Department of Energy
Washington, DC 20585

August 18, 2004

Mr. Leonard Peters
Director
Pacific Northwest National Laboratory
902 Battelle Boulevard
P.O. Box 999
Richland, Washington 99352

Dear Mr. Peters:

This letter responds to your March 19, 2004, request for an exemption from a provision contained in title 10, Code of Federal Regulations, part 835 (10 CFR 835), "Occupational Radiation Protection." The purpose of the exemption request is to permit Pacific Northwest National Laboratory (PNNL) to use certain units in reporting bioassay services results.

The Office of Environment, Safety and Health conducted a technical review (enclosure 1) of the exemption request. Staff from the Office of Science and the Office of Environmental Management concur with this technical review. Based on review of the information that was provided, I am granting PNNL an exemption, with condition, from the applicable provision of 10 CFR 835.

The technical review provides additional information concerning the Exemption Decision (enclosure 2).

Sincerely,

John Spitaleri Shaw
Acting Assistant Secretary
Office of Environment, Safety and Health

2 Enclosures

cc w/enclosures:
See attached list.

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cc w/enclosures:
Radiological Control
Coordinating Committee
Price Anderson Amendments
Act Coordinator – Richland Operations Office
Keith Klein, Manager, FEM
Paul Kruger, Manager, FEM
Roy Schepens, Manager, FEM
Raymond L. Orbach, DOE/SC-1
Paul M. Golan, DOE/Acting EM-1
Lee Sarah Liberman Otis, DOE/GC-1
Stephen M. Sohinki, DOE/EH-10
Docketing Clerk, DOE/EH-10

Enclosure 1

Technical Review

Pacific Northwest National Laboratory (PNNL), Title 10, Code of Federal Regulations, Part 835 (10 CFR 835) Exemption Request

On March 19, 2004, PNNL submitted a request for relief from a requirement contained in 10 CFR 835, "Occupational Radiation Protection," as it pertains to the use of certain units in reporting bioassay services results.

As discussed below, relief from the provision of 10 CFR 835 is justified. The Department of Energy (DOE) Office of Worker Protection Policy and Programs (EH-52) recommends granting the requested exemption to the 10 CFR 835 requirement, with a condition, as specifically discussed in this technical review.

Discussion of Exemption Request

General

In particular, PNNL requested an exemption from the requirement, contained in 10 CFR 835.4, to use certain units in records required by 10 CFR 835.

Requirement from which Exemption is Sought

10 CFR 835.4 Radiological Units:

> "Unless otherwise specified, the quantities used in the records required by this part shall be clearly indicated in special units of curie, rad, roentgen, or rem, including multiples and subdivisions of these units. The SI units, becquerel (Bq), gray (Gy), and sievert (Sv), are only provided parenthetically in this part for reference with scientific standards."

Results of Analysis

Background

On December 3, 2003, PNNL submitted a letter to the Office of Health (EH-5) requesting clarification regarding compliance with the 10 CFR 835.4 provision. The letter was in response to a recent self-assessment finding:

> "Quantities used in some records are not clearly indicated in units of curie, rad, roentgen, or rem, including multiples and subdivisions of these units as required by 10 CFR 835, Article 4."

PNNL contended that use of "dpm" instead of "curie" is consistent with the intent of the regulatory requirement. PNNL provided support for this position by referencing discussion in the "Notice of Rulemaking" published in the Federal Register, Volume 58, Number 238, page 65468, December 14, 1993, which initially promulgated the amendment to 10 CFR 835. A response to a comment contains an explanatory note that says that 10 CFR 835.4 was added to the final rule to specifically clarify that the older "special units" were to be used in records or reports rather than the new international units, as was suggested by some comments received during the comment phase of the rulemaking process.

In that context, PNNL stated their belief that use of dpm instead of curies is fully consistent with the intent of the regulatory requirement. While dpm was not the "special unit of activity" defined historically, it was an accepted historically conventional unit in which low levels of radioactivity were measured and recorded.

The EH-5 response stated that, although PNNL's contention had merit, PNNL was still obligated to adhere to the words in 10 CFR 835, as written. In that regard, in accordance with 10 CFR 835.4: records required by 10 CFR 835 must use the special units of curie, rad, roentgen, or rem, including multiples and subdivisions of these units.

Discussion

The intent of the 10 CFR 835.4 requirement was to preclude exclusive use of International System (SI) units (e.g., sievert, gray, becquerel) in reports. This was done to avoid confusion from inconsistent DOE site use of units; traditional or SI in reports. The SI units were allowed to be used parenthetically. The intent was not to preclude such traditional units as "dpm" or mass units in bioassay results. However, as written, only the units of curie, rad, roentgen, or rem, including multiples and subdivisions of these units, are currently allowed.

EH-52 is working to amend 10 CFR 835 and will consider making appropriate revisions to address these and other issues.

PNNL's exemption request states that the exemption request meets several of the special circumstances for granting exemptions to DOE's nuclear safety rules specified in title 10, Code of Federal Regulations, part 820, "Procedural Rules for DOE Nuclear Activities" (10 CFR 820). Based on the above discussion, EH-52 found compelling PNNL's assertion that the criterion in 10 CFR 820.62(d)(2) has been met. Ten CFR 820.62(d)(2) provides for granting exemptions if application of the requirements in the particular circumstances would not serve or is not necessary to achieve its underlying purpose, or would result in resource impacts which are not justified by the safety improvements.

Concurrence

Relief from the requirement in 10 CFR 835.4 should be provided with a condition. This is in recognition of the fact that the requirement was never intended to exclude the use of the units requested.

Conclusion

The above exemption meets the criteria for granting an exemption under 10 CFR 820.62, with a condition:

1. Granting this exemption would be authorized by law.

2. This exemption would not present an undue risk to public health and safety, the environment, or facility workers.

3. The exemption would be consistent with the safe operation of a DOE nuclear facility.

4. In granting this exemption pursuant to §820.62(d)(2), DOE recognizes that special circumstances exist that justify exemption because application of the requirements in the particular circumstances would not serve, or is not necessary, to achieve its underlying purpose or would result in resource impacts that are not justified by the safety improvements.

Based on the above, EH-52 concurs with the request for exemption with the condition that:

PNNL shall update its radiation protection program to allow mass units and use of "dpm" in records of bioassay monitoring results.

Enclosure 2

EXEMPTION DECISION

Pursuant to title 10, Code of Federal Regulations, part 820.61 (10 CFR 820.61), the Assistant Secretary for Environment, Safety and Health (EH-1) is authorized to exercise authority on behalf of the U.S. Department of Energy (DOE) with respect to requests for exemptions from nuclear safety rules relating to radiological protection of workers, the public, and the environment.

On March 19, 2004, the Pacific Northwest National Laboratory (PNNL) requested exemption from certain DOE regulations; specifically, relief from a requirement contained in 10 CFR 835, "Occupational Radiation Protection," as they pertain to the use of certain units in reporting bioassay services results.

In particular, PNNL requested an exemption from requirements contained in 10 CFR 835.4 to use certain units in records required by 10 CFR 835.

Under the terms set forth in 10 CFR 820.61, I am the Secretarial Officer granted the review and approval authority for exemption requests made with respect to 10 CFR 835. Based on a review of the supporting documentation, I find that the request set forth above has been justified for relief. Specifically, I find that the exemption criteria of 10 CFR 820.62 have been met. Also, the requested exemption is not prohibited by law; will not present an undue risk to the public health and safety, the environment, or facility workers; and is consistent with the safe operation of a DOE nuclear facility. I have determined that the exemption meets the special circumstances, described in the technical review prepared by the Office of Worker Protection Policy and Programs, which constitute a sufficient basis upon which to grant this exemption with a condition.

On the basis of the foregoing, I hereby approve the PNNL request for exemption from 10 CFR 835.4, with a condition:

<u>Condition:</u>

PNNL shall update their radiation protection program to allow mass units and use of "dpm" in records of bioassay monitoring results.

Pursuant to 10 CFR 820.66, PNNL has 15 days from the date of the filing of this decision to file a Request to Review with the Secretary. The Request to Review shall state, specifically, the respects in which the exemption determination is claimed to be erroneous, the grounds of the request, and the relief requested. If no Request to Review is submitted, the Exemption Decision becomes a final order 15 days after it is filed.

8/17/04
Date

John Spitaleri Shaw
Acting Assistant Secretary
Office of Environment, Safety and Health