

Murray Hill, NJ has been added as a party to this venture. Also, American Telephone & Telegraph Company, New York, NY; Harris Corporation, Melbourne, FL; LSI Logic Corporation Milpitas, CA; Micron Technology, Inc., Boise, ID; and NCR Corporation, Dayton, OH have been dropped as parties to this venture.

No other changes have been made in either the membership or planned activity of the group research project. Membership in this group research project remains open, and SEMATECH intends to file additional written notification disclosing all changes in membership.

On April 22, 1988, SEMATECH filed its original notification pursuant to section 6(a) of the Act. The Department of Justice published a notice in the **Federal Register** pursuant to section 6(b) of the Act on May 19, 1988 (53 FR 17987).

The last notification was filed with the Department on January 4, 1989. A notice was published in the **Federal Register** pursuant to section 6(b) of the Act on February 10, 1989 (54 FR 6458).

**Constance K. Robinson,**

*Director of Operations, Antitrust Division.*

[FR Doc. 01-10024 Filed 4-23-01; 8:45 am]

**BILLING CODE 4410-11-M**

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (01-051)]

### National Environmental Policy Act; Genesis Mission

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

**ACTION:** Finding of no significant impact.

**SUMMARY:** Pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321, *et seq.*), the Council on Environmental Quality (CEQ) 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 made a finding of no significant impact (FONSI) with respect to the proposed Genesis mission, which would involve a flight to a libration point (L1 point) in the Sun-Earth system, (*i.e.*, where the gravitational pulls of the Sun and the Earth are balanced). The spacecraft would be placed into a halo orbit about the L1 point to collect incoming solar wind ions. After 2 years of sample collection, the spacecraft would return the samples to Earth.

The baseline mission calls for the Genesis spacecraft to be launched aboard a Delta II 7326 from Cape Canaveral Air Force Station (CCAFS), Florida during the launch opportunity beginning in June 2001, as well as the recovery of the sample return capsule (SRC) at the Utah Test and Training Range (UTTR) approximately 65 kilometers (40 miles) southwest of Salt Lake City, Utah, no earlier than June 2004, depending on the actual launch date.

**DATES:** Comments must be provided in writing to NASA on or before May 24, 2001.

**ADDRESSES:** Comments should be addressed to Steve Brody, NASA Headquarters, Code SD, 300 E Street SW, Washington, DC 20546. The Environmental Assessment (EA) prepared for the Genesis mission which supports this FONSI may be reviewed at:

1. NASA Headquarters, Library, Room 1J20, 300 E Street, SW, Washington, DC 20546.
2. NASA, Spaceport USA, Room 2001, John F. Kennedy Space Center, Florida 32899 (321-867-2622). Please call Penny Myers beforehand at 321-867-9280 so that arrangements can be made.
3. Jet Propulsion Laboratory, Visitors Lobby, Building 249, 4800 Oak Grove Drive, Pasadena, CA 91109 (818-354-5179).
4. Tooele City Public Library, 128 West Vine Street, Tooele, UT 84074 (435-882-2182).

Other locations where the EA may be examined are listed in the Supplementary Information section below.

A limited number of copies of the EA are available for persons wishing a copy by contacting Mr. Brody at the address or telephone number indicated herein.

**FOR FURTHER INFORMATION CONTACT:** Steve Brody, 202-358-1544.

**SUPPLEMENTARY INFORMATION:** The EA may be examined at the following additional public libraries:

1. Salt Lake City Public Library, Main Library, 200 East 500 South, Salt Lake City, UT 84111 (801-524-8200).
2. Weber County Library, 2464 Jefferson Avenue, Ogden, UT 84401-2488 (801-627-6913).
3. West Wendover Branch Library, 590 Camper Road, West Wendover, NV 89883 (775-664-2510).

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

1. NASA, Ames Research Center, Moffett Field, CA 94035 (650-604-1181).
2. NASA, Dryden Flight Research Center, Edwards, CA 93523 (661-258-3689).
3. NASA, Glenn Research Center, 21000 Brookpark Road, Cleveland, OH 44135 (216-433-2755).
4. NASA, Goddard Space Flight Center, Greenbelt, MD 20771 (301-286-6255).
5. NASA, Johnson Space Center, Houston, TX 77058 (281-483-8612).
6. NASA, Langley Research Center, Hampton, VA 23665 (757-864-2497).
7. NASA, Marshall Space Flight Center, Huntsville, AL 35812 (256-544-1837).
8. NASA, Stennis Space Center, MS 39529 (228-688-2164). NASA has reviewed the EA prepared for the Genesis mission and has determined that it represents an accurate and adequate analysis of the scope and level of associated environmental impacts. This FONSI summarizes and incorporates the EA by reference.

NASA is proposing to launch the Genesis mission, which would deliver a single spacecraft into a halo orbit about the L1 point, approximately 1.5 million kilometers (km) [0.93 million miles (mi)] away from the Earth (approximately 1 percent of the Earth-Sun distance). This would also place the spacecraft well beyond Earth's magnetic field (magnetosphere), which shields the Earth from the charged particles emitted by the Sun, thus preventing instruments within the Earth's magnetosphere from acquiring accurate measurements of ions in the solar wind. After arrival at the L1 point, the mostly ultra-pure silicon collectors would be exposed to the incoming solar wind (*i.e.*, material erupting from the Sun's corona). The ions from the solar wind would be accumulated as they implant in the collector materials. After 2 years of sample collection, the spacecraft would stow the collectors into a sealed canister in the SRC to protect the purity of the solar wind particles collected for return to Earth and subsequent recovery at UTTR. The spacecraft would not carry any radioactive material. Current plans call for using a Delta II 7326 expendable launch system to inject the Genesis spacecraft into its low energy trajectory to the L1 point during the launch opportunity beginning in June 2001.

Depending on the actual launch date in 2001, the Genesis spacecraft would return to Earth in June 2004 or sometime thereafter. At a prescribed time during its approach to Earth, a command sequence would be sent to the spacecraft to orient itself for separation

from the SRC. After separation from the spacecraft, the SRC would directly enter the atmosphere to be captured midair via helicopter as it descends over UTTR. Following mid-air retrieval, the SRC would be removed to a staging area at UTTR where it would be prepared for transport to the planetary materials curatorial facility at the Johnson Space Center in Houston, Texas. Should conditions, such as weather over the recovery site, be unfavorable, there is an opportunity at entry minus 12 hours to enter a 19-day parking orbit for one or two revolutions (19 or 38 days) prior to a second Earth entry opportunity. In the unlikely event of bad weather on a second entry opportunity, the mid-air retrieval would not be possible, so the SRC would descend to the surface on a parafoil. The SRC and canister are designed to stay intact in the event of a parafoil landing.

The overall science objectives of Genesis are as follows:

(1) Measure the isotopic compositions of solar matter. Most chemical elements consist of more than one isotope. In some cases (*e.g.*, oxygen and nitrogen) the relative amounts of the isotopes of a given element are not the same for different types of planetary materials. (An isotope is an atomic species of a chemical element with different atomic mass and physical properties, *e.g.*, carbon-12 versus carbon-14.) However, at the required level of precision, the isotopic composition of solar matter is not available for comparison. Genesis could provide the data to fill this gap. The solar data are of major importance to planetary science because the outer regions of the Sun preserve the average composition of the solar nebula from which all planets in the solar system formed.

(2) Significantly improve our knowledge of the abundance of elements originating in the Sun. A remarkable feature of the solar system is the great diversity of planetary objects. However, this diversity was produced from a solar nebula, which is widely accepted to have been homogeneous in chemical composition. How this transition from solar nebula to planets took place has both fascinated and mystified scientists. Partial answers are available from the study of the elemental and isotopic composition of solar system bodies which suggests that moons, planets, and even asteroids are significantly different in composition. These objects are "fossil residues", and differences in basic elements and isotopic compositions provide invaluable insight into how the solar nebula evolved. Using these differences, scientists can model various

evolutionary processes, but have been hampered by missing information about the composition of the original solar nebula.

The Sun, which contains well over 99 percent of all the material in the solar system, may help provide the answer. While its interior has been modified by nuclear reactions, the outer layers of the Sun are composed of very nearly the same material as the original solar nebula. Some of the Sun's composition can be determined by the characteristics of the light it emits, but the abundance of many elements and nearly all isotopes is as yet unknown.

By stationing a spacecraft outside Earth's magnetic field, solar wind particles can be captured and returned to Earth where high precision analyses can be carried out. Comparing the Sun's isotopic composition and abundance against known planetary composition data sets may provide another piece of the puzzle in the continuing search for origins. The goal of Genesis is to improve the accuracy in the measure of each element's abundance by at least a factor of three.

(3) Provide a reservoir of solar matter for the 21st century. A great advantage of sample return missions is that curated materials are available to address the advanced questions that arise in the normal course of scientific study. When the need arises for improved knowledge of solar isotopic or elemental abundance beyond that provided in the initial studies, the curated Genesis materials would be available to address these needs.

Alternatives to the Genesis mission that were evaluated include: (1) No-Action (*i.e.*, no Genesis mission); (2) launch vehicle options, including the Space Shuttle, Taurus, and Atlas configurations, as well as other Delta configurations; (3) alternative launch sites; and (4) alternative recovery sites. Of the launch vehicles evaluated, the Delta II 7326 launch system most closely matches the Genesis mission requirements within the cost constraints of this Discovery Mission.

Expected impacts to the human environment associated with the mission arise almost entirely from the normal launch of the Delta II 7326, and to a much lesser extent, the entry, descent, and recovery operations of the sample return. Air emissions during the launch produced by the solid propellant graphite epoxy motors and liquid first stage primarily include carbon monoxide, hydrochloric acid, aluminum oxide in soluble and insoluble forms, carbon dioxide, and deluge water mixed with propellant by-products. Air impacts would be short-term and not

substantial. Short-term water quality and noise impacts, as well as short-term effects on wetlands, plants, and animals, would occur in the vicinity of the launch complex. These short-term impacts are of a nature to be self-correcting, and none of these effects would be substantial. No impact on threatened or endangered species or critical habitat, cultural resources, or floodplains is anticipated. In addition to the impacts that might be expected to arise from a normal launch, launch accident scenarios have been addressed and indicate no expected significant impact to the environment.

The second stage would be ignited at an altitude of 111 kilometers (69 miles). Although the second stage would achieve orbit, its orbital decay time would fall below the limit NASA has set for orbital debris consideration. After burning its propellant to depletion, the second stage would remain in low-Earth orbit until its orbit eventually decayed. The second stage is designed to burn up as it reenters Earth's atmosphere. The Genesis mission planning has followed NASA guidelines regarding orbital debris and minimizing the risk of human casualty for uncontrolled reentry into the Earth's atmosphere. No other impacts of environmental concern have been identified.

The level and scope of environmental impacts associated with the launch of the Delta II 7326 vehicle are well within the envelope of impacts that have been addressed in previous FONSI's concerning other launch vehicles and spacecraft. No significant new circumstances or information relevant to environmental concerns associated with the launch vehicle have been identified which would affect the earlier findings.

The Genesis mission has been categorized by the NASA Planetary Protection Officer as a Planetary Protection Category V mission, "Unrestricted Earth Return", because there is essentially zero chance of extraterrestrial biological contamination during sample collection at the L1 point, and thus an insignificant chance of back contamination by returning a novel organism to Earth. Nonetheless, prior to Earth return, the most recent scientific data related to the Genesis sample collection would be considered by the NASA Planetary Protection Advisory Committee in its review of this categorization for NASA.

Upper altitude emissions associated with reentry of the SRC would include ablation (*i.e.*, vaporization) products of the thermal protection system on the forebody. The SRC would enter the Earth's atmosphere directly above UTTR's South Range. At an altitude of

2.8 km (9200 ft) mean sea level, a recovery helicopter would intercept the SRC and initiate a mid-air retrieval operation above the UTTR surface. The intercept altitude would permit multiple passes, if necessary, to effect capture. A back-up helicopter would provide redundant capability. The proposed material to be used for the forebody heatshield is a carbon-carbon (C-C) composite. The peak heating would occur at approximately 60 seconds after reentry begins, which corresponds to an altitude of approximately 60 km (196,860 ft) above the Earth. The ablation would continue for about twenty seconds. Models conservatively predict that less than five percent [2.05 kg (4.5 lb)] of the total C-C material would ablate during reentry. The chemical species produced during ablation would be dissipated in the shock wave behind the SRC. The ablation process and thus the production of ablation products would cease more than 48 km (157,000 ft) above the Earth. Therefore, these concentrations would disperse in the large volume of air in the upper atmosphere and would not constitute a danger to health or life on Earth. The SRC heatshield would be rapidly cooling during the subsonic portion of the descent, and would not emit to the lower atmosphere. UTTR is primarily used by the U.S. Air Force as a bombing and artillery test and training range. The entry, descent, and recovery operations for the 225-kg (495-lb) SRC would be well within the bounds of the day-to-day operations carried on at UTTR. No impact on threatened or endangered species or critical habitat, cultural resources, wetlands, or floodplains is expected. Recovery scenarios wherein the SRC is not retrieved via helicopter in mid-air have also been addressed and do not lead to substantial environmental impacts.

Current plans call for commanding the remaining spacecraft bus to perform a controlled maneuver to burn the remaining on-board propellant approximately one hour after releasing the SRC. This "deboost" maneuver would result in the spacecraft entering the upper atmosphere high above the Pacific Ocean, where it would burn up due to atmospheric friction. The proposed Genesis deboost maneuver would comply with the guideline for footprint clearance of land masses [46 km (25 nautical miles) from U.S. soil, 370 km (200 nautical miles) from any non-U.S. land mass].

Based on the Genesis Spacecraft Breakup Analysis, the main spacecraft composite structure is conservatively predicted to break apart at altitudes

above 68 km (223,108 ft). Even in the worst case wherein the spacecraft bus reenters the atmosphere along the same trajectory as the SRC, all components have been shown by independent modeling to burn up above 47 km (154,000 ft). The small quantities of gases produced during burnup of the Genesis spacecraft are left at these extreme altitudes.

Failure to undertake the Genesis mission would disrupt the execution of NASA's Solar System Exploration program as defined by the agency's Solar System Exploration Committee. Solar wind samples returned by the Genesis mission could significantly improve our knowledge of the average chemical and isotopic composition of the solar system. Cancellation of the proposed mission would result in no or minimal environmental impact, but the loss of the scientific knowledge and database from carrying out the mission could be significant.

On the basis of the Genesis EA, NASA has determined that the environmental impacts associated with the mission would not individually or cumulatively have a significant impact on the quality of the human environment. NASA will take no final action prior to the expiration of the 30-day comment period.

**Edward J. Weiler,**

*Associate Administrator for Space Science.*

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**BILLING CODE 7510-01-P**

## THE NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES

### Meetings of Humanities Panel

**AGENCY:** The National Endowment for the Humanities.

**ACTION:** Additional notice of meetings.

**SUMMARY:** Pursuant to the provisions of the Federal Advisory Committee Act (Public Law 92-463, as amended), notice is hereby given that the following meetings of the Humanities Panel will be held at the Old Post Office, 1100 Pennsylvania Avenue, NW., Washington, DC 20506

**FOR FURTHER INFORMATION CONTACT:**

Laura S. Nelson, Advisory Committee Management Officer, National Endowment for the Humanities, Washington, DC 20506; telephone (202) 606-8322. Hearing-impaired individuals are advised that information on this matter may be obtained by contacting the Endowment's TDD terminal on (202) 606-8322.

**SUPPLEMENTARY INFORMATION:** The proposed meetings are for the purpose of panel review, discussion, evaluation and recommendation on applications for financial assistance under the National Foundation on the Arts and the Humanities Act of 1965, as amended, including discussion of information given in confidence to the agency by the grant applicants. Because the proposed meetings will consider information that is likely to disclose trade secrets and commercial or financial information obtained from a person and privileged or confidential and/or information of a personal nature the disclosure of which would constitute a clearly unwarranted invasion of personal privacy, pursuant to authority granted me by the Chairman's Delegation of Authority to Close Advisory Committee meetings, dated July 19, 1993, I have determined that these meetings will be closed to the public pursuant to subsections (c) (4), and (6) of section 552b of Title 5, United States Code.

1. *Date:* May 28-30, 2001.

*Time:* 9 a.m. to 5 p.m.

*Room:* 527.

*Program:* This meeting will review applications for Extending the Reach: Faculty Research Awards, submitted to the Division of Research Programs at the April 10, 2001 deadline.

**Laura S. Nelson,**

*Advisory Committee Management Officer.*

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## NATIONAL TRANSPORTATION SAFETY BOARD

### Sunshine Act Meeting

**TIME AND PLACE:** 9:30 a.m., Tuesday, May 1, 2001.

**PLACE:** NTSB Conference Center, 429 L'Enfant Plaza SW., Washington, DC 20594.

**STATUS:** The three items are open to the public.

**MATTERS TO BE CONSIDERED:** 7357 Fire On Board Liberian Passenger Ship Ecstasy, Miami, Florida, July 20, 1998 (DCA-98-MM-035).

7356 Special Investigation Report: Rear-End Collision Prevention Technologies.

7339A Railroad Accident Report: Collision Involving Three Consolidated Rail Corporation Freight Trains Operating in Fog at Bryan, Ohio, January 17, 1999 (DCA-99-MR-002)—Positive Train Separation Issues.

**NEWS MEDIA CONTACT:** Telephone: (202) 314-6100.