

FOIA — 93-557

RESPONSE TYPE

FINAL PARTIAL

DATE FEB - 3 1994

DOCKET NUMBER(S) (If applicable)



Handwritten: nrc docs

RESPONSE TO FREEDOM OF INFORMATION ACT (FOIA) REQUEST

REQUESTER

Marcy L. Colkitt

PART I.—AGENCY RECORDS RELEASED OR NOT LOCATED (See checked boxes)

- No agency records subject to the request have been located.
- No additional agency records subject to the request have been located.
- Requested records are available through another public distribution program. See Comments section.
- Agency records subject to the request that are identified in Appendix(es) _____ are already available for public inspection and copying at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC.
- Agency records subject to the request that are identified in Appendix(es) C are being made available for public inspection and copying at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC, in a folder under this FOIA number.
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- Records subject to the request have been referred to another Federal agency(ies) for review and direct response to you.

Fees

You will be billed by the NRC for fees totaling \$ _____.

You will receive a refund from the NRC in the amount of \$ 300.76.

In view of NRC's response to this request, no further action is being taken on appeal letter dated _____, No. _____.

PART II. A—INFORMATION WITHHELD FROM PUBLIC DISCLOSURE

Certain information in the requested records is being withheld from public disclosure pursuant to the exemptions described in and for the reasons stated in Part II, B, C, and D. Any released portions of the documents for which only part of the record is being withheld are being made available for public inspection and copying in the NRC Public Document Room, 2120 L Street, N.W., Washington, DC in a folder under this FOIA number.

COMMENTS

The actual fees for processing your request are as follows:

Search:	\$ 96.95
Review:	33.62
TOTAL	<u>130.57</u>

You will receive a refund in the amount of \$300.76. This completes NRC action on your request.

9412210174 940203
PDR FOIA
COLKITT93-557 PDR

SIGNATURE, DIRECTOR, DIVISION OF FREEDOM OF INFORMATION AND PUBLICATIONS SERVICES

Handwritten signature

9412210174

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Handwritten signature: [Signature]

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SIGNATURE DIRECTOR, DIVISION OF FREEDOM OF INFORMATION AND PUBLICATIONS SERVICES

[Handwritten Signature]

9412210174

Re: FOIA-93-557

APPENDIX C
DOCUMENTS BEING PLACED IN THE PDR

NUMBER	DATE	DESCRIPTION
1.	4/1/93	Sequence of Events. (3 pages)
2.	5/7/93	Memo from A. Bert Davis to J. Lieberman, subject: Mayo Foundation - Proposed Notice of Violation and Imposition of Civil Penalty - \$6,000, with attachments. (153 pages)

³²P Contamination

Sequence of Events:

1. Wednesday, March 17. Individual #1 used 1.5 mCi ³²P orthophosphate to label proteins for immunoprecipitation. He performed a daily survey of the area and himself after his experiment; they were negative.
2. Friday, March 19. Individual #1 transferred the proteins to film for autoradiography. Loaded cassette by laying it on the counter, opening it, and placing the film inside. The cassette was then put in the -70° freezer.
3. Friday afternoon. Individual #2 borrowed a meter from an adjacent lab and performed the required daily undocumented meter survey. The results of the survey were negative.
4. Sunday, March 21, 10:00 a.m.. Individual #1 came into the lab, turned on the film processor and took the cassette out of the freezer to thaw. While he waited for the cassette to thaw, he filtered some nonradioactive dialyzed serum. While the serum was filtering, he diluted 10 mCi of ³²P orthophosphate behind Plexiglas shielding. He went back to the dialyzed serum and put it in the refrigerator, then went into the darkroom and unloaded his film for developing. In the same cassette, he loaded another film and membrane for autoradiography. He also loaded two other cassettes for experiments by others in the lab. He wore gloves while diluting the ³²P, but washed his hands only once just before he left for the morning. He left the lab about 10:30.

The film that was loaded on March 19 and developed Sunday morning did not show spots from contamination.

5. Sunday, March 21, 2:30 p.m.. Individual #3 came in to develop one of the other films that had been loaded by individual #1 that morning. He noticed "hot spots" on the film which is not unusual or indicative of radioactive contamination. These spots are usually due to radioactive debris.
6. Sunday afternoon. Individual #4. came into the lab to work.
7. Sunday, March 21, 9:30 pm. Individual #1 came in to develop the film he used Sunday morning. He, again, put another film and membrane in the cassette to run overnight. The film he developed this p.m. also had "hot spots".
8. Monday, March 22. Individual #1 developed the film of his experiment that he had loaded Sunday Night. It showed "hot spots".

Individual #1 also worked with 3 mCi of ³²P orthophosphate to label proteins.

9. Tuesday, March 23, 9:30 a.m.. When getting ready to run his gel, individual #1 decided to borrow a GM meter from another lab. When he turned the instrument on, he noticed he was detecting contamination from his hands. He notified Individual #3 who immediately notified Radiation Safety. [This was the first time since March 17 that individual #1 had monitored his hands; the batteries in their meter were low so the meter was not used for personal or lab surveys for one week.]. Rad Safe #1 went to the laboratory to survey and sent individual #1 to Radiation Safety to shower.

Since the laboratory had widespread contamination including phones, centrifuges, pipettors, cassettes, etc., Rad Safe #1 requested that the area be decontaminated and he would return to do a more thorough survey. Individual #2 and individual #3 surveyed the entire lab either cleaning contaminated items or confiscating them. Laboratory personnel were monitored and not found to have skin contamination. Surveys of the laboratory floor and everyone's shoes were negative.

Prior to the shower, individual #1 had 0.03 uCi on his right hand, 0.24 uCi on his left hand, and 0.018 uCi in his hair using a GM survey meter (29.9% efficiency). After his shower he had .003 uCi on his right hand, 0.015 uCi on his left hand, and 1.5 nCi in his hair.

10. Tuesday, March 23, 1:00 p.m.. Rad Safe #1 surveyed individual #1's car and home. The car steering wheel and stick shift were contaminated each with .003 uCi. The car door handle had 0.76 nCi of contamination. No items in the house were found to be contaminated.
11. Individual #1 urine from March 23, 1993 was negative.

CF1

12. Individual #1 urine from March 24, 1993 was positive (0.007 nCi/ml).
13. Individual #1 urine from March 25, 1993 was positive (0.007 nCi/ml)
14. Thursday, March 25, 1993. Individual #3 called Radiation Safety indicating that individual #2 had contamination on the back of his shirt apparently from a chair he had sat in that day. The chair was confiscated and Rad Safe #1 went to the lab to perform another survey.

The survey resulted in the confiscation of a lab book (18.2 nCi), the decontamination of a spot on the lab bench (6.1 nCi), and the disposal of a chemical waste container (12.1 nCi). All other surfaces were negative including stairwell door knobs, entrance to the men's room, and individual offices (phones, desks, books, calculators, etc.). In the office of individual #4, his coat was found to have 76 nCi of ^{32}P contamination on the shoulder. (It was at this time we discovered that he had also been in over the weekend.) The coat was promptly decontaminated. Individual #4 was not personally contaminated.

15. Thursday, March 25, p.m. Individual #2 surveyed his home with a GM meter. He discovered contamination on two throw pillows, each with less than 1.5 nCi. He confiscated these from use.
16. Friday, March 26, 9:30 a.m.. Rad Safe #1 surveyed the home and car of Individual #4. The survey of the car was negative. The survey of the home turned up three sweaters that had been worn Monday, Tuesday, and Wednesday. A green mock turtleneck (152 nCi on right shoulder), a multi-colored cardigan (60.8 nCi on the right collar), and a black pullover (less than 1.5 nCi on right shoulder). All three sweaters have been confiscated. Individual #4 surmised that he put his shoulder bag over a contaminated chair. The strap of the bag became contaminated and contaminated any sluits or jackets he wore when carrying the bag. The shoulder strap has been confiscated and currently has 27 nCi of contamination.
17. Friday, March 26, 9:00 a.m.. Individual #3 took a GM meter and surveyed his home and the jacket he wore into work Sunday. The surveys were negative.
18. Friday, March 26, 10:30 a.m.. Rad Safe #1 went back to the lab and distributed urine bottle to all lab personnel. He also surveyed the faucet handles in the men's room. They were not contaminated.
19. All Friday urines were negative including that of individual #1.

Conclusions:

The first incidence of personal contamination of individual #1 occurred on Sunday, March 21 at 10:30 a.m. probably during the dilution of the 10 mCi ^{32}P solution. Since, on Tuesday morning when he showered in Radiation Safety 93.5% of the activity washed off, we have assumed that washing his hands before he left on Sunday also removed 93.5% of the activity. However, by this time everything he had handled in the lab was contaminated, including the new films he loaded. We predict (based on previous incidents with ^{32}P skin contamination) the rate of loss of contamination after the first washing was 20% per washing. Individual #1 showered on Monday morning at home, on Tuesday morning at home, and on Tuesday morning in Radiation Safety. No other hand washings have been included although it can be predicted that there were several over that period of time. On Tuesday morning, individual #1 recontaminated himself with 0.24 uCi of ^{32}P by coming in contact with an item previously contaminated on Sunday. The recentness of this recontamination explains why most (93.5%) of the activity washed off in the shower at 9:30 a.m. Tuesday morning. The activity remaining on his hands after the shower (about 0.016 uCi) is believed to have been from the original contamination incident on Sunday since it was bound to the skin and would not decontaminate with numerous attempts.

Skin Doses For Individual #1:

Activity (uCi)	Elapsed Time (h)	Dose (rem) over 10 cm ² (accum.)*
0.486	0.25	0.1
0.031	20.5	0.7
0.025	24	1.2
0.020	3	1.3
0.016	51	2.0
0.002	48	2.1
0.227	2	2.5

*VARSKIN Computer Program

Internal Contamination:

Current urinalysis result indicate an internal uptake for individual #1 of 0.2 uCi. This would give a dose of < 1 mrad total body, 8 mrad red marrow, and 2 mrem effective dose.

Other Notes:

1. The Nuclear Regulatory Commission (NRC) exposure limit to the skin is 7.5 rem in any one quarter and 30 rem per year. These limits have not been exceeded.
2. The NRC contamination limit for ³²P in a restricted area is 2200 dpm/100 cm². This limit was exceeded on several items in the lab that have been confiscated.
3. The NRC contamination limit for ³²P in an unrestricted area is 220 dpm/100 cm². This limit was exceeded for the steering wheel and stick shift of individual #1's car and for the shoulder strap of individual #4's bag..
4. The NRC contamination limit for ³²P on personal clothing worn in an unrestricted area is 220 dpm/100 cm². This limit was exceeded for individual #4's jacket and sweaters.

Self-identified Violations:

1. Individual #1 was not a registered radiation worker, therefore he had not attended the radiation safety orientation class. This is a violation of Nuclear Regulatory Commission (NRC) Regulations, 10CFR19, requiring radiation safety training of a worker prior to working with radiation.
2. Since individual #1 was not a radiation worker, he had not had a urine bioassay in the 5.5 months of work with radiation. This is a violation of our NRC License requiring a urine bioassay for anyone handling more than 5 ALI (2.7 mCi) in one quarter.
3. Daily surveys of the laboratory were not performed on Sunday and Monday. This is a violation of our NRC License. Daily meter surveys and weekly contamination surveys are required for any laboratory having more than 6 mCi of ³²P on hand and using more than 10 uCi of ³²P on any one day.
4. Since individual #1 was not a radiation worker, he was not wearing a finger badge.

Reportability:

1. Exceeding ten times the applicable limit for an unrestricted area is reportable to the NRC via written report within 30 days. 10CFR20.405(a)(1)(v)
2. Exceeding ten times the applicable limit for personal clothing in an unrestricted area is reportable to the NRC via written report within 30 days. 10CFR20.405(a)(1)(v)

ONCOLOGY SERVICES CORPORATION

110 Regent Court • Suite 100 • State College, PA • 16801

R14-238-0075 • 800-628-0076 • Fax: R14-238-8069



(412) 463-3570

October 18, 1993

VIA TELECOPY: 708-790-5693

Kathy Clayton
FOIA Coordinator
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Building 4
Glen Ellyn, IL 60137

FREEDOM OF INFORMATION
ACT REQUEST

FOIA-93-557
Rec'd 10-19-93

Re: FOIA Request

Dear Kathy:

I hereby make an FOIA request for all documents relating to the civil penalty of \$6,000 recently imposed on the Mayo Foundation, Rochester, Minnesota for regulatory violations, including the willful violation relating to failure to perform contamination surveys, including any confirmatory action letters.

If you have any questions, please contact me at 412-463-3570. Also, please advise me of the estimated costs if they exceed \$50. All communication on this matter should be sent as follows:

Marcy L. Colkitt, Esquire
P.O. Box 607
Indiana, PA 15701-0607

Very truly yours,

Marcy L. Colkitt

General Counsel and
Executive Vice President

MTG/ejq

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