| **Pg** | **Sec** | **Para** | **Line** | **Type** | **Comment/ Rationale** | **Reviewer (Name/Agency)** | **Suggested Disposition** | **Final Disposition**  **(Do Not Fill In)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5-1 | 5.1.1 | 1 | 1 | ed | Typo – 5.2 through 0, | Patrick Zimmerman / NASA/JSC | should be 5.2 through 5.8 |  |
| 5-1 | 5.2.10 | 1 | All | ed | Should be a sub-bullet to 5.2.9, which is currently left dangling with a : | Patrick Zimmerman / NASA/JSC | 5.2.10 should be a sub-bullet of 5.2.9, similar to 4.2.5 in the TDM BlueBook |  |
| 5-1 | 5.2.11 | 1 | All | ed | Should be a sub-bullet to 5.2.9, which is currently left dangling with a : | Patrick Zimmerman / NASA/JSC | 5.2.11 should be a sub-bullet of 5.2.9, similar to 4.2.5 in the TDM BlueBook |  |
| 5-2 | 5.2.13.4 | 1 | All | ed | Clarification of words | Patrick Zimmerman / NASA/JSC | The timetag and measurements/calculated values in the value terms must be separated by  at least one blank character (white space). |  |
| 5-2 | 5.2.13.4.1 | 1 | All | ed | Should be a sub-bullet to 5.2.9, which is currently left dangling with a : | Patrick Zimmerman / NASA/JSC | 5.2.13.4.1 should be a sub-bullet of 5.2.9, similar to 4.2.5 in the TDM BlueBook. These exceptions are needed followup to the words in 5.2.10 and 5.2.11 |  |
| 5-2 | 5.3 | all | all | ed | ‘Value’ appears to be an overloaded term throughout section 5.3, as it can refer to both the keyword and the value of the keyword-value pair. Distinction should be made when referring to the Keyword itself. | Patrick Zimmerman / NASA/JSC | Use a different term other than ‘value’ when referring to the keyword, such as ‘designator’  5.3 NHM MNEMONIC KEYWORD DESIGNATORS  5.3.1 The designators associated with the “DEFINE” keyword…  etc. |  |
| 5-3 | 5.3.1.2 | 1 | 3 | ed | Missing comma/clarification | Patrick Zimmerman / NASA/JSC | (ASCII value 46, aka decimal). |  |
| 5-3 to 5-4 | 5.3.1.3, 5.3.1.7, 5.3.1.10, 5.3.1.12, 5.3.1.14 | 1 | 1 | ed | Main bullets need to be re-numbered, with the other entries becoming sub-bullets | Patrick Zimmerman / NASA/JSC | 5.3.2 System Field  5.3.3 Hardware Type Field  5.3.4 Data Group Field  5.3.5 Value Count Field  5.3.6 Data Type Field |  |
| 5-3 | 5.3.1.4, 5.3.1.5, 5.3.1.6 | All | All | ed | All three should be sub-bullets of 5.3.1.3 | Patrick Zimmerman / NASA/JSC | Make  5.3.2.1,  5.3.2.2,  5.3.2.3 |  |
| 5-3 | 5.3.1.8, 5.3.1.9 | All | All | ed | Both should be sub-bullets of 5.3.1.4 Hardware Type Field | Patrick Zimmerman / NASA/JSC | Make  5.3.3.1,  5.3.3.2 |  |
| 5-3 | 5.3.1.11 | All | All | ed | Should be sub-bullets of 5.3.1.5 Data Group Field | Patrick Zimmerman / NASA/JSC | Make  5.3.4.1 |  |
| 5-3 | 5.3.1.13 | All | All | ed | Should be sub-bullets of 5.3.1.6 Value Count Field | Patrick Zimmerman / NASA/JSC | Make  5.3.5.1 |  |
| 5-3 | 5.3.1.15, 5.3.1.16 | All | All | ed | Both should be sub-bullets of 5.3.1.7 Data Type Field | Patrick Zimmerman / NASA/JSC | Make  5.3.6.1,  5.3.6.2 |  |
| 5-3 | 5.3.1.4 | 1 | 2 | ed | Wording inconsistent with other field definition statements | Patrick Zimmerman / NASA/JSC | The first field of a Mnemonic shall specify the spacecraft system from which the data originates. |  |
| 5-3, 5-4,  5-7 | 5.3.1.6,  5.3.1.9,  5.3.1.16,  5.5 | 1 | 1 | ed | Incorrect Annex referenced for the SANA registry. | Patrick Zimmerman / NASA/JSC | Change to Annex B |  |
| 5-3 | 5.3.1.5 NOTE, 5.3.1.9 NOTE, 5.3.1.16 NOTE | 1 | 1 | ed | Typo, missing dash | Patrick Zimmerman / NASA/JSC | Add Dash  NOTE – An ICD… |  |
| 5-3 | 5.3.1.5 NOTE, 5.3.1.9 NOTE, 5.3.1.16 NOTE | 1 | 1 | ed | Awkward phrasing, suggest re-wording | Patrick Zimmerman / NASA/JSC | An ICD should be used only if the appropriate designator is not in the SANA registry. In that event, if the designator is not considered unique, addition of the designator to the SANA registry is preferred. |  |
| 5-3 | 5.3.1.10 | 1 | 1 | ed | Additional definition of what goes into this field is lacking (doesn’t match Table 5-1) | Patrick Zimmerman / NASA/JSC | The value contained in the Data Group Field shall be one specified in an ICD. |  |
| 5-4 | 5.3.1.15 | 1 | 1 | ed | Rewording for consistency with other Field definitions | Patrick Zimmerman / NASA/JSC | The fifth field of a Mnemonic Keyword may optionally specify the form of the data associated with the Mnemonic Keyword. |  |
| 5-4, 5-5 | Table 5-1 | n/a | n/a | ed | Incorrect Annex referenced. | Patrick Zimmerman / NASA/JSC | Change to Annex B, in System, Hardware and Data Descriptions |  |
| 5-4 | Table 5-1 | n/a | n/a | ed | Incomplete description of HARDWARE TYPE field | Patrick Zimmerman / NASA/JSC | The hardware type field shall start with an upper case alphabetic string containing exactly three characters, followed by the numeric value of the hardware instance. |  |
| 5-5 | Table 5-1 | n/a | n/a | ed | In the VALUE COUNT Field column entry, remove unneeded text | Patrick Zimmerman / NASA/JSC | Delete (ELEMENT COUNT?) from Field column |  |
| 5-5 | Table 5-1 | n/a | n/a | ed | In the VALUE COUNT description, replace ‘elements’ with ‘values’. The word element in not used elsewhere, and appears non-specific | Patrick Zimmerman / NASA/JSC | The value count field shall be a string consisting of the upper case letter “V” followed by an integer that indicates the number of data values on each data record with this string as its Mnemonic Keyword. |  |
| 5-5 | 5.4.2 | 1 | 1 | ed | Missing word | Patrick Zimmerman / NASA/JSC | The number of values for each Mnemonic provided must equal the number in the “Value Count” field of the Mnemonic Keyword. |  |
| 5-5 | 5.4.3 | 1 | 1 | ed | Indicates a “Data Format” field, which does not exist, should be “Data Type”. Rest of sentence is awkward/redundant | Patrick Zimmerman / NASA/JSC | If the “Data Type” field exists in the Mnemonic Keyword, the values provided must match that format. |  |
| 5-5, 5-6 | 5.4.5, 5.4.7 | 1 | 1 | ed, te | Term ‘exponential notation’ is inconsistent with other NAV documents, and with 5.4.7.4. Use floating-point instead | Patrick Zimmerman / NASA/JSC | floating-point notation |  |
| 5-6 | 5.4.7.4 | 1 | 1 | ed | The minus sign is not ascii character 43, it’s 45 | Patrick Zimmerman / NASA/JSC | The exponent must be an integer, and must have a ‘+’ sign (ASCII Character 43), a ‘-’ sign (ASCII Character 45) or neither. If the sign is omitted, then ‘+’ is assumed). |  |
| 5-6 | 5.4.7.4 Note: | 1 | 1 | ed | There are 2 NOTES for 5.4.7.4. Suggest changing Note: 1 into 5.4.7.5 | Patrick Zimmerman / NASA/JSC | **5.4.7.5** The maximum positive floating-point value is approximately 1.798E+308, with 16 significant decimal digits precision. The minimum positive floating-point value is approximately 4.94E-324, with 16 significant decimal digits precision. |  |
| 5-6 | 5.4.7.4 NOTE | 1 | 1 | ed | The 2nd NOTE indicates a reference 6, which doesn’t appear to exist | Patrick Zimmerman / NASA/JSC | Verify references and update citations |  |
| 5-6 | 5.4.9 | 1 | 1 | ed | Character value Fields is a header and should be in bold | Patrick Zimmerman / NASA/JSC | 5.4.9 **Character value fields** |  |
| 5-6 | 5.4.9.3 | 1 | 1 | ed | Should characters start with an opening single quote symbol instead? (ascii character 96) | Patrick Zimmerman / NASA/JSC | Confirm symbols for indicating character fields |  |
| 5-7 | 5.4.9.4 | 1 | 1 | ed | Wouldn’t a single quote symbol be represented by 3 adjacent symbols, not 2? | Patrick Zimmerman / NASA/JSC | Confirm number of symbols to quote a quotation mark |  |
| 5-7 | 5.4.11 | 1 | 1 | ed | Believe this is redundant with 5.4.10 | Patrick Zimmerman / NASA/JSC | Delete if redundant |  |
| 5-7 | 5.4.12 | 5 | 3 | ed | Indicates reference 5, which does not exist | Patrick Zimmerman / NASA/JSC | Verify references and update citation |  |
| 5-8 | 5.6.2 | 2,3,4 | 1 | ed | Turn bulleted list into numbered list for consistency, as was done for the rest of section 5 | Patrick Zimmerman / NASA/JSC | 5.6.2.1  5.6.2.2  5.6.2.3 |  |
| 5-8 | 5.6.2 | 3 | 2 | ed | Make bullet 2 consistent with bullet 1 and 3, by using an “i.e.” in the sentence | Patrick Zimmerman / NASA/JSC | at the beginning of the NHM Metadata Section (i.e. between the ‘META\_START and TIME SYSTEM line, as shown in table 3-2). |  |
| 5-8 | 5.6.5 | 1 | 1 | ed, te | Is this situation even possible since the Keywords are not defined a priori as with most other Messages? | Patrick Zimmerman / NASA/JSC | Determine if should be deleted |  |
| 5-9 | 5.7.5 | n/a | n/a | ed | Excess carriage retuns between 3 & 4 and 4 & 5 in the NOTES. | Patrick Zimmerman / NASA/JSC | Delete excess space |  |