Appendix R
NASA Mission Planning Correspondence

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001

Reply to Attn of

S

MAY 22 2000

Mr. Earl Wahlquist
Associate Director
Office of Space and Defense
Power Systems
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Mr. Wahlquist:

Recent changes in the NASA Deep Space Systems (DSS) program have led to modifications in our planned launch dates and spacecraft configurations for the Europa Orbiter, Pluto-Kuiper Express, and Solar Probe missions. These modifications have been driven by changes in the launch vehicle and technology maturity status, and are based upon the best information and the limited funds available.

Under a proposed plan, the Pluto-Kuiper Express mission would be launched in 2004. Due to cost profile constraints, the baseline mission plan is to utilize the F5 generator "as is" as the primary power source. It is expected that DOE and the Jet Propulsion Laboratory (JPL) in Pasadena, California, will work together to develop a test and inspection program to verify the flight worthiness of the F5 generator.

A proposed plan for the Europa Orbiter mission is to launch in 2006 (with a fallback option for a 2007 launch). A proposed plan for the Solar Probe mission is to launch in 2007 (with a fallback option for a 2008 launch). Both of these missions could possibly utilize the option of a proposed new power system based on a Stirling technology generator. NASA Headquarters and JPL will work closely with DOE to establish requirements that will ensure that this new power system will meet the flight needs of these missions.

As a result of the proposed DSS program changes, NASA Headquarters no longer has an identifiable planned requirement for Small Radioisotope Thermoelectric Generator (SRTG) power systems. Therefore, NASA Headquarters requests that all SRTG development efforts for DSS spacecraft missions be halted. In addition, investigations into the utilization of the E8 and Multi-Hundred Watt systems for DSS applications should be stopped. The closure of these activities will permit reprogramming the funds to support the start-up of the Stirling system development.

As always, your support for the development of spacecraft power systems is greatly appreciated.

Sincerely,

Earle K. Huckins III
Deputy Associate Administrator
for Space Science

cc:
S/E. Weiler
S/C. Pilcher
SD/D.Lavery
SD/M. Dahl
SD/J. Parrish
DOE/W. Magwood
DOE/L. Herrera

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001

SEP 12 2000

Reply to Attn of: S

TO: Jet Propulsion Laboratory
Attn: 180/904/Director

FROM: S/Associate Administrator for Space Science

SUBJECT: Pluto-Kuiper Express Mission and Reformulation of the Deep Space Systems Program

I have concluded, for programmatic and technical reasons, that it is not feasible to implement the Pluto-Kuiper Express (PKE) mission as currently conceived. I, therefore, direct you to immediately stop all work in support of PKE development as currently conceived.

In anticipation of a new science roadmap for Outer Planet Exploration, you are further directed to begin developing a technology plan that would support a mission to Pluto and the Kuiper Belt, to arrive at Pluto no later than 2020. Clearly, a central objective of this technology plan should be to reduce flight time to Pluto substantially from what is currently achievable.

You are also directed to continue all activities necessary to support a launch of the Europa Orbiter mission in January 2006.

The Acting Science Director for Solar System Exploration, Dr. Jay T. Bergstralh, will be in contact with your staff regarding other aspects of the new Outer Planets Science Roadmap. If you or your staff have any questions, please feel free to contact Dr. Bergstralh at (202) 358-0313.

Edward J. Weiler

Edward J. Weiler

cc:
B/Mr. Mal Peterson
S/Dr. E. Huckins
JPL/NMO/180-801/Dr. B. Parker

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001

SEP 22 2000

Reply to Attn of: SD

Mr. Earl Wahlquist
Associate Director
Office of Space and Defense
Power Systems
U.S. Department of Energy (DOE)
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Wahlquist:

The Office of Space Science recently concluded, for programmatic and technical reasons, that it is not feasible to implement the Pluto-Kuiper Express (PKE) mission as currently conceived. We have directed the Jet Propulsion Laboratory to stop all work in support of the current PKE development and to continue all activities necessary to support a launch of the Europa Orbiter (EO) mission in January 2006. Therefore, the mission planning guidance provided to you in our May 22, 2000, letter needs to be updated.

While the design baseline for the EO mission includes the use of Stirling technology radioisotope generators, a viable backup power system is needed in order to support the 2006 launch. Current power estimates indicate that both the F-5 and E-8 generators would be required to support the mission. Your mission planning should consider maintaining the viability of both F-5 and E-8 generators as EO backups.

NASA relies on DOE's capability to produce and provide Radioisotope Power Systems (such as Stirling) that are essential for planning and implementing deep space and long lived space exploration missions. Your continued support is appreciated.

Sincerely,

Earle K. Huckins III
Deputy Associate Administrator
for Space Science