GEOSCIENCES AND ENGINEERING DIVISION
QUALITY ASSURANCE
SURVEILLANCE REPORT

PROJECT NO. 06002.01.161, 352, 354-7, 362, 372	REPORT No.: 2007-19	Page 1 of 2

SURVEILLANCE SCOPE: CNWRA Performance Assessment (PA) activities; including Methodology and Overall System Performance (MOSP), Total Performance Assessment (TPA) Code Development, Redistribution of Radionuclides in Soil (RRS), Biosphere Characteristics (BC), and Public Outreach (PO).

REFERENCE DOCUMENTS: QAPs-001, 005, 007; TOP-018; AP-001

START DATE: 9/12/07	END DATE: 9/25/07	QA REP: M. Simpson

PERSONS CONDUCTING ACTIVITY (persons contacted):
J. Winterle (Mgr.), R. Benke, J. Durham, L. Howard, R. Janetzke, J. Mancillas, R. Nes, O. Osidele, O. Pensado, O. Povetko, M. Juckett, D. Hooper, S. Biswas, N. Adams, A. Simpkins. In addition to those listed above, personnel records were checked for P. LaPlante and A. Kouznetsov (consultant).

SATISFACTORY FINDINGS:

General Observations:

Much recent PA work, e.g., TPA/User Guide, does not easily lend itself to assessment by routine programmatic surveillance methods. It is, therefore, somewhat difficult to draw meaningful programmatic conclusions. However, taking this into consideration, PA activities do appear to be generally compliant with GED QA program and associated requirements.

Personnel qualification, training, and conflict of interest (CO) records are complete and up to date for all personnel listed above. Quality Requirements Application Matrices (QRAMs) were not reviewed during this surveillance as all QRAMs are currently being revised during annual Operations Planning and will be reviewed/approved as part of that process. PA has no current laboratory or field work. Except for the TPA code itself, software used for recent PA work is in the off-the-shelf/commercially available category or is NRC-endorsed. Note; the TPA code (and other GED software) is specifically assessed in other, software-specific GED surveillances.

Due to the nature of most PA work, relatively few scientific notebooks are maintained. A couple of open notebooks had no new entries since previous review during the last PA surveillance. Another notebook (758E) was unavailable for review because of a network problem (being addressed by Information Management Systems staff). Notebooks reviewed and found satisfactory included 355, 756, 849E, and 612E. The holder of one notebook (895) was reminded not to obliterate incorrect notebook entries and to use the required correction method. The cognizant staff member demonstrated an understanding of the situation and agreed to make necessary changes.

MOSP and TPA:

A majority of recent PA work has involved revision and validation of the TPA code and an almost complete rewrite of the corresponding User Guide. These major CNWRA exercises have been recently completed. TPA, Revision 5.1 was transmitted to NRC last month. The QAP-002 review process for this transmittal was a significant effort in its own right and was completed as scheduled. TPA Rev. 5.1a and the TPA User Guide were delivered during the course of this surveillance. The

overall TPA effort involved many PA and other GED personnel working long hours over the last few years. From all indications, this effort has been successful and the client is satisfied. PA plans to run/test the TPA code continuously prior to DOE's Yucca Mountain License Application (LA) for construction. A "Risk Insights Report" or similar TPA reporting document may be developed in the near future, depending on client needs. Work to research and understand DOE's Total System Performance Assessment (TSPA) code is underway, including review of data packages at DOE's Licensing Support Office (LSO). It is anticipated that DOE's publication of the Supplemental Yucca Mountain Environmental Impact Statement (EIS) in October will provide significant preliminary insight into some aspects of the TSPA and will facilitate its pre-LA review.

Additional current MOSP work includes scenario analyses and identification of multiple barriers (mostly by literature and code reviews) to assess the probability of criticality, seismic events, and igneous intrusion in relation to Yucca Mountain post-closure requirements. Activity reporting will include a criticality "time line" report and the transmittal to NRC of collected associated documents. Igneous activities have included attendance at DOE workshops and technical review of previously developed (by PA) reports.

RRS:

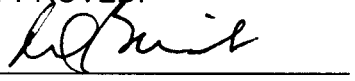
This activity will be incorporated into a related GLGP project next fiscal year. A report detailing last year's Sunset Crater work is currently under review at NRC and a related journal paper was delivered last summer. Review of associated DOE RRS documentation continues.

BC:

A BC report is currently undergoing NRC comment resolution. Literature review and modeling of DOE assessments in the Yucca Mountain area will continue as preparation for the LA.

PO:

No new projects have been initiated since the previous PA surveillance. There are tentative plans to develop a new brochure of NRC's scientific activities.

UNSATISFACTORY FINDINGS: None	
NCR NO.: None	CAR NO.: None
ATTACHMENTS: None	
RECOMMENDATIONS/ACTIONS: None	
APPROVED:  DATE: 9/26/2007	DISTRIBUTION: ORIGINAL—QA RECORDS DIRECTOR, QA ASSISTANT DIRECTOR: Mohanty MANAGER: Winterle PRINCIPAL INVESTIGATOR: Pensado