

URECO DOCKET NO.

40-3453

URANIUM REDUCTION COMPANY

L&R File Copy

Box 488 — Moab, Utah

R. F. HOLLIS
General Manager

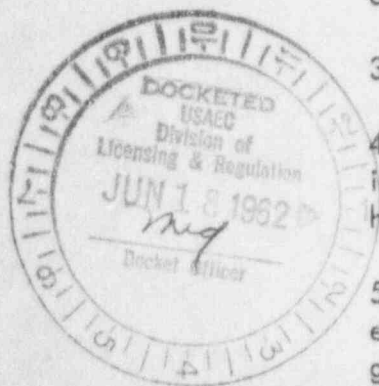
June 14, 1962

Mr. R. Lowenstein, Director
Division of Licensing and Regulation
United States Atomic Energy Commission
Washington 25, D. C.

Dear Sir:

The following information is submitted in support of our application for permission to incinerate wet press papers containing source material. This information was requested in your letter of April 27, 1962, reference DLR:DFH 40-3453.

1. Description of the incinerator: See enclosures.
2. Estimated quantities involved in each operation: Approximately 60 pounds of U_3O_8 are recovered daily.
3. Frequency of incineration: Daily.
4. Procedures for handling the ash: The ash from the incinerator is slurried with water then shovelled into the product drying hearth.
5. Procedures to prevent overexposures: The incinerator and exhaust stack were designed and installed so that the exhaust gases are discharged to the main hearth stack.



The approach used to determine individual exposures to airborne radiation is the Multiple Sample Time Weighted Average Exposure method as outlined in the report, Air Sample Procedures in Evaluating Exposures, by H. Glauberman and W. B. Harris of the Health and Safety

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Compliance

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Laboratory, U. S. Atomic Energy Commission. The filters from individual zone samples are composited on a working time basis and the breathing zone exposure determined. General Air surveys are also made to determine concentrations in work areas. All samples are taken in triplicate. The sampling device used is a Staplex-Unico Model 30 air sampler with Millipore Type AA 0.80 micron filters. A total of 24 samples are taken each quarter in this area. To date no employee has received an overexposure.

We hope that this information is adequate to justify granting us permission to continue to utilize this equipment in order that we may best protect our employees from airborne radiation.

Very truly yours,



R. F. Hollis

Vice President-General Manager

RFH:lsp



DOCKET NO. 40-3453

THE FILE COPY



AIR COOLED

Gas Fired **INCINERATORS**

ASSEMBLE "ON-THE-JOB"! FASTEST INSTALLATION!

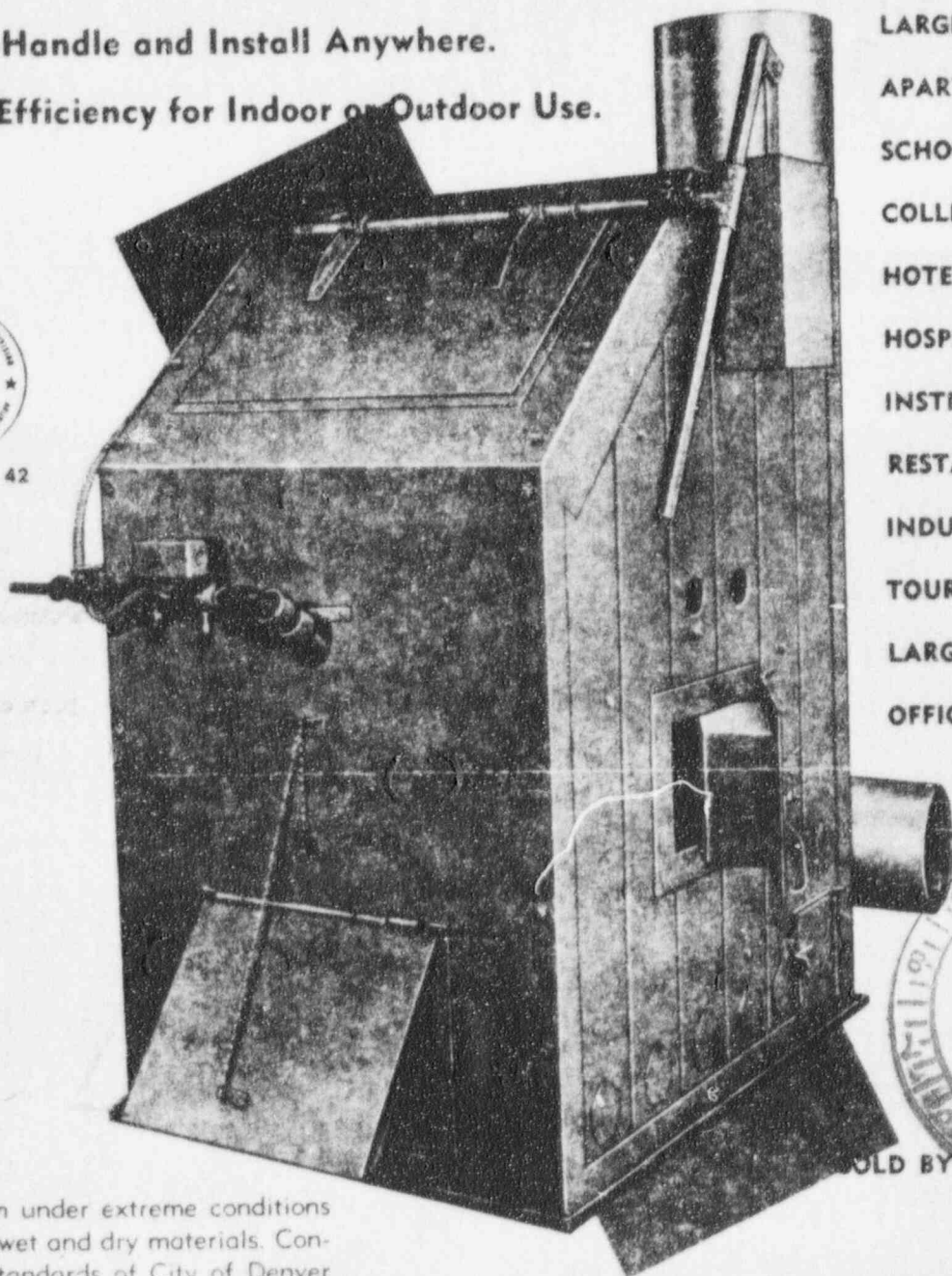
- Air-Cooled For Longer Refractory Life.
- Sizes To Meet Specific Requirements.
- Easy to Handle and Install Anywhere.
- High Efficiency for Indoor or Outdoor Use.

for

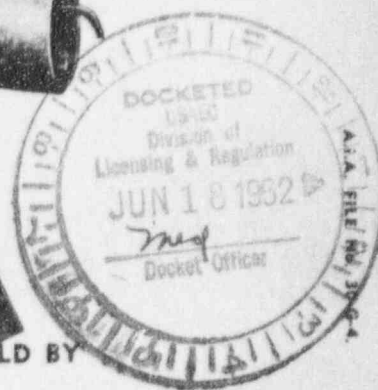
LARGE RESIDENCES
APARTMENT HOUSES
SCHOOLS
COLLEGES
HOTELS
HOSPITALS
INSTITUTIONS
RESTAURANTS
INDUSTRIAL PLANTS
TOURIST COURTS
LARGE STORES
OFFICE BUILDINGS



SIGNER No. 42



TESTED: Proven under extreme conditions destroying both wet and dry materials. Conforms to rigid standards of City of Denver Building Code.



SOLD BY

Killam... Dependable for 40 Years

NOW! The Easiest, Most Practical Answer to Your Disposal Problem

Air-Cooling lowers temperature of jacket to minimum and prolongs life of refractories. High firebox temperatures speeds combustion. Gas Burner capacities varied to requirements of different types of refuse being consumed.

EFFICIENT: Ordinary refuse is consumed with a minimum of smoke or odor. Step type grates aid secondary air circulation and speed complete combustion.

SLOPING FRONT: This important feature with extra large, 14" x 22", feed door opening permits the dumping of rubbish containers directly into the incinerator. No aggravating re-handling.

CHARGING DOOR: Counter weight makes it very easy for the operator to open and close the feed door while unit is in use.

SANITARY: Disposal unit encased in multi-rib 18 gauge Steel, finished in high temperature blued paint. Easy to keep spic and span.

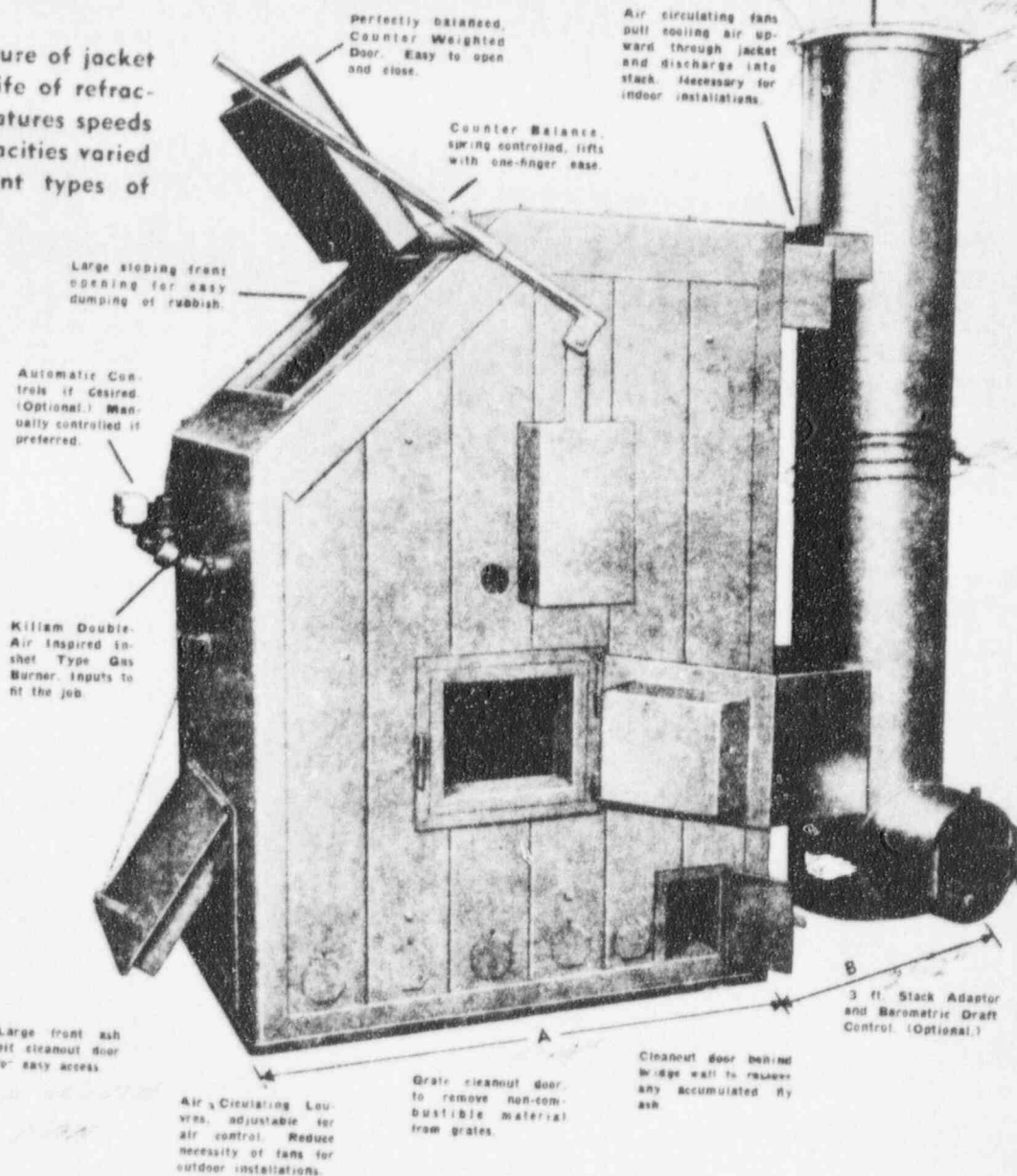
ECONOMICAL: Operates in most instances at less than the cost of hauling rubbish away. Eliminates stench, dirt and debris of accumulating rubbish and garbage. Eliminates smoke and odor of old-fashioned open brick incinerators. Any number of people can use this incinerator with safety and without special instruction.

4 MOST PRACTICAL—ALL PURPOSE SIZES

These Recommended Uses Taken Directly from Denver's New Building Code Requirements

Model Number	Firebox Volume	Flue Diameter	Recommended For Use In	Capacity Per Hour Dry Matter
1-FC	6 BU.	14"	6 to 10 Room Residence Small Apartment House	35 LBS.
2-FC	10 BU.	16"	2 Family House 16 Kitchenette Apartments	65 LBS.
3-FC	14 BU.	16"	30 Kitchenette Apartments 35 Bed Hospital—School of 500	95 LBS.
3-FCW	22 BU.	16"	60 Kitchenette Apartments 60 Bed Hospital—School of 800	145 LBS.

Available on Specified Order for Larger Requirements and Special Applications

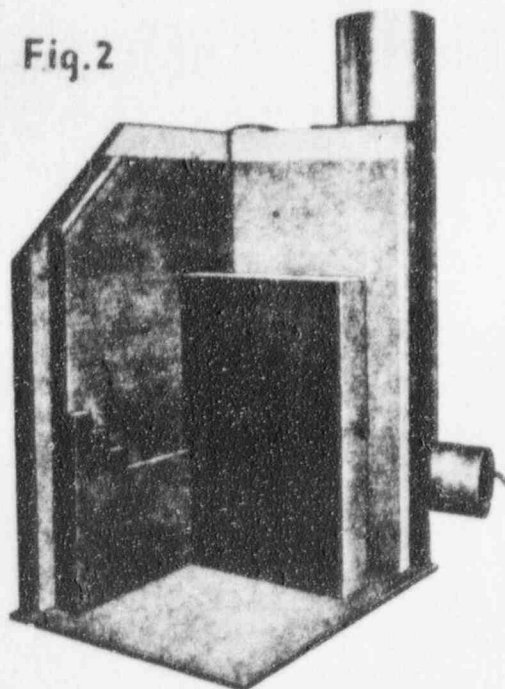


Killam... Dependable for 40 Years

You Can Deliver and Install This Killam Incinerator with a Minimum of Time and Labor

Shipped "Knocked Down", this unit can be taken through narrow doorways, up or down stairways to almost every desired installation site.

Fig. 2



MODELS FOR "WET" OR "DRY" DISPOSAL

Where a considerable amount of wet material is to be consumed, increased gas inputs are advisable. Burner capacities can be orificed in a range from 45 to 75 cu. ft. per hour each at 4" wc gas pressure.

Fig. 1

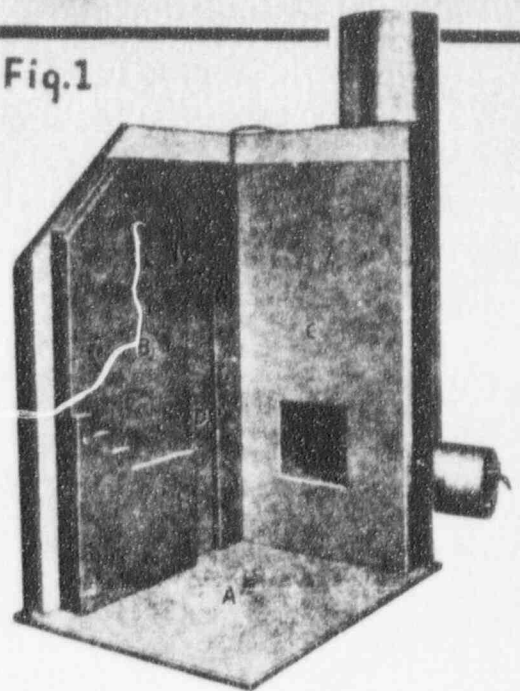


FIG. 1: Place base plate (A) at desired location of incinerator. Level base plate. Place left side (B) on base. Put $\frac{1}{4}$ to $\frac{1}{2}$ " of joint cement on back edge of refractory of side. Place the back (C) in place and start bolts. Do not tighten bolts until ALL bolts have been started. Put $\frac{1}{4}$ to $\frac{1}{2}$ " of joint cement in bridge wall recess (D) of side.

FIG. 2: Place bridge wall (E) in side wall recess (D). Put $\frac{1}{4}$ to $\frac{1}{2}$ " of joint cement on back edge of refractory and recess of opposite side. Then place the right side in position and start bolts. Put $\frac{1}{4}$ to $\frac{1}{2}$ " of joint cement around top edge of refractory and place top in position. Start bolts. Put $\frac{1}{4}$ to $\frac{1}{2}$ " of joint cement on front edge of sides. Place bottom of front on base. Raise front into fitting position. Start bolts. Now . . . tighten all bolts. Finish off all joints with trowel. Pour 2" of refractory material on floor base and in back of bridge wall. Do not apply heat in less than 24 hours.

Fig. 3

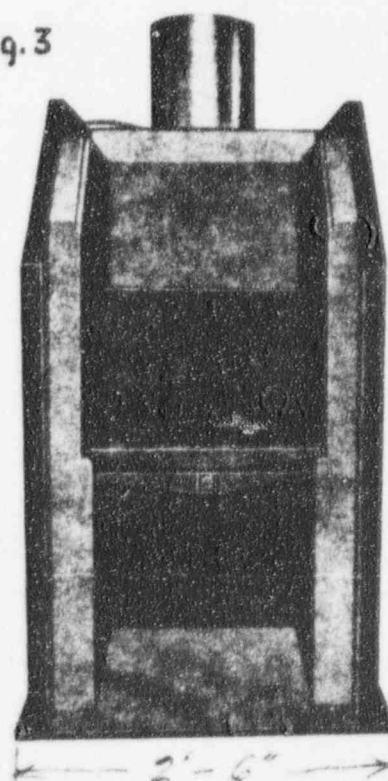


FIG. 3: Insert step grate (F) through sloping feed door. Set feed door slip shaft with threaded end in first from right hand side. Alignment marks should coincide. Adjust lock nuts against spring so that there is a slight drag on the door hinge. Insert Inshot type Killam Gas Burner through aperture provided in front, and screw securely in place. Complete stack and gas connections.

4 STANDARD PRODUCTION MODELS

Established Through Research and Testing Under Rigid Requirements

Model Number	Overall Length A + B	Overall Height	Overall Width	Grate Area	Volume Total	Unit Weight
1-FC	3' 4" + 2' 0"	4' 8"	2' 5½"	3.2 sq. ft.	17 cu. ft.	3,000 LBS.
2-FC	4' 4" + 2' 0"	4' 8"	2' 5½"	5.0 sq. ft.	27 cu. ft.	3,800 LBS.
3-FC	5' 4" + 2' 2"	4' 8"	2' 5½"	7.4 sq. ft.	35 cu. ft.	4,400 LBS.
3-FWC	5' 4" + 2' 2"	4' 8"	3' 5½"	10.6 sq. ft.	54 cu. ft.	5,400 LBS.

Write Killam About Larger Requirements and Special Applications

Killam... Dependable for 40 Years

Here Are The Reasons You Can Install "The Killam" With Confidence

Killam Air Cooled Incinerators are constructed of multi-rib 18 gauge steel for exceptional strength and to provide channels for circulation of air around the refractory. Air is circulated by means of a blower mounted on the back top of the incinerator (especially desirable in indoor installation) and discharges the cooling air into the stack. (Refractory lined if desired.) The side walls of the jacket have multiple louvered openings that can be opened or closed to balance air intake and which suffice for outdoor installation.

Continuous circulation of cool air between the inner and outer walls maintains much lower jacket temperatures. An incinerator thus constructed does not require as heavy a refractory construction in the walls and the walls will absorb and dissipate greater amounts of heat, thus prolonging refractory life.

A 20 gauge steel plate is placed on the rib construction and 3" of high temperature refractory material is then moulded to form the sides and back wall. This refractory material will stand extremely high temperatures.

The top and front sections have 3" of High Temperature cast refractory, with 1" of mineral rock wool. Casting of the refractory is done by vibrating the materials which give greater compaction and denser walls than by ordinary methods. The bridge wall is also of this high temperature material and is constructed so that the products of combustion make a complete 180 Degree loop before leaving the flue. This precipitates any fine carry over ash back of this bridge wall where it is easily removed.

The ash and air door is mounted in front with a stop so the door cannot be completely closed and thus shut off air for combustion.

The recommended barometric type draft diverter for base of the stack (optional) will regulate the draft in order to prevent excessive firing speed.

When this unit is to be installed out of doors it is possible to omit the air circulating fans and still maintain reasonably good circulation through the top and bottom louvered jacket openings. This eliminates an electrical connection.

Gas burners are optional with this incinerator, depending upon the type of material to be consumed.

Refractory walls are recastable. However, the Killam Incinerators have been subjected to several years of severe testing, so that the resulting product is as near indestructible as it is possible to manufacture such an incinerating unit.



***Killam* GAS BURNER CO.**

MANUFACTURERS AND HEATING ENGINEERS

Domestic, Industrial and Special Design Burners for All Gases

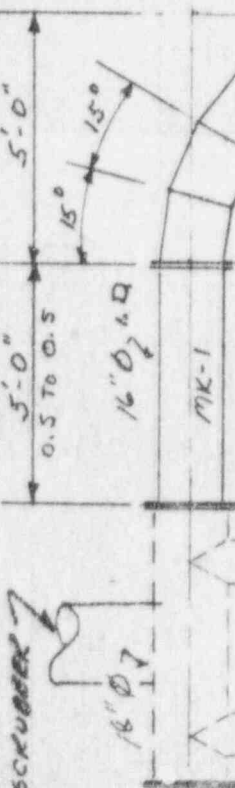
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• Denver 23, Colorado •

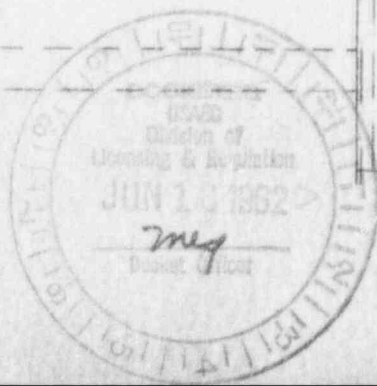
RAce 2-2871

DOCKET NO. 40-8453

DUCT TO SCRUBBER



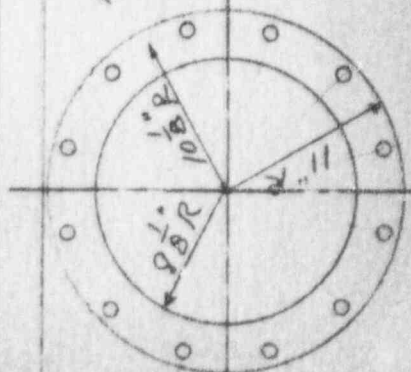
SCALE $\frac{1}{4}'' = 1 \text{ FOOT}$



SCRUBBER

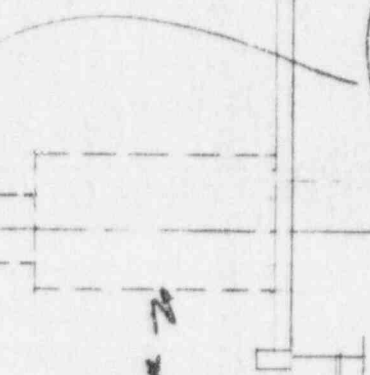
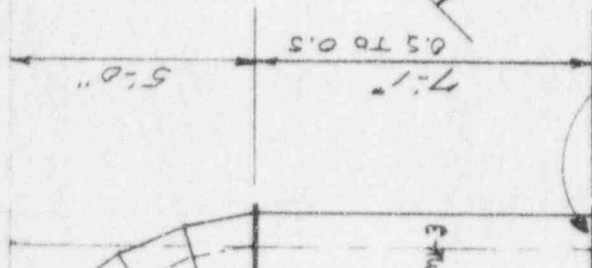
INCINERATOR

FLANGE $\frac{9}{8}''$ THICK
12 HOLES $\frac{3}{4}'' \phi$



ONE REQUIRED
FOR MK-1

SCALE $1'' = 1 \text{ FOOT}$



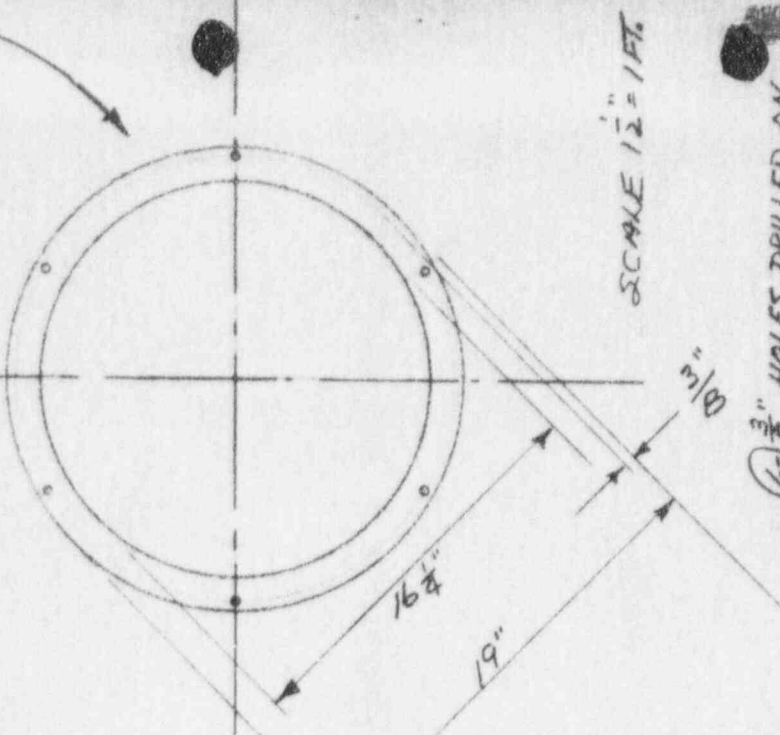
ROASTER

INCINERATOR



NO HOLES DRILLED.
ONE REQUIRED
FOR MK-3

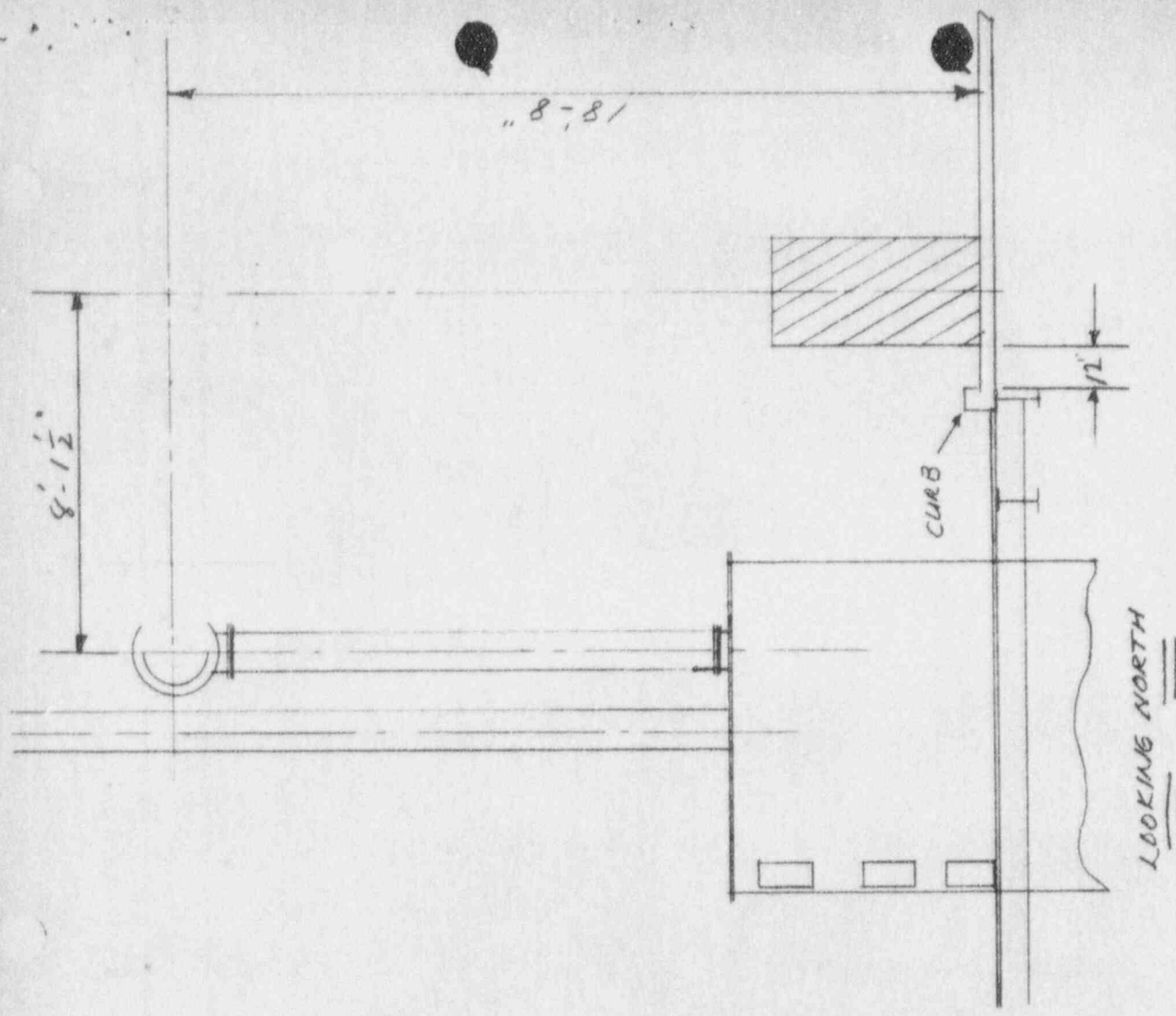
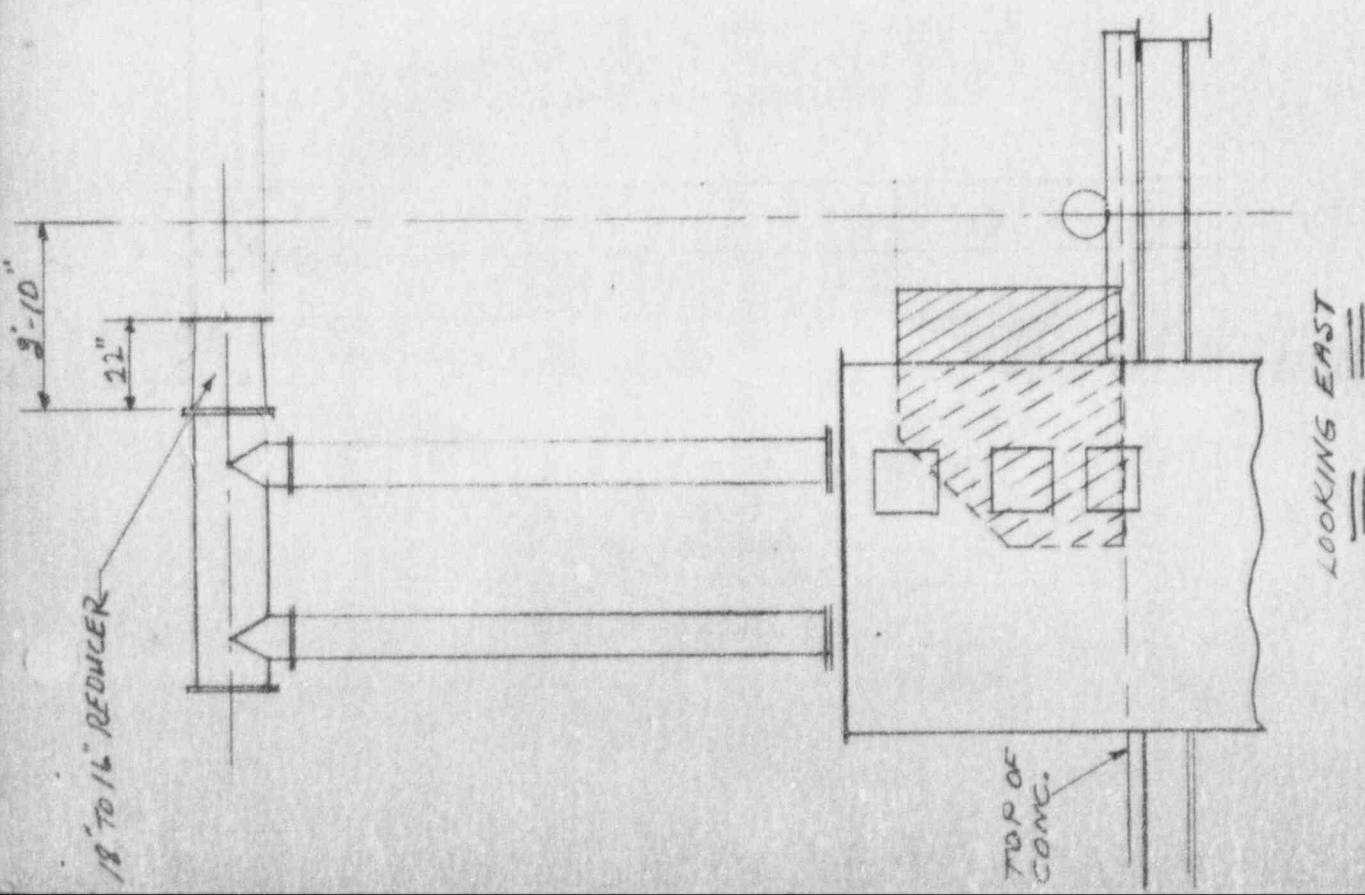
FOUR REQUIRED -
ONE FOR MK-1
TWO FOR MK-2
ONE FOR MK-3



SCALE $1\frac{1}{2}'' = 1 \text{ FT.}$

6 $\frac{3}{8}''$ HOLES DRILLED ON
 $\frac{3}{8}''$ CENTER LINE

U.R.C. MOD. LITMAN
PIPING FROM
INCINERATOR TO
HEARTH STACK
7-25-60
U-297-C



DIMENSIONS FOR
INCINERATOR
INSTALLATION
2-12-60 4-143-C

(SUB CONTRACT)

FROM: URANIUM REDUCTION COMPANY Kosh, Utah E. F. Hollis		DATE OF DOCUMENT: 6/14/62		DATE RECEIVED 6/18/62		NO.: 5675	
TO: E. Lowenstein		LTR. X		MEMO:		REPORT:	
		ORIG.: 2		CC:		OTHER: 1 verifax	
CLASSIF.: U		POST OFFICE REG. NO. 1206		ACTION NECESSARY <input type="checkbox"/> NO ACTION NECESSARY <input type="checkbox"/>		CONCURRENCE <input type="checkbox"/> COMMENT <input type="checkbox"/>	
		FILE CODE:		DATE ANSWERED: BY:			
DESCRIPTION: (Must Be Unclassified) ltr. submitting info in support of their appl. for permission to incinerate vet press papers containing source material which was requested in our ltr of 4/27/62. w/file				REFERRED TO D. A. Muesbauer		DATE 6/18	
ENCLOSURES: 1. Killam Air Cooled gas fire incinerators 2. U.R.C. Kosh, Utah piping from incinerator hearth stack dtd 2-25-60 CU U-207-C 3. Dimensions for incinerators installation dtd 2-12-60 CU U-19328				cy for Compliance (EDocket 40-3453) <i>Hansen</i>		6/18	
REMARKS: Mail Room Distribution: Public Document Room							