



# pharmaco nuclear inc.

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RECEIVED

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U.S. NUCLEAR REGULATORY COMMISSION  
KANSAS CITY, MISSOURI

July 28, 1980

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

Re: Control Number 03407

Dear Mr. Del Medico:

Please find enclosed the revised information with respect to the ventilation system for our radiopharmacy to be located in St. Louis, Missouri.

I have had Bill McHugh physically measure the distance from the nearest window to the top of the roof. This distance is 11 feet. Since the exhaust stack will extend 5 feet above the roof, it will be 16 feet from the exhaust stack opening to the nearest window. It was also noted that each window had a concrete joist above it which extended out 6 inches from the building. Windows in this building are rarely if ever opened because of the air conditioning and heating systems.

In order to achieve a negative pressure in the Radiopharmaceutical Dispensing lab, the Pharmacist Office, and the Hot Lab area, the following will be done:

1. All return vents will be closed.
2. The above areas will have the total supply air reduced to 753 CFM.
3. A fume hood will be installed which will exhaust 900 CFM through its own exclusive exhaust vent. This fume hood will be on at all times when the Pharmacy is opened.
4. A second fume hood will be installed which will exhaust 900 CFM as a back-up system in the event that the first fume hood should fail. In this way a negative pressure of approximately 150 CFM will be maintained at all times during normal operation of the Pharmacy.

#### Emergency procedure:

In the case of an accidental release of volatile material in the Hot Lab or Radiopharmaceutical Dispensing area, both fume hoods will be turned on. This will insure a negative pressure in these three areas of approximately 1000 CFM and an overall negative pressure of approximately 600 CFM relative to any other area of the 9th floor.

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INSPECTION AND ENFORCEMENT

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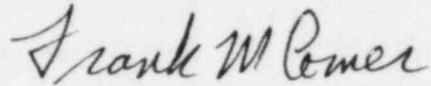
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I have enclosed the revised sketch of ventilation information based on the measurements that I made. When we apply for our 133-Xenon authorization, I will submit actual measurements and, if necessary, further adjustments will be made to insure that we maintain the 150 CFM negative pressure system for the areas involved.

We will also re-check the system when changing from refrigeration to furnace air supply so as to maintain the 150 CFM of negative pressure.

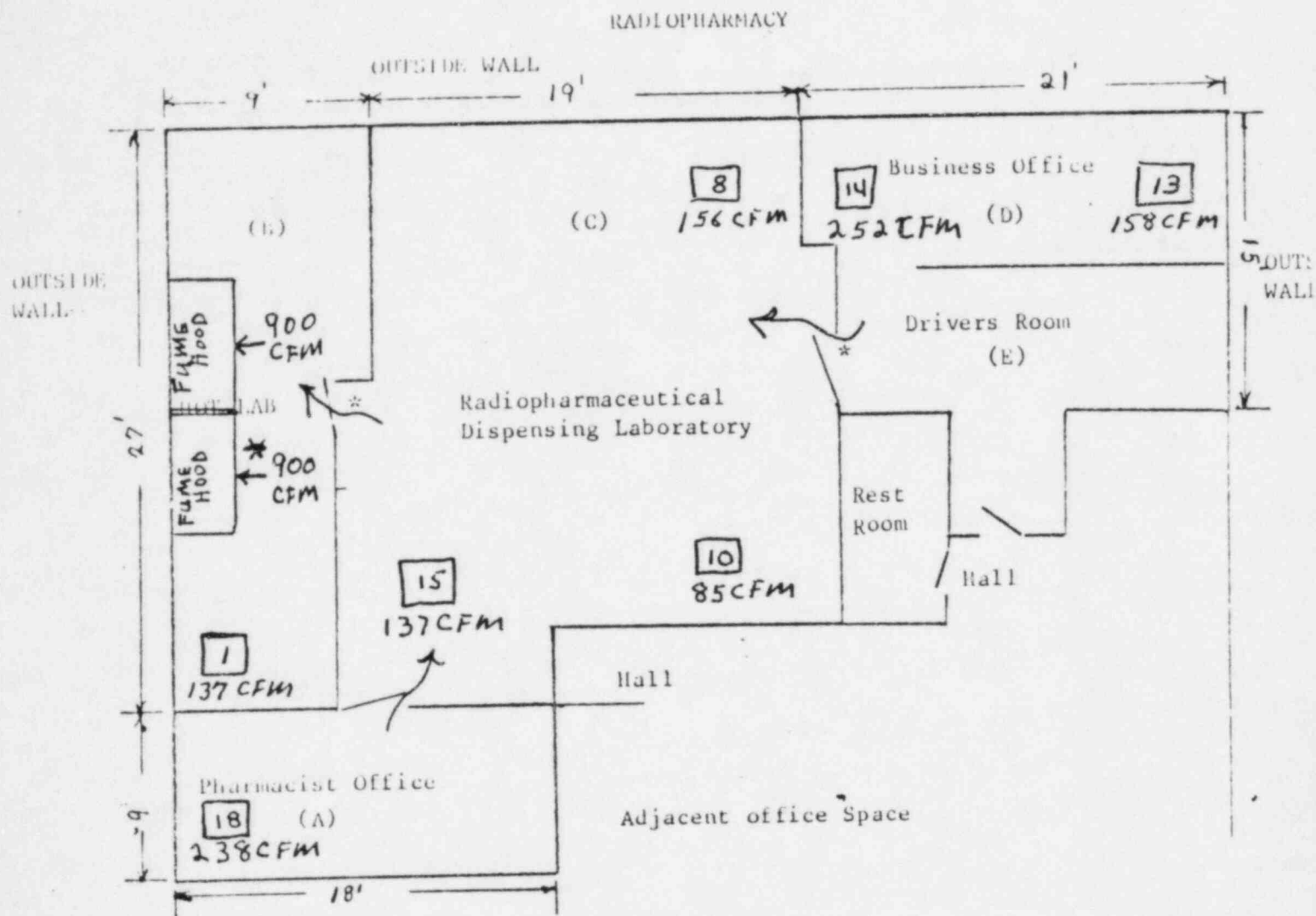
Your consideration in this matter is appreciated.

Sincerely,

A handwritten signature in cursive script that reads "Frank M. Comer".

Frank M. Comer  
Radiation Physicist

spa  
Enclosures



\* Dead Bolt Locks

Total area approximately 1300 square feet  
 Located on the ninth floor of a free standing building

□ SUPPLY

Scale 1/8" = 1'

\* OPERATED IN CASE OF EMERGENCY

Air Supply by Room

<u>Vent #</u>	<u>Supply</u>	<u>Return</u>
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Hot Lab

1	137 CFM	None
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Total Supply: 137 CFM

Radiopharmacy Dispensing

8	85 CFM	None
10	156 CFM	
15	137 CFM	

Total Supply: 378

Pharmacist Office

18	238 CFM	None
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Total Supply: 238

Business Office and Driver's Room

13	158 CFM	None
14	252 CFM	

Total Supply: 410 CFM

All vent numbers are referenced to previous ventilation report.

Total Supply and Exhaust Air for Hot Lab, Radiopharmacy Dispensing, and Pharmacist Office

<u>Vent #</u>	<u>Supply</u>	<u>Exhaust</u>
1	137 CFM	900 CFM (Fume Hood)
8	85 CFM	
10	156 CFM	900 CFM (Back-Up Fume Hood)
15	137 CFM	
18	238 CFM	
Total Supply	<hr/> 753 CFM	<hr/> *1800 CFM

A negative pressure of 900 CFM - 753 CFM = 147 CFM will be maintained in these three rooms.

\* One Fume Hood will be operating at all times while Pharmacy is open.  
In case of an emergency, both Fume Hoods will be operating.