Creating a Turn-key E-Record Package

Nuclear Information and Records Management Association (NIRMA)
Summerlin, Nevada
August 12, 2008 – Track 1 – Session 25

Peggy J. Warner, CRM/NS, Sandia National Laboratories (SNL)
Mary Alena Martell, Sandia National Laboratories (SNL)
Alice Quintanilla, Information Assets Management (IAM)
Richard Schetnan, Rhym Llc.

Availability of the final complete SANDReport

Due to extensive review practices required by the Department of Energy (DOE), for materials being issued to the public regarding the Yucca Mountain Project, the final presentation will be provided to attendees at the conference.

Abstract
When the electronic data "firehose" is turned on can you: capture data, place it into the correct electronic form elements, attach appropriate pdf documents, and create the total record package in one turn-key activity? Yes you can!

Creating a turnkey electronic record package to replace a paper centric process begins with numerous brain storming sessions. Defining the deliverable and working back to the origination of the data can be a real eye opener. Where does the data reside or who will create it? What format is it in? How much is there? What are the time constraints? What is the deliverable format? What the programmer must know to create the application?

A sample demonstration of the final process will also be provided as well as cost savings and lessons learned. This session is presented as a case study from the Yucca Mountain Project License Application efforts of Sandia National Laboratories.

Introduction
The regulations at 10CFR63.10 for disposal of high-level radioactive wastes in a geologic repository at Yucca Mountain, Nevada, require that information in the License Application be "complete and accurate in all material respects." The Management Plan for Development of the Yucca Mountain License Application (YMP/04-01) specifies the need for documentation to confirm the validation of material statements contained in the License Application (LA) postclosure Safety Analysis Report (SAR) by the U.S. Department of Energy (DOE).

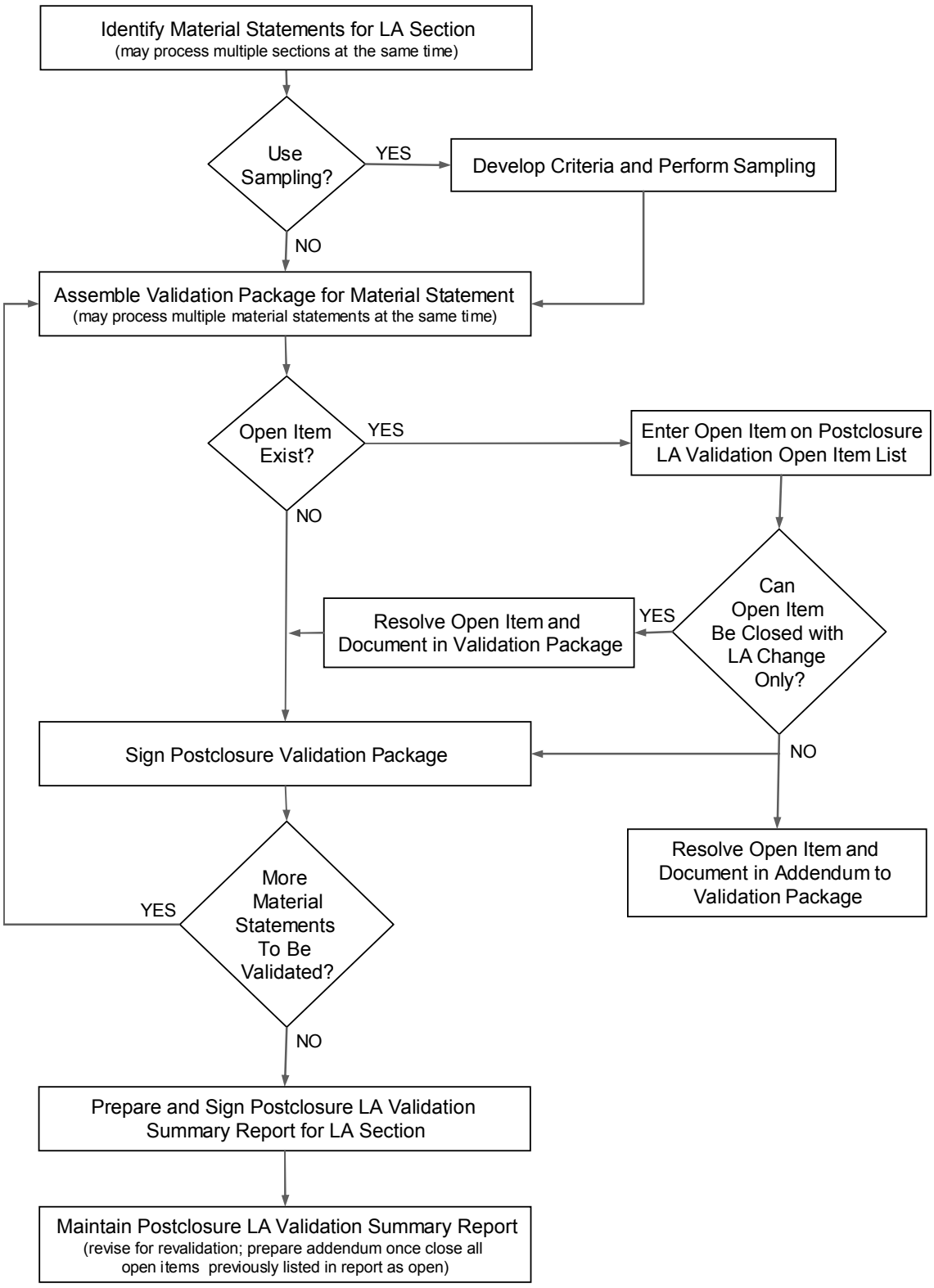
Presentation

To accomplish this adhoc but critical task of confirming the validation of material statements contained in the License Application (LA) postclosure Safety Analysis Report (SAR) by the U.S. Department of Energy (DOE) , a customized electronic interface xform technology was implemented to replace a traditional paper-intensive process to validate approximately 31,000 material statements. An interactive xform (created in FormsPlayer) based on structured markup language was made accessible to the team. The xform process was introduced to automate the workflow process, reduce inefficiencies, and increase the accuracy of the information being captured. These improvements were possible because the information was captured once but utilized many times.

A website was developed to display the xform that allowed for validation of individual material statements, progress tracking, and the ability to compare new text to text that had been validated. The site provided a 'total' electronic process to handle individual LA statements, provide electronic access to necessary documents required for validation of statements, capture input information and attachments in a database, plus track activity of all users accessing the site. Additional requirements were that the material validation site URL be made available to users across the US, must deal with issues surrounding security, workflow, version control, and user management. During the peak of activity there were ~50,000 hits/day on the site from the team, updating ~5000 statements in a day. The process allowed for validation and review to be ongoing at that one site.

The final activity was to electronically extract the necessary data to compile and prepare the record package from the large block xml data. The electronic form fields were designed and verified. Programming was prepared to assure proper flow capturing all of the pertinent data into the final electronic form fields, as well as, attaching the associated supporting pdf file to each statement. Exceptions were identified and issues resolved. A record package transmittal form was applied. The entire final process took under five hours of run time.

Below is the process flow chart that governed this overall Validation/Verification of SAR Material Statements process.


Identify Material Statements for LA Section
(may process multiple sections at the same time)
Use Sampling?
YES
Develop Criteria and Perform Sampling
NO
Assemble Validation Package for Material Statement
(may process multiple material statements at the same time)
Open Item Exist?
YES
Enter Open Item on Postclosure LA Validation Open Item List
NO
Can Open Item Be Closed with LA Change Only?
YES
Resolve Open Item and Document in Validation Package
NO
Sign Postclosure Validation Package
Resolve Open Item and Document in Addendum to Validation Package
More Material Statements To Be Validated?
YES
NO
Prepare and Sign Postclosure LA Validation Summary Report for LA Section
Maintain Postclosure LA Validation Summary Report
(revise for revalidation; prepare addendum once close all open items previously listed in report as open)