

SOP 8: Processed CNV Files (OC_C Creation)

Version 1

Revision History Log:

Prev. Version #	Revision Date	Author	Changes Made	New Version #
[none]	Oct. 2010	S. Danielson, W. Johnson, L. Sharman, G. Eckert, B. Moynahan	Initial version	1

Summary

At the end of the survey year, the certified HEX files along with the latest CON file are retrieved from SEAN and copied to the park file server. Sea-Bird SBEDataproce.exe software is executed under script control, creating the CNV files.

Once created, the individual CNV files are zipped into one file for the year. The Project Leader submits the one file to the Data Manager as OC_C. Validation / quality assurance iterations are performed until the Project Leader is satisfied the data are as accurate and complete as is practical. The Project Leader certifies the deliverable and the Data Manager arranges for repository, dissemination, and metadata update.

Two profile plots of each fully processed CNV file are also generated by the SBEDataproce script. The plots are retained by the Project Leader for later creation of deliverable OC_M - Data Evaluation.

Note: before executing this procedure, it may be helpful to review protocol Appendix H regarding standard directory structures and Appendix I regarding Sea-Bird software layout.

SOP 8 requires users to work in the internal NPS network under valid Active Directory accounts. Access questions should be directed to the Data Manager.

Detailed Steps

1. Project Leader Tasks

1. Obtain the latest certified HEX files.

1. Delete all data files in
\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\HEX_raw\.
2. Download the certified OC_B deliverable from web site
http://science.nature.nps.gov/im/units/sean/OC_Main.aspx to file server directory
\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\HEX_raw\.
3. Unzip its files using Windows explorer
 1. Double-click the downloaded zip file.

2. *A pane showing all the HEX files will open – select them with the mouse and drag to the main folder of*
`\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\HEX_raw\`.
 3. *It could take awhile to extract the typical number of files.*
2. **Obtain the most recent certified CON file for the season.**
 1. Delete all files in
`\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\CON_Calibration\`.
 2. Download the most recent certified OC_A deliverable for the year to
`\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\CON_Calibration\`. The appropriate file is the most recent one for the CTD in use which internally contains sensor calibration records all dated prior to the start of the cruise.
3. **Using Windows Explorer, create a folder for the CNV output at**
`\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\CNV_processed` **where yyyy is the year surveyed.**
 1. Within that folder, create a subdirectory named “temp”.
 2. If the CNV_Processed folder already exists from an earlier attempt, delete all its existing files, including those in the temp directory, using Windows Explorer.
4. **Use SBEDataproc.exe to generate one CNV file from each HEX file.**
 1. Be aware of inherent software limitations as detailed in SOP 7.
 2. The final output CNV files will be directed to
`\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\CNV_processed\`.
 1. *The file will be named yymm_C_dddd_cc_suffix.CNV*
 1. yy is year, mm is month, C is CTD#, dddd is dump#, and cc is cast number.
 2. Suffix refers to a set of single letters separated by underscores that get generated as a byproduct of the software process. A typical suffix is “c_f_a_m_l_d_b”.
 3. Invoke the automation scripts by double-clicking the provided desktop icon or, if no icon is available, double-clicking this entry in Windows explorer: C:\Program Files\Sea-Bird\CNV_Create.bat. A “DOS command box” will appear.
 4. Invoke the automation scripts by double-clicking the provided desktop icon or, if no icon is available, double-clicking its BAT file in Windows explorer.
 1. *Each CTD has its own version of the script. For example, CTD #1 uses*
`C:\Program Files\Sea-Bird\#1CNV_Create.bat`. *CTD #5 uses* `C:\Program Files\Sea-Bird\#5CNV_Create.bat`.
 2. *Details of program configuration are provided in Appendix I.*
 5. A “DOS command window” will appear and prompt the user for parameters.
 1. *Provide the 4-digit year in response to the prompt.*
 2. *Enter the name of the calibration file to use.*
 1. Generally, this is the file most current at the beginning of the survey year.
 2. Enter the filename and extension only.
 1. For example, 1_0436a.con
 2. Do not attempt to specify any directory information. The locations of calibration files for each year are pre-defined.
 6. While nothing may appear to be happening, processes are starting in the background. Each one may take several minutes to appear on the screen. Be patient.
 7. A Windows dialog box will appear titled “Data Conversion”
 1. *It shows parameters used and provides the status of file processing.*
 2. *As long as file processing progress is shown, nothing should be touched in the dialog box.*

3. *Message boxes indicating errors in a particular file may appear.*
 1. The messages are terse but do explain the nature of problems.
 2. Generally, they can be dismissed by pressing the OK button.
 3. If presented a message box asking “Do you want to process the next file?”, one may generally press YES.
 1. A few defective files should not be grounds for cancelling the deliverable.
4. *This subprocess will be over when the “Data Conversion” dialog box disappears.*
8. Dialog boxes will similarly appear and disappear as the following additional processes execute: Filter, Align CTD, Cell Thermal Mass, Loop Edit, Derive, Bin Average, Sea Plot ‘A’ series, Sea Plot ‘B’ series.
 1. *Note and dismiss any warning messages as they appear.*
 2. *Errors serious enough to halt the process are possible.*
 1. Appendix I provides details helpful in diagnosis.
 2. The latest Sea-Bird software manual may explain how to recover.
 3. The Data Manager may be able to assist.
9. Once the whole process completes, several sets of files will be created.
 1. *\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\CNV_processed\ will contain the final CNV files to be used in assembling OC_C.*
 2. *\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\Plot\CNV\ will contain a pair of plots for each cast.*
 1. These are based on the fully processed CNV files.
 2. They should be similar but not identical to the QA plots in the ...Plot\HEX\ subdirectory.
 3. *\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\CNV_processed\temp\ will contain the intermediate files left by each subprocess.*
 1. These are left behind for diagnostic purposes.
 2. They are not to be reported to SEAN.
 3. They should be deleted once OC_C is successfully certified.
5. **Zip all the CNV files in**
\\nps\akrdfs\GLBA\Science\Data\Oceanography\Data\yyyy\CNV_processed\ into a single file stored in the same folder.
 1. Bring up the CNV_processed folder in Windows explorer
 2. Select all files.
 1. *Left click one of the CNV files to select it.*
 2. *Press Control-A to select the remaining.*
 3. *If any files other than types CNV were in the folder, deselect them by holding down the control key and left clicking each one. Be certain to deselect the “temp” directory.*
 3. Create a single ZIP file containing all final CNV files using WinZip or similar software
 1. *In Windows explorer, right click one of the selected files.*
 2. *From the menu that appears, point to WinZip.*
 1. If WinZip is not on the menu, contact IT support for help.
 3. *On the sub-menu that appears, select “Add to Zip File...”*
 4. *On the “Add” dialog box that appears, add the final product’s filename to the existing path.*
 1. The default path shown should be the folder containing the CNV files.
 2. Name the archive file CNV_yyyy_a.zip .
 1. ‘yyyy’ is the calendar year.

2. Sequence letter 'a' is A for first attempt, B for second, etc.
3. For example, the second attempt at creating a valid 2012 OC_C deliverable would use filename CNV_2012_B.ZIP.
5. *Press the "Add" button and the new file will be created from all selected files.*
4. Submit the deliverable file via email notification to the Data Manager for validation.
 1. Specify in the message body it is deliverable OC_C, as defined in protocol OC-2010.1.
 2. Specify the fully qualified filename that the ZIP resides in.
 3. Do not attach the ZIP file to the email, as it may be too large to be delivered.
 4. Do not alter the deliverable file after the submission email has been sent; that could break the validation process.

2. Data Manager Tasks

1. **On receipt of the submission, assign the next formal Submission Number to this file, as found in the master Submission_Log table.**
 1. Use the "Update Submission Log" web tool at http://165.83.57.239/0_submission_update.aspx.
 2. Complete Submission_Log details up through the Submission_Date column.
 1. *The submission status must be P for pending.*
2. **Network copy the file into the staging area for validation at [\\inpglbafs03\data\SEAN_Data\Staging\OC\OC_C](\\inpglbafs03\data\SEAN_Data\Staging\OC\OC_C).**
3. **Ensure its name meets the standards defined in Appendix J.**
 1. Put it in its own subdirectory whose name is the same as the submission number.
4. **Unzip the file into its component CNV files in the staging area.**
5. **Invoke validation of the CNV files according to current criteria by using the web program at http://165.83.57.239/OC_DM_validate_OCC.aspx.**
 1. Select the pending OC_C submission from among those shown.
 2. Validation summary results automatically are recorded in the Submission_Log.
6. **If submission fails mandatory criteria, reply with a "failure email" that includes:**
 1. The submission number assigned
 2. The deliverable ID
 3. The protocol ID
 4. A specific list of all the mandatory criteria failed
 1. *Copy and paste the "findings" panel of OC_DM_validate_OCC.aspx into the email message.*
 2. *Alternatively, attach the "findings.htm" file that was automatically created in the staging subdirectory.*
7. **If submission passes mandatory criteria, reply with a "success email" that includes:**
 1. The submission number assigned
 2. The deliverable ID
 3. The protocol ID
 4. Documentation listing any specific optional criteria failed
 5. Request to certify deliverable as complete

3. Project Leader Tasks

1. **On receipt of a failure email:**
 1. Make corrections so the deliverable meets mandatory criteria.
 2. Restart the process from the beginning of the post-season component section.

2. On receipt of a success email, review any failed optional criteria:

1. If these are acceptable:
 1. *Reply with a “certification email” stating the deliverable is certified and may be disseminated.*
 2. *Delete the obsolete intermediate files contained in ...\\CNV_Processed\\temp\\.*
2. If these are unacceptable:
 1. *Reply with a “withdrawal email”, stating the deliverable is withdrawn.*
 2. *Take remedial action to obtain a corrected deliverable.*
 3. *Restart the process from the beginning.*

4. Data Manager Tasks

1. On receipt of a withdrawal email:

1. Mark the withdrawal in the Submission_Log’s Status column using the web tool.
2. Terminate the process.

2. On receipt of a certification email:

1. If sensitive information is in the unzipped deliverable:
 1. *Products containing sensitive information cannot be disseminated.*
 2. *Mark the Submission_Log’s Status column as Sensitive using the web tool.*
 3. *Copy the submitted single zip file to test environment as AUXREP\OC\OC_C\SENSITIVE\CNV_yyyy.zip (no version letter in name).*
2. If NO sensitive information is in the unzipped deliverable:
 1. *Copy the submitted single zip file to test environment at AUXREP\OC\OC_C\CNV_yyyy.zip.*
 2. *Create web page links to the new file.*
 3. *Mark the certification in the Status column in Submission_Log using the web tool.*
3. Propagate from test to production environment.
4. Verify any non-sensitive deliverable is accessible from production web site.
5. Update the annual deliverable tracking spreadsheet with the date of completion for OC_C.
6. Do not delete the individual CNV files from the staging area. They will be immediately needed for generating OC_D.

3. Update the scope of the formal metadata so it includes the new date coverage.

