

## Department of Energy

Washington, DC 20585

May 26, 2000

Mr. John Sloan  
General Manager  
Ross Aviation, Inc.  
P.O. Box 9124  
Albuquerque, New Mexico 87119

Dear Mr. Sloan:

On December 29, 1995, the Department of Energy (DOE) Assistant Secretary for Environment, Safety and Health issued an Exemption Decision that granted Ross Aviation, Inc., an exemption, with specified conditions, from Title 10 Code of Federal Regulations, Part 835 (10 CFR 835), "Occupational Radiation Protection." The Exemption Decision stated that the exemption was granted on a temporary basis and would be re-evaluated upon amendment of 10 CFR 835 to specifically exempt transportation-related activities. On November 4, 1998, an amendment to 10 CFR 835 was published in the Federal Register that included a specific exclusion in 10 CFR 835.1(b) for radioactive material transportation, as defined in 10 CFR 835.2(a).

The Office of Worker Health and Safety reviewed the December 29, 1995, Exemption Decision and determined that based on the radioactive material transportation exclusion in the November 4, 1998, amendment, the exemption from 10 CFR 835 that excused Ross Aviation, Inc., from 10 CFR 835 requirements and imposed several conditions is no longer needed. This determination is based on Ross Aviation, Inc., only conducting activities having the potential to result in the occupational exposure of their personnel that are: (1) considered radioactive material transportation as defined in 10 CFR 835.2(a); or (2) covered within the scope of another organization's radiation protection program (e.g., Ross Aviation, Inc., personnel waiting for a shipment preparation inside the controlled area at a DOE facility who are covered within the scope of that facility's radiation protection program).

If Ross Aviation, Inc., is involved in DOE activities having the potential to result in the occupational exposure of their personnel other than those types discussed above, these activities would need to be conducted in accordance with a DOE approved radiation protection program.

In addition, 10 CFR 835.1(c) states that occupational doses received as a result of radioactive material transportation shall be considered when determining compliance with the occupational dose limits. One approach for compliance with this provision would be for Ross Aviation, Inc., to continue to provide personal dosimeters to Ross Aviation, Inc., personnel involved in radioactive material transportation who are likely to receive doses exceeding the individual monitoring thresholds in 10 CFR 835.402. The Office of Environment, Safety and Health encourages Ross Aviation, Inc., to continue performing the other functions listed as conditions in the December 29, 1995, Exemption Decision. In addition to providing personal dosimeters, these functions include conducting triennial audits, providing employees with General Employee Radiological Training, maintaining records of personnel monitoring, and providing monitoring reports to individuals.

If you have any questions on this matter, please contact Mr. Peter O'Connell, Office of Worker Protection Programs and Hazards Management, on 301- 903-5641.

Sincerely,



David Michaels, PhD, MPH  
Assistant Secretary  
Environment, Safety and Health

cc: T. Gioconda, Acting DP-1  
Keith Christopher, EH-10  
Docketing Clerk, EH-10  
Manager, Albuquerque Operations  
Office  
Radiological Control  
Coordinating Committee  
Price Anderson Amendments  
Act Coordinator (Donna Bergman,  
Albuquerque Operations Office)

# memorandum

DATE: December 29, 1995

REPLY TO  
ATTN OF: Worker Protection Programs and Hazards Management: Joel Rabovsky: 3-2135

SUBJECT: APPROVAL OF ROSS AVIATION REQUEST FOR EXEMPTION FROM TITLE 10, CODE OF  
FEDERAL REGULATIONS, PART 835 (10 CFR 835)

TO: Bruce G. Twining, Albuquerque Operations Office (AL)

This memorandum responds to your memorandum of June 28, 1995, requesting approval of the request from Ross Aviation for an exemption from all of the provisions of 10 CFR 835. The reason for this request is to relieve these organizations of the burden of complying with the requirements of 10 CFR 835 for transportation-related operations. The exemption is requested temporarily until 10 CFR 835 can be amended so that radiological requirements related to transportation activities can be explicitly excluded from 10 CFR 835 through a clarifying amendment.

The Office of Worker Health and Safety has conducted a technical review of this exemption request and recommends approval. The results of this analysis are summarized as follows:

- o Exposure of Ross Aviation personnel is limited to activities involving the transport of radioactive materials; Ross Aviation personnel do not package or unpack radioactive material shipments.
- o Existing Department of Energy (DOE) Orders and Notices provide an adequate set of requirements to protect individuals from exposure to radiation for the types of activities performed by Ross Aviation personnel.
- o Historical records of external dose and the low probability of internal exposure indicate that these activities do not pose a significant hazard to Ross Aviation personnel.

Based on this analysis, it has been determined that this exemption request meets the criteria in 820.62 (a), (b), and (c): (1) it would be authorized by law; (2) it would not present an undue risk to public health and safety, the environment, or facility workers; and (3) it would be consistent with the safe operation of a DOE facility. In addition, this exemption request also meets the special criterion of 820.62(d)(1), "Application of the requirement 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."



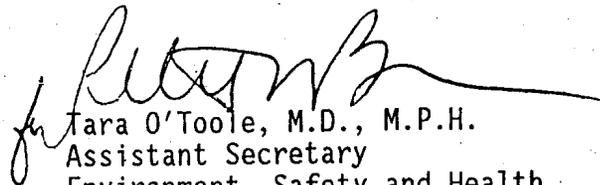
Accordingly, I approve Ross Aviation's request for exemption from 10 CFR 835 with the following conditions:

- o Ross Aviation will continue to adhere to the following radiological control practices:
  - Conduct triennial environment, safety, and health audits of transportation-related radiological activities;
  - Provide personal dosimeters to Ross Aviation personnel involved in transportation-related activities;
  - Require that Ross Aviation personnel involved in transportation activities have received the equivalent of General Employee Radiological Training;
  - Maintain records of the results of personnel monitoring; and
  - Provide reports of monitoring results to individuals.
- o Ross Aviation will develop the technical basis to demonstrate that there is not a credible path for uptake or intake of radioactive material by its personnel.
- o Because all individuals exposed to ionizing radiation resulting from the conduct of DOE activities are subject to dose limits, Ross Aviation will institute an administrative control level of 2 rem total effective dose equivalent per year. Approval by the Assistant Secretary for Defense Programs (DP) or designee is required prior to allowing a Ross Aviation employee to exceed this dose level.

This exemption is granted on a temporary basis and will be reevaluated upon amendment of 10 CFR 835 to specifically exempt transportation-related activities and to include requirements related to the control and sealed sources. This exemption will be reevaluated based on changes in the Department of Transportation regulations. In addition, this exemption will be reviewed upon finalization of the Transportation Safety Analysis Report for DOE Transportation Safeguards Division, Volume 2, "Ross Aviation Operations."

Because DP has delegated AL programmatic authority for Ross Aviation operations, I am responding directly to AL.

The DP staff concurs with this response.

  
Tara O'Toole, M.D., M.P.H.  
Assistant Secretary  
Environment, Safety and Health

2 Attachments

cc w/attachments:

Victor H. Reis, DP-1

Alan D. Luck, AL

Robert K. Christopher, EH-3

Docketing Clerk, EH-3

Radiological Control

Coordinating Committee

Price Anderson Amendments

Act Coordinator

Ted Wyka, EH-9

## Technical Position

### Ross Aviation

#### Title 10, Code of Federal Regulations, Part 835 (10 CFR 835)

The Albuquerque Operations Office (AL) has requested temporary exemption from all of the provisions of 10 CFR 835 for the following organizations: (1) Ross Aviation; and (2) the Transportation Safeguard Division (TSD) of Defense Programs (DP). AL states that the reason for this request is to relieve these organizations of the burden of complying with the requirements of 10 CFR 835 for transportation-related operations. AL maintains that since all operations performed by Ross Aviation and TSD are transportation related, the exemption request applies to all of 10 CFR 835.

### Discussion

Ross Aviation is requesting an exemption from all requirements of 10 CFR 835 until 10 CFR 835 can be amended so that radiological requirements related to transportation activities can be explicitly excluded from 10 CFR 835 through a clarifying amendment. Ross Aviation maintains that 10 CFR 835 was not intended to apply to transportation-related activities. In support of this position, Ross Aviation cites the portion of the preamble of 10 CFR 835 that states that transportation activities are covered by various Department of Energy (DOE) Orders and, therefore, not addressed in 10 CFR 835. In addition, a January 17, 1995, memorandum from the Director of the DOE Enforcement and Investigations Staff to the Director of the AL Health Protection Division states that it was not the intention of the DOE Office of Health Physics and Industrial Hygiene that 10 CFR 835 be applicable to activities involving the offsite packaging and transportation of radioactive material. Ross Aviation is an indemnified contractor to DOE and is, therefore, covered by the Price Anderson Amendments Act.

### Analysis

#### Activities Covered by Exemption Request

Ross Aviation employees perform transportation of radioactive materials for the DOE Transportation Services Division by air. These operations are limited to radioactive materials under the cognizance of DP. Ross Aviation employees load, unload, and pilot aircraft. They do not pack or unpack radioactive materials or items containing radioactive materials. Therefore, the only source of exposure to radiation is during transportation activities.

#### Documents Covering the Conduct of Transportation Activities

- o TSD transportation-related activities are conducted under 49 CFR 173 as mandated by the following DOE Orders:

- 1540.1, "Materials Transportation and/Traffic Management;"

- 1540.2, "Hazardous Material Packaging for Transport - Administrative Procedures;"
- 1540.3, "Base Technology for Radioactive Material Transportation Packaging Systems;" and
- 5610.1, "Packaging and Transportation of Nuclear Explosives, Nuclear Component and Special Assemblies."

Although Ross Aviation follows Department of Transportation (DOT) transportation activities, the Office of Worker Protection Programs and Hazards Management (EH-52) notes that transportation activities are designed to ensure protection of the transportation personnel through requirements placed upon the shippers and receivers of radioactive materials. Accordingly, the following paragraphs provide support for the presumption that the shippers and receivers of materials transported by Ross Aviation conduct transportation activities in accordance with DOT requirements.

EH-52 notes that the effectiveness of the transportation requirements in controlling radiation exposure to the Ross Aviation personnel is the responsibility of the shipper. Providing assurance that this is the case, the Transportation Safety Analysis Report (TSAR) for DOE TSD, Volume 2, "Ross Aviation Operations," states that all Ross Aviation shipments by air must have an approved DOE offsite transportation certificate or an approved DOE offsite transportation authorization. The TSAR also states that the safety documentation upon which the offsite transportation certificate or authorization is based shall contain information to demonstrate compliance of the packaging system and cargo handling equipment with the requirements of DOE Order 5610 series and regulatory guidelines from DOT and the Nuclear Regulatory Commission. DOE AL approves the offsite transportation authorization or certification.

The exemption request states that the shipper packages radioactive materials to ensure that radiation levels at the surface of the packages and within the vehicle meet 49 CFR requirements. Also, the exemption request states that contamination control is performed by the shipper and receiver of the items shipped by Ross Aviation. Finally, we note that the shipper certifies on the Transportation Services Request form that the shipment presented to Ross Aviation is packaged in accordance with DOE transportation requirements in 49 CFR, Subchapter C, "Hazardous Material Operations." The shipper and the receiver are audited by TSD to verify compliance with the statements on the Transportation Services Request form.

In addition to the transportation requirements associated with this shipment, there are additional requirements associated with the Ross Aviation operations that also work to reduce the likelihood of an event that would result in exposure of Ross Aviation personnel to radioactive material. These requirements are described in the TSAR.

### Historical Radiation Doses Received by Ross Aviation Employees

The exemption request states that external doses received by Ross Aviation employees involved in transportation activities are typically zero with an occasional positive indication ranging from 10 to 90 mrem per year. This evidence supports the Ross Aviation position that the system of radiological controls used by Ross Aviation provides an acceptable method of controlling personnel exposure to radiation.

We note that there is no discussion of internal exposure in the exemption request. Based on the information in the TSAR and the statement by the AL representative that there has been no evidence of contamination on the surfaces of the shipments, we believe that the potential internal exposure is remote but not impossible. Accordingly, Ross Aviation should provide information to demonstrate that there is not a credible path for uptake of radioactive material for Ross Aviation employees.

### Additional Radiological Controls Practices

The exemption request states that Ross Aviation performs the following set of radiological controls to ensure that exposure to DOE personnel is minimized:

- o Conducts triennial environment, safety, and health audits of transportation-related radiological activities;
- o Provides personal dosimeters to Ross Aviation personnel involved in transportation-related activities;
- o Requires that Ross Aviation personnel involved in transportation activities have received the equivalent of General Employee Radiological Training;
- o Maintains records of the results of personnel monitoring; and
- o Provides reports of monitoring results to individuals.

### CONCLUSION

The request for exemption from Ross Aviation meets the criteria in 820.62 (a), (b), and (c): (1) it would be authorized by law; (2) it would not present an undue risk to public health and safety, the environment, or facility workers; and (3) and it would be consistent with the safe operation of a DOE facility. In addition, the exemption request also meets the special criterion of 820.62(d)(1), "Application of the requirement 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."

The evidence provided in the exemption request and other supporting documents indicate that for Ross Aviation activities involving the transport of radioactive materials, the compliance with the provisions in 10 CFR 835 is not needed to protect workers from exposure to radiation. Adherence to the set of requirements referenced above provides an acceptable level of protection to Ross Aviation personnel. Therefore, an exemption from all of the requirements of 10 CFR 835 is recommended with the following conditions:

- o Ross Aviation will continue to adhere to those "additional radiological control practices" listed above; and
- o Ross Aviation will develop the technical basis to demonstrate that there is not a credible path for uptake or intake of radioactive material.

This exemption is granted on a temporary basis and will be reevaluated upon amendment of 10 CFR 835 to specifically exempt transportation-related activities and to include requirements related to the control of sealed sources. This exemption will be reevaluated based on changes in the DOT regulations. In addition, the exemption will be reviewed upon finalization of the TSAR referenced above.

## PART 835 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 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. Ross Aviation filed a request for exemption from certain provisions contained in Title 10, Code of Federal Regulations, Part 835 (10 CFR 835), "Occupational Radiation Protection." In particular, Ross Aviation requested an exemption from all of the provisions of 10 CFR 835. The request states that the exemption is not prohibited by law; will not present undue risk to the public health and safety, the environment, or facility workers; and is consistent with the safe operations of a DOE facility.

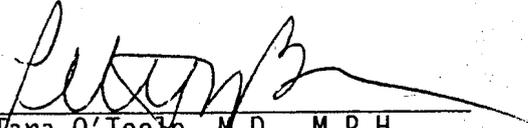
Based on a review of the supporting documentation and other information obtained during the evaluation of this exemption request, I hereby approve this request for exemption from 10 CFR 835. Specifically, I find that the exemption criteria in 10 CFR 820.62 have been met. I have read the exemption request and the technical position prepared by the Office of Worker Protection Programs and Hazards Management (EH-52) and have determined that the exemption is authorized by law; will not present undue risk to public health and safety, the environment, or facility workers; and is consistent with the safe operation of a DOE nuclear facility. I also find that the special circumstances, described in the Technical Position prepared by EH-52, constitute a sufficient basis upon which to grant this exemption. Radiological protection of Ross Aviation personnel transporting radioactive materials and using radioactive check sources are adequately covered by other DOE requirements pertaining to the transportation of radioactive materials and the control of sealed sources. Accordingly, compliance with 10 CFR 835 is not needed to protect Ross Aviation personnel from radiation exposure.

On the basis of the foregoing, I hereby approve Ross Aviation's request for exemption from 10 CFR 835 with the following conditions:

- o The Transportation Safeguard Division will continue to adhere to the following radiological control practices:
  - Conduct triennial environment, safety, and health audits of transportation-related radiological activities;
  - Provide personal dosimeters to Ross Aviation personnel involved in transportation-related activities;
  - Require that Ross Aviation personnel involved in transportation activities have received the equivalent of General Employee Radiological Training;
  - Maintain records of the results of personnel monitoring; and
  - Provide reports of monitoring results to individuals.

- o Ross Aviation will develop the technical basis to demonstrate that there is not a credible path for uptake or intake of radioactive material.
- o Exemption from 10 CFR 835 removes all dose limits from Ross Aviation. Accordingly, Ross Aviation will institute an administrative control level of 2 rem total effective dose equivalent per year. Approval by the Assistant Secretary for Defense Programs or designee is required prior to allowing a Ross Aviation employee to exceed this dose level.

This exemption is granted on a temporary basis and will be reevaluated upon amendment of 10 CFR 835 to specifically exempt transportation-related activities and to include requirements related to the control and sealed sources. In addition, this exemption will be reevaluated based on changes in Department of Transportation regulations and any changes to the portions of the Transportation Safety Analysis Report covering Transportation Safeguard Division highway operations.

  
Tara O'Toole, M.D., M.P.H.  
Assistant Secretary  
Environment, Safety and Health

12/29/95  
Date