1. **Test Dataset: AA400015**

**S‐58 Recommended ENC Validation Checks covered in this section:**

|  |  |
| --- | --- |
| **S‐58 Check** | **Description** |
| 24 | For each SOUNDG feature object which does not reference a SG3D field with X, Y and Z values. |
| 26a | For each subfield where the value is not within the range defined in the S-57 format description. |
| 536 | If a field without a repetition factor repeats. |
| 540a | If mandatory records, fields and subfields are not Present OR are Null where the “Null” value is not allowed. |
| 540b | If data set file contains prohibited records, fields or subfields. |

**Secondary Errors**

Critical – 20b, 27, 518b

Error – 81, 67a

Warnings –

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Dataset Name** | AA400015 | | | **S‐58 Check** | | 24 | | | **Type** | C |
| **S-58 Description** | For each SOUNDG feature object which does not reference a SG3D field with X, Y and Z values. | | | | | | | | | |
| **Message** | SOUNDG does not reference a SG3D field. | | | | | | | | | |
| **Solution** | Amend coordinate type or values for SOUNDG. | | | | | **Conformity** | | Part 3 (5.1.4.1) | | |
| **Test Case No. 1** | Revised SG3D to SG2D for SOUNDG feature. | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | **FRID** | | **FOID** | | | **VRID** |
| - | | SOUNDG |  | | FE-49 | | AA 0000000115 00001 | | | VI-12 |
|  | | SOUNDG |  | | FE-50 | | AA 0000000229 00001 | | | VI-13 |
| **ASCII** |  | | | | | | | | | |
| **Expected Test Results** | 24: An error “SOUNDG does not reference a SG3D field.” must be triggered. | | | | | | | | | |
| **Secondary Critical Errors** | 20b: Orphaned geometry | | | | | | | | | |
|  | | | | | | | | | | |
| **Dataset Name** | AA400015 | | | **S‐58 Check** | | 26a | | | **Type** | C |
| **S-58 Description** | For each subfield where the value is not within the range defined in the S-57 format description. | | | | | | | | | |
| **Message** | Subfield value does not conform to S-57 format specification. | | | | | | | | | |
| **Solution** | Amend subfield value. | | | | | **Conformity** | | Part 3 (7.2.2.1) and (7.3) | | |
| **Test Case No. 1** | Revised GRUP subfield in FRID | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | **FRID** | | **FOID** | | | **VRID** |
| - | | SOUNDG |  | | FE-51 | | AA 0000000229 00001 | | | VE-13 |
| **ASCII** |  | | | | | | | | | |
| **Expected Test Results** | 26a: An error “Subfield value does not conform to S-57 format specification” should be triggered. | | | | | | | | | |
| **Secondary Critical Errors** | 540a: Mandatory records, fields or subfields are not used | | | | | | | | | |
| **Test Case No. 2** | Revised RUIN subfield in VRID | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | **FRID** | | **FOID** | | | **VRID** |
| - | | - | - | | FE-51 | | AA 0000000229 00001 | | | VE-13 |
| **ASCII** |  | | | | | | | | | |
| **Expected Test Results** | 26a: An error “Subfield value does not conform to S-57 format specification” should be triggered. | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | |
|  | | | | | | | | | | |
| **Dataset Name** | AA400015 | | | **S‐58 Check** | | 536 | | | **Type** | C |
| **S-58 Description** | If a field without a repetition factor repeats. | | | | | | | | | |
| **Message** | Field without a repetition factor repeats. | | | | | | | | | |
| **Solution** | Remove repeating value. | | | | | **Conformity** | | 6.1.3 | | |
| **Test Case No. 1** | Repeated the DSPM field records. | | | | | | | | | |
| **ASCII** |  | | | | | | | | | |
| **Expected Test Results** | 536: An error “Field without a repetition factor repeats” should be triggered. | | | | | | | | | |
| **Secondary Critical Errors** | 27: Subfield not formatted in accordance with S-57 | | | | | | | | | |
|  | | | | | | | | | | |
| **Dataset Name** | AA400015 | | | **S‐58 Check** | | 540a | | | **Type** | C |
| **S-58 Description** | If mandatory records, fields and subfields are not Present OR are Null where the “Null” value is not allowed. | | | | | | | | | |
| **Message** | Mandatory records, fields or subfields are not used. | | | | | | | | | |
| **Solution** | Add mandatory records/values. | | | | | **Conformity** | | 6.1.4, 6.3 and 6.4 | | |
| **Test Case No. 1** | GRUP subfield in FRID set to Null | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | **FRID** | | **FOID** | | | **VRID** |
| - | | SOUNDG |  | | FE-51 | | AA 0000000229 00001 | | | VE-13 |
| **ASCII** |  | | | | | | | | | |
| **Expected Test Results** | 540a: An error “Mandatory records, fields or subfields are not used” must be triggered. | | | | | | | | | |
| **Secondary Critical Errors** | 26a: An error “Subfield value does not conform to S-57 format specification” should be triggered. | | | | | | | | | |
|  | | | | | | | | | | |
| **Dataset Name** | AA400015 | | | **S‐58 Check** | | 540b | | | **Type** | C |
| **S-58 Description** | If data set file contains prohibited records, fields or subfields. | | | | | | | | | |
| **Message** | Prohibited records, fields or subfields used. | | | | | | | | | |
| **Solution** | Remove prohibited records/values. | | | | | **Conformity** | | 6.3 and 6.4 | | |
| **Test Case No. 1** | Added text for prohibited subfield “PSDN”. | | | | | | | | | |
| **ASCII** |  | | | | | | | | | |
| **Expected Test Results** | 540b: An error “Prohibited records, fields or subfields used” must be triggered. | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | |