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Electronic Document Management at the U.S. Nuclear Regulatory Commission

Teresa Linton, U.S. Nuclear Regulatory Commission
Washington, DC

I appreciate this opportunity to talk to you about ADAMS (Agencywide Document Access and Management System), the Nuclear Regulatory Commission's new electronic document management system. First, however, I want to explain who we are and what we do since my experience has been that many people do not know this.

The Atomic Energy Commission or the AEC was established in 1946 and had the dual responsibility for both developing and regulating nuclear activities. Since Congress found that there was an inherent conflict in the development and promotional activities versus the regulation of nuclear power, the AEC was split in 1975. At that time, the U.S. Nuclear Regulatory Commission (NRC) was formed to regulate the various commercial, industrial, medical and institutional uses of nuclear energy, including nuclear power plants to produce electricity. Federal research and development work for all energy sources, as well as nuclear weapons production, was conducted by the second agency created from the AEC, now the Department of Energy.

Under its responsibility to protect public health and safety, the NRC has three principal regulatory functions: (1) establish standards and regulations, (2) issue licenses for nuclear facilities and users of nuclear materials, and (3) inspect facilities and users of nuclear materials to ensure compliance with the requirements. These regulatory functions relate to both nuclear power plants and to other uses of nuclear materials--like nuclear medicine programs at hospitals and academic activities at educational institutions.

The NRC staff numbers approximately 2,900 with a budget of about \$470 million. The NRC budget comes from the fees from our licensees. Roughly two-thirds of the NRC employees work in the agency's headquarters in Rockville, Maryland. The remainder are located in four regional offices throughout the country or at resident inspector offices at each commercial nuclear power plant.

Any organization or individual intending to possess or use radioactive materials must obtain a license. Typically, licenses describe the location of use, the training and qualifications of workers, specific procedures for using the materials, and any special safety precautions

required. The license holder must follow the specific license requirements as well as the more general NRC regulations. The NRC sets the rules that users of radioactive materials must follow. These rules are intended to protect the persons using the radioactive materials and the general public from the potential hazards of radioactivity. NRC regulations are found in 10 CFR Parts 0-199.

And now a word about where I work at NRC. I am now a reference librarian in the Public Document Room. I joined the NRC in December 1985 as reference librarian for the Local Public Document Room Program (LPDR). This was a program begun in 1971 that established document collections in libraries located near commercially operated nuclear power reactors. Most of the collections were related to power reactors, with a few collections for other types of facilities. The collections were site-specific, related only to the local reactor, and in paper. In 1990, the paper collections in power reactor LPDRs were replaced by a microfiche collection of all publicly available NRC documents issued since January 1981. The collections were no longer site-specific. So that in all of the 75 power reactor LPDRs the microfiche collections were identical, containing approximately 1.5 million documents. Some of you may be at libraries that were designated LPDR libraries.

The LPDR program ended October 1, 1999. It ended largely because of the move of the NRC to an all electronic document management system. Since paper or microfiche copies of documents would no longer be produced, there would be nothing more to send to the LPDR libraries.

Most of the libraries that had served as power reactor LPDRs decided to keep the materials that had been sent to them, especially the comprehensive microfiche collections. There were a few libraries that did not want the documents and NRC in cooperation with the Federal Depository Library Program at GPO arranged to have these collections moved to depository libraries. Some of you may be at libraries that received the microfiche collections.

I want to mention briefly some of the types of documents generated by or received at NRC. There are documents that are specific to facilities, such as license applications and amendments, inspection reports, emergency plans, periodic operating reports (such as monthly and annual reports and annual radioactive effluent release reports).

There are also general Commission documents such as Commission meeting transcripts, Commission correspondence, FOIA requests, Technical/NUREG reports and regulatory guides.

ADAMS is certainly not the first experience the NRC has had with automation and document management systems. The first was the Nuclear Documents System (NUDOCS) which became operational in September 1978.

Documents were sent to a central location to be indexed. This information was entered into an on-line bibliographic record. NUDOCS contains citations only (with a few exceptions), not full text. The documents were then filmed onto microfiche and the bibliographic record updated with the microfiche address. The microfiche was then reproduced and distributed to locations within NRC and to the power reactor LPDR libraries. Many LPDR libraries had

computer access to NUDOCS. NUDOCS is still available to search; however, no new records have been entered since October 31, 1999, when ADAMS became operational. NUDOCS can be used to locate documents within NRC microfiche collections. Access requires a password, which is provided by NRC staff. It is dial-up modem access (800 number).

There is another system for searching older, pre-ADAMS records. It is the PDR's own system, BRS (Bibliographic Retrieval System). This is an in-house PDR system, not the commercial BRS. This system also contains the bibliographic information for NRC records. It uses different search commands than NUDOCS. BRS can be accessed by dial-up modem to an 800 number or by telnet. Access requires a password that is assigned by the PDR staff. BRS can still be searched, but again, no new records have been added since October 31, 1999.

I want to talk briefly about the NRC's new electronic initiative in document management.

ADAMS is:

- a document management system to organize, process and manage agency documents
- a workflow system that uses e-mail to route work items and documents for review, comment or concurrence
- a record-keeping system that maintains the official records of the agency and manages their disposition based on the established record retention schedule
- a public information dissemination system that places full-text publicly available records on the NRC public server

Documents are put into ADAMS a couple of ways. Externally generated paper documents are scanned as TIFF files. The image file kept in ADAMS is the Official Agency Record (OAR) in lieu of the original paper document. Image files are OCR'd to generate a searchable text file. [OCR: Optical Character Recognition]

Internally generated NRC documents are added to ADAMS as a file in their native application, such as WordPerfect, and automatically converted to PDF files when they are declared OAR.

At this point, I want to turn to my transparencies. I want to show you the NRC Web site and briefly how to get into ADAMS.

1. (Transparency #1: The NRC Web site.) The NRC Web site URL is <http://www.nrc.gov>

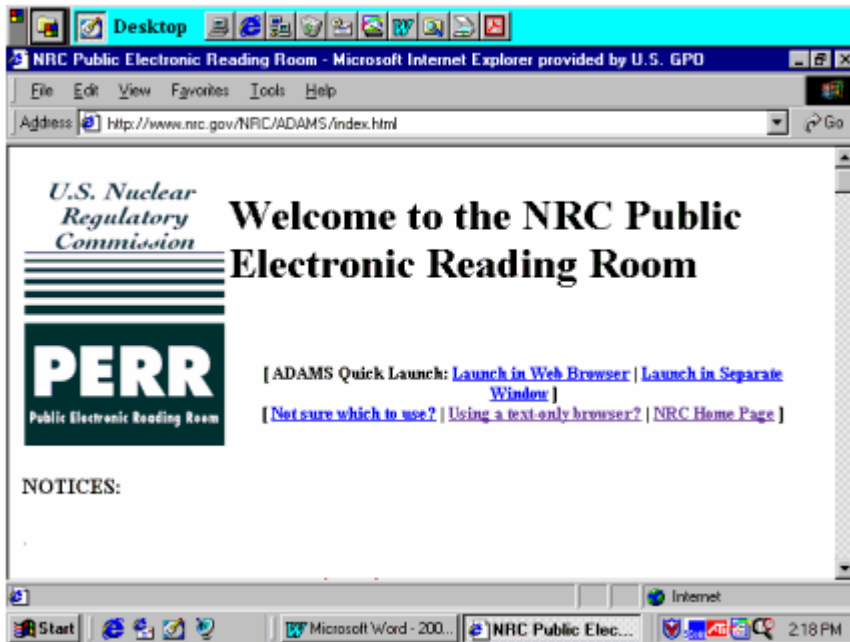
. I invite you to take a look at this site. Maybe just click on the Index at the bottom and scroll down to get an idea of what is here. Access to information about the

ADAMS system is from here, the Public Electronic Reading Room, at the bottom of the page.



I want to quickly mention a few things about this home page. In the Reference Library you will find recent NUREG series reports and 10 CFR. The Information Digest is a good source of general information on the agency. It has locations of nuclear reactors, dates of construction permits, operating licenses, and maps showing locations of reactors.

(Transparency #2: Welcome to the NRC Public Electronic Reading Room.) I would encourage you to go down through this page on your first visit and print this page.



The following questions are answered:

- What Is ADAMS?
- How Do I Install ADAMS?
- How Do I Run ADAMS?
- How Are Documents Organized in ADAMS?
- How Do I Get Help?

Access to ADAMS requires downloading a Citrix client plug in. Depending on the kind of PC you have and if you are on a LAN, there are some potential problems in the initial installation of the client. On the PERR page, there is a link to the ADAMS Issues Update which describes problems that some have encountered and the suggested action to take to resolve them. One of the issues is the firewall on LAN systems. If you try to install the Citrix client and get an error message that your system is unable to connect to the Citrix server that generally indicates a firewall problem. We have information to help you work through that and I will give you an e-mail address and phone number at the end of my presentation to contact us with any questions about firewalls or anything else.

Once you have installed the Citrix client, and you do that one time, you return to the PERR page and "launch ADAMS" at the top of the page. You have two options for "launching" ADAMS. The link to "Not sure which one to use?" gives the pros and cons of each method. A Filenet log on screen will appear for the Publicly Available Records System. The Publicly Available Records System (PARS) is the library of publicly available electronic documents. The user name is GUEST, no password or group. Press Enter or hit OK.

- The ADAMS Document Manager screen will appear. There are two main libraries. The Public Legacy Library is not operational. This will be the part of ADAMS with the bibliographic citations of pre-ADAMS documents. When it is functional it will replace the NUDOCs and BRS systems.

PARS, the electronic portion of the system, has several folders. The ADAMS Helps and Tips offers guidance on various functions of ADAMS, such as how to save a search strategy, and it has the frequently asked questions.

- The Recent Released Documents folder expands to monthly folders, then daily folders. These are lists of documents released on a particular day. There are a few other folders set up here, for example, one for meeting notices and one for FOIA requests and responses.

These are lists of documents, this is not how you search for documents in PARS. There are two forms of documents, PDF files or TIFF files. The type of file is identified by a symbol in front of the title. Depending on whether it is a PDF file or TIFF file, if you right mouse click on a title, you will get a pop-up menu of options. You can view, open the document, copy to a local drive, or print the document. You can mark documents to create a report, which is the Filenet terminology for creating a hit list.

- Options for PDF file. Right clicking on the title of a PDF file will bring a pop-up menu of options.
- Options for TIFF file. Right clicking on the title of a TIFF file will bring a pop-up menu of options for text and image.
- ADAMS FIND. Searching in PARS is from TOOLS, ADAMS FIND on the tool bar. There are two search modes: Simple and Advanced.
- Simple find. With the Simple search, you are limited in the fields that you can search, there are no boolean operators except implied "and," but there are drop down pick lists, and content searching in the title and text of documents.

Just as a word of caution, the maximum number of hits returned has a default of 10. I would recommend raising that to several hundred before you begin searching.

- In the Advanced search you select the search field (property) from a drop down list, select the operator and enter the value. There is a Browse Values feature that helps you find values. There is content searching for words or phrases. And you can use boolean logic in the search. You can save search strategies.
- Sample advanced search. This transparency shows a typical advance search with boolean logic. When you have entered the search criteria, click on Find Now to perform the search. The search results are behind the search screen.

Once you have completed a search, you view your hitlist by clicking on "View" then "Show Criteria." This will remove the search window. Right mouse click on a title and you get a pop up menu. You can view the text or image of documents, by opening the text of a document you can search within the text, you can save a document to a local drive, print a document, or create a report (hitlist). If you run into any problems at all when using ADAMS, please contact us at the PDR.

There are issues in printing TIFF files, and we do recommend that these be saved to a local drive and opened by the imager with your system.

- Saving to local drive. Saving to a local drive can be tricky. When you ask to save to a local drive (or copy image to a local drive) the default drive is not yours. You must select your drive (C\$ on client C is your hard drive).
- Client File Security. The first time you save a file to a local drive, a security access screen will pop up, and you must select full access in order to save the file. The default is no access, and if you left this screen on no access and clicked on never ask me again, you will not be asked again and you will not be able to save a file to a local drive. You can get this security screen back and change the access by right mouse clicking on the symbol in the upper left hand corner of the ADAMS - Citric ICA Client bar.

We don't have a live connection and I'm not going to go into any detail on searching. There is a link to the ADAMS Users Guide on the PERR page. You can download it, or I would be happy to mail you a copy.

- PDR information. I have one handout, an information sheet for the Public Document Room. It includes our e-mail address and telephone number.

You may not have a need to use NRC documents, but if anyone has questions or has encountered problems with ADAMS, please contact the NRC Public Document Room.

PUBLIC DOCUMENT ROOM FACT SHEET

LOCATION:	One White Flint North 11555 Rockville Pike Rockville, MD 20852
MAILING ADDRESS:	U.S. Nuclear Regulatory Commission Public Document Room Washington, DC 20555
INTERNET E-MAIL:	pdr@nrc.gov
READING ROOM HOURS:	7:45 a.m.-4:15 p.m. Monday-Friday, Eastern Time, Closed Federal Holidays
TELEPHONE REFERENCE HOURS:	8:30 a.m.-4:15 p.m. Monday-Friday Eastern Time, Closed Federal Holidays

HOLDINGS: The PDR maintains over 2.3 million agency documents in paper, microfiche and, selectively, electronic full text (diskette and online). The majority of these documents relate to the licensing and inspection of nuclear facilities and to the use, transport, and disposal of nuclear materials. NUREG/BR-0052, "PDR File Classification System," gives a more detailed listing of PDR holdings. It is advisable to call the PDR in advance if a research project involves reviewing pre-1980 material because many older documents are retired.

REFERENCE ASSISTANCE: The PDR files are open to the public, and PDR reference librarians assist on-site researchers in their use. The reference staff also responds to requests received by telephone, Internet, fax, and mail. Although staffing constraints prohibit PDR staff from performing extensive research on behalf of users, the staff will assist the public in doing their own research.

AGENCY DOCUMENT MANAGEMENT SYSTEM (ADAMS): The ADAMS database contains citations and full-text to public documents. The ADAMS legacy library contains citations and some full-text to documents released prior to October 31, 1999. The ADAMS Publicly Available Records System (PARS) library contains full-text documents from October 31, 1999 forward.

The PDR staff will assist clients in formulating search strategies and provide them with printouts of results. The PDR does not charge for computer searches, but does limit the size of free printouts. The staff will train clients in the use of ADAMS. A Users' Guide is available at the NRC Web site <<http://www.nrc.gov/NRC/ADAMS/index.html>>. Documents can be printed or downloaded from ADAMS by the user or ordered, for a fee, from the PDR staff.

DOCUMENT REPRODUCTION SERVICE: The PDR on-site reproduction contractor copies, with some exceptions, PDR documents in paper, microform and electronic full-text for a fee. The PDR also offers a Standing Order service that enables customers to receive certain categories of documents on a regular basis as they become available, without having to renew the order repeatedly. Fees and turnaround times vary depending on the amount and kind of material. See the current price schedule for more information. Reproduction orders can be picked up on-site or mailed to the requester by regular or express mail. Facsimile service is also available. A self-service duplicating machine and a number of coin-operated reader-printers are available at the PDR for users who need immediate copies of documents.

PDR USERS'GUIDE: For more information about the PDR, contact the reference librarians to order a free copy of the "Public Document Room Users' Guide," or access the most recent version on the Internet at <<http://www.nrc.gov/NRC/PDR/pdrusers.htm>>.

NRC HOME PAGE: For information about NRC and its mission as well as electronic versions of many NRC documents, visit the NRC Web site at <<http://www.nrc.gov>>. For a list of frequently used URLs, request a copy of the "PDR Information Sheet" handout.