1. **Test Dataset: AA400014**

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

|  |  |
| --- | --- |
| **S‐58 Check** | **Description** |
| 7 | For each feature object with invalid AGEN, FIDN or FIDS values. |
| 13b | For each feature object of geometric primitive line which references multiple edges where the end node of a vector record is not identical to the beginning node of the following vector record. |
| 518a | For each FLODOC, DRGARE, LNDARE, HULKES, PONTON, DEPARE or UNSARE feature object of geometric primitive area where the GRUP subfield of the FRID is Not equal to 1 (Group 1). |
| 518b | For each feature object (excluding FLODOC, DRGARE, LNDARE, HULKES, PONTON, DEPARE and UNSARE of geometric primitive area) where the GRUP subfield of the FRID is Not equal to  2 (Group 2). |
| 531 | If the Dataset file name is not in accordance with the ENC Product Specification. |
| 1016 | If the calculated CRC value of a file is Not equal to that stated in the catalogue file. |
| 1518b | If the first 2 characters of the data set file name do not correspond to the value of the AGEN subfield of the DSID field. |

**Secondary Errors**

Critical – 13a, 42, 554

Error –

Warnings – 90b

|  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Dataset Name** | AA400014 | | | | | **S‐58 Check** | | 7 | | | **Type** | C |
| **S-58 Description** | For each feature object with invalid AGEN, FIDN or FIDS values. | | | | | | | | | | | |
| **Message** | Invalid values of AGEN, FIDN or FIDS. | | | | | | | | | | | |
| **Solution** | Amend AGEN, FIDN or FIDS value. | | | | | | | **Conformity** | | Part 3 (4.3.1) and  (4.3.2) | | |
| **Test Case No. 1** | FOID.AGEN has been assigned an invalid value. | | | | | | | | | | | |
| **Location** | | | **Feature** | | **Attributes** | | **FRID** | | **FOID** | | | **VRID** |
| 32°32'36.95"S 61°06'48.36"E | | | BOYSPP (P) | | BOYSHP=4; COLOUR=6; CATSPM=27 | | FE-29 | | 1C 0393032998 12345 | | | VI-01 |
| **vi-1** |  | | | | | | | | | | | |
| **Expected Test Results** | 7: An error “Invalid values of AGEN, FIDN or FIDS” must be triggered. | | | | | | | | | | | |
| **Secondary Critical Errors** | ~~1518a: An additional error “Data set file name does not begin with the agency code corresponding to that set in the AGEN subfield of the DSID field.” must be triggered.~~ | | | | | | | | | | | |
| **Test Case No. 2** | FOID.FIDN has been assigned an invalid value. | | | | | | | | | | | |
| **Location** | | **Feature** | | **Attributes** | | | **FRID** | | **FOID** | | | **VRID** |
| 32°33'01.96"S 61°07'53.63"E | | LNDMRK (P) | | CATLMK= 17; CONVIS= 2 | | | FE-30 | | AA 0000000000 12345 | | | VI-02 |
| **Screen Capture** |  | | | | | | | | | | | |
| **Expected Test Results** | 7: An error “Invalid values of AGEN, FIDN or FIDS” must be triggered. | | | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | | | |
| **Test Case No. 3** | FOID.FIDS has been assigned an invalid value. | | | | | | | | | | | |
| **Location** | | **Feature** | | **Attributes** | | | **FRID** | | **FOID** | | | **VRID** |
| 32°32'06.01"S 61°06'59.38"E | | SBDARE (P) | | NATSUR=1 | | | FE-33 | | AA 0000000267 00000 | | | VI-05 |
| **ASCII** |  | | | | | | | | | | | |
| **Expected Test Results** | 7: An error “Invalid values of FIDS” must be triggered. | | | | | | | | | | | |
| **Secondary Critical Errors** | None. | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Dataset Name** | AA400014 | | | | | **S‐58 Check** | | 13b | | | **Type** | C |
| **S-58 Description** | For each feature object of geometric primitive line which references multiple edges where the end node of a vector record is not identical to the beginning node of the following vector record. | | | | | | | | | | | |
| **Message** | Sequential edges do not have the same end and beginning nodes. | | | | | | | | | | | |
| **Solution** | Ensure end and beginning nodes of sequential edges  match. | | | | | | | **Conformity** | | Part 3 (5.1.3.2) | | |
| **Test Case No. 1** | RIVERS (L) feature created. | | | | | | | | | | | |
| **Location** | | **Feature** | | **Attributes** | | | **FRID** | | **FOID** | | | **VRID** |
| 32°33'08.68"S 61°08'00.31"E | | RIVERS (L) | | SCAMIN=599999 | | | FE-28 | | AA 0000004046 00001 | | | VE-23; VE-24 |
| **Screen Capture** |  | | | | | | | | | | | |
| **Expected Test Results** | 13b: error “Sequential edges do not have the same start and end nodes” must be  triggered. | | | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Dataset Name** | AA400014 | | | | | **S‐58 Check** | | 518a | | | **Type** | C |
| **S-58 Description** | For each FLODOC, DRGARE, LNDARE, HULKES, PONTON, DEPARE or UNSARE feature object of geometric primitive area where the GRUP subfield of the FRID is Not equal to 1 (Group 1). | | | | | | | | | | | |
| **Message** | Skin of the earth objects are not encoded as Group 1. | | | | | | | | | | | |
| **Solution** | Ensure that the FRID subfield GRUP is set to 1 (Group 1) for all skin of the earth feature objects. | | | | | | | **Conformity** | | 3.10.1 | | |
| **Test Case No. 1** | FLODOC, DRGARE, LNDARE, HULKES, PONTON, DEPARE or UNSARE features are created as a group 2 objects | | | | | | | | | | | |
| **Location** | | **Feature** | | **Attributes** | | | **FRID** | | **FOID** | | | **VRID** |
| 32°31'13.00"S 61°05'06.14"E | | DEPARE | | DRVAL1=30; DRVAL2=50 | | | FE-01 | | AA 0000000259 00001 | | | - |
| 32°30'34.87"S 61°08'00.66"E | | DEPARE | | DRVAL1=200; DRVAL2=300 | | | FE-02 | | AA 0000000270 00001 | | | - |
| 32°32'43.90"S 61°05'36.99"E | | DEPARE | | DRVAL1=50; DRVAL2=100 | | | FE-03 | | AA 0000000272 00001 | | | - |
| 32°33'57.90"S 61°09'12.05"E | | DEPARE | | DRVAL1=50; DRVAL2=100 | | | FE-04 | | AA 0000000679 00001 | | | - |
| 32°32'55.72"S 61°08'32.75"E | | DEPARE | | DRVAL1=2; DRVAL2=5 | | | FE-05 | | AA 0000003998 00001 | | | - |
| 32°32'40.10"S 61°07'20.63"E | | DEPARE | | DRVAL1=5; DRVAL2=10 | | | FE-06 | | AA 0000004043 00001 | | | - |
| 32°34'29.00"S 61°07'12.14"E | | DEPARE | | DRVAL1=10; DRVAL2=20 | | | FE-07 | | AA 0000003994 00001 | | | - |
| 32°31'25.81"S 61°07'10.20"E | | DEPARE | | DRVAL1=20; DRVAL2=200 | | | FE-08 | | AA 0000003992 00001 | | | - |
| 32°33'36.30"S 61°07'55.50"E | | DEPARE | | DRVAL1=0; DRVAL2=2 | | | FE-09 | | AA 0000004048 00001 | | | - |
| 32°32'07.13"S 61°08'16.34"E | | DRGARE | | DRVAL1=10;QUASOU=11 | | | FE-10 | | AA 0000004030 00001 | | | - |
| 32°32'18.02"S 61°08'41.00"E | | FLODOC | | - | | | FE-15 | | AA 0000004035 00001 | | | - |
| 32°33'31.88"S 61°07'08.00"E | | HULKES | | CATHLK=2 | | | FE-16 | | AA 0000004028 00001 | | | - |
| 32°33'06.34"S 61°07'57.03"E | | LNDARE | | - | | | FE-14 | | AA 0000003980 00001 | | | - |
| 32°32'46.72"S 61°08'07.43"E | | PONTON | | - | | | FE-17 | | AA 0000004026 00001 | | | - |
| 32°33'59.40"S 61°07'27.37"E | | UNSARE | | - | | | FE-11 | | AA 0000004038 00001 | | | - |
| **Expected Test Results** | 518a: An error ”Skin of the earth objects are not encoded as Group 1” must be triggered. | | | | | | | | | | | |
| **Secondary Critical Errors** | ~~19: An additional error “edge coincides with data limit border, but has no USAG=C in object” must be triggered.~~  42: An additional error “edge is common border of more than two TG1 objects” must be triggered. | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Dataset Name** | AA400014 | | | | | **S‐58 Check** | | 518b | | | **Type** | C |
| **S-58 Description** | For each feature object (excluding FLODOC, DRGARE, LNDARE, HULKES, PONTON, DEPARE and UNSARE of geometric primitive area) where the GRUP subfield of the FRID is Not equal to  2 (Group 2). | | | | | | | | | | | |
| **Message** | Group 2 objects are not encoded as Group 2. | | | | | | | | | | | |
| **Solution** | Ensure that the FRID subfield GRUP is set to 2 (Group 2) for all non-skin of the earth feature objects. | | | | | | | **Conformity** | | 3.10.2 | | |
| **Test Case No. 1** | These features are captured as a group 1 objects | | | | | | | | | | | |
| **Location** | | **Feature** | | **Attributes** | | | **FRID** | | **FOID** | | | **VRID** |
| 32°32'36.95"S 61°06'48.36"E | | BOYSPP | | - | | | FE-29 | | 1C 0393032998 12345 | | | VI-01 |
| 32°32'52.57"S 61°08'06.05"E | | COALNE | | - | | | FE-19 | | AA 0000003983 00001 | | | VE-21 |
| 32°32'55.17"S 61°08'51.74"E | | DEPCNT | | - | | | FE-20 | | AA 0000003989 00001 | | | VE-12 |
| 32°32'25.00"S 61°07'41.61"E | | DEPCNT | | - | | | FE-21 | | AA 0000003986 00001 | | | VE-10 |
| 32°32'53.53"S 61°09'22.32"E | | DEPCNT | | - | | | FE-22 | | AA 0000000264 00001 | | | VE-08 |
| 32°31'16.06"S 61°05'13.13"E | | DEPCNT | | - | | | FE-23 | | AA 0000000265 00001 | | | VE-01 |
| 32°31'21.76"S 61°07'58.03"E | | DEPCNT | | - | | | FE-24 | | AA 0000000269 00001 | | | VE-03 |
| 32°32'23.67"S 61°06'18.49"E | | DEPCNT | | - | | | FE-25 | | AA 0000000271 00001 | | | VE-06 |
| 32°32'36.29"S 61°08'07.02"E | | DEPCNT | | - | | | FE-26 | | AA 0000003985 00001 | | | VE-11 |
| 32°34'44.06"S 61°07'18.71"E | | DEPCNT | | - | | | FE-27 | | AA 0000003990 00001 | | | VE-17 |
| 32°33'01.96"S 61°07'53.63"E | | LNDMRK | | - | | | FE-30 | | AA 0000000000 12345 | | | VI-02 |
| 32°32'24.00"S 61°07'24.50"E | | M\_COVR | | - | | | FE-18 | | AA 0624991259 12345 | | | - |
| 32°32'24.00"S 61°07'24.50"E | | M\_QUAL | | - | | | FE-13 | | AA 0000004050 00001 | | | - |
| 32°32'24.00"S 61°07'24.50"E | | M\_NSYS | | - | | | FE-12 | | AA 0000000262 00001 | | | - |
| 32°32'59.36"S 61°08'03.72"E  32°33'23.58"S 61°07'57.39"E | | RIVERS | | - | | | FE-28 | | AA 0000004046 00001 | | | VE-23; VE-24 |
| 32°30'47.38"S 61°07'56.38"E | | SBDARE | | - | | | FE-32 | | AA 0000000266 00001 | | | VI-04 |
| 32°32'06.01"S 61°06'59.38"E | | SBDARE | | - | | | FE-33 | | AA 0000000267 00000 | | | V1-04 |
| 32°31'17.31"S 61°08'53.18"E | | SBDARE | | - | | | FE-34 | | AA 0000000685 00001 | | | VI-06 |
| - | | SOUNDG | | - | | | FE-35 | | AA 0763538920 12345 | | | VI-07 |
| 32°31'26.31"S 61°07'25.01"E | | WRECKS | | - | | | FE-31 | | AA 0000000686 00001 | | | VI-03 |
| **Expected Test Results** | 518b: An error “Group 2 objects are not encoded as Group 2” must be triggered. | | | | | | | | | | | |
| **Secondary Critical Errors** | 554: An additional error “edge is shared by M\_COVR with CATCOV=1 and more than one TG1 object” must be triggered. | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Dataset Name** | AA400014 | | | | | **S‐58 Check** | | 531 | | | **Type** | C |
| **S-58 Description** | If the Dataset file name is not in accordance with the ENC Product Specification. | | | | | | | | | | | |
| **Message** | Dataset file name is not in accordance with the ENC Product Specification. | | | | | | | | | | | |
| **Solution** | Amend file names. | | | | | | | **Conformity** | | 5.6.3 | | |
| **Test Case No. 1** | Dataset file name amended according to the error description. | | | | | | | | | | | |
| **ASCII** |  | | | | | | | | | | | |
| **Expected Test Results** | 531: An error “file name is not in accordance with ENC product specification: Invalid producer code Reference” must be triggered. | | | | | | | | | | | |
| **Secondary Critical Errors** | ~~85: An additional error “producing agency code in FOID differs from that in DSID” must be triggered.~~  1518b: An additional error “illegal value of DSID.AGEN - is not the same as the first two characters of the data set file name” must be triggered. | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Dataset Name** | AA400014 | | | | | **S‐58 Check** | | 1016 | | | **Type** | C |
| **S-58 Description** | If the calculated CRC value of a file is Not equal to that stated in the catalogue file. | | | | | | | | | | | |
| **Message** | CRC values do not match. | | | | | | | | | | | |
| **Solution** | Amend CRC value. | | | | | | | **Conformity** | | Appendix B.1 (5.9.1) | | |
| **Test Case No. 1** | CRC value in CATALOG file is incorrect. | | | | | | | | | | | |
| **Screen Capture** | - | | | | | | | | | | | |
| **Expected Test Results** | 1016: An error “CRC values do not match” must be triggered. | | | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Dataset Name** | AA400014 | | | | | **S‐58 Check** | | 1518b | | | **Type** | C |
| **S-58 Description** | If the first 2 characters of the data set file name do not correspond to the value of the AGEN subfield of the DSID field. | | | | | | | | | | | |
| **Message** | Data set file name does not begin with the agency code corresponding to that set in the AGEN  subfield of the DSID field. | | | | | | | | | | | |
| **Solution** | Amend the first 2 characters of the data set file name. | | | | | | | **Conformity** | | 2.2.1 | | |
| **Test Case No. 1** | First 2 characters of the data set file name has been amended. | | | | | | | | | | | |
| **Screen Capture** |  | | | | | | | | | | | |
| **Expected Test Results** | 1518b: An error “illegal value of DSID.AGEN - is not the same as the first two characters of the data set file name” must be triggered. | | | | | | | | | | | |
| **Secondary Critical Errors** | 531: An additional error “file name is not in accordance with ENC product specification: Invalid producer code Reference” must be triggered. | | | | | | | | | | | |