop switch. This returns the lead storage plug to the down position.

3. A source 2 enable switch will also be on the control console. This will initiate a 10 second warning period all during which an alarm bell sounds and a red warning light flashes in the exposure room. The switch to raise source 2 will not operate until completion of the 10 second warning period.

4. An emergency switch is being installed in the exposure room. Operation of this switch activates the down air controls for both sources, immediately returns the lead storage plug of source 1 to the down position, and causes an alarm bell to sound and red warning lights to flash throughout the area.

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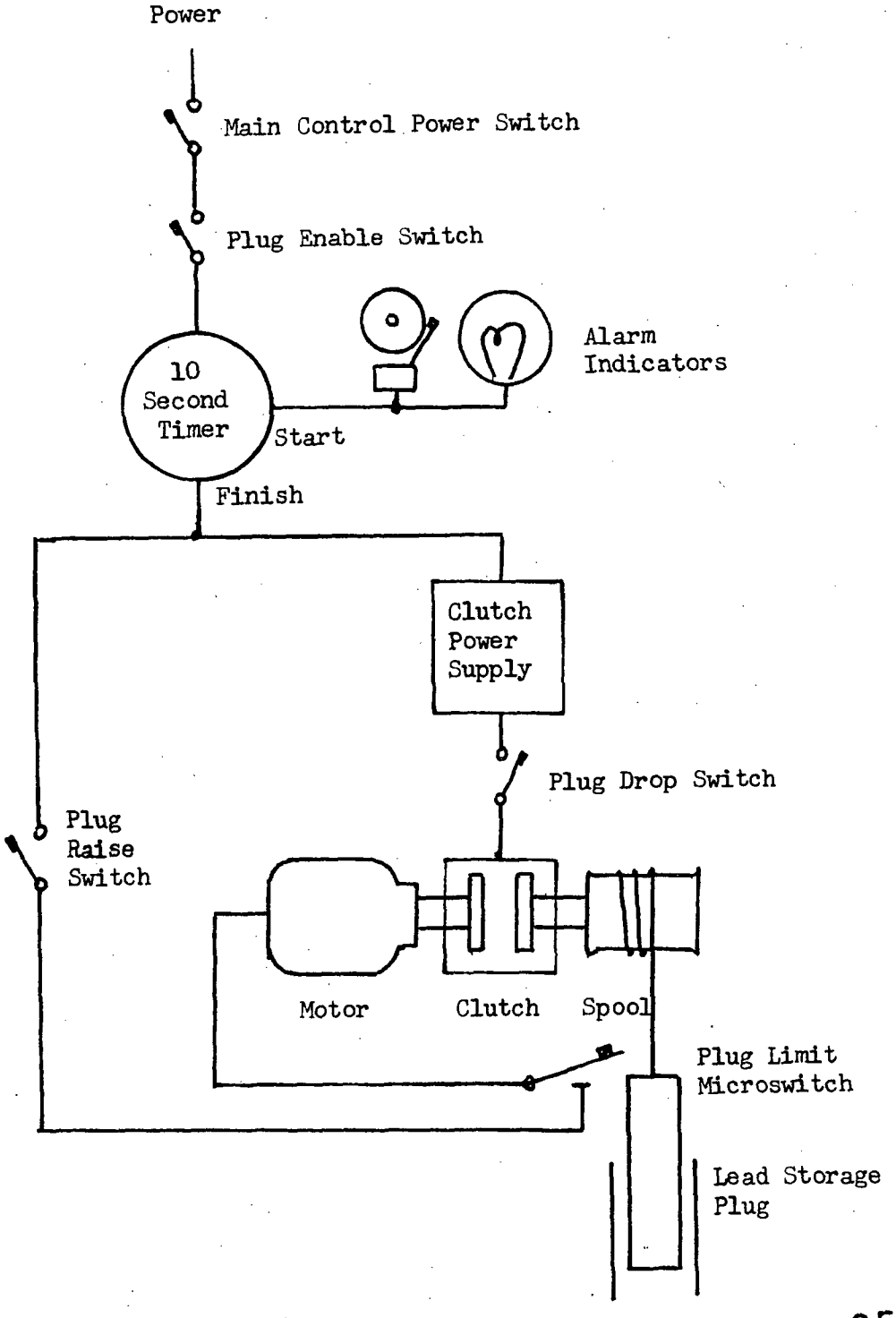
E 2

SCHEMATIC OF STORAGE PLUG CONTROL MECHANISM (SOURCE 1)



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