

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA), as amended, the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA, and NASA's NEPA policy and procedures, NASA has made a Finding of No Significant Impact (FONSI) with respect to the use of radioisotope heater units (RHUs) in spacecraft launched from Kennedy Space Center (KSC) and Cape Canaveral Air Force Station (CCAFS) in Brevard County, Florida. NASA is the lead federal agency for this action, with the U.S. Department of Energy, the U.S. Air Force, and the Federal Aviation Administration serving as cooperating agencies. NASA has prepared a Final Programmatic Environmental Assessment (PEA) of Launches Involving RHUs.

ADDRESSES: The Final PEA, which serves as the basis for this FONSI, may be viewed at <https://www.nasa.gov/emd/nepa-public-reviews> or at the following locations:

1. Central Brevard Library and Reference Center, 308 Forrest Ave., Cocoa, Florida
2. Cocoa Beach Public Library, 550 N Brevard Ave., Cocoa Beach, Florida
3. Melbourne Library, 540 E Fee Ave., Melbourne, Florida
4. Merritt Island Public Library, 1195 N Courtenay Pkwy., Merritt Island, Florida
5. Port St John Public Library, 6500 Carole Ave., Cocoa, Florida
6. Titusville Public Library, 2121 S Hopkins Ave., Titusville, Florida
7. Satellite Beach Public Library, 751 Jamaica Blvd., Satellite Beach, Florida
8. NASA Headquarters Library, 300 E Street SW (East Lobby – Room 1J20), Washington, DC

SUPPLEMENTARY INFORMATION:

Public Involvement

NASA solicited public and agency review and comment on the environmental impacts of the Proposed Action through the following methods:

1. Publishing notices of availability of the Draft PEA in two local newspapers
2. Making the Draft PEA available for review at eight public libraries
3. Publishing the Draft PEA on the NASA website
4. Consulting with federal agencies

The comments and responses to comments are provided in Appendix B of the Final PEA.

Proposed Action

RHUs have been used in space missions since the 1960s. Under the Proposed Action, NASA would continue to use RHUs as heat sources in space missions when the use of solar or other

technologies would be infeasible or when the use of an RHU would enhance the ability of the mission to meet its science goals. The programmatic document will be applied each time an RHU is used in a space mission, as long as the parameters listed below are met. If a future mission is found to be outside these parameters, additional analysis and/or NEPA documentation will be necessary for that action.

- Only RHUs are included in this PEA. Other space nuclear power systems, such as radioisotope thermoelectric generators, are not included.
- This PEA covers missions using up to 130 RHUs for a maximum combined 351 grams of Plutonium-238 oxide (Pu-238) per launch. A RHU's standard configuration contains approximately 3 grams of Pu-238.
- This PEA only covers launches from the KSC and CCAFS launch complexes.
- Only launch vehicles that have been fully analyzed through the NASA NEPA process and have undergone the NASA launch approval process per NASA Policy Directives 8610.7D, 8610.23C, and 8610.24C and NASA Procedural Requirement 8705.4 are included in this analysis.
- Future launch vehicles that have been evaluated under NEPA and meet launch approval requirements are covered by this analysis.
- All potential NASA near-Earth, crewed, and deep space missions meeting the preceding requirements are included in this PEA.

Alternatives

In addition to the Proposed Action, NASA considered the implementation of a No Action Alternative. The No Action Alternative does not meet the purpose and need of the Proposed Action as it would limit NASA's ability to efficiently use RHUs in space missions and hinder compliance with the requirements to reduce paperwork in the CEQ NEPA implementing regulations (40 CFR Section 1500.4).

Environmental Impacts

The PEA analyzed the potential impacts to health and safety, land use, water resources, biological resources, cultural resources, and hazardous materials. The PEA found that the Proposed Action would not result in, or contribute to, significant negative direct, indirect, or cumulative impacts to any of these resources. NASA has reviewed the Final PEA and has concluded that the Final PEA represents an accurate and adequate analysis of the scope and level of associated environmental impacts. NASA hereby incorporates the Final PEA by reference into this FONSI. On the basis of the Final PEA, NASA has determined that the environmental impacts associated with the Proposed Action would not individually or cumulatively have a significant impact on the quality of the natural or human environment. Therefore, no environmental impact statement is required.

Thomas Zurbuchen, PhD
Associate Administrator
NASA Science Mission Directorate

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