

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



August 11, 2014

Reply to Attn of:

Human Exploration and Operations Mission Directorate

Cool Flames Investigation Science Definition Team (SDT)
NASA John H. Glenn Research Center
21000 Brookpark Rd., MS 77-6
Cleveland, Ohio 44135

Dear CFI Science Definition Team:

We have completed our evaluation of the results of the Cool Flames Investigation (CFI) combined Science Concept Review (SCR) and Requirements Definition Review (RDR), which took place on May 5, 2014 at the Glenn Research Center. I am pleased to inform you that upon review of the panel reports and project artifacts, the project has successfully passed all the requirements for the SCR/RDR. The CFI project has authorization to advance to the next stage of development.

The Science and Engineering Panel reports and the Science Requirements Document (SRD) were carefully reviewed by Dr. Chiaramonte, Program Executive for Physical Sciences, who recommends that the project advance to the next stage of development. As is clear from the panel reports, CFI is a project with outstanding scientific merit and relevance. Excerpts from the science and engineering panels are provided below.

The SCR Science Panel gives their enthusiastic and unanimous endorsement of the project. Their summary comments are listed below:

The proposed research is exciting, well-planned, and will contribute to the knowledge base of combustion science. The team consists of international experts in the fields of hydrocarbon combustion kinetics and droplet combustion, who have had significant success in previous microgravity programs. The committee strongly recommends that NASA support the continued development and operation of this ISS experiment.

The engineering review board recognized the difficult technical and programmatic challenges facing the project, but likewise recommends (with documented qualifications) that the project advances to the preliminary design phase of the project.

[The] Board feels they have successfully met the criteria for RDR with the exceptions noted [in the report] and recommend that they move into the preliminary design phase of the project. As a Project Team, they need to identify the work that is in front of them, streamline reviews where possible, and then prioritize the work that must be done versus what could be done. The experience of the Engineering Team will be of great benefit in this activity and help to ensure success.

Deficiencies noted by the engineering board have been documented in the form of Review Item Discrepancies (RIDs) and Requests For Actions (RFAs) that must be closed by the CFI management team prior to the beginning of PDR.

In light of these conclusions, permission to proceed to the Preliminary Design Review of this experiment is hereby granted. I would like to express my appreciation to you for your effort in preparing for the SCR/RDR and my congratulations for your part in its success.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Marshall Porterfield".

D. Marshall Porterfield
Director, Space Life and Physical Sciences Division

cc:

HEOMD/Mr. Otero
HEOMD/Dr. Carpenter
HEOMD/Dr. Chiaramonte
GRC/Mr. St Onge
GRC/Mr. Foster
GRC/Dr. Kohl
GRC/Dr. Urban
GRC/Dr. Dietrich