MIT/L PROGRAM CHANGE ROUTING SLIP

- COLOSSUS 2C
- COLOSSUS 2D
- COLOSSUS 2E
- COLOSSUS 2F
- LUMINARY 1B
- LUMINARY 1C
- LUMINARY 1D
- LUMINARY 1E

☐ MIT Approved PCN  ☐ NASA Approved PCR
☐ NASA Approved PCN  ☐ NASA Approved
☐ MIT Approved
Software Anomaly
Software Anomaly

A. Coding

☒ Begin coding immediately

ACTION:

Program Supervisor's Approval:

☐ Do not code until new GSOP material has been approved by the MIT
Mission Design Review Board (MDRB) and distributed.

B. GSOP Preparation

☐ Prepare GSOP revisions for MDRB
consideration

ACTION:

☐ Technical Committee Meeting not required.

☐ Technical Committee Meeting(s) held on
Attendees:

C. KSC Testing and Checkout

☐ Review for possible impact on KSC
testing and checkout

ACTION:

D. Other Programs Affected

☐ Review for corresponding changes in

ACTION:

Special Instructions

Project Manager:

Date: 1/21/70

Stephan L. Cull
In KALCMANU STEERING log section, there is a call to subroutine ZEROERROR which is unhinted thus allowing an interrupt (DAP) to take place in the middle of the zeroing sequence. (See Attachment)

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1.6 DESCRIPTION OF RUN:
Eyeball

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2.1 CAUSE:
Error in code

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2.4 AVOIDANCE PROCEDURE:
None

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2.5 RECOVERY PROCEDURE:
None

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2.6 PROGRAM CORRECTION:
Correct error in code in KALCMANU STEERING log section card #11 BZMF to NOGOM2

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2.7 RECOMMENDED DISPOSITION (Fix, Work-around, etc):
Fix for 2E

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2.8 RECOMMENDED RE-TESTING:

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3.1 NASA DIRECTION:
Fix for COLOSSUS 2E

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4.3 ORGANIZATION:

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4.4 DATE:

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1.5 In the sequence in ZEROERROR

- CDUXD ← CDUX
- (A) CDUVD ← CDUY
- (B) CDUZD ← CDUZ

if T5 interrupts for PHASE 1 of the RCS DAP at (A)

Effectively, X gimbal angle error will be zeroed but not Y & Z

if at (B) X & Y gimbal errors zeroed but not Z.

The X, Y, Z gimbal errors are transformed by the Matrix MGB to body errors so exactly what happens to ERROR X, Y, Z is a function of MGB which in turn is a function of gimbal angles.

2.3 At worst, a small unwanted jet firing might occur, but this is very unlikely. Essentially, a PHASE 1 T5RUPT at A or B would result in the DAP working with an inconsistent (but not really bad) set of reference angles for one cycle.