NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS 77058

REPLY TO
ATTN OF: FS66-71-88

JUL 26 1971

MEMORANDUM

TO: Distribution

FROM: FS/Chief, Flight Support Division

SUBJECT: Concerning Flight Software Readiness Review (FSRR) Action Items

Reference is made to the following:

a. Our memorandum, FS66-71-72, dated June 29, 1971, entitled "Minutes of the LUMINARY 1E (Apollo 15) Flight Software Readiness Review (FSRR)."

b. Memorandum FA-114, dated June 22, 1971, entitled "Action Items Resulting from the Apollo 15 Flight Software Readiness Review (FSRR)."

c. Mission Planning and Analysis Division (MPAD) memorandum, FM73 (71-214), dated July 21, 1971, entitled "MPAD Action Items from Apollo 15 FSRR."

d. MPAD memorandum, FM22 (71-143), dated July 19, 1971, entitled "Maximum Allowable NAV Noun 69's."

Several action items were assigned at the LUMINARY 1E FSRR for Apollo 15 (listed in references a. and b.). The action that has been taken on these items will be summarized in this memorandum.

The adequacy of testing for the docked DPS/APS burns was questioned and Messrs. T. G. Price of the Flight Support Division and R. O. Nobles of MPAD were to coordinate a review of the testing completed. Mr. Nobles listed a number of docked DPS/APS burns to be run by MIT/SDL and these were datafaxed to Mr. R. Larson of MIT/SDL. The results of these runs revealed no difficulties (reference c.).

In P34, if the elevation angle option is loaded and time of ignition computed for a direct rendezvous, a 611 alarm (no TIG for this elevation angle) may occur. Mr. R. Becker of MPAD has said that the responsible individuals of the Flight Control Division are aware of this problem, but that he would again inform them about it. The present timeline calls for loading TIG and computing the elevation angle so there does not appear to be any problem here.

There was a discussion concerning how large the delta RLS (Noun 69) update magnitude can be for the PDI+5-minute update. Reference d. defines the maximum magnitudes permitted based on the maximum inputs defined by guidance tolerance and velocity residual limits.

Anomaly L-1E-09 describes a condition where the engine-off signal in P12, P70, or P71 may occur either early or late if an engine failure indication (Verb 97) has occurred during the last 4 to 6 seconds of ascent. The problem here is that, if a call-up display is being monitored during the latter portion of the ascent, the V97 will be masked. Mr. Price was to coordinate the inclusion of this clarification into the program notes and that action is completed.

James C. Stokes, Jr.

FS66/TGPrice:jvm:7/23/71:2308