



## Hill Top Research, Inc.

P.O. Box 42501, Cincinnati, Ohio 45242 (513) 831-3114

October 17, 1985

William J. Adam  
Materials Licensing Section  
U.S. Nuclear Regulatory Commission, Region III  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Applicant

Check No.

Amount/Fee Category

Type of Fee

Date Check Rec'd

Received By

Oct 23<sup>rd</sup>

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AMD

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U.S. N.R.C.  
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RE: License No. 34-20385-01

Dear Mr. Adam:

This letter constitutes an application by Hill Top Research, Inc. to amend the Company's Materials License.

Our amendment request is for the addition of Phosphorous-32 to our list of licensed materials, and concerns items 6, 7, 8, and 9 of our license as follows:

- Item 6.D. (Addition to Item 6): Phosphorous-32
- Item 7.D. (Addition to Item 7): Any chemical or physical form
- Item 8.D. (Addition to Item 8): 1 millicurie, maximum possession at any one time.
- Item 9.D. (Addition to Item 9): To be used for medical and biological research and development.

The main use of 32P will be in the form of radiolabeled substrates for analytical biochemical tests or in the preparation of reagents for such tests (e.g., DNA, RNA, enzyme substrates). The maximum amount of 32P to be handled at any one time is expected to be of the order of 100 uCi. Our handling and survey program for 32P will include a GM meter (0-50 mR/hr., beta and gamma detection, Victoreen Model 493) at the site of use during periods of 32P use, and a GM survey of the use area at the conclusion of each day's use.

The GM counter will be calibrated every 6 months by our current calibration service. We do not plan to use personnel monitoring devices (film badges) for the amount of 32P being requested for licensing because it is not considered likely that anyone will receive 25 percent of the maximum permissible dose per week averaged over 13 consecutive weeks (25 mrem).

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REGION III

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CONTROL NO. 79987

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We will hold 32P solid waste for decay-in-storage until radioactivity cannot be distinguished from background, then disposed of as nonradioactive, as stated in item 15 of our current license. Waste will be stored in a secured, posted area, restricted to use by trained personnel. The waste will be shielded and the site monitored. Sanitary sewer disposal of water soluble or dispersible 32P will not exceed 0.5 uCi/liter of water (10 CFR 20, Appendix B). All other provisions of our current license and amendments will apply to 32P.

Enclosed please find a check for \$120.00 which we understand is the fee for amendment of this license. Please contact George C. Lavelle, Ph.D., Radiation Safety Officer, if you have questions or need additional information.

Thank you for your prompt attention to this amendment request.

Sincerely,

HILL TOP RESEARCH, INC.



Don E. McOske, Ph.D.  
Chairman  
Radiation Safety Committee

DEM/csf