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Aberdeen Chemical Agent Disposal Facility (ABCDF) Develops Tool to Expedite Electronic Records Archiving

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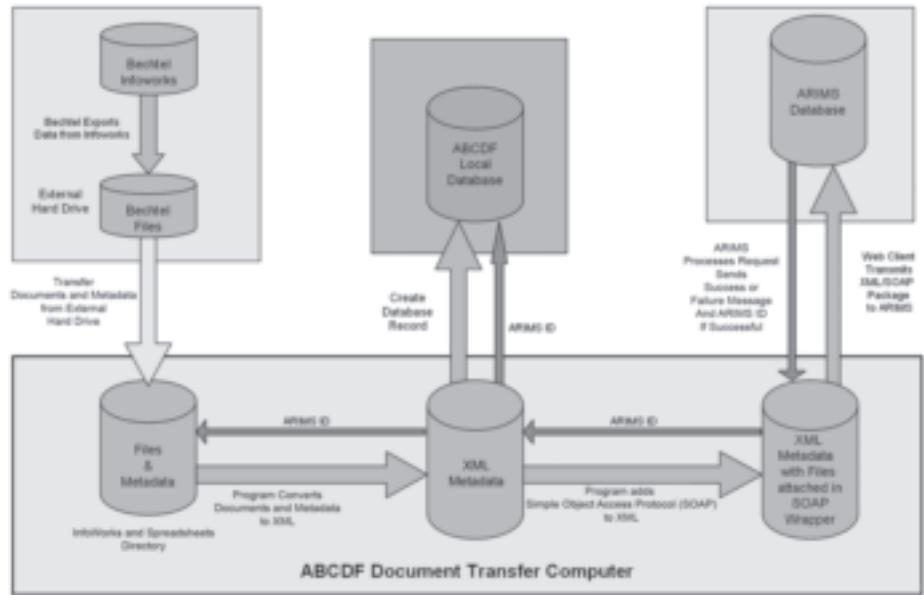
It seemed that for every ton of chemical warfare mustard agent destroyed at the U.S. Army's ABCDF, nearly another ton of records documenting the decisions and technology employed in conducting those operations was created. When workers at the ABCDF, located on the Edgewood Area of Aberdeen Proving Ground, MD, safely eliminated the last of the Maryland mustard agent stockpile in February 2006, the Army wasted no time planning for the expedient archiving of almost 10 years of indispensable records created over the project's life. The ABCDF had successfully constructed and operated a pilot facility that destroyed mustard agent by mixing it vigorously with hot water and sodium hydroxide, and made history by being the first chemical demilitarization facility in CONUS to successfully destroy its chemical weapons stockpile. No stranger to out-of-the-box thinking, the site developed a unique method to ensure its files would be available to the Nation's remaining seven chemical weapons disposal sites, as well as to the defense community at large.

ABCDF officials inspect Process Neutralization Building reactors prior to project startup in 2003. (Photo courtesy of the U.S. Army Chemical Materials Agency (CMA).)

ABCDF site personnel began working with the U.S. Army Records Management and Declassification Agency (RMDA) to determine the feasibility of archiving more than 100,000 electronic records into the Army Electronic Archive (AEA) as quickly and efficiently as possible, and then being able to retrieve a copy of these records if needed at a future time. In addition to the guidance provided in *Army Regulation 25-400-2, Army Records Information Management System (ARIMS)*, RMDA provided its Army Automated Information Systems to ARIMS Interface Control Document, which provided the key to electronically archiving batches of records via the ARIMS Web Services.

RMDA's ARIMS provides three interfaces for the electronic records archiving:

- The Electronic Capture and Store application, which is a Microsoft® Outlook tool that permits users to archive e-mails and attachments one record at a time, but use of the application is limited. Because many secure e-mail systems limit the size of file attachments, archiving large files often is difficult or impossible.



Scanned/electronic records are sent to ARIMS AEA via the Web with little human intervention. Record retrieval is completed in seconds rather than days. (U.S. Army photo courtesy of ABCDF.)

- The Records Input Processing System (RIPS), which is a Web-based application that permits users to attach and send one file at a time into ARIMS. The one-file-at-a-time limitation combined with minimal ability to submit metadata also made RIPS an unlikely candidate.
- The ARIMS Web Services.

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raw communication speed. To use the ARIMS Web Services, a team of information technology (IT) specialists from Science Applications International Corp. (SAIC), the ABCDF government team, Bechtel and RMDA

personnel created a software interface connecting the ABCDF network with the ARIMS Web Services. This software interface became known as the WSC. It should be noted that the WSC is a tool for archiving records and is not a records management program. Prior to using the tool, agencies must first register in the ARIMS Web site and establish their office records lists (ORLs).

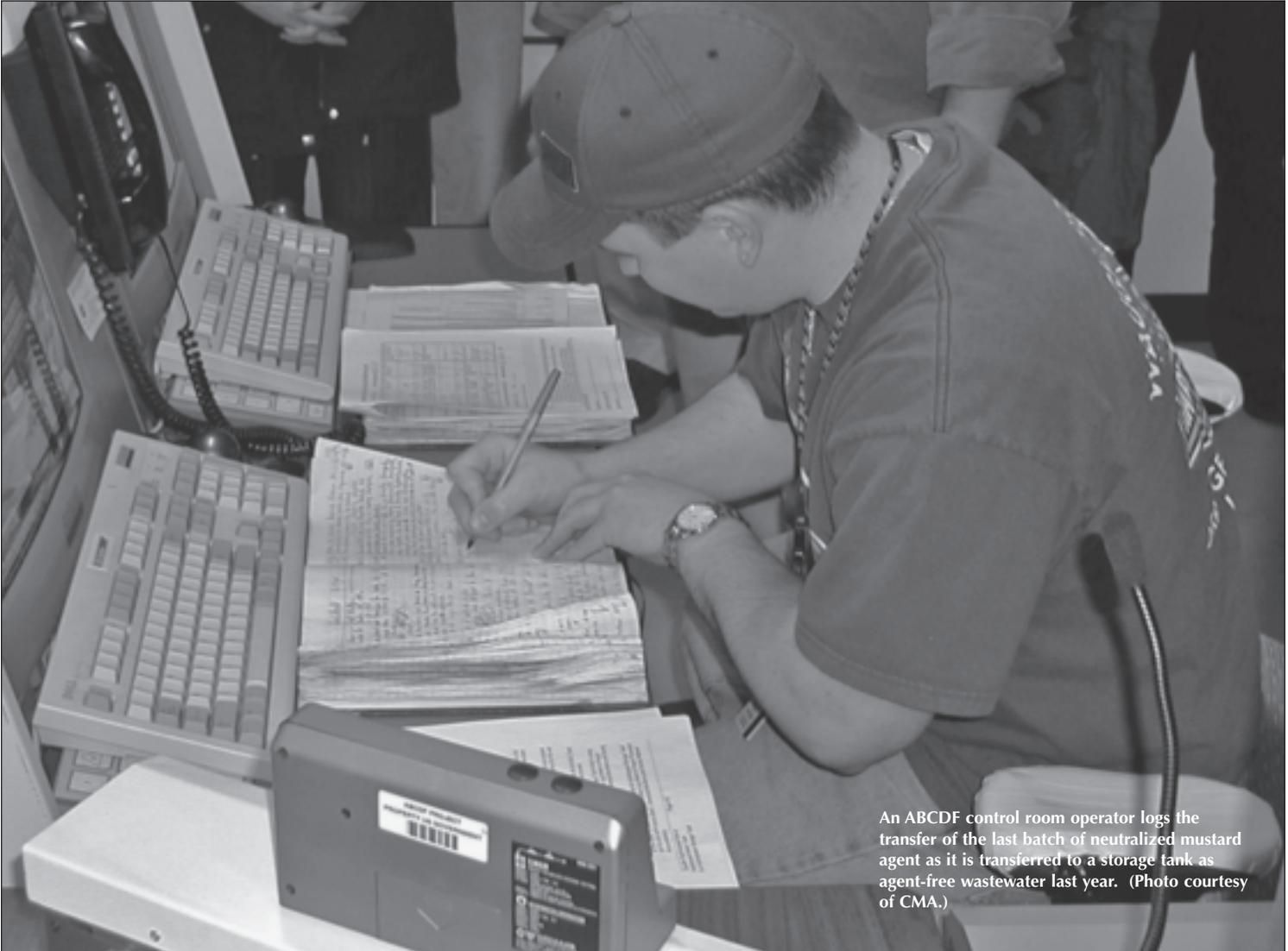
Acting as middleware between the ABCDF and the ARIMS AEA component, WSC allows users to automatically archive electronic records from a local site to ARIMS over a fast, secure network. WSC automatically translates existing metadata into the required ARIMS format to archive the



Archiving hard-copy records is labor intensive and costly. Records retrieval is a time-consuming process, usually requiring days for receipt of requested records. ARIMS WSC is streamlining that arduous process and creating a full record search capability. (U.S. Army photo courtesy of ABCDF.)

ARIMS Web Services Client (WSC)

Given the short suspense the ABCDF team had to archive its voluminous quantity of records, they began investigating the ARIMS Web Services interface, the third option for electronic records archiving. ARIMS Web Services is a relatively new technology that favors simplicity, best design practices and cross-platform use over



An ABCDF control room operator logs the transfer of the last batch of neutralized mustard agent as it is transferred to a storage tank as agent-free wastewater last year. (Photo courtesy of CMA.)

record. It then stores a record of each ARIMS transaction in a local Microsoft Structured Query Language (SQL) Server database. Metadata, along with the ARIMS identification number, can be used to retrieve the record from ARIMS AEA anytime.

When accessing the WSC system, users must first customize their records submission by completing a specialized input form. This form associates the submitted records to the correct Unit Identification Code and ORL previously established. They then click a

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“Start Processing” button and the system begins processing a zipped batch of records with an accompanying Microsoft

Excel file containing the submission’s corresponding metadata. The zipped file is copied into a WSC local storage folder. WSC automatically connects to ARIMS, authenticates the user’s credentials (based on an Army Knowledge Online account) and

begins archiving records with no additional user interaction required.

The ABCDF IT team designed the WSC interface to be user-friendly,

robust and to check for record duplication. Further, should an error occur during record transmission, the WSC logs the error and notifies users immediately so that the mistake may be corrected.

In addition to the functionality mentioned above, the WSC’s local Microsoft SQL Server database enables users to conduct full record searches using flexible search criteria such as title, keywords, dates, etc. Search results yield a record’s ARIMS identification number, along with all metadata stored on the record. This information is used to retrieve a copy of the actual record.

“WSC has revolutionized how we think about records archiving,”



ABCDF operators drain mustard agent from ton containers using a "glovebox" in the Process Neutralization Building. Once the chemical agent is drained, it is vigorously mixed with hot water and sodium hydroxide to render it into an agent-free wastewater by-product. (Photo courtesy of CMA.)

electronic records using the ARIMS WSC and that it was so successful," remarked Ken Hansen, Acting Chief, Records Management Division, RMDA. "Authorized personnel and future researchers and historians will have instant access to these important Army records for generations to come."

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DIANE L. GRAHAM is an Information Management Specialist and a Senior Records Manager employed with SAIC for more than 13 years, supporting the CMA Alternative Technologies and Approaches Product with her in-depth understanding of U.S. Army regulations and CMA policies. She holds a B.A. in foreign languages from the University of Maryland-Baltimore County, with specialties in both German and Russian.

explained Brian O'Donnell, ABCDF Site Project Manager. "Because the system is so easy to install and access, rather than waiting until the tail end of their mission, project personnel can archive vital records throughout all phases of operations."

ABCDF's success in creating an automated, rapid method to archive and retrieve project documents within ARIMS is yet another example of how

site personnel continue to leverage innovative thinking and technology in completing their missions. Site personnel

are presently collaborating with the remaining chemical demilitarization sites to share their experiences with the system and facilitate the potential future adaptation of the system by other sites.

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"We are pleased that the CMA chose to archive its long-term and permanent



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