

EDO Principal Correspondence Control

FROM: DUE: 08/31/06 EDO CONTROL: G20060708  
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FINAL REPLY:

Michael D. Griffin  
National Aeronautics and Space Administration  
(NASA)

TO:

Chairman Klein

FOR SIGNATURE OF : \*\* GRN \*\* CRC NO: 06-0392

Sheron, RES

DESC:

ROUTING:

Request for Designee for the Interagency Nuclear  
Safety Review Panel for 2009 Mission to Mars

Reyes  
Virgilio  
Kane  
Silber  
Dean  
Cyr/Burns  
Strosnider, NMSS

DATE: 08/10/06

ASSIGNED TO:

CONTACT:

RES

Sheron

SPECIAL INSTRUCTIONS OR REMARKS:

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**OFFICE OF THE SECRETARY  
CORRESPONDENCE CONTROL TICKET**

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**ACTION OFFICE:** EDO

**AUTHOR:** Michael Griffin  
**AFFILIATION:** DC  
**ADDRESSEE:** Dale Klein  
**SUBJECT:** Request designee for the Interagency Nuclear Safety Review Panel for 2009 Mission to Mars

**ACTION:** Direct Reply  
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**LETTER DATE:** 08/01/2006  
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**FILE LOCATION:** ADAMS

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EDO --G20060708

National Aeronautics and  
Space Administration  
**Office of the Administrator**  
Washington, DC 20546-0001



August 1, 2006

The Honorable Dale E. Klein  
Chairman  
Nuclear Regulatory Commission  
Rockville, MD 20852

Dear Mr. Klein:

NASA is planning to launch the Mars Science Laboratory (MSL) Mission to Mars in 2009. The formation of an ad hoc Interagency Nuclear Safety Review Panel (INSRP) is needed for this mission since it currently is planning to use a radioisotope power system. This process is in accordance with the interagency cooperation reflected in paragraph 9 of Presidential Directive/National Security Council Memorandum #25 (PD/NSC-25), as amended May 8, 1996. Please provide the name of your designee who will serve as your Agency's INSRP technical advisor for this mission.

MSL would be designed to place a mobile science laboratory (rover) on the surface of Mars to assess the biological potential of at least one target environment, characterize the geology of the landing region, investigate planetary processes of relevance to past habitability, including the role of water, and characterize the broad spectrum of the surface radiation environment. MSL is planning for a launch from the Cape Canaveral Air Force Station in the September to October 2009 timeframe. The proposed launch vehicle system would be an Atlas V 541.

The baseline spacecraft design includes one Multi-Mission Radioisotope Thermoelectric Generator (MMRTG) for power. The total plutonium dioxide loading of the MMRTG is approximately 4.8 kg, containing approximately  $2.2 \times 10^{15}$  becquerels (58,700 curies) of Pu-238 and other radionuclides. RTGs were used on, and enabled, 26 U.S. space missions including Voyager, Pioneer, Viking, all but the first of the manned Apollo flights, Galileo, Ulysses, and Cassini. The most recent use of an RTG was for the New Horizons mission to Pluto that was launched in January 2006.

The nuclear safety launch approval process is expected to be similar to the process used on previous missions using RTGs. The MSL INSRP will review, among other documents, the Department of Energy-prepared nuclear Safety Analysis Report (SAR) for the mission and document its evaluation in a Safety Evaluation Report (SER).

After Agency review and acceptance, I will determine whether to request Presidential nuclear safety launch approval. If I request approval, I will formally transmit the SAR, SER, and other pertinent information to the Director of the Office of Science and Technology Policy.

If you have any questions, please have your staff contact Dr. Colleen Hartman, Deputy Associate Administrator, Science Mission Directorate, on 202-358-2165. The NASA INSRP member for this project is Mr. Peter G. Prassinis who can be contacted on 202-358-1246.

NASA looks forward to receiving the name of your INSRP designee, and to continuing our excellent working relationship in this important planetary exploration project.

Sincerely,

A handwritten signature in black ink, appearing to read "M. D. Griffin", with a long horizontal flourish extending to the right.

Michael D. Griffin  
Administrator