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(65FR3394)

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NUCLEAR REGULATORY COMMISSION

10 CFR Part 40

[Docket No. PRM-40-28]

Donald A. Barbour, Philotechnics; Receipt of Petition for Rulemaking

AGENCY: Nuclear Regulatory Commission.

ACTION: Petition for rulemaking; Notice of receipt.

SUMMARY: The Nuclear Regulatory Commission (NRC) has received, and requests public comment on, a petition for rulemaking filed by David A. Barbour, Philotechnics. The petition has been docketed by the Commission and assigned Docket No. PRM-40-28. The petitioner requests that the NRC amend its regulations governing the domestic licensing of source material to provide additional rules for the effective control of depleted uranium aircraft counterweights. The petitioner believes that this regulatory clarification should address a number of issues concerning the exemption, storage, and disposal of these devices.

April 5, 2000

DATE: Submit comments by (~~insert date 75 days following publication in the Federal Register~~):

Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments received on or before this date.

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ADDRESSES: Submit comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Attention: Rulemakings and Adjudications staff.

Deliver comments to 11555 Rockville Pike, Rockville, Maryland, between 7:30 am and 4:15 pm on Federal workdays.

For a copy of the petition, write to David L. Meyer, Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

You may also provide comments via the NRC's interactive rulemaking website at <http://ruleforum.llnl.gov>. This site provides the capability to upload comments as files (any format), if your web browser supports that function. For information about the interactive rulemaking website, contact Ms. Carol Gallagher, (301) 415-5905 (e-mail: CAG@nrc.gov).

Documents created or received at the NRC after November 1, 1999, are also available electronically at the NRC's Public Electronic Reading Room on the Internet at <http://www.nrc.gov/NRC/ADAMS/index.html>. From this site, the public can gain entry into the NRC's Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents. For more information, contact the NRC Public Document Room (PDR) reference staff at 1-800-397-4209, 202-634-3273 or by email to pdr@nrc.gov.

FOR FURTHER INFORMATION CONTACT: David L. Meyer, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Telephone: 301-415-7162 or Toll-free: 1-800-368-5642 or E-mail: DLM1@NRC.GOV.

SUPPLEMENTARY INFORMATION:**Background**

On November 16, 1999, the Nuclear Regulatory Commission (NRC) docketed a letter from David A. Barbour, Philotechnics, to a member of the NRC staff as a petition for rulemaking under 10 CFR 2.802. In his letter, Mr. Barbour refers to a current NRC rulemaking to establish additional requirements for certain generally licensed devices containing byproduct materials. Mr. Barbour indicates that concerns similar to those being addressed in the rulemaking on generally licensed devices are relevant to depleted uranium aircraft counterweights, although these devices are beyond the scope of the current rulemaking. While Mr. Barbour did not specifically characterize his letter as a petition under § 2.802, Mr. Barbour clearly desires the NRC to take regulatory action to control these devices more effectively.

The Requested Action

The petitioner requests that the NRC amend its regulations to provide for additional rules that would define and clarify responsibilities for the effective control of depleted uranium aircraft counterweights. The petitioner believes that the amendment should clarify at what point and under what circumstances, the licensing exemption for these devices in 10 CFR 40.13(c)(5) is no longer applicable to these devices; the length of time counterweights for which there is no demand or use may be stored as exempt material; the regulations that apply to aircraft that have been removed from service which have depleted uranium counterweights that can be transferred to unlicensed parts dealers and salvage operators; and, the need for radiological surveillance of long-term aircraft storage parks and facilities where aircraft with depleted uranium counterweights are regularly stored for protracted periods under unmonitored conditions. The petitioner believes that the control and accountability issues involving these

counterweights closely parallel those same issues being addressed in the generally licensed devices rulemaking. The petitioner suggests either expanding the scope of that rulemaking to include depleted uranium aircraft counterweights or initiating a separate rulemaking along similar lines.

Additionally, the petitioner believes that an immediate notification is necessary to advise those organizations that currently possess depleted uranium aircraft counterweights of their responsibilities to the public. The petitioner asserts that the aviation community is tightly regulated and law abiding and that there are extremely effective channels of communication between the industry and its primary regulator, the Federal Aviation Administration (FAA). The petitioner suggests that the NRC take advantage of this situation by encouraging the FAA to issue an appropriate advisory bulletin that informs the aviation community of its responsibilities for managing depleted uranium counterweights. The petitioner has provided a summary of key points that should be considered for incorporation in such a notification.

The Regulatory Situation

Counterweights are made of extremely dense materials such as depleted uranium. They are used to balance the control surfaces of ailerons and elevators to facilitate hydraulic adjustments during flight. Depleted uranium counterweights are currently exempted from all regulation as an unimportant quantity of source material while they are installed on an airplane or stored or handled incident to installation or removal (10 CFR 40.13 (c)(5)). These counterweights must, however, be manufactured in accordance with a specific license. The manufacturer must clearly impress them with the legend "Depleted Uranium," and must properly mark or label them with the manufacturer's identification and the statement "Unauthorized Alterations Prohibited."

According to the petitioner, the clear implication of these provisions is that when a counterweight made of depleted uranium is removed from service, it loses this regulatory exemption. Neither the language in the current regulation nor the Statement of Considerations accompanying this exemption make that clear. Therefore, when a fleet is retired or a plane is scrapped, significant quantities of depleted uranium counterweights become source material that require a license. The petitioner asserts that these counterweights may then be in the possession of an organization that has no license and no knowledge of the hazards of the material or the regulatory requirements that may be applicable. Over the past nine months, the petitioner's firm, Philotechnics, has conducted extensive, informal industry surveys that confirm widespread unawareness of the responsibilities and controls applicable to depleted uranium counterweights.

The petitioner contends that a general license cannot be invoked to control the material because the amount of depleted uranium that may be possessed under a general license is limited to 15 pounds (10 CFR 40.22). The petitioner indicates that very few counterweights weigh less than 15 pounds with most depleted uranium counterweights for a wide-body aircraft weighing between 20 and 50 pounds. The petitioner continues to explain that the quantities almost always exceed the general license limit because a "ship set" of counterweights includes many counterweights that collectively weigh over 1000 pounds for most aircraft models.

Use of Depleted Uranium Counterweights

The petitioner indicates that depleted uranium counterweights were once widely used on wide-body commercial aircraft such as the L-1011 Tristar, the DC-10, and the Boeing 747. These counterweights were also used on general aviation planes such as the JetStar and military and naval aircraft including the A-7, F-111, C-5A, C-130, C-141, P-3C, and S-3B.

Some aircraft, like the A-7, have passed from U.S. service to our allies along with their depleted uranium counterweights. While some of these aircraft continue to use depleted uranium counterweights, others are converting their counterweights to tungsten.

The petitioner explains that although depleted uranium counterweights are being replaced by counterweights made of tungsten for new production aircraft, a legacy of depleted uranium counterweights remains on older planes. The petitioner states that the total amount of depleted uranium counterweights is difficult to determine with accuracy because the quantity would vary for each different model of wide-body aircraft. The petitioner used parts listings and structural drawings to determine the amount of depleted uranium in ship sets of counterweights for representative L-1011, DC-10, 747, and JetStar aircraft. Based on the number of these planes in existence and a survey of the quantities of counterweights in the inventories of aviation parts suppliers, the petitioner estimates that as much as two million pounds of counterweights made of depleted uranium may be in service.

The petitioner believes that as many of these planes reach the end of their economical service life, depleted uranium counterweights are beginning to enter uncontrolled disposal channels in a rapidly increasing stream. The petitioner presents the average ages of existing wide-body commercial aircraft as 22.9 years for the L-1011, 23.4 years for the DC-10, and 15.8 years for the 747. The petitioner states that increasing numbers of these aircraft are being set down, parted out, and scrapped. The petitioner asserts that major airlines are knowledgeable enough to ensure appropriate disposal of their surplus counterweight spares, although the spares may be stored for prolonged periods without a license. The petitioner believes that those counterweights entering parts or salvage channels may be abandoned or transferred to unlicensed operators and disposed of in municipal and industrial landfills and other sites. The petitioner also believes that many thousands of pounds are being improperly disposed of and that many of the disposal companies are unaware of proper storage and disposal requirements.

The petitioner reports incidents where depleted uranium counterweights were improperly reused for other purposes and asserts that abandoned counterweights have been encountered at airports and discarded in trash dumpsters.

In addition, the petitioner contends that depleted uranium counterweights remain on aircraft that are retired from service and consigned to long-term storage, parts recovery, or salvage. The petitioner states that these devices are prone to corrosion but that they are plated and painted to retard oxidation. The petitioner asserts that when depleted uranium counterweights are no longer maintained in airworthy condition and subject to systematic inspection, the release of uranium oxides is highly probable. The petitioner states that observations of the C-141 maintenance program confirm that, without continuing surveillance, corrosion of depleted uranium counterweights can progress to the point where radiological contamination of maintenance facilities and long-term storage areas is possible. The petitioner believes that this potential environmental release could be minimized by terminating the exemption of counterweights on aircraft that are not in active use.

Unresolved Issues

The petitioner presents a number of unresolved issues that the petitioner believes should be addressed in any subsequent rulemaking on this matter.

1. How long may an airline possess depleted uranium counterweights as spare parts after a fleet of aircraft with these devices has been set down before it must apply for a source material license? The petitioner believes that as aging planes are retired and "parted out", spare parts inventories will swell at the same time as real demand disappears with the transition to tungsten counterweights and the reduced number of aircraft to be supported. The petitioner

asserts that regulations containing criteria based on intent, such as the intent to sell surplus counterweights, are difficult to enforce.

Furthermore, the petitioner fears that it may be cheaper to store depleted uranium counterweights than to pay the cost of authorized disposal. The petitioner likens this scenario to the situation that resulted in NRC's issuance of the timeliness rule, an action that mandates decommissioning if a licensed facility remains idle for two years. The petitioner suggests that depleted uranium aircraft counterweights should lose their exemption if they have not been used in flight or, for a particular part number, there is no demand during a specified time period.

The petitioner believes that the way a part is managed provides another objective indication of its intended use. Modern aircraft incorporate over one million different parts that are almost always managed by an automated data processing system. The petitioner explains that parts are commonly classified in such a system as either "repairable" or "consumable." Consumable parts that do not meet the criteria for airworthiness are automatically directed to disposal channels. If a depleted uranium counterweight is classified as a "consumable" part in an organization's automated data system, there is a clear indication that the part should lose its licensing exemption as soon as it is removed from an aircraft.

2. The petitioner presumes that the exemption from licensing for depleted uranium counterweights stored incident to installation on an aircraft applies to counterweights in the inventories of aviation parts dealers who are attempting to sell them for their intended use. In that case, should such counterweights retain their exemption from licensing after being held in storage for a specified period without being sold?

3. Can depleted uranium counterweights in the possession of a salvor, scrap dealer, or parts broker be considered exempt from licensing because of the theoretical possibility of their future use on an aircraft? These types of organizations may acquire parts that they do not expressly want because they are included in a large-scale consignment, transaction, or

inventory transfer along with other high-demand parts. The petitioner cites an FAA requirement that all parts used on an aircraft be documented for airworthiness. Counterweights coming out of a tear-down facility would have to go through and meet FAA's procedures before they could be put to their original intended use. The petitioner points out that this is an expensive procedure that a facility would not undertake unless there was a realistic possibility that the part could be reused.

The petitioner further asserts that the transfer of depleted uranium counterweights without the receiving facility obtaining proper FAA forms is probably inconsistent with the intent of the current regulations. Therefore, the petitioner suggests that, from the time the devices are removed from an aircraft and enter either parts or salvage channels, the possessor should bear the burden of demonstrating a realistic possibility of reuse.

4. Do depleted uranium counterweights installed on an aircraft lose their exemption from licensing if they remain installed on an aircraft and the aircraft is placed in long-term storage or transferred for "parting out" or salvage? The petitioner believes that aircraft not maintained in an airworthy condition and subject to periodic inspection will eventually experience corrosion of the counterweights and release radioactive oxide into storage areas and the adjacent environment. The petitioner cites the FAA definition of aircraft as a device intended for flight. Therefore, a device removed from service would cease to be an aircraft according to the FAA. If installation on a non-operational aircraft qualifies depleted uranium counterweights for exemption from licensing, a parts company performing a tear-down operation could remove high-value components for refurbishment and reuse while leaving the counterweights attached to a stripped aircraft consigned for scrapping. At what point does the stripped aircraft cease to be an aircraft? Can depleted uranium counterweights that are left on a bare airframe be considered legally abandoned?

5. The petitioner states that, under the proposed generally licensed devices rulemaking, devices containing byproduct material that were stored for two years without being used will require disposition. The petitioner asks if depleted uranium counterweights installed on an aircraft parked in long-term storage and not flown for a specified period lose their exemption. Would the owner/operator of the storage facility be required to obtain a source material license, remove the counterweights and place them in controlled storage, or perform periodic radiation monitoring and surveillance to ensure against the release of radioactive corrosion products into the environment?

6. The petitioner states that military aircraft with depleted uranium counterweights, such as the A-7 Corsair, have been transferred to foreign governments through military sales. The petitioner believes that the gaining governments may not always be aware of the presence of depleted uranium and the appropriate controls. The petitioner believes that notification and information requirements appropriate for this type of transfer should be established.

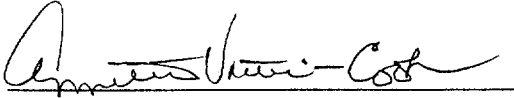
The Petitioner's Conclusion

The petitioner believes that the NRC should conduct a rulemaking that would define and clarify responsibilities for the effective control of depleted uranium aircraft counterweights. The petitioner believes that the rule should specify at what point and under what circumstances the licensing exemption for these devices is no longer applicable; the length of time counterweights for which there is no demand or use may be stored as exempt material; the regulations that apply to aircraft that are removed from service with depleted uranium counterweights that can be transferred to unlicensed parts dealers and salvage operators; and, the need for radiological surveillance of long-term aircraft storage parks and facilities where aircraft with depleted uranium counterweights are regularly stored for protracted periods under unmonitored

conditions. The petitioner believes that the current rulemaking on generally licensed devices should be expanded to include depleted uranium counterweights or that a separate rulemaking along similar lines should be initiated.

Dated at Rockville, Maryland, this 13th day of January, 2000.

For the Nuclear Regulatory Commission.


Annette Vietti-Cook,
Secretary of the Commission.