

March 10, 1982

Ms. B. J. Holt  
Region III Licensing Section  
Material Licensing Branch  
Division of Fuel Cycle & Material Safety  
Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Dear Ms. Holt:

The following information is supplied pursuant to your correspondence of January 14, 1982. Our license number is 34-01329-07 and control number is 05502.

#1. We wish to incinerate the following radiosotopes -  $^3\text{H}$ ,  $^{14}\text{C}$ ,  $^{32}\text{P}$ ,  $^{35}\text{S}$ ,  $^{45}\text{Ca}$ ,  $^{59}\text{Fe}$ , and  $^{125}\text{I}$ .

#2. Vials containing liquid scintillation fluid are placed in their original cartons, if possible, or in plastic containers, then carefully in plastic lined drums by the individual users. They are also responsible for accurately stating the activity contained in the fluid. The maintenance department will move the barrels to the boilers and burn the container after approval from the Radiation Safety Office. A log book will be kept in the Radiation Safety Office of all burnings.

#3. (a) Effluent from the incinerator stack will not exceed 10% of the limits specified in Appendix B, Table II, Column I, 10CFR20 for all radiosotopes incinerated.

(b) The Radiation Safety Officer will be responsible for insuring these limits are not exceeded.

#4. If different radiosotopes are incinerated at the same time, the following type calculation will be conducted if there is any possibility of exceeding MPC values.

Assume we wish to incinerate the following radiosotopes (the maximum daily limits are in parentheses).

$^{125}\text{I}$  (2.5uCi),  $^{35}\text{S}$  (280uCi) and  $^{32}\text{P}$  (63uCi)

We would be allowed to incinerate

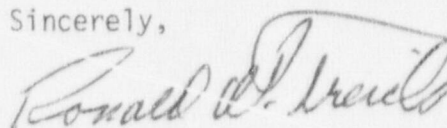
1.25 uCi  $^{125}\text{I}$ , 70uCi  $^{35}\text{S}$  and 15uCi  $^{32}\text{P}$

at the same time; that is,

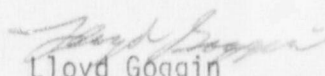
$$\frac{1.25}{2.50} + \frac{70}{280} + \frac{15}{63} \leq 1$$

#5. We do not expect any radioactive material to remain in the coal ash. The solvents are completely incinerated and break down to carbon dioxide and water vapor. We will, however, analyze several ash samples for radioactivity. If residual activity is detected, we will convert to microcuries per gram and dispose as ordinary waste only if concentrations do not exceed those specified for water (Appendix B, Table II, 10CFR20). (You discussed this procedure with Kenneth Fritz on February 3, 1982).

Sincerely,



R. W. Treick, Ph.D.  
Chairman, Radiation Control Committee



Lloyd Goggin  
Vice President Finance and  
Business Affairs