

DRAFT

1000, MAY 15 1958, please check

TO: LYALL JOHNSON

FROM: Lester R. Rogers

SUBJECT: S. F. APPLIANCES LIMITED, 105 STATE STREET, PATERSON, N.J.  
DOCKET NO. 40-215

Conclusion

The survey report dated April 22, 1958 appears satisfactory ~~from a~~  
~~radiological safety standpoint.~~ *and renewal of license is appropriate from*  
~~the radiological safety standpoint.~~

The following information was reviewed.

Location: Morris, Illinois

Person Conducting Survey: Mr. Edward Maryniw (?), radiation technician

for Lindsay Chemical Company. *Report signed by Kramer & Robert Sandaner (of Lindsay)*  
*An excellent report and analysis.*

Instruments used: Nuclear-Chicago Model 2612. Air sampling pump ~~with~~ *rate*  
of 35 liters/min. for 30 minute period using 1 1/4" diameter, No. 411 ~~Whitmore~~ *Whitman (consultant)*  
filter paper. Counting was done in a scintillation counter having 2  $\pi$  geometry.

Results

The complete results may be found in the enclosed report. The gamma highest  
reading ~~was found~~ on the surface of a 200 lb. drum of thorium nitrate ~~to be~~

1725 20 mr/hr. The second highest was at the surface of the tube used for the  
thorium nitrate impregnating solution. The remainder of the areas ~~was at~~ *were*

2 mr/hr or lower. *Highest averages in area of stirring and hand finishing of*

Airborne Activity *mantles which indicates exposures of less than 20 mr per week.*  
*They recommend a 13 week film badge survey annually.*

The air samples taken indicated a maximum of 2% of the MPC for thorium. ~~The~~  
*levels were all below 20% so no posting*  
(see comments below). *required for airborne activity.*

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Posting:

The author of the report gives an excellent account of when and where materials and areas should be posted as required by 10 CFR 20.

Instruction:

Personnel handling material containing thorium will be informed of and instructed in the proper handling procedures.

Waste Disposal:

There is no waste resulting from the process.

Records on surveys and personnel monitoring will be kept.

Comments:

In paragraph 3 of item (4) of the subject report, the author states that the filter papers are allowed to stand for one week prior to counting to allow for the decay for short-lived daughter products of thoron and radon.

This will not give a true picture of the exposure to the lungs of the workers in the process areas. If a radioactive gas is present due to heating of the thorium material, the lungs of the workers will be exposed to this plus the activity of the longer lived thoron daughter products.

It might be well to point out this matter when a renewal license is issued to the subject company.

*of solutions  
Tubs are to  
be posted but cartons of up to 12,000 marbles (0.5 gm/marble) do not  
need to be labeled. Process, impregnation area, containing  
something  
290 g of ThO<sub>2</sub>  
should be  
posted.  
They are handling radioactive material of low level, no hazard  
exists from its use but it is not to be eaten  
or ingested and they should wash  
said practice good housekeeping  
habits generally*