

Comments on PCR/PCN Items for SCB #43

Reference: PCR/PCN items listed in 71-FS55-1, "ASSCCB Meeting #43 Agenda," received in two lots on 12 January 1971 (except for CSM changes 1135 and 1136).

The following comments are provided on the referenced changes. In general, the changes, particularly the GSOP "record" ones, show little evidence of having been even glanced at by the MSC AAP G&N contractor, and hence it seems highly improper for MSC approval to be granted to them in their present form.

ChangeCommentSkylab Changes

- SL403 Confirmation of the two "believed to be" statements in first paragraph of item 3 on the 3rd page of the change should be obtained before the change is approved.
- SL406 On 2nd page, a vector indication missing with the "UNIT(\bar{R})" at beginning of third line; at end of the line, the citation of the \bar{R} vector should be of UNIT(\bar{R}) instead (as in program, and to minimize loss of precision).
On 3rd page, there seems no reason to repeat the computation: instead, the material added should be deleted, and the $\bar{U}YA$ computation source, as already mentioned with the change to 5.7-4, be left to that page of the document. If it is felt necessary to have the computation as shown, then of course the last term must involve UNIT(\bar{R}), not merely \bar{R} , to avoid loss of precision (and as in existing coding). Note not done as shown if RELVELSW = 0 in present coding (hence 1.6 material incomplete).

CSM Changes

- 1101 In "description of change", "perfrom" should be "perform".
Title given here not consistent with that quoted in Sect. 5 Rev. 12 change pages themselves (which was "GSOP Section 5 Revision 12 Changes"). A similar comment applies to several of the other GSOP PCNs.
The change for 5.4-4 should cite Number 3, not Number 4, and CSI, not CS1 (letter, not number).
The change for 5.4-63 should involve p_{CON} , not P_{CON} .
The first change on the 4th page of the PCN should cite page 5.9-4: no change to page 5.6-39 to reflect the fact that there are two times was located successfully.
- 1102 The asterisk notation with the first two changes on page 2 of the PCN should be explained (or asterisk deleted).
For consistency with change made to document, the 2nd page 2-83 change should mention OPTMON, not OPTMOM.
The change to page 2-125 should mention that "word is initialized", not "bit is initialized", for consistency with change made to document itself.

WORKING PAPER

<u>Change</u>	<u>Comment</u>
1103	The change indicated to page 3.2-22 reflects a design change to the program, due to a deliberate and malicious failure of the MSC AAP G&N contractor to obey the explicit Government direction of PCR 860. As a result, there should be an anomaly report generated, not a casual "Improve Quality of Document" change. See 70-FM73-328 (Nobles' report).
1104	<p>The change listed as the 2nd one for page xvi is not visible in the published document, since <u>all</u> page numbers, not merely "4-17...in PCR 874", were deleted. Heading on pg. 2 should mention 1.6, <u>not</u> 1.5: see e.g.110</p> <p>Page 4-4 change should cite "Barbecue", not "Barbeque".</p> <p>The 2nd page 4-6 change should delete the 5 letters "lable".</p> <p>The first P20 assumption change should cite RENDEZVOUS, not RENEZVOUS, for consistency with document.</p> <p>The P23/130 change listed should be deleted. It was a change made in Rev. 13 of the GSOP, as authorized on page 2 of PCN 1004 (under P23): "SAVECFLG is reset before R57 is executed at line 140." The P23 version in the GSOP is Rev. 19 (06/29/70).</p> <p>The P40 change latter part ("TVCDAP") is garbled. See GSOP.</p> <p>P51 lines 260-490 are flagged as a change authorized by this PCN.</p> <p>P52 lines 1060-1160 are flagged as a change authorized by this PCN (this and the P51 change perhaps suggested by the R53/498 change, but in a too incomplete fashion).</p> <p>The extra "of the end" in the P62 change should be deleted.</p> <p>The R64/323 change was to replace CDUX with THETADX, not "Exchange CDUX for THETADX".</p> <p>The V69/398 change was not flagged as such in the document.</p>
1123	Storage impact presumably should be "2 erasable", not "2 eraserable".
1125	From item "F" on page 26 of E-2448 Users' Guide to Minkey (17 July 1970), "R31 and R34 use conic integration," (if Average G is off). Since presumably this decision is the one being modified, the title and text should mention R34, not just R31 (the coding in program is the same set of steps, with branching for different angles).

Change

Comment

LM Changes

- 1087 The change to page 2-35 (on page 3 of PCN), last sentence, is not in the published GSOP (instead, the impact of PCR 1058 is reflected).
- The change to page 2-44 (on page 6 of the PCN) is not consistent with what was printed in the document. The quotation marks in 6th line should be deleted, and last sentence should also mention P40. See PCN 1126 for wording in the published GSOP.
- The addition of the "E" in 6th line of word 61b definition, page 2-65a (PCN page 8), should have been circled as a change.
- An "and" was inserted in last sentence of bit 15 definition, page 2-66 change (PCN page 9), in published document.
- The change to page 2-101 was identified at the bottom of the page as due to PCR 1058 (R10 design changes). This on page 13 of PCN.
- The definition of word 6 on page 2-104 (page 13 of PCN) considerably different from what appears here.
- The wording on page 2-105 for word 22 (page 14 of PCN) different from what appears here (the order of mention of landing site and terrain model made consistent with subsequent mention of terrain model).
- Page 2-123 of published document flagged as being changed per this PCN.
- 1009 Several areas of the document were changed beyond those quoted here, including at the beginning pages 4-1, 4-2, 4-9, 4-10, 4-23, 4-24, the Noun list, the Alarm list, and the Flag list (all of which also cited this PCN).
- Efforts to identify the "P12/Assumption 11" change in the published document were not successful. Last part of change, with "delete" in place of "cite", seems to be appropriate for Assumption 9 (by analogy with P40 Assumption 7 change, for example).
- The P12/Assumption 14 change seems to have impacted Assumption 13 of the published document.
- P12/165 also cites this PCN (the flag setting moved from the P12/355 location that is mentioned).
- The P12/200 and P12/240 changes are the coding carelessness (conversion from fps to m/cs units) reported in Anomaly L-1D-16. Such blunders ought not to be (unsuccessfully) hidden from the Government as an "Editorial Change".
- P22/1120 has a change flag mentioning this PCN.
- P34/10 has a change flag mentioning this PCN.
- P35/430 has a change flag mentioning this PCN (grossly erroneous change).

Change

Comment

1009
(cont)

P41/40 has a change flag mentioning this PCN.

P57 Assumption 8 now reads "attitude deadband" (hence "changed to" material incorrect).

P57/1360 cites this PCN.

P64 Purpose 3 cites this PCN.

P64/140 cites this PCN.

P66 Purpose 2 cites this PCN.

P71/135 cites this PCN, and in addition there were a number of other changes made to P71 (paralleling those made to P70) which were not flagged, yet which presumably originated from the P70 upgrading effort reflected in the PCN.

No changes to P72 in the document distributed by MSC were detected (the heading print indicates "Rev 02 12/03/69").

The change intended to P72/226 presumably changed "5.4.2.2", not "5.4.2", to "5.4.2".

Last 4 line numbers for P72 don't seem consistent with distributed document (perhaps refer to locations after 110-145 update?).

P76 Assumption 4 also cited this PCN.

R13 cites this PCN at line 10.

R41 Assumption 3 cites this PCN.

The change identified as R51/150-170 should be R52/150-170 instead.

The change identified as R57/130 should be R58/130 instead.

The 3rd from last change on page 8 of PCN (R51/136) should be R52/136 instead.

The V59 change left the quantity QSW in the document in quotation marks (as indicated by the "before" item, which however is also missing a set of quotation marks).

1126

The "correctly documented Section 4" citation applies to Apollo 13, not Apollo 14, as carefully mentioned in the anomaly report. The Section 4 Rev. 8 Luminary 1D GSOP shows program performance (see page 3 of PCN 1009, the P40/660-690 change). Hence it too must be changed if anomaly corrected.

Page 3 should have S_{TH} settings consistent with those described on page 2 (e.g. "set to 1 for P42").

Change

Comment

- 1127 Since the analogous change for the CSM was a PCR, this change should have been a PCR, not PCN (see PCR 1118 for CSM).
- 1132 Since PCR 1117.2 pages were stamped "Preliminary", it is questioned why it was found necessary to submit this change.
- Present coding seems to retain Average G whenever it is running, not merely "during the Powered Descent". In 5th line on page 2, perhaps the "during" should begin a new sentence.
- 1133 Page 2 of this change is obsolete, since it does not show the effect of PCR 294 (reflected in Section 3 Rev. 5 GSOP, dated June 1970) in the value of "Highest descent mass". The value should be about 36817 lbs (GSOP mentioned had 36740 pounds, apparently due to use of 2.2000 lb/kg).