

# memorandum

DATE: July 19, 2013  
REPLY TO  
ATTN OF: NE-75  
SUBJECT: Inventory Allocation of Plutonium-238 for Civil Space Applications  
TO: File

In order to provide increased transparency for mission planning for space exploration purposes, the Office of Nuclear Energy is establishing separate allocations for civil space applications, such as National Aeronautics and Space Administration (NASA) space exploration missions, and for national security applications. Prior to the establishment of this inventory allocation, the Office of Nuclear Energy's Office of Space and Defense Power Systems (NE-75) managed Pu-238 as a single programmatic inventory serving both civil space and national security applications. The primary differentiator in management of the inventory was whether the Pu-238 was domestically produced or procured from Russia. While material procured from Russia may not be used for national security purposes by agreement, domestically produced material has been informally reserved for national security purposes until such time that a domestic Pu-238 production capability is reestablished. The current approach establishes a civil space allocation that is available for planning future space exploration missions. This allocation includes both Pu-238 procured from Russia and a portion of domestically produced Pu-238.

This memorandum establishes an allocation in the amount of 35 kilograms (kg) of plutonium-238 isotope for civil space applications. Of that amount, approximately 17 kg complies with the Pu-238 content specified for the General Purpose Heat Source. The balance may be used as blend stock to increase the net amount of usable material for flight systems. Information pertaining to the civil space and national security allocations shall be handled consistent with classification guidance set forth in TNP-48, *Guidance for Plutonium-238 Inventories*, attached to this memorandum.

Allocations are based on the mass of Pu-238 isotope, not the mass of bulk oxide. NE-75 will assign specific items in the Pu-238 inventory to each allocation in a manner that balances the needs of user communities. Allocations are for planning purposes only and may be adjusted by NE-75 based on evolving national priorities, either in terms of total mass in each allocation or specific items within an allocation. An allocation does not convey any rights to material usage; it is meant to facilitate planning for future mission needs. New Pu-238 produced domestically using NASA funds will be assigned to the civil space allocation. Pu-238 procured from Russia will always remain as part of the civil space allocation. Allocations do not correspond to whether any usage of material requires reimbursement to the Department of Energy; such commitments are tracked separately.

NE-75 plans to issue annual updates to this allocation. If there are any questions, please contact me at (301) 903-6062.



Alice K. Caponiti, Acting Director  
for Space and Defense Power Systems  
Office of Nuclear Energy

Attachment