



# United States Department of the Interior



## GEOLOGICAL SURVEY

Western Region Radiation Safety Committee (WRRSC)

345 Middlefield Rd., Mail Stop 465

Menlo Park, California 94025

Voice: (415) 329-4461

FAX: (415) 329-4463

January 6, 1994

License No.: 04-06674-07

Nuclear Regulatory Commission, Region V  
1450 Maria Lane, Suite 210  
Walnut Creek, CA 94596

Attention: Regional Administrator

### SUBJECT: REPLY TO A NOTICE OF VIOLATION

This refers to the Notice of Violation dated December 13, 1993, following the inspection conducted by Mr. John Jacobson and Ms. Frieda Taylor of your office on November 18-19, 1993. This reply includes for each violation: 1) the reason for the violation, 2) the corrective steps that have been taken and results achieved, 3) the corrective steps that have been taken to avoid further violations, and 4) the date when full compliance will be achieved.

**Violation A.** The user authorized by the WRRSC (the licensee) under permit number 18 (Dr. Ralph Vaga) failed to notify the WRRSC, through the committee's secretary, that licensed materials were being purchased. Dr. Vaga was under the impression that the vendor would notify the WRRSC.

1) Two factors contributed to this violation. First, the principal user under permit 18 failed to make himself familiar with the procurement procedures documented in the "RADIATION SAFETY MANUAL: BYPRODUCT MATERIAL, U.S. GEOLOGICAL SURVEY, WESTERN REGION," revised May 23, 1988. Second, purchasing agents at the U. S. Geological Survey district office in Portland, Oregon, where the principal user on permit 18 resides, are not familiar with the requirement that the WRRSC secretary must approve all purchases of licensed materials. Permit 18 was issued by the WRRSC in the summer of 1993. The first internal audit of activities under this permit was scheduled for the week following the NRC inspection. Thus, the WRRSC had not yet had an opportunity to audit activities conducted under this new permit.

2) Numerous telephone calls were made between WRRSC personnel and Dr. Vaga, during which time he was made familiar with the need to understand procedures documented in the

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Radiation Safety Manual. Receiving documents and a complete inventory were received by the WRRSC and are now on file with the committee's records in the secretary's office.

3) Two steps have been taken to avoid further violations. First, a procedure has been put into place whereby Dr. Vaga must purchase licensed materials through agents located at WR Headquarters (see the attached memorandum to Dr. Vaga dated January 6, 1993). Purchasing agents at WR headquarters understand the requirement that all purchases of radioactive materials must be approved by the secretary of the WRRSC. Dr. Vaga is the only user not resident at WR Headquarters. Second, principal users of all permits issued by the WRRSC have been reminded of the requirement to obtain approval from the secretary of the WRRSC (see attached memorandum to principal users dated January 6, 1993).

4) Full compliance has now been achieved.

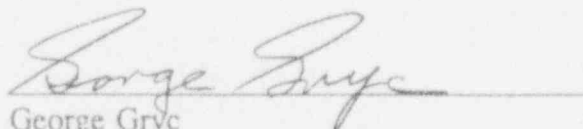
**Violation B.** Area surveys were reported in counts per minute (cpm) rather than decays per minute.

1) This violation was noted during the inspection of a user authorized by the WRRSC (permit 9). The user is authorized to use a large number of gamma and beta emitting radioisotopes under this permit, however most of these radioisotopes are rarely in the user's inventory. Converting cpm to dpm would require an understanding of the counter efficiency for all relevant energy ranges. The user did not have traceable standards for computing counter efficiencies in all relevant energy ranges. He had made an attempt to estimate the counter efficiency for the radioisotope currently in use by determining the activity of a sample derived from the primary stock solution provided by the vendor, but this was not a traceable standard.

2) Traceable standards for calibrating counters have been obtained from the radiological safety consultant. These standards are being used to calibrate all of the counters currently in use under this license.

3) All counting instruments in use under this license will be calibrated annually (see memorandum to Principal Users dated January 6, 1994). These calibrations will be used to compute counter efficiencies and to convert wipe test records from cpm to dpm. Copies of the calibration records will be maintained by each user and by the WRRSC (located with records for calibration of survey meters). These records will be inspected during the biannual internal audits.

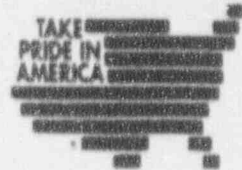
4) Users are currently calibrating their counting equipment with the set of traceable standards. Full compliance will be achieved by January 15, 1994.

  
George Gryc  
Director's Representative



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Western Region Radiation Safety Committee (WRRSC)  
345 Middlefield Rd., Mail Stop 465  
Menlo Park, California 94025

January 6, 1994

## Memorandum

TO: Principal Users

FROM: Douglas B. Kent, Chairperson, WRRSC (Radiation Safety Officer) *Doug Kent*

SUBJECT: Response to Notice of Violation issued by the Nuclear Regulatory Commission (NRC) December 13, 1993 (Docket No.: 030-13620; License No.: 04-76674-07)

During the period November 18-24, 1993, the NRC conducted an inspection of activities conducted under the subject materials license. Violations of NRC requirements were noted during this inspection; a copy of the notice of violation is attached. The following paragraphs describe steps required to prevent their repetition.

A. One user failed to obtain approval from the RSC prior to procuring licensed material. Approval from the secretary of the RSC is required prior to procurement of licensed material. This approval must be noted as an appropriately signed statement attached to each procurement record (e.g., requisition). This allows the secretary to verify the procurement against the inventory allowed under our license. *All procedures for procurement, receipt, and disposal of licensed material are documented in the Radiation Safety Manual. These procedures are incorporated by reference into our license. Failure to follow these procedures constitutes a violation.*

If such a violation were to be noted by the NRC during the next inspection, it could result in a civil penalty.

This type of violation is not likely to occur at the Western Region Headquarters because purchasing agents understand the requirement and therefore would not complete procurement of radioisotopes without approval of the WRRSC secretary. The violation occurred in a district office, where purchasing agents are not familiar with these requirements.

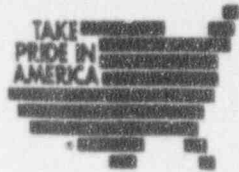
To avoid future violations, permit holders in district offices will be required to purchase licensed materials through the Western Region Headquarters.

The radiological safety consultant shall review these records during the biannual audits. The results will be reported to the WRRSC. Any deficiencies in this area must be addressed.



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Western Region Radiation Safety Committee (WRRSC)  
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Menlo Park, California 94025

January 6, 1994

## Memorandum

**TO:** Ralph Vaga, Principal User, Permit No. 18, USGS, 10615 S.E. Cherry Blossom Dr., Portland OR 97216

**FROM:** Douglas Kent, Chairperson, WRRSC 

**SUBJECT:** Response to Notice of Violation issued by the Nuclear Regulatory Commission (NRC) December 13, 1993 (Docket No.: 030-13620; License No.: 04-06674-07)

As you are aware, during the course of the NRC inspections conducted November 18-24, 1993, it was discovered that you had purchased licensed material without the knowledge of the WRRSC. This is contrary to procedures documented in the Radiation Safety Manual, which is incorporated by reference into the subject NRC materials license. This resulted in a violation of NRC requirements (point A. in the subject document). The subject document requires the WRRSC to take steps to insure compliance with NRC requirements. This memorandum documents those steps.

Future purchases of licensed material must be processed by agents at the Western Region (WR) Headquarters. Purchasing agents at WR headquarters are familiar with the requirement that the secretary of the WRRSC approve all purchases of radioactive materials.

In preparing your requisition, please include the following elements: your appropriation/allotment No., your address and telephone number in the "Deliver to" box, and the "approved by" language from the Radiation Safety Manual. Mail the completed requisition to the secretary of the WRRSC (currently John Duff, USGS MS 496, 345 Middlefield Rd., Menlo Park, CA, 94025). The secretary will approve and forward it to our purchasing office. The radioisotopes will be charged and shipped directly to you. When you receive the material, you will need to follow the receipt procedures described in the Radiation Safety Manual and forward the appropriate documents to the WRRSC secretary.

Routing the purchase through agents at WR headquarters will require some additional time, which you will need to consider in timing your order. Our purchasing department usually honors "need by" dates noted on the requisition if they are reasonable (e.g., three or four weeks after it is received by the purchasing office). Be sure to call ahead to the secretary to make sure s/he is aware that your requisition is on its way.

cc: J. Duff MS 496; L. Miller MS 465; D. Wadsworth

B. The results of some wipe tests of sealed sources and laboratory area surveys were not reported in curies or decays per minute (dpm), as required by the NRC.

The laboratory wipe tests cited by the NRC were reported in counts per minute (cpm) per 100 cm<sup>2</sup>. Results of area wipe tests must be reported in dpm per 100 cm<sup>2</sup>. This requires determining counter efficiencies appropriate for the relevant isotopes.

The radiological safety consultant will calibrate counting equipment annually using traceable standards in the relevant energy ranges. These calibrations will be used to convert wipe test records from cpm to dpm. Each permit will retain calibration records for counters used by personnel on that permit. Each principal user will forward a copy of the calibration records to the WRRSC secretary for filing with records of calibration of survey meters.

RSC records of wipe tests of sealed sources were not consistently reported in the proper units of curies (or microcuries). Principal users must check the results of wipe tests of sealed sources to insure that they are reported in the proper units.

The radiological safety consultant shall inspect wipe test records during biannual audits to verify that results are reported in the appropriate units. Any deficiencies in this area must be addressed immediately.

R. James MS 421  
R. Fleck MS 937  
B. Cole MS 496  
R. Oremland MS 465  
C. Fuller MS 465  
S. Luoma MS 465  
A. Decho MS 465  
J. Wooden MS 937  
J. Kuwabara MS 465  
J. Duff MS 496  
J. Nimmo MS 421  
J. Constantz MS 496  
H. Lee MS 999  
J. Bischoff MS 999  
R. Vaga 10615 S.E. Cherry Blossom Dr.,  
Portland OR 97216

cc: L. Miller MS 465; J. Duff MS 496