



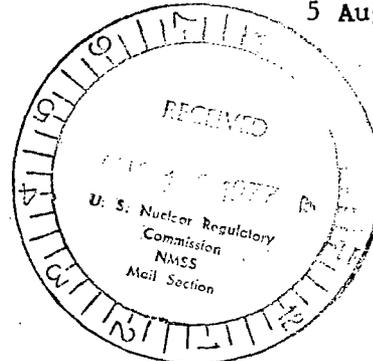
DEPARTMENT OF THE ARMY  
 HEADQUARTERS US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND  
 5001 EISENHOWER AVE., ALEXANDRIA, VA. 22333

*Control*  
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DRGSF-P/76-0049

5 August 1977

Director  
 Nuclear Material Safety and Safeguards  
 US Nuclear Regulatory Commission  
 ATTN: Radioisotopes Licensing Branch  
 (Mr. Frederick Combs)  
 Washington, D.C. 20555



Ref: NRC letter, dated 29 July 1977, subject: Application for Amendment to License No. 29-01022-07.

Dear Mr. Combs:

Forwarded is reply from US Army Electronics Command to referenced letter. This Headquarters concurs in the reply.

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

Sincerely,

*[Signature]*  
 DARWIN N. TARAS  
 Chief, Health Physics  
 Safety Office

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 as

Gy Furn:  
 HQDA (DASG-HCH-E) Wash, DC 20310 (w/incl in dupe)  
 Cdr, DARCOM FSA, Charlestown, IN 47111 (w/incl)  
 Cdr, ECOM, ATTN: DRSEL-RD-H, Ft. Monmouth, NJ 07703 (w/o incl)

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DEPARTMENT OF THE ARMY

HEADQUARTERS UNITED STATES ARMY ELECTRONICS COMMAND  
FORT MONMOUTH, NEW JERSEY 07703

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2 AUG 1977

DRSEL-RD-H

SUBJECT: Application to Amend NRC License EML 29-01022-07

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

TO: Director  
US Nuclear Regulatory Commission  
ATTN: Frederick Combs  
Washington, DC 20310

1. This letter is in reply to your letter dated Jun 29, 1977 regarding amendment to license number 29-01022-07. Telephone conversations on July 18 and July 28, 1977 between Stanley Potter of this organization and Frederick Combs of your organization are also referenced.
2. The manufacturer of the source is Picker Corp. The design of the source is as specified in Picker Corp drawing dated May 3, 1962 and titled "Brookhaven Proposal #1".
3. The exposure device is illustrated in the sketches of Inclosure 1, which is a replacement for page E-13 of the application for amendment. The exposure device is the same as used under EPL 29-0047-05 at Picatinny Arsenal. A further description is included in para 13 of Incl 2, which is a replacement for page E-1a of the application for amendment.
4. The operation of the interlock system is illustrated in Incl 3, which is a replacement for page E-10 of the application for amendment. All solenoids in the pneumatic control system are ganged so that application of power puts each solenoid into its mode for raising the sources and without power each solenoid is in its mode for lowering the sources. Activation of any of the interlocks cuts the power to the solenoids.

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2 AUG 1977

DRSEL-RD-H

SUBJECT: Application to Amend NRC License HML 29-01022-07

5. The specific radiation profile of the irradiator will be provided upon installation of the irradiator in the facility.

FOR THE COMMANDER:

3 Incl  
as

*Walter S. McAfee*  
WALTER S. McAFEE  
Commander's Representative  
Ionizing Radiation Control Committee

CF:  
DRCSE-P  
DRSEL-SF  
DRSEL-RD-O  
DRSEL-RD-H

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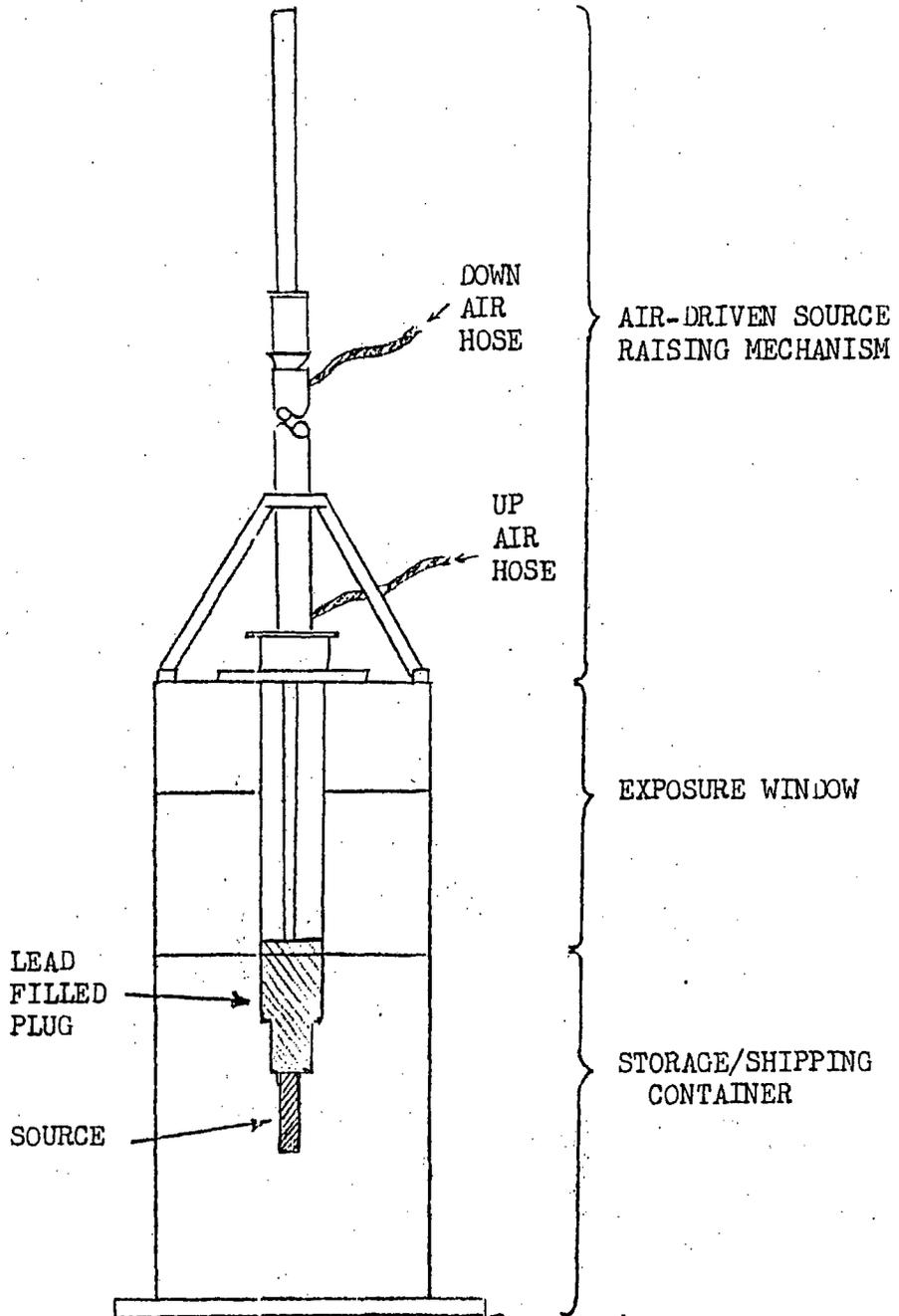


Figure 12A. Mechanism for source. Source in down (storage) position

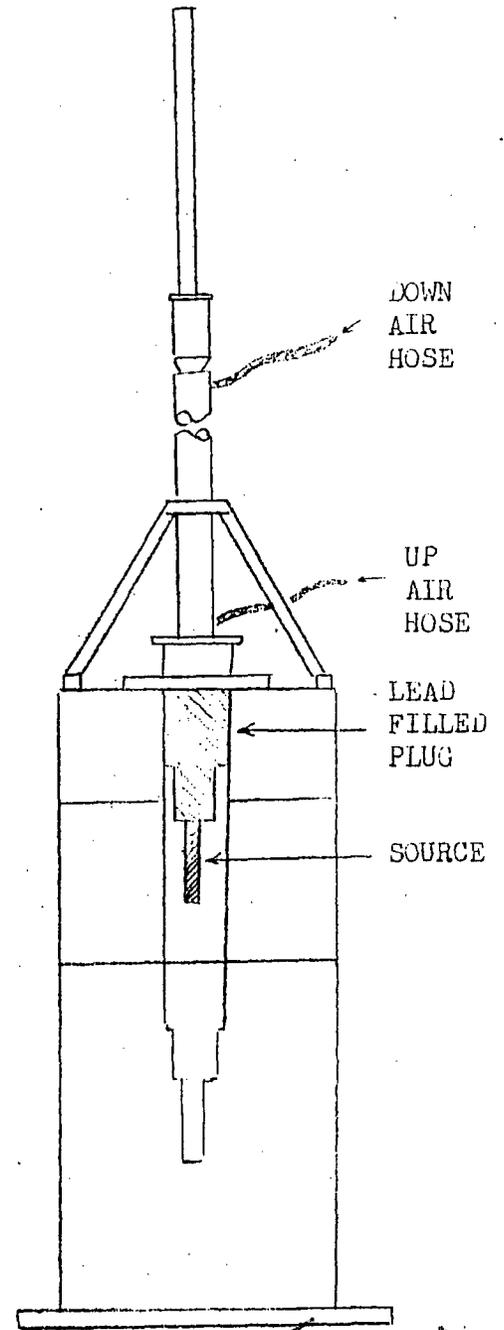


Figure 12B. Mechanism for source. Source in up (irradiating) position

- ~~XXXXXXXXXX~~
- c. The radiation level in the Console Room is above 5 mR/hr or the monitor is off, or
  - d. The remote control switch in the Exposure Room or the main control switch are switched to the "down" position.

The connection TB 4-5 was closed when the system was tested with a dummy source; however, now this connection is open so that the sources cannot be raised from inside the Exposure Room.

- 8. A pair of Argonne Type D-8 Slave manipulators (see Fig. E-3) is installed to move equipment located in the Exposure Room while the operator is in the Control Room. These manipulators are used routinely to raise and lower the source shield plug of the [ ] source.
- 9. The sump in the Exposure Room is connected to the radioactive waste dilution system (see para 6b, page I-3 of Application for Renewal of NRC BP License No. 29-01022-06 dated 4 Sep 75).
- 10. An alarm bell rings if the radiation level in the Console Room goes above 5 mR/hr. The alarm bell is audible throughout Bldg. 401.
- 11. The pneumatic controls and solenoids are located in the Control Room. An emergency generator and an air compressor take over automatically in case of an interruption or failure of the electrical power system.
- 12. The pneumatic control system is shown in Fig. E-9. The hand operated valves (in the Console Room) in the up line allow either or both sources to be raised for use when the system is in operation. An emergency generator and air compressor take over automatically in case of an interruption or failure of the electrical power system.
- 13. The components shown in Figures E-11, E-12a and E-12b and the pneumatic and electrical systems (See Figs. E-9 and E-10) make up the 2048 Ci source storage and use device. The exposure window allows irradiation in an arc of  $110^\circ$ , with 8 inches of lead (encased in  $\frac{1}{2}$  inch of stainless steel) shielding in all other directions. The storage/shipping container is marked as being manufactured by the Edlow Lead Co, Columbus, Ohio, under BE Permit No. 1462. As depicted in Fig. E-9, activation of any of the interlocks cuts the power to the solenoids, resulting in the sources being lowered. In the event of power failure the sources will be automatically lowered the same as an interlock action. In the event of air failure without power failure the source can still be lowered by cutting the power to the solenoids. The weight of the lead-filled plug will force the source into the storage container.

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E-1a

Ex 2

Doc 2

Sheet 3

Ex 2

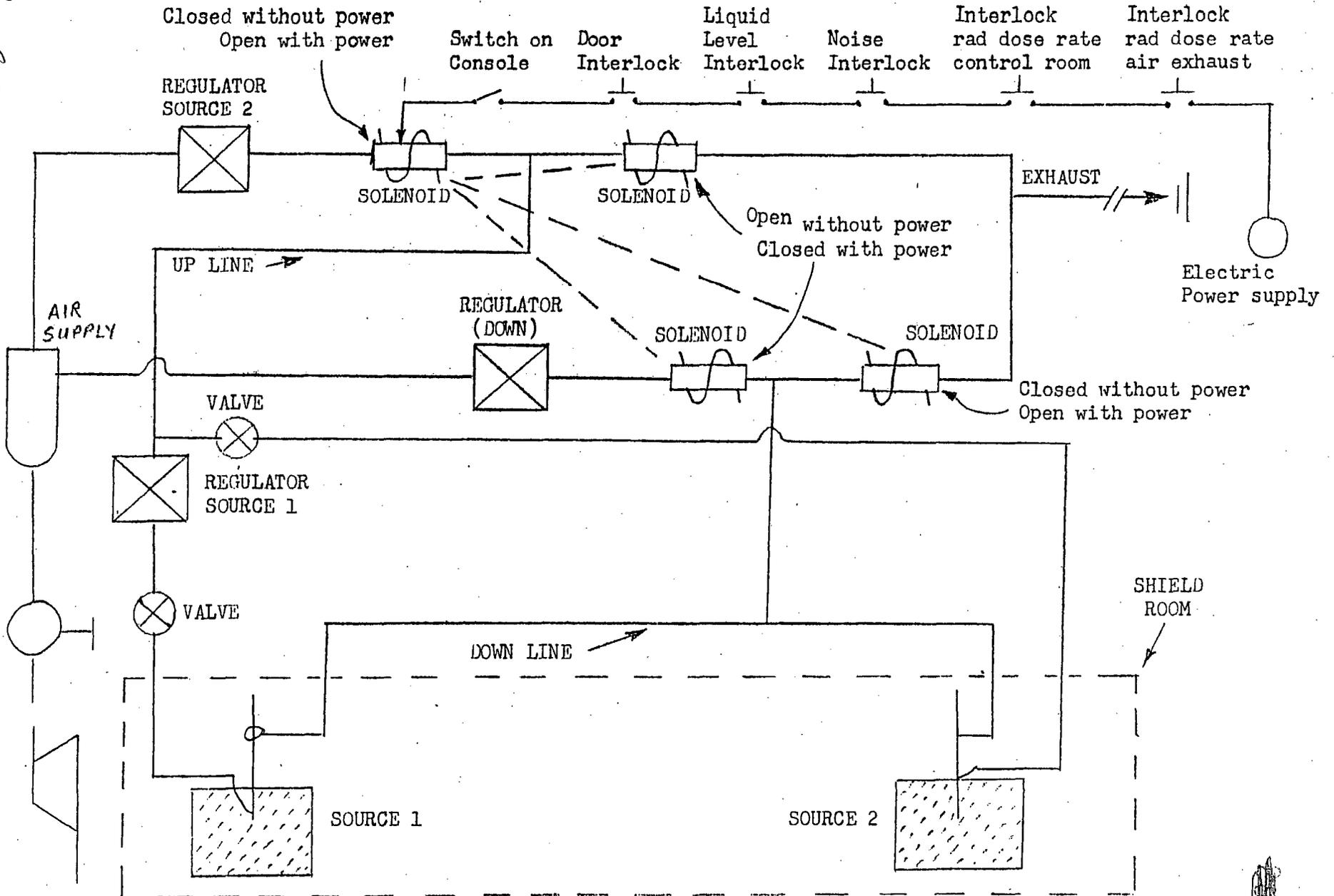


FIG. E-9. PNEUMATIC CONTROL SYSTEM.

SOURCE 1 - SOURCE  
SOURCE 2 - SOURCE