

EXPERT SYSTEM LICENSE EVALUATION  
REPORT FOR LICENSE 37-06176-01

NAME OF LICENSEE: GETTYSBURG COLLEGE  
LISTED SITE: GETTYSBURGH COLLEGE, GETTYSBURG, PENNSYLVANIA

--- TYPE OF ACTIVITY OR FACILITY: UNIVERSITY LABORATORY - NONREACTOR

DESCRIPTION OF FIRST SITE AT WHICH 37-06176-01 WAS USED  
GETTYSBURG COLLEGE  
PHYSICS DEPARTMENT  
GETTYSBURG, PENNSYLVANIA

Description of LICENSEE ACTIVITY UNDER THIS LICENSE

TO BE USED IN COINCIDENCE, ANGULAR CORRELATION, SCATTERING AND  
SIMILAR LABORATORY EXPERIMENTS FOR EDUCATIONAL PURPOSES.

----- MATERIALS INFORMATION FOR THIS LICENSE -----

--Information on type and form of materials--

--Authorized Material--

--Form Authorized--

CO-60	Loose or Any
CS-137	Loose or Any
PM-147	Loose or Any
TL-204	Loose or Any
CO-58	Loose or Any

AMOUNT OR ACTIVITY OF THOSE MATERIALS CONTRIBUTING TO INITIAL SCORE:

---Material--      -SLD/LOOSE--      -ACTIVITY-      Unit

CO-60	LOOSE	.00500000	CI
SCORE IS EITHER ZERO OR NOT COMPUTED			

CS-137	LOOSE	.00500000	CI
SCORE FOR MATL: 0.7			

PM-147	LOOSE	.00100000	CI
SCORE IS EITHER ZERO OR NOT COMPUTED			

TL-204	LOOSE	.00100000	CI
SCORE IS EITHER ZERO OR NOT COMPUTED			

CO-58	LOOSE	.00500000	CI
SCORE IS EITHER ZERO OR NOT COMPUTED			

INITIAL SITE SCORE, based on LOOSE material possession limits: : 0.73

FINAL DECISION FOR LOOSE MATERIALS:

The license cannot be eliminated, but the final score is low.

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The license cannot be eliminated, but the final score is low.  
ELIMINATED FROM CONSIDERATION FOR SITE CONTAMINATION  
Reason for elimination: Disp adequate, disposal minor

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FINAL SCORE for SITE CONTAMINATION is: 2

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### SEQUENCE OF RECORDED REASONING

1. There was at least one loose material on this license for which the amount remaining was reduced according to the length of the half-life
2. License had some indication of improper disposal of some kind, However the materials score was low, & the reviewer indicated that evidence was not significant enough to override elimination of the license from further consideration.
3. License had disposition information for the loose materials, user specified inadequate
4. There was one identifiable site with this license.
5. FIRST SITE: Possible building contamination, but fairly low likelihood or low level only. Score not changed.
6. The reviewer's judgment was that significant outdoor contamination was very unlikely to have occurred under this license at this site .  $\text{Score} = \text{score} * 0.90$
7. FIRST SITE: There was no evidence or reason to suspect the occurrence of NONROUTINE or EPISODIC releases to the environment or outdoors at this site. Score not changed.
8. FIRST SITE: There was PROBABLE use of glove boxes, hoods, or protective clothing
9. FIRST SITE: Possible inappropriate disposal or abandonment of contaminated material from glove boxes, hoods, or equipment.  $\text{Score} = \text{score} * 1.1$
10. FIRST SITE: There was possible or limited generation of contaminated material from machinery used in the operation.  $\text{Score} = \text{score} * 1.2$ .
11. FIRST SITE: Possible inappropriate disposal or abandonment of contaminated material from machinery (cloths, parts, etc).

Score=score\*1.1

12. FIRST SITE: There was evidence that solid waste was generated in the operation. Score=score\*1.5

13. FIRST SITE: Possible inappropriate disposal or abandonment of contaminated solid waste. Score=score\*1.4

14. FIRST SITE: There was mention of 10CFR20 on a certificate of disposition, or on some other document. Because of this there is presumed to be some evidence of dumping or other onsite disposal. Score=score\*1.2

15. FIRST SITE: There is evidence in the file indicating that turnover of the materials under this license was not frequent. This may be due to issuance of the license using limits applicable to a year or to the entire period of the license. Score=score\*.8

16. FIRST SITE: There was some documentation of materials disposition, but not complete. Score=score\*0.9

17. FIRST SITE: Because the score for this site is below 20 at this point, a closeout survey would not necessarily have been warranted.

18. FIRST SITE: There was no closeout survey for this site. The score will not be altered, since the current score for this site is below 20

19. FIRST SITE: There was NOT an NRC FINAL INSPECTION of the facility. Score not changed.

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#### COMMENTS FOR LICENSE EVALUATION

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Reviewer's comments concerning potential BURIAL OF WASTE OR MATERIAL  
A GENERAL FILE FOR THIS LICENSE STATES THAT SOME CONTAMINATED PAPER  
AND GLASSWARE, ETC. HAVE BEEN STORED WITH THE OTHER BYPRODUCT  
MATERIAL. IT WAS STATED THAT THIS MATERIAL WILL PROBABLY BE BURIED  
SOON. (NO LOCATION GIVEN)

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TO BE USED IN COINCIDENCE, ANGULAR CORRELATION, SCATTERING AND  
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Reviewer's comments concerning potential TURNOVER OF MATERIALS  
ACCORDING TO THE 1964 GENERAL FILE ONLY ONE SHIPMENT OF BYPRODUCT  
MATERIAL HAD BEEN RECEIVED SINCE 1960. ISOTOPES RECEIVED WERE ONLY  
THALLIUM-204, CESIUM-137, AND COBALT-60.

THERE WAS A CERTIFICATE OF DISPOSITION IN THE FILE WHICH HAS CHECKED  
THAT MATERIAL WILL BE DISPOSED OF IN COMPLIANCE WITH 10 CFR 20.

Reviewer's comments concerning potential GENERATION OF WASTE  
A HOOD WAS TO BE UTILIZED IN PREPARATION OF SAMPLES.  
THE 1964 GENERAL FILE REFERS TO ACCUMULATION OF GLASSWARE, PAPER,  
ETC. ALONG WITH BYPRODUCT MATERIAL.

- GENERAL COMMENTS ENTERED BY THE REVIEWER CONCERNING THE EVALUATION -

- ACCORDING TO INFORMATION IN THE 1964 GENERAL FILE, THE LICENSEE HAD
- ONLY RECEIVED THREE OF THE SIX LICENSED ISOTOPES. THEY WERE
- COBALT-60, 5 MILLICURIES; CESIUM-137, 5 MILLICURIES, AND
- THALLIUM-204, 1 MILLICURIE. IT APPEARS THAT USE OF MATERIALS WAS IN
- VERY QUANTITIES. MAXIMUM AMOUNT HANDLED WAS 50-100 MICROCURIES PER
- SOURCE.
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- AT TIME OF INSPECTION, 12/9/63, TWO VIOLATIONS WERE NOTED, A CLOSET
- IN WHICH MATERIAL WAS STORED WAS NOT POSTED AND SEALED SOURCES USED
- IN PHYSICS LAB. WERE NOT SECURED AGAINST UNAUTHORIZED REMOVAL AS
- REQUIRED.
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- PERIODIC SURVEYS WERE CONDUCTED IN THE LABORATORY AND GOOD
- HOUSEKEEPING WAS TO BE PRACTICED.
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- AT TIME OF INSPECTION NO WASTE HAD BEEN DISPOSED OF. SOME
- CONTAMINATED PAPER AND GLASSWARE, ETC., HAD BEEN STORED WITH THE
- OTHER BYPRODUCT MATERIAL WHICH WILL PROBABLY BE BURIED ACCORDING TO
- REPRESENTATIVE OF THE COLLEGE. IT IS NOT KNOWN IF THERE IS AN ONSITE
- BURIAL GROUND.
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END OF COMMENTS FOR LICENSE EVALUATION

--- EXPERT SYSTEM EVALUATION WAS BASED ON THE ---  
---- FOLLOWING INVENTORY RECORD ----

REGION RESPONSIBLE: I

LICENSEE NAME: GETTYSBURG COLLEGE  
STREET ADDRESS: (NONE GIVEN) City: GETTYSBURG  
FIPS state code (principal operation): PA

Site used: GETTYSBURGH COLLEGE, GETTYSBURG, PENNSYLVANIA

Disposition information present: CERTIFICATE

There was a reference to disposal in accordance with 10CFR20

This license was listed as expired on 02/29/64

APPLICATION INFORMATION

There WAS a licensee application contained in the file

The application contained some information on material use.

JOB NUMBER: 1722 BOX NUMBER: 01

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Date of last evaluation or revision: 08/09/94