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CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES QUALITY ASSURANCE SURVEILLANCE REPORT

PROJECT NO.: 20-5708-159

REPORT NO.: 97-06

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SURVEILLANCE SCOPE: Review of Files of Software Controlled by TOP-018 for Completeness, Accuracy, etc

REFERENCE DOCUMENTS: TOP-018

STARTING DATE: March 31, 1997

ENDING DATE: March 31, 1997

QA REPRESENTATIVE: R. D. Brient *R. Brient*

PERSONS CONDUCTING TEST/EXAM/ACTIVITY: B. Mabrito, Software Custodian

SATISFACTORY FINDINGS:

Files for each of the controlled software and software in development have been established. A sample of the files were reviewed for required content, with the following observations:

3DStress version 1.1 An SRD is included in the file, but not indicated on the software control checklist. As existing software, the SRD is not required, but the checklist should indicate the content of the file.

3DStress version 1.2 No design verification report is on file, although the checklist indicates so. The checklist does not indicate that the other design verification checks were done and there is no evidence on file. Installation test documentation was not signed by the developer and EM, although signature blocks were provided on the report. (see unsatisfactory findings)

ABAQUS version 5.5 No comments.

BREATH version 1.1 No comments.

CDOCS version 1.0 The checklist indicates that installation testing is documented in a separate notebook, but no indication is given for its identity or location. A draft user manual is mentioned, but no specific title, date, or location is identified. No title, date or storage location are provided for the technical description (no indication is given that the user manual may suffice as the technical description). Several ancillary memos are included in the file having no direct bearing on software control.

CHAINT version 2.3 The documents satisfying TOP-018 requirements are not identified by title on the checklist. The file includes software validation information, but the validation test plan and validation report have not been technically reviewed as required by TOP-018. It was uncertain whether the EM had identified CHAINT for validation.

EBSPAC version 1.0 A memo in the file indicating "formal release" of the software was misdated as 1996. It is unclear why this memo was issued when the Software Release Notice (also in the file and required by TOP-018) serves the same purpose, and is the only valid mechanism for software release. The file did not include a design verification report, although the checklist indicated so. Several ancillary memos having no direct bearing on software control are included in the files. Documentation of installation testing consists of an e-mail memo (also containing unrelated information) from a software consultant rather than from the software user or developer. No reference is made to a Scientific Notebook entry, the actual test case run, or computer used for the installation test. (see unsatisfactory finding)

UNSATISFACTORY FINDINGS: 3DStress version 1.2 and EBSPAC version 1.0 appear to have been released without the required design verification activities having been completed or documented in a design verification report.

NONCONFORMANCE REPORT NO.: 97-03

ATTACHMENTS: none

RECOMMENDATIONS/ACTIONS: The software control checklist are an informal mechanism to assure that all required control steps and associated documentation are performed and prepared. These may also be used as a table of contents for the software files, particularly if the documentation is not specifically located in the software file (in a Scientific Notebook, etc). Many of the checklists could be more beneficial if more information were provided.

APPROVED:

Diana Malando
CNWRA DIRECTOR OF QUALITY ASSURANCE

DATE:

3/8/97

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