



pharmaco nuclear inc.

1734 EAST 63RD STREET • SUITE 214
KANSAS CITY, MISSOURI 64110
(816) 523-4014

May 20, 1980

Joseph Del Medico
Licensing Management Branch
Division of Fuel Cycle and Material Safety
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Control #03407

Dear Mr. Del Medico:

Enclosed is a copy of the Pharmacy Permit issued to our St. Louis location by the state of Missouri. Also, I have enclosed the results of the measurements that I obtained on the ventilation system for our pharmacy which is located at 100 North Euclid, Suite 900, St. Louis, MO, 63108.

We will be installing a fume hood in the hot lab which will exhaust between 700 CFM and 900 CFM across the face of the hood. Measurements will be made at the fume hood opening and at the louvers of the exhaust duct which will extend 5 feet above the roof. These measurements will be submitted when fume hood installation has been completed.

Some comments are in order:

1. By extending the fume hood exhaust vent 5 feet above the roof, the point where the fume hood is exhausted will be 5 stories + 5' (55") higher than the closest building which is over 100 feet from this building.
2. A separate air supply unit is used for each floor of this building; therefore, return air from the ventilation system would only involve other office space located on the ninth floor. The intake for this unit will be over 100 feet from the point that the fume hood is exhausted.
3. From the enclosed report you can see that the return vents return 114 CFM to the total system which is 5115 CFM. This represents a return of 2.2% of the air from the hot lab into the total system. With the installation of a fume hood exhausting between 700 CFM and 900 CFM there will be a negative pressure in the hot lab of at least 350 CFM when the fume hood is on.

COPIES SENT TO OFF. OF
INSPECTION AND ENFORCEMENT

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PDR FOIA
HAMMITT85-287 PDR

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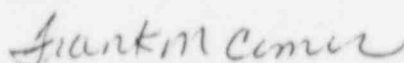
Mr. Joseph Del Medico
May 20, 1980
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Since there is positive pressure in all of the remainder of the rooms, air flow will be into the hot lab. The fume hood will be on at all times when the pharmacy is open and all volatile substances, i.e., I-131 and 133 Xenon will be handled and dispensed in the fume hood. As you know, we do not use 133-Xenon; we only transfer it from its shipping container to the dose calibrator for assay and back to its shipping container for transfer to our customers. We dispense only unit dose containers supplied by the manufacturer.

Total ventilation system air supply was measured by Midwest Refrigeration Service and Supply Company, Inc., 10631 Liberty Avenue, St. Louis, MO, 63132.

If you have any questions concerning this information, please do not hesitate to contact me.

Sincerely,



Frank M. Comer -
Radiation Physicist

cmt
Enclosure

VENTILATION SUPPLY AND RETURNS
PHARMACO NUCLEAR, INC.

100 N. EUCLID
ST. LOUIS, MISSOURI 63108

MEASURED AIR FLOW RATES
SUPPLY AIR

LOCATION #	VENT AREA	AIR FLOW (Measure)	CFM SUPPLY
1	7.5" x 7.5" = 0.39 ft ²	350 ft/min.	137
2	7.5" x 7.5" = 0.39 ft ²	200	78
4	7.5" x 7.5" = 0.39 ft ²	350	137
7	7.5" x 7.5" = 0.39 ft ²	625	244
8	7.5" x 7.5" = 0.39 ft ²	400	156
9	3.5" x 7.5" = 0.18 ft ²	1000	180
13	9.5" x 9.5" = 0.63 ft ²	250	158
14	9.5" x 9.5" = 0.63 ft ²	400	252
15	7.5" x 7.5" = 0.39 ft ²	350	137
17	7.5" x 7.5" = 0.39 ft ²	350	137
18	8.5" x 8.5" = 0.50 ft ²	475	238
20	7.5" x 7.5" = 0.39 ft ²	530	<u>207</u>
TOTAL SUPPLY AIR			2061 CFM

RETURN AIR

3	7.5" x 7.5" = 0.39 ft ²	100 ft/min.	39
5	8.5" x 8.5" = 0.50 ft ²	150	75
6	7.5" x 7.5" = 0.39 ft ²	100	39
10	11.5" x 11.5" = 0.92 ft ²	100	85
11	9.5" x 9.5" = 0.63 ft ²	100	63
12	9.5" x 9.5" = 0.63 ft ²	100	63
16	7.5" x 7.5" = 0.39 ft ²	100	39
19	9.5" x 9.5" = 0.63 ft ²	100	<u>63</u>
TOTAL RETURN AIR			466 CFM

Vent air flow was measured with a Bacharach Instrument Company Model MLD Florite Anemometer.

Physicist
Date

Frank M. Comer
8/11/80

AIR SUPPLY BY ROOMHOT LAB

<u>VENT #</u>	<u>SUPPLY</u>	<u>VENT #</u>	<u>RETURN</u>
1	137 CFM	3	39 CFM
2	78 CFM	5	75 CFM
4	<u>137 CFM</u>		
Total Supply	352 CFM	Total Return	114 CFM

RADIOPHARMACY DISPENSING LABORATORY

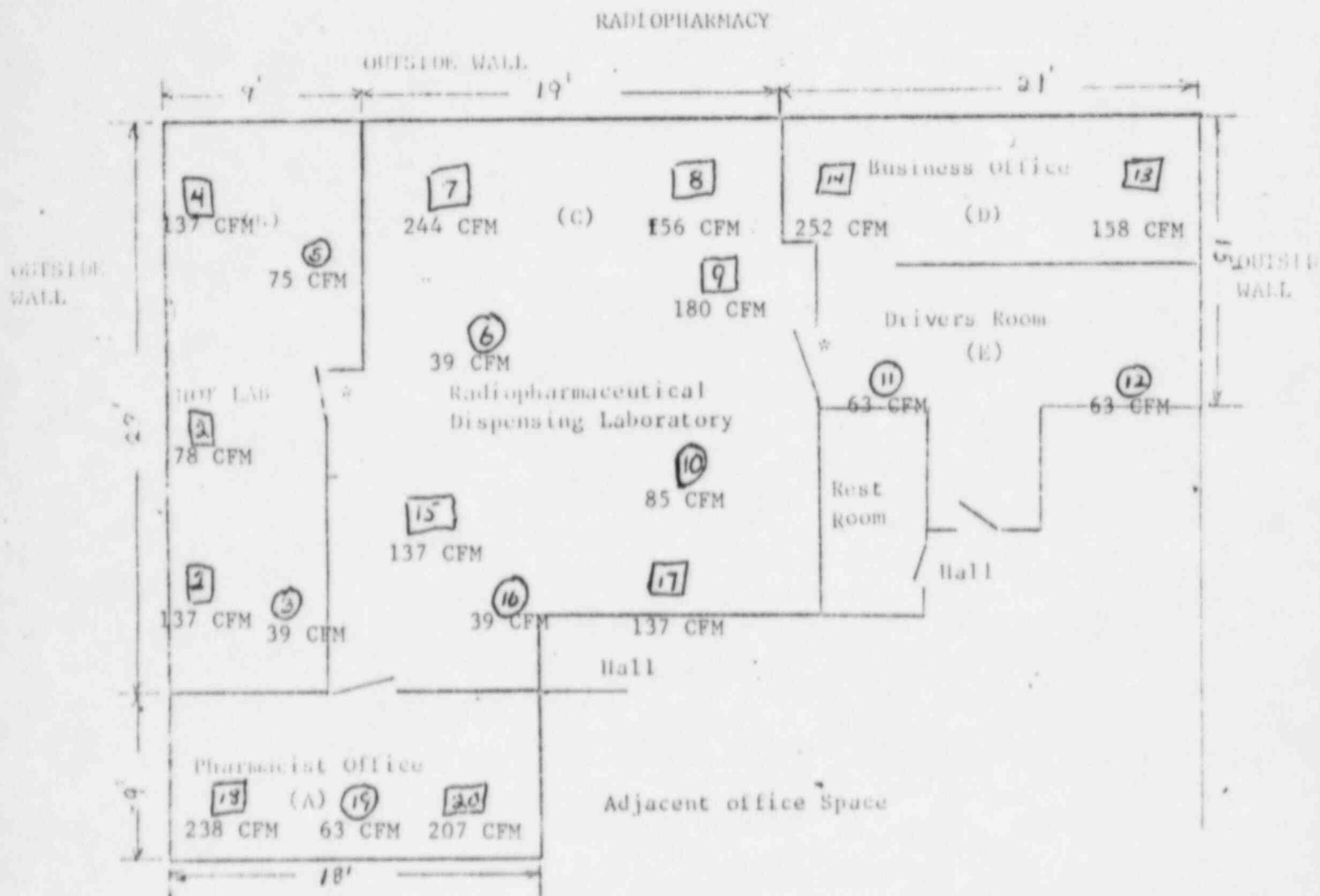
<u>VENT #</u>	<u>SUPPLY</u>	<u>VENT #</u>	<u>RETURN</u>
7	244 CFM	6	39 CFM
8	156	10	85
9	180	16	39
15	137		
17	<u>137</u>		
Total Supply	854 CFM	Total Return	163 CFM

PHARMACIST OFFICE

<u>VENT #</u>	<u>SUPPLY</u>	<u>VENT #</u>	<u>RETURN</u>
18	238 CFM	19	63 CFM
29	<u>207</u>		
Total Supply	445 CFM	Total Return	63 CFM

BUSINESS OFFICE AND DRIVERS ROOM

<u>VENT #</u>	<u>SUPPLY</u>	<u>VENT #</u>	<u>RETURN</u>
13	158 CFM	11	63 CFM
14	<u>252</u>	12	<u>63</u>
Total Supply	410 CFM	Total Return	126 CFM



SB01420

MISSOURI STATE BOARD OF PHARMACY
DRUG STORE OR PHARMACY PERMIT

July 1, 1979 to June 30, 1980



Pharmaco Nuclear, Inc. 3801
100 N. Euclid, Suite 900
St. Louis, MO 63108

CHIEF
PHARMACIST
McHugh

W. Keith Rustian
EXECUTIVE DIRECTOR SECRETARY

POST IN CONSPICUOUS PLACE — NON TRANSFERABLE

SB01344

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MISSOURI STATE BOARD OF PHARMACY
**DRUG STORE OR PHARMACY
PERMIT RENEWAL NOTICE**

July 1, 1980 to June 30, 1981

RETURN THIS NOTICE WITH \$20.00 TO:

Vincent "Skipper" Hecht, R.Ph., Secretary
MO. BOARD OF PHARMACY
P.O. Box 625
Jefferson City, Mo. 65102

DO NOT FOLD, BEND OR STAPLE

Pharmaco Nuclear, Inc. 3801
100 N. Euclid, Suite 900
St. Louis, MO 63108

CHIEF
PHARMACIST
McHugh

1113



MIDWEST REFRIGERATION

SERVICE & SUPPLY CO., INC.

ENERGY MANAGEMENT SPECIALIST



May 7, 1980

Doctor's Building
100 N. Euclid
St. Louis, Missouri
63108

Attention: Mr. Kugler

Re: Total CFM of air supply Suite 900.
Nuclear Pharmacy Area.

Dear Mr. Kugler,

Our service technician measured the air flow in the above referenced area to be approximately 3000 cubic feet per minute. If an exact, precise measurement at each grill is necessary we can have a professional air balancing company come in and do the testing.

Please call if you have any questions.

Sincerely,

Daniel H. Brouillet Jr.