



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

PROJECT NO.:N/A

REPORT No.:2007-07

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SURVEILLANCE SCOPE: Total-System Performance Assessment (TPA) Code Version 5.1 Validation Test Planning and Configuration Change Control

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

START DATE:
March 6, 2007

END DATE:
March 8, 2007

QA REPRESENTATIVE:
Randolph Folck

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

SATISFACTORY FINDINGS:

- The TPA, Version 5.1 software validation plan has been developed and is being reviewed in accordance with the requirements of QAP-002. The validation plan outlines seventeen (17) process-level validation tasks and four (4) system-level validation tasks. The validation plan includes test objectives, responsibilities, hardware and software configuration requirements, regression testing methodology, and a high level schedule. Specific test methods, test procedures, test inputs and expected outputs will be developed by the test teams and documented on Software validation Reports (SVRs).
- A total of nineteen (19) TPA Software Change Reports (SCRs) are outstanding. Seventeen (17) SCRs have been implemented and require acceptance testing and two (2) SCRs require implementation and acceptance testing. TPA SCR status is tracked via a code development list. TPA code configuration status is maintained using SCCS. Verified the configuration status of SCRs 658, 664 and 605.
- Reviewed the acceptance test report for SCR 658. The SCR includes test inputs, test environment, a detailed test procedure, acceptance criteria and an analysis of test results.

UNSATISFACTORY FINDINGS: None.

NCR NO.: None

CAR NO.:None

ATTACHMENTS: None

RECOMMENDATIONS/ACTIONS:

- TPA SVRs for the seventeen (17) process-level validation tasks and four (4) system-level validation tasks will require technical review. Consider developing special instruction to technical reviewers that focus on test case design concepts, e.g., boundary-value analysis, test coverage, error-guessing, stress testing, etc.
- Consider performing routine configuration audits to verify: (1) completion of acceptance testing, (2) incorporation of modified code into the TPA baseline, and (3) accuracy of configuration status accounting tools, SCCS and the TPA code development status list.

APPROVED:



DATE: 3/8/2007

DISTRIBUTION:

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