

**SCALE SQA Coordinator Procedure
For Data Revisions**

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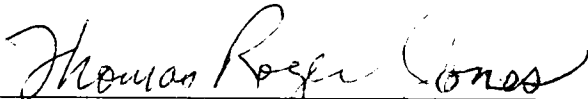
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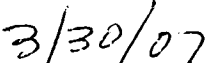
SCALE Project Leader



Date



Quality Program Manager, NSTD



Date

SCALE SQA Coordinator Procedure For Data Revisions

1.0 PURPOSE

To describe a standardized operational procedure to be followed for implementation of SCALE data file revisions on all computer platforms where SCALE is configuration controlled. The procedure outlined in this document complies with the Configuration Management Plan (CMP) for the SCALE code system which is controlled by the NSTD Nuclear Systems Analysis, Design, and Safety (NSADS) Group.

2.0 SCOPE

This procedure covers modifying and testing SCALE production data files on all computer platforms where SCALE is configuration controlled. The procedure complies with the requirements of the SCALE Configuration Management Plan (CMP) for the SCALE Data Revision Report (DRR) forms.

3.0 PROCEDURE

3.1 Initiating a DRR

- 3.1.1 The Code Manager requests the DRR form from the SCALE Software Quality Assurance (SQA) Coordinator whenever modifications need to be made to a permanent or sample input dataset.
- 3.1.2 Items in Part I of the DRR form which are to be completed by the SQA Coordinator are described below:
 - 3.1.2.1 **DRR Report No.** – Assign a sequence number “YY-NNN” to the DRR. “YY” represents the last two digits of the current year and “NNN” represents a three digit sequence number beginning as “001” and increasing by one each time a new DRR is requested. This complete sequence of numbering restarts at the beginning of each calendar year.
 - 3.1.2.2 **Production Dataset Name** – Enter the name of the dataset that is being modified.
- 3.1.3 Enter the information in the DRR log and give the DRR form to the Code Manager.
- 3.1.4 The signature of the Project Leader in Part V is required before the SQA

Coordinator may incorporate the software revisions as specified in the remainder of this procedure.

3.2 Archiving and Updating the Current Production Data File

- 3.2.1 Prior to updating a production data file, the current data file should be archived by copying or moving it to an archive directory. If the file is copied using the “cp” command, be sure that the “-p” flag is used to preserve the time and date the file was last modified. If there are both ASCII and binary forms of a data library, both data files should be archived.
- 3.2.2 A newly modified data file must be obtained from the location specified on Part III of the DRR.
- 3.2.3 Enter the names of the archived and the new production data files and paths on Part VI of the DRR.
- 3.2.4 Update the command file for executing SCALE if any of the production data file names were changed (e.g., the “*revnn*” qualifier was increased) and note the date under “Date of Cataloged Procedure Update” on Part VI of the DRR. Otherwise, mark “N/A”.

3.3 Executing the Test Problem(s)

- 3.3.1 Copy all test problems designated in Part V to the test directory. The naming convention for the test problems is drrYY-NNN.inp, where YY-NNN is the DRR sequence number.
- 3.3.2 Run all test problems.
- 3.3.3 Use a text editor to examine the output and message files to verify successful execution of the test cases. The results should be compared with those obtained previously by the Code Manager.
- 3.3.4 If the results do not agree, notify the Code Manager. Appropriate action to rectify the problem is taken under the direction of the Code Manager or Project Leader.
- 3.3.5 If the results agree, enter comments such as, “Results of testing were as expected.” Sign and date Part VI of the DRR.
- 3.3.6 If sample problem input files were updated, the Code Manager must complete and sign the Sample Problem Verification Form.

3.4 Completing Documentation

- 3.4.1 Copy the QA Comments from the DRR documentation into an email notification message to ORNL SCALE users. The email notification should be addressed to scale@home.ornl.gov. (Local users may request to be added to the email list by contacting the SQA Coordinator or the Project Leader.) Also enter the information into the summary of SCALE updates for local users on the internal ORNL website.
- 3.4.2 If document changes to the SCALE Manual are attached or pending, attach a copy to the DRR and send the original to the SCALE Manual reports specialist.
- 3.4.3 Update the DRR log, recording dates for the updated data file(s) and completion date for test problems.
- 3.4.4 File the original DRR form in the Data Revision Report binder and an electronic copy on the SQA Coordinator's PC.
- 3.4.5 Enter the date of change for all affected data files in the Configuration Control List (CCL).
- 3.4.6 Enter the DRR report number into the Quality Assurance Log.

3.5 Quarterly Reports

- 3.5.1 Generate quarterly Configuration Control Lists (CCLs) for sample problem input files and data libraries.
- 3.5.2 Type the SCALE-CCL-XXX number on each CCL, where "XXX" is an incremental counting number, and enter the number into the Quality Assurance Log.
- 3.5.3 Sign and date the CCL. Obtain the Project Leader's signature.
- 3.5.4 File the original CCL in file cabinet labeled "Quality Assurance Records" under the appropriately labeled folder.
- 3.5.5 File copies of each CCL, Quality Assurance Log, and all DRR forms processed during the quarter at the duplicate file location.