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MOUND LSDR OPEN MONSANTO
Central File No. 52-6-54

[redacted]
6/13/5 GLM
CIRCULATION LIMITED

June 13, 1952

DECLASSIFICATION REVIEW	
1ST REVIEW DATE: 9/18/97	DETERMINATION (CIRCLE NUMBER(S))
AUTHORITY: ☐ AOC ☒ ADC ☐ ADD	1. CLASSIFICATION RETAINED
NAME: T. M. FLANAGAN	2. CLASSIFICATION CHANGED TO:
2ND REVIEW-DATE: 1/18/98	3. CONTAINS NO DOE CLASSIFIED INFO
AUTHORITY: ADD	4. COORDINATE WITH:
NAME: [illegible]	5. CLASSIFICATION CANCELLED
	6. CLASSIFIED INFO BRACKETED
	7. OTHER (SPECIFY):

Mr. E. A. Walker, Acting Area Manager
U. S. Atomic Energy Commission
P. O. Box 66
Miamisburg, Ohio

Subject: Domestic Distribution of Polonium 210

Dear Mr. Walker:

Referring to your letter of April 30, 1952, we have the following comments to make.

The order for material would have to be placed with the Isotopes Division who would send it to us. Upon concluding our work we would ship it back to Oak Ridge from which it would be sent to the purchaser. This would not be too difficult in the case of standard items. We shall cooperate fully with you in trying to fulfill special requests but feel that we cannot recommend a procedure for handling these. Since the special outside requests are a security problem, we feel that the Atomic Energy Commission must establish such a procedure.

Messrs. Markham, Meehan and Richmond have estimated prices on the various items which we can fabricate, and these are listed showing the price breakdown along with a brief description of the items.

1. Polonium 210

   Plated on a platinum foil, enclosed in a tantalum can with nickel cap, and sealed in a glass ampoule in a helium atmosphere.
   $40 per curie

2. Neutron Sources

   The following are made in a standard container which is a nickel cylinder 0.50" x 0.50" inside by 0.66" x 0.66" (diameter and height) coated with nickel to final outside dimensions of approximately 0.70" x 0.70".

GROUP [redacted]
Excluded [redacted] automatic
down[redacted]ng and
[redacted]ssification

[redacted]

Restricted Data
This document [redacted] restricted data as defined in the [redacted] Act of 1946. Its transmittal or the [redacted] contents in any manner to a [redacted] authorized [redacted] is prohibited.

[redacted]

a. Beryllium Source

Salaries, Wages and Related Items	$ 325.00
Overhead	
Utilities	450.00
Service Departments	450.00
Security	420.00
Health Physics	325.00
Repairs and Maintenance	120.00
Operation Control	100.00
Supplies and Services	72.00
Fabrication Costs	$ 2,262.00

Add $40 per curie, or proportionate amount, to the above price depending on strength of source.

b. Mock Fission Source

Salaries, Wages and Related Items	$ 650.00
Overhead	
Utilities	900.00
Service Departments	900.00
Security	840.00
Health Physics	650.00
Repairs and Maintenance	240.00
Operation Control	200.00
Supplies and Services	144.00
Fabrication Costs	$ 4,524.00

Add $40 per curie, or proportionate amount, to the above price depending on strength of source.

c. Boron Source

Salaries, Wages and Related Items	$ 487.50
Overhead	
Utilities	675.00
Service Departments	675.00
Security	630.00
Health Physics	487.50
Repairs and Maintenance	180.00
Operation Control	150.00
Supplies and Services	108.00
Fabrication Costs	$ 3,393.00

Add $40 per curie, or proportionate amount, to the above price depending on strength of source.

It would also be necessary to add shipping charges to the above and require that the containers be returned to us. [redacted]

3. Alpha Sources

The following are based on our experience to date:

a. Solutions — 5 manhours
b. Electroplating — 7 manhours

All sources with uniform deposit over a surface are prepared by electroplating.

c. Distillation — uncovered — 5 manhours
covered — 7 manhours

Sources with some latitude in value, but over 50 millicuries, and deposited in restricted areas (1/8" to 3/8" diameter) are prepared by distillation.

d. Electrochemical Deposition — 6 manhours

Sources not defined above and with a backing material above polonium in the electromotive series of elements are made by electrochemical deposition.

Requests for sources with uniform polonium do require an autoradiograph, and, therefore, an additional two hour fabrication time. One manhour should be added for a hold-down or protective coat.

	MANHOURS					
	5	6	7	8	9	10
Salaries, Wages and Related Items	$ 14.00	$ 16.80	$ 19.60	$ 22.40	$ 25.20	$ 28.00
Overhead						
Utilities	13.00	15.60	18.20	20.80	23.40	26.00
Service Departments	24.00	28.80	33.60	38.40	43.20	48.00
Security	17.00	20.40	23.80	27.20	30.60	34.00
Health Physics	10.00	12.00	14.00	16.00	18.00	20.00
Repairs and Maintenance	13.00	15.60	18.20	20.80	23.40	26.00
Operation Control	3.00	3.60	4.20	4.80	5.40	6.00
Supplies and Service	4.00	4.80	5.60	6.40	7.20	8.00
Other Cost	11.00	13.20	15.40	17.60	19.80	22.00
Metals	6.00	6.00	6.00	6.00	6.00	6.00
Fabrication Costs	$ 115.00	$ 136.80	$ 158.60	$ 180.40	$ 202.20	$ 224.00

Add $ 40 per curie, or proportionate amount, to the above prices depending on the strength of source.

The $40 per curie is obtained from our accounting records kept by Mr. Markham.

The cost per neutron source is based on last fiscal years total money for cost center 4, the total number of items made, and prorated as to direct time for each type.

The alpha sources were based on an estimate of the manhours to prepare a source and the fractional part of the total manhours represented by Y-Section work. This fraction was applied to the total cost to determine a unit cost.

The fabrication of shipping containers for alpha sources is almost negligible but the cost of shipping containers for the neutron sources is quite high. We could establish a standard charge for packaging and shipping these items to Oak Ridge but feel that shipping charges from that point are a responsibility of the Atomic Energy Commission.

If these comments are satisfactory, we shall be glad for you to arrange a meeting at Mound Laboratory at any time.

Very truly yours,

J. Burbage

Joseph J. Burbage
Director

McCarthy/g

Distribution: (Limited)
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