



## CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES QUALITY ASSURANCE SURVEILLANCE REPORT

PROJECT NO: 20-1402-159

REPORT NO: 2000-12

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SURVEILLANCE SCOPE: Software Development &amp; Control

REFERENCE DOCUMENTS: TOP-018, Development and Control of Scientific and Engineering Software

STARTING DATE: May 12, 2000

ENDING DATE: May 19, 2000

QA REPRESENTATIVE: R. Folck

R. Folck 5/19/00

PERSONS CONDUCTING TEST/EXAM/ACTIVITY: R. Janetzke, B. Mabrito, N. Sridhar, L. Yang, V. Jain, R. Fedors, J. Stamatakos, S. Painter

**SATISFACTORY FINDINGS:**

Verified implementation of selected portions of TOP-018 for developed and acquired software listed on page 2.

**UNSATISFACTORY FINDINGS:**

Design verification was not documented for acquired code UDEC, Version 3.1 as required by TOP-018, Section 5.8. This problem is documented on previously issued nonconformance report 2000-03.

NONCONFORMANCE REPORT NO: None

ATTACHMENTS: None

**RECOMMENDATIONS/ACTIONS:**

- The Software Custodian maintains a copy of the software and related information as QA records. When a version of software is updated or a previous version is retired, relevant information (e.g. SRD) from the previous version should be brought forward and placed in the current version's file folder.
- Provide TOP-018 training to focus on recent enhancements such as tailoring of SDPs and use of SCRs for documentation of minor "bug" fixes.
- Change TOP-018 to clearly specify that all three conditions noted in section 5.4.1 must be satisfied for a waiver of an SDP may be granted by the EM.

APPROVED: \_\_\_\_\_

*Steve Malin*  
CENTER DIRECTOR OF QUALITY ASSURANCE

DATE: \_\_\_\_\_

5/22/2000

**DISTRIBUTION:**

ORIGINAL -

 CENTER QA DIRECTOR / QA Records  
 ORIGINATOR - R Folck  
 PRINCIPAL INVESTIGATOR (above)  
 ELEMENT MANAGERS  
 B Sagar, H Garcia, M Ehnstrom

Name/Version	Category	Comments
TPA, V4.0	Developed	Design verification completed 3/31/00. Accepted by NRC 04/24/00 pending evaluation of User's Guide.
UDEC, Version 3.1	Acquired	Software Release Form issued under 04/19/00. Design verification not completed.
KINEROS2, Version 00_04 or 1.4	Acquired	Design verification completed June 15, 2000.
HILLS, Version 90-4	Acquired	Code evaluated and will not be used. Copy of code placed in folder of report entitled, "Upper Split Wash Modeling in Support of Shallow Infiltration Estimates."
TECTRAN, Version 1.0	Developed	SRD developed. Pending further documentation. Estimated release June 2000.
PRETEAT, VERSION 0	Developed	Excel spreadsheets and user interface. Used for Hanford project. Controlled under QAP-014, Documentation and Verification of Scientific and Engineering Calculations. Hand calculations documented in Scientific Notebook No. 352.
JBA_HAZ	Acquired	Estimated that this code will be acquired June 2000.
3DMove	Acquired	Not to be used for NRC-related activities. TOP-018 control pending EM disposition.
MULTIFLOW, Versions 1.2	Developed	Design verification completed 3/2/00.
MULTIFLOW, Versions 1.2.1	Developed	Released to fix minor bug. Design verification completed May 19, 2000.