

maintenance procedures and terms and conditions of the Proposed Decision and Order. The petitioner asserts that the proposed alternative method would provide at least the same measure of protection as the existing standard.

#### 6. Round Mountain Gold Corporation

[Docket No. M-2006-005-M]

Round Mountain Gold Corporation, P.O. Box 480, Round Mountain, Nevada 89045 has filed a petition to modify the application of 30 CFR 56.6309(b) (Fuel oil requirements for ANFO) to its Smoke Valley Common Operation (MSHA I.D. No. 26-00594) located in Nye County, Nevada. The petitioner proposes to install a commercially manufactured system (a Doerschneider oil blender) specifically engineered to blend recycled oil with diesel fuel in the manufacturing process for ANFO. The resulting blend of recycled oils and diesel fuel will be used to manufacture ammonium nitrate-fuel oil (ANFO) for blasting. Further details of the terms and conditions are listed in the petition for modification and are available upon request. The petitioner asserts that the proposed alternative method would provide at least the same measure of protection as the existing standard.

#### Request for Comments

Persons interested in these petitions are encouraged to submit comments via e-mail to [Standards-Petitions@dol.gov](mailto:Standards-Petitions@dol.gov). Include "petitions for modification" in the subject line of the e-mail. Comments can also be submitted by fax, regular mail, or hand-delivery. If faxing your comments, include "petitions for modification" on the subject line of the fax. Comments by regular mail or hand-delivery should be submitted to the Mine Safety and Health Administration, Office of Standards, Regulations, and Variances, 1100 Wilson Boulevard, Room 2350, Arlington, Virginia 22209. If hand-delivered, you are required to stop by the 21st floor to check in with the receptionist. All comments must be postmarked or received by the Office of Standards, Regulations, and Variances on or before October 26, 2006. Copies of the petitions are available for inspection at that address.

Dated at Arlington, Virginia this 19th day of September 2006.

**Ria Moore Benedict,**

*Deputy Director, Office of Standards, Regulations, and Variances.*

[FR Doc. 06-8248 Filed 9-25-06; 8:45 am]

**BILLING CODE 4510-43-P**

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (06-075)]

### National Environmental Policy Act; Advanced Radioisotope Power Systems

**AGENCY:** National Aeronautics and Space Administration (NASA).

**ACTION:** Notice of Availability of Final Programmatic Environmental Impact Statement (FPEIS) for the Development of Advanced Radioisotope Power Systems.

**SUMMARY:** Pursuant to the National Environmental Policy Act of 1969, as amended (NEPA) (42 U.S.C. 4321 *et seq.*), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR parts 1500-1508), and NASA policy and procedures (14 CFR part 1216 subpart 1216.3), NASA has prepared and issued an FPEIS for the proposed development of two new types of advanced Radioisotope Power Systems (RPSs), the Multi-Mission Radioisotope Thermoelectric Generator (MMRTG) and the Stirling Radioisotope Generator (SRG).

The purpose of this Proposed Action is to develop advanced power systems, specifically the MMRTG and the SRG, that would be able to function in the environments encountered in space and on the surfaces of planets, moons, and other solar system bodies that have an atmosphere thus enabling a broad range of long-term space exploration missions. Included in this Proposed Action are NASA's long-term research and development (R&D) activities focused on alternative radioisotope power systems and power conversion technologies. The long-term R&D activities could include, but not necessarily be limited to, improvements to further increase the versatility of future RPS designs, expanding their capability and the environments in which they can operate.

The long-term R&D activities are also expected to include activities to develop RPS designs with smaller electrical outputs and efforts to reduce the mass of power conversion systems to further improve specific power (watts of electrical power per unit of mass). Such long-term R&D activities do not involve the use of radioactive material.

The only alternative to the Proposed Action considered in detail is the No Action Alternative, where NASA would discontinue development efforts for the production of the MMRTG and the SRG and would continue to consider the use of currently available RPSs, such as the

General Purpose Heat Source—Radioisotope Thermoelectric Generator (GPHS-RTG), for future exploration missions. As with the Proposed Action, NASA's long-term R&D activities on alternative radioisotope power systems and power conversion technologies would continue. The Proposed Action is NASA's preferred alternative.

**DATES:** NASA will take no final action on the proposed development of advanced RPSs on or before October 30, 2006, or 30 days from the date of publication in the **Federal Register** of the U.S. Environmental Protection Agency (EPA) notice of availability (NOA) of the FPEIS for the Development of Advanced Radioisotope Power Systems, whichever is later.

**ADDRESSES:** The FPEIS may be viewed at the following locations:

(a) NASA Headquarters, Library, Room 1J20, 300 E Street, SW., Washington, DC 20546.

(b) NASA, NASA Information Center, Glenn Research Center, 21000 Brookpark Road, Cleveland, OH 44135 after contacting the Freedom of Information Officer (866-404-3642).

(c) Jet Propulsion Laboratory, Visitors Lobby, Building 249, 4800 Oak Grove Drive, Pasadena, CA 91109.

In addition, hard copies of the FPEIS may be examined at other NASA Centers (see **SUPPLEMENTARY INFORMATION** below).

Limited hard copies of the FPEIS are available for distribution by contacting Mr. David Lavery at the address, telephone number, or electronic mail address indicated below. The FPEIS also is available in Acrobat® portable document format at <http://spacescience.nasa.gov/admin/pubs/rps/>. NASA's Record of Decision (ROD) will also be placed on that Web site when it is issued.

**FOR FURTHER INFORMATION CONTACT:** Mr. David Lavery, Planetary Science Division, Science Mission Directorate, Mail Suite 3T82, NASA Headquarters, 300 E Street SW., Washington, DC 20546-0001, telephone 202-358-4800, or electronic mail [rpseis@nasa.gov](mailto:rpseis@nasa.gov).

**SUPPLEMENTARY INFORMATION:** NASA, in cooperation with the U.S. Department of Energy (DOE), proposes to:

(1) Develop in the near-term and qualify for flight two advanced RPSs, the MMRTG and the SRG. The MMRTG and the SRG would be able to satisfy a broader range of future space exploration missions than are currently possible with existing radioisotope power technologies specifically, the GPHS-RTG used on the Galileo, Ulysses, Cassini, and New Horizons missions. The GPHS-RTG generates

heat from the radioactive decay of plutonium-238 dioxide, a non-weapons isotope of plutonium, for conversion to electricity. The advanced RPSs would be capable of providing long-term, reliable electrical power to spacecraft and function in the environments encountered in space and on the surfaces of planets, moons and other solar system bodies that have an atmosphere (e.g., Mars, Venus, Pluto, and two moons of Saturn (Titan and Enceladus)). The advanced RPS designs would generate power from the heat given off by an enhanced version of the GPHS module used for the GPHS-RTG; and

(2) Continue NASA's long-term R&D of alternative radioisotope power systems and power converter technologies. The above efforts collectively constitute the Proposed Action, which is NASA's preferred alternative. The long-term R&D efforts are addressed under both the Proposed Action and the No Action Alternative since these efforts will continue irrespective of the alternative selected by NASA. Such R&D activities will not involve use of radioactive material.

The MMRTG would build upon spaceflight-proven passive thermoelectric power conversion technology while incorporating improvements to allow extended operation on solar system bodies that have an atmosphere. Both the MMRTG and the SRG configurations, as proposed, would consist of three basic elements: the enhanced GPHS heat source, a converter, and an outer case with a heat radiator. The converter thermocouple that would be employed in the MMRTG has a history of use in diverse environments. The converter thermocouple design is based on the Systems for Nuclear Auxiliary Power (SNAP)-19 RTG, which was used successfully on the Viking Mars Landers and the Pioneer spacecraft in the 1970's. For the SRG, NASA, in cooperation with DOE, would develop a new dynamic power conversion system based on the Stirling engine. The Stirling conversion system would convert the heat from the decay of plutonium into electrical power much more efficiently than the MMRTG and therefore use considerably less plutonium dioxide to generate comparable amounts of electrical power. Because the SRG would use less plutonium dioxide than the MMRTG, the SRG would generate less waste (excess) heat. Therefore, an SRG also may be beneficial for missions where excess heat would adversely impact spacecraft operation, but perhaps undesirable for missions where excess

heat from the RPS is needed for warming spacecraft components.

First used in space by the U.S. in 1961, RPSs have consistently demonstrated unique capabilities over other types of space power systems for certain applications requiring up to several hundred watts of electric power. Radioisotopes can also serve as a versatile energy source for heating and maintaining the temperature of sensitive electronics in space. A key advantage of using RPSs is their ability to operate continuously, both further away from and closer to the Sun than other existing space power technologies, such as batteries, solar arrays, and fuel cells. RPSs are long-lived, rugged, compact, highly reliable, and relatively insensitive to radiation and other environmental effects. The GPHS-RTG, used on the ongoing Cassini mission to Saturn and New Horizons mission to Pluto, is an RPS that is capable of operating in the vacuum of space; however, it has limited capabilities for operating on surface missions where an atmosphere is present. The GPHS-RTG, which was designed to operate unsealed in space vacuum, degrades in most atmospheres and does not provide the long-term operating capabilities desired for surface missions. With the appropriate design, such as the SNAP-19 RTG for the Viking missions, an RPS would have the capability to function in a wider range of surface conditions than the GPHS-RTG.

The GPHS-RTG provides power in the upper 200's watts of electricity ( $W_e$ ). NASA envisions the need for lower levels of electric power (approximately 100  $W_e$ ), and physically smaller power systems, enabling NASA to more efficiently fly smaller missions that require less power than that provided by the GPHS-RTG. The advanced RPS designs are considered modular units. Thus more than one of these devices could be fitted to a spacecraft for a mission requiring higher levels of electric power.

The advanced RPSs would enable missions with substantial longevity, flexibility, and greater scientific exploration capability. Some possibilities are:

(1) Comprehensive and detailed planetary investigations creating comparative data sets of the outer planets—Jupiter, Saturn, Uranus, Neptune and Pluto and their moons. The knowledge gained from these data sets would be vital to understanding other recently discovered planetary systems and general principles of planetary formation.

(2) Comprehensive exploration of the surfaces and interiors of comets,

possibly including returning samples to Earth to better understand the building blocks of our solar system and ingredients contributing to the origin of life.

(3) Expanded capabilities for surface and on-orbit exploration, and potential sample return missions to Mars and other planetary bodies to greatly improve our understanding of planetary processes, particularly those affecting the potential for life.

NASA's long-term R&D efforts involving alternative radioisotope power systems and power converter technologies are on-going activities. These ongoing R&D activities focus on longer-term improvements to RPSs that are less technologically developed than the MMRTG and SRG. Included are technologies that increase specific power (electrical power output per unit mass); increase efficiencies for power conversion technologies; improve modularity; increase reliability, lifetime, and operability; and provide improved capability to operate in harsh environments. These advancements would provide for greater power system flexibility enabling use in more places in space and on certain solar system bodies. The R&D efforts directed at power conversion technologies have applicability to both radioisotope and non-radioisotope power systems. The results of this R&D could be applied to improve the MMRTG or SRG design, to facilitate evolutionary RPS designs including designs with smaller electrical outputs using GPHSs or radioisotope heater units, and to improve non-radiological power systems. Final decisions to fabricate fueled RPSs (*i.e.*, qualification units (used to demonstrate the readiness of a design for flight applications) and flight units)) stemming from this long-term R&D would be preceded by future NEPA documentation. The long-term R&D activities are addressed under both the Proposed Action and the No Action Alternative, as these efforts would continue independent of the alternative selected by NASA. In addition, NASA will continue to evaluate power systems developed independently by other organizations for their viability in space-based applications.

It is anticipated that development and test activities involving the use of radioisotopes would be performed at existing DOE sites that routinely perform similar activities. DOE currently imports plutonium dioxide needed to support NASA activities from Russia. Radioisotope fuel processing and fabrication would likely occur at existing facilities at Los Alamos National Laboratory in Los Alamos,

New Mexico, which are currently used for the fabrication of the fuel for the GPHS modules. The advanced RPS assembly and testing would likely be performed at Idaho National Laboratory, west of Idaho Falls, Idaho. Any required additional safety testing (using a non-radioactive fuel substitute to simulate the mechanical properties of the plutonium dioxide fuel) of an advanced RPS could be performed at one or more of several existing facilities; including DOE facilities such as LANL and Sandia National Laboratory (SNL) in Albuquerque, New Mexico, or U.S. Army facilities at Aberdeen Proving Ground (APG) in Aberdeen, Maryland. Currently, DOE is considering plans to consolidate operations for the domestic production of plutonium at its INL facility; the NEPA process for this action is on-going (70 FR 38132). NASA holds no stake in the decision ultimately taken by DOE related to consolidation of its long-term production of plutonium-238. NASA's Proposed Action or implementation of the No Action Alternative is independent of the DOE decision that will be made by DOE after its NEPA process is completed.

Activities not requiring the use of radioisotopes and associated with the development, testing, and verification of the power conversion systems could be performed at several existing facilities including NASA facilities (such as the Glenn Research Center at Lewis Field, Cleveland, Ohio and the Jet Propulsion Laboratory, Pasadena, California) and several commercial facilities (Pratt & Whitney Rocketdyne, Canoga Park, California; Teledyne Energy Systems, Hunt Valley, Maryland; and Lockheed Martin Space Systems Company, Denver, Colorado, and King of Prussia, Pennsylvania).

The only alternative to the Proposed Action considered in detail, the No Action Alternative, is to discontinue MMRTG and SRG development efforts. NASA would continue to consider the use of available RPSs, such as the GPHS-RTG, for future solar system exploration missions. While well suited to use in space, the GPHS-RTG would have substantially limited application on missions to the surface of solar system bodies where an atmosphere is present. In addition, DOE's GPHS-RTG production line is no longer operative, including the Silicon/Germanium thermocouple manufacturing operations. It may be possible to construct a limited number of GPHS-RTGs (one or two) from existing parts inventories, but longer term reliance on this technology would require the reactivation of these production capabilities, including reestablishing

vendors for GPHS-RTG components, which could involve a substantial financial investment.

The principal near and mid-term activities associated with the Proposed Action and potential environmental impacts include: development of 100 We capable MMRTG and SRG units and demonstration of performance in flight qualified, fueled systems. Development of these systems requires component and integrated systems testing of unfueled units, acquisition of plutonium dioxide, fabrication of fuel, assembly of fueled test RPSs and safety and acceptance testing of that fueled RPS. Impacts from similar past activities associated with the GPHS-RTG used for the Galileo, Ulysses, Cassini, and New Horizons mission to Pluto are well understood and have been documented in past NEPA documents. Potential environmental impacts associated with development of the flight-qualified MMRTG and the SRG would be similar to those associated with the GPHS-RTG and are expected to be within the envelope of previously-prepared DOE NEPA documentation for the facilities that are involved in this effort.

NASA's ongoing long-term R&D activities for alternative power systems and advanced power conversion technologies are small-scale, laboratory activities. No radioisotopes are involved and only small quantities of hazardous materials might be involved. The potential for impacts on worker health, public health, and the environment from these R&D activities is small.

Actual use of an MMRTG or SRG on a specific spacecraft proposed for launch from any U.S. launch site (e.g., Kennedy Space Center /Cape Canaveral Air Force Station, Vandenberg Air Force Station) would be subject to mission-specific NEPA documentation. Potential integrated system development (i.e., full system development requiring the integration of the RPS converter with a radioisotope fuel source) and production of any new generation of space-qualified RPSs (beyond the MMRTG and SRG) that result from the related long-term R&D technologies (e.g., more efficient systems or systems producing smaller electrical power output), are beyond the scope of this FPEIS, and would be subject to separate NEPA documentation.

The FPEIS may be examined at the following NASA locations by contacting the pertinent Freedom of Information Act Office:

(a) NASA, Ames Research Center, Moffett Field, CA 94035 (650-604-3273).

(b) NASA, Dryden Flight Research Center, P.O. Box 273, Edwards, CA 93523 (661-276-2704).

(c) NASA, Goddard Space Flight Center, Greenbelt Road, Greenbelt, MD 20771 (301-286-4721).

(d) NASA, Johnson Space Center, Houston, TX 77058 (281-483-8612).

(e) NASA, Kennedy Space Center, FL 32899 (321-867-9280).

(f) NASA, Langley Research Center, Hampton, VA 23681 (757-864-2497).

(g) NASA, Marshall Space Flight Center, Huntsville, AL 35812 (256-544-1837).

(h) NASA, Stennis Space Center, MS 39529 (228-688-2118).

NASA formally released the Draft Programmatic Environmental Impact Statement (DPEIS) for the Development of Advanced Radioisotope Power Systems for public review via publication of the EPA NOA in the **Federal Register** on January 6, 2006 (71 FR 928) and NASA's NOA in the **Federal Register** on January 5, 2006 (71 FR 625). The DPEIS was distributed in hardcopy and also made available electronically via the Worldwide Web at the address noted in the NASA NOA of the DPEIS. The DPEIS was made available to interested agencies, organizations, and individuals for review and comment. NASA received 52 written comment submissions, both in hard copy and electronic form, during the comment period ending on February 21, 2006. The comments are addressed in the FPEIS.

Any person, organization, or governmental body or agency interested in receiving a hard copy of NASA's ROD after it is rendered should so indicate by mail or electronic mail to Mr. Lavery at the addresses provided above.

**Olga M. Dominguez,**

*Assistant Administrator for Infrastructure and Administration.*

[FR Doc. E6-15764 Filed 9-25-06; 8:45 am]

**BILLING CODE 7510-13-P**

## **NATIONAL AERONAUTICS AND SPACE ADMINISTRATION**

**[Notice (06-074)]**

### **National Environmental Policy Act; Constellation Program**

**AGENCY:** National Aeronautics and Space Administration (NASA).

**ACTION:** Notice of intent to prepare a Programmatic Environmental Impact Statement (EIS) and to conduct scoping for the Constellation Program.

**SUMMARY:** Pursuant to the National Environmental Policy Act of 1969, as