



**GEOSCIENCES AND ENGINEERING DIVISION  
QUALITY ASSURANCE  
SURVEILLANCE REPORT**

PROJECT NO.:N/A

REPORT No.:2007-20

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SURVEILLANCE SCOPE: Total-System Performance Assessment (TPA) Code Version 5.1

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

START DATE:  
September 18, 2007

END DATE:  
October 12, 2007

QA REPRESENTATIVE:  
Randolph Folck

PERSONS CONDUCTING ACTIVITY: R. Brient, R. Janetzke, J. Winterle

**SATISFACTORY FINDINGS:**

TPA, Version 5.1 software was modified and released as TPA, Version 5.1a. In accordance with TOP-018:

- Software changes were documented on Software Change Report (SCR) No. 695. The SCR documents the nature of the change and acceptance testing. SCR 695 was approved August 31, 2007.
- Regression testing was performed to determine whether the changes affected previously validated functions. Regression testing was documented in a test report and included with SCR 695.
- The modified software was released under Software Release Notice (SRN) No. 433 on September 25, 2007. The SRN references SCR 695 and regression testing.

The Software Development Plan for TPA is being updated to more fully address the TPA software change control process. Staff are addressing NRC comments regarding the change authority for the TPA software.

UNSATISFACTORY FINDINGS: None.

NCR NO.: None

CAR NO.: None

ATTACHMENTS: None

**RECOMMENDATIONS/ACTIONS:**

- Suggest modification of TOP-018, section 5.8.9 to more fully describe documentation requirements for regression testing of previously validated software.
- Consider posting the TPA regression test report as a sample or template.

APPROVED:

*M. S. Jones for R. Brient*

DATE: 10/24/07

DISTRIBUTION:

ORIGINAL—QA RECORDS

DIRECTOR, QA

ASSISTANT DIRECTOR: Mohanty

MANAGER: Winterle

PRINCIPAL INVESTIGATOR: Janetzke