



CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES QUALITY ASSURANCE SURVEILLANCE REPORT

PROJECT NO: 20.06002.01.031

REPORT NO: 2003-13

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SURVEILLANCE SCOPE: Development and control of software

REFERENCE DOCUMENTS: TOP-018, Development and Control of Scientific and Engineering Software
QAP-004, Surveillance Control
Software Validation Test Plan for TPA Version 5.0 Code
Corrective Action Request (CAR) 2001-04

STARTING DATE: June 30, 2003

ENDING DATE: July 1, 2003

QA REPRESENTATIVE: R. Folck

R. Folck 7/2/03

PERSONS CONDUCTING TEST/EXAM/ACTIVITY: R. Janetzke, G. Wittmeyer, B. Winfrey, P. Seely, D. Turner, M. Smith, A. Jank, G. Adams.

SATISFACTORY FINDINGS:

- The QA record copy of BREATH, Version 1.2 and FITEQL, Version 2.0 codes were successfully installed in accordance with documented installation instructions by a CNWRA MIS staff member with one exception. A floppy disk contained in the FITEQL folder could not be read, apparently due to the age of the floppy disk and/or the age of the original recording equipment. Applicable files were obtained from the user and added to a newer floppy disk. See recommendations below.
- The approach being used in the validation testing of TPA code version 5.0 was found to be thorough and effective. Test procedures, test environment, assumptions, test results and evaluation criteria are documented on validation test reports. Test personnel test boundary conditions as appropriate and if problems are identified, the nature of the problem and any related information is captured to ensure correction and follow-up. See recommendations below.

UNSATISFACTORY FINDINGS: None

NONCONFORMANCE REPORT NO: None

ATTACHMENTS: None

RECOMMENDATIONS/ACTIONS: See page 2.

APPROVED: *R. Folck*

CENTER DIRECTOR OF QUALITY ASSURANCE

DATE: *7/3/03*

DISTRIBUTION:

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ORIGINATOR - R. Folck
PRICIPAL INVESTIGATORS
ELEMENT MANAGERS
TECHNICAL & ADMINISTRATIVE DIRECTORS
M. Ehnstrom

RECOMMENDATIONS/ACTIONS:

1. Since computer hardware and recording medium are going through such rapid change, consider copying all existing code related floppy disks in the QA Records to CDs to ensure retrievability of needed data.
2. Validation of TPA code version 5.0 is well documented but the following should be considered:
 - When an input value or range of values are viewed as **critical** to the execution of a test (e.g. number of realizations, number of pixels, etc.) and their selection may be a subject of future debate, the rational for the selection of these input values should be recorded in the validation test report.
 - The User's Guide for TPA Version 5.0 code should fully describe the functionality contained in the TPA code. To ensure each function described in the User's Guide has been thoroughly tested, consider documenting a test coverage matrix (e.g. test case-to-function) in the User's Guide. A test coverage matrix should also help in regression testing when further modifications are made.