Swarthmore College

Dept. of Physics & Astronomy

P-7

Facimile Cover Sheet

37-06958-02
03010952

Swarthmore College
Science Center, Ste 131
500 College Ave.
Swarthmore, PA 19081
Phone: 610-328-8258
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To: Thomas Thompson	From:
Company: NRC	Date:
Dept.:	Phone #:
Fax #: 610 337-5269	
Phone #:	

☐ URGENT ☐ REPLY ASAP ☐ PLEASE COMMENT ☐ PLEASE REVIEW ☐ FOR YOUR INFORMATION

Total pages, including cover:

Comments:

MAIL CONTROL 140898

Thom, this has fuller ~~explation~~ explanation of Steve Miller's experience + training

Frank

140898

NMSS/RGN1 MATERIALS-002

Swarthmore College

For incomplete fax transmissions, please call Carolyn at 610-328-8258

US Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406

Attn: Materials Licensing

re: Amendment of Byproduct Material License, Number 37-06958-02
Swarthmore College, Docket Number 030-10952

Gentlemen:

This is a request for an amendment to the referenced license. Please authorize the use of phosphorus 32 for research and development purposes. The P-32 will be in the form of tagged adenosine triphosphatase (ATP) that will be added to solutions of purified enzymes from bacteria to evaluate the interactions between the enzymes, a communicating molecule and the active ATP. Analysis will be by means of thin layer chromatography. It is requested that a maximum of 250 microcuries (μCi) be authorized at any one time. It is anticipated that 10 to 25 μCi will be used in any one experiment. The work will be performed by Stephen T. Miller, Ph.D. We request that Dr. Miller be added to the license as an authorized user. Dr. Miller worked on this project at Princeton University. Dr. Miller will be the sole researcher with no students involved. Dr. Miller has been trained in radiation safety and procedures both as a graduate student (Harvard University, 1992) and as a post-doctoral fellow (Princeton University, 1999). In addition, he has received training in radiation safety at the National Synchrotron Light Source at Brookhaven National Laboratory, though this training focused primarily on x-ray radiation rather than handling radioactive material. Dr. Miller performed experiments with 32P similar to those he now proposes to undertake while at Princeton University. Anthony LaMastra will perform an initial survey prior to the actual work being initiated to determine that the work will comply with license conditions and the NRC's regulations. Mr. LaMastra does not believe that personnel dosimetry will be required. However, if it is, it will be supplied by a processor accredited under NAVLAP. Dr. Miller will also investigate the possibility of using phosphorus 33 and we request a similar authorization for this radionuclide, in the same activity limit (250 μCi).

Should there be any questions regarding the application, please contact me at (610) 610-328-8256. (phone number of person signing the letter)

Sincerely,

Title: Professor of Physics,
Radiation Safety officer, Swarthmore College