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CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

TRIP REPORT
November 9, 1990

SUBJECT: CNWRA Discussion with DOE/Yucca Mountain Project Office Regarding its Intended Use of Data-Record Packages as the Retrieval Vehicle for Technical Data within the LSS (Account No. 20-3705-001)

DATE AND PLACE: November 1-2, 1990
Yucca Mountain Project Office, Las Vegas, Nevada

AUTHOR (S): Steve Young, Charles Acree

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SUBJECT: CNWRA Discussion with DOE/Yucca Mountain Project Office Regarding its Intended Use of Data-Record Packages as the Retrieval Vehicle for Technical Data within the LSS

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PERSONS PRESENT:

CNWRA	DOE	SAIC
Steve Young	R. Barton	David Keller
Charles Acree	C. Newbury	

BACKGROUND AND PURPOSE OF TRIP:

The purpose of this visit was to provide an opportunity for the Department of Energy's (DOE) Yucca Mountain Project Office (YMPO) to explain to the Center for Nuclear Waste Regulatory Analyses (CNWRA) how it intends to employ Data-Record Packages as the retrieval vehicle for technical data within the Licensing Support System (LSS). The CNWRA has been engaged by the LSS Administrator (LSSA) to resolve ambiguities pertaining to the term "technical data," to identify organizations generating it, to document existing plans for providing access to it, and to prepare a plan for implementing related requirements of the LSS Rule.

SUMMARY OF PERTINENT POINTS:

CNWRA representatives explained that they needed clarification of YMPO procedures for assembling and cataloging its Data-Record Packages, which it uses for the entry of technical data into its central records management system, and which it intends to use also for the entry of that same data into the LSS. They mentioned that the packaging of technical data (which would provide the LSS a single bibliographic header for a bundle of documentary material--rather than multiple headers to describe the individual components) had been discussed at the October 10-11 meeting of the LSS Advisory Review Panel (LSSARP). LSSARP members seemed inclined to support packaging as a concept, but were awaiting clarification from the continuing CNWRA explorations.

Meeting alone with CNWRA representatives after Ms. Newbury (DOE) introduced them, Mr. Keller (SAIC) responded to questions regarding YMPO packaging practices, permitted examination of YMPO technical Data-Record Packages on microfilm, and provided four new records management procedures (attached). Visits were made to the YMPO Central Records Facility (CRF, managed by SAIC), the YMPO Local Records Center (LRC), and the SAIC's LRC. Following their

conversations with Mr. Keller, CNWRA representatives met briefly with Mr. Barton (DOE) to express appreciation for courtesies extended and to arrange visits to LRCs at the Sandia National Laboratories and the U.S. Geological Survey, which are the two largest producers of technical data.

Detailed findings will be incorporated within the CNWRA's report to the LSSA in late February 1991. Highlights follow:

1. A package of technical data amounts to a case file on a particular YMPO investigative activity, usually undertaken by a contractor. Most packages are gradually compiled at an LRC, as data arrive there piecemeal (in "segments") from the responsible local investigator. All relevant material to the investigation must be included in the package.

2. A package's title and table-of-contents are both created by the responsible investigator, who alone decides how much descriptive detail to use. YMPO procedures dictate only basic requirements (e.g., "concise" descriptions and page counts for each item). A table-of-contents form is available but is not mandatory. Formats, therefore, differ not only among LRC's, but among individual investigators as well.

3. A package is forwarded to the CRF bearing an authenticating signature. Usually, this is done when it is complete. However, to assure that data submissions to the CRF are not delayed, if an activity takes longer than a quarter to finish, package segments at an LRC are submitted to the CRF quarterly. (Extensions may be granted.)

4. When an investigator submits data to an LRC, he must attach a Technical Data Input Form (TDIF), describing that data and its collection process. These forms accompany Data-Record Packages, or the segments to which they relate, when they are forwarded, on a quarterly basis, to the CRF. The forms are used for input into the CRF's computer-based Records Information System (RIS) and into its supporting Automated Technical Data Tracking System (ATDT).

5. The bibliographic header that describes a package in the RIS is written entirely by the CRF. The header includes an abstract when one has already been written by the investigator, as in the case of USGS Open File Reports. Otherwise, it does not. Header creation is limited also by the fact that it will usually include keywords only from words encountered in the title itself. CRF employees do not possess substantive expertise to write abstracts or scan packaged material for additional keywords that might assist retrieval. (Thus, LSS headers, which are to be derived from RIS headers, will, as matters stand, contain only occasional abstracts, with limited descriptors and identifiers.)

6. Every package will have an associated header. Certain materials within a package, however, may be assigned headers of their own. "Special process" and "one-of-a-kind," items within a package (i.e., those which cannot be microfilmed or would lose meaning if microfilmed, such as magnetic tapes, videotapes, films, oversized maps, or multi-colored maps) will always be assigned individual headers. Other "stand-alone" items, including completed reports, correspondence, and items that an LRC wants for some reason to be separately retrievable, may

also be assigned individual headers--if the CRF decides that they should, given its intention to create fewer headers.

7. After indexing, every package is microfilmed at a YMPO contractor's site in Las Vegas (Holmes & Narver). After that, the paper originals are stored. It may well be necessary to scan these originals when LSS entry occurs, if the LSS capture station cannot accept input directly from the microfilm archive.

8. In addition to having their own headers, items that are not microfilmed are being removed from their packages and placed in a strictly-controlled, environmentally-secure, off-site, permanent storage facility in Las Vegas (the same location where microfilm masters and paper originals are stored). There, they are readily available via accession number. A "slip sheet" (Special Instruction Form), showing that number, is inserted within a package in place of each such item and is included also in the microfilm copy. Presumably, this procedure will, by extension, apply as well to materials that cannot be scanned for the entry of document images into the LSS. However, the YMPO has not yet defined procedures for that process.

9. The YMPO intends to incorporate all technical data, ultimately, within Data-Record Packages. Some materials, however, notably magnetic tapes, are currently being received individually through the mail and are being assigned their own headers. All tapes are stored with adequate written specifications and external labeling to assure readability by YMPO and other users.

10. Each package has a permanent LRC-assigned alpha-numeric identification code (typed on the upper right-hand corner of the table of contents), as well as a CRF-assigned accession number (in the same location, but affixed vertically).

11. The YMPO and its contractors are still getting used to its relatively new and evolving technical data management system, for which approved plans and procedures are generally less than a year old. Much work will be required on the part of investigators and LRCs to compile and transmit backlogged data - estimated to amount to four million pages of pre-1990 material, in proper form. The YMPO hopes to complete this task by 1995, if projected funding is received.

IMPRESSIONS/CONCLUSIONS:

The visit clarified some important details regarding the use of Data-Record Packages by the YMPO.

There are some potential problems: The LSSARP has agreed that bibliographic headers for non-text-searchable material in the LSS will always include abstracts. As things stand, some YMPO packages will not have abstracts already written, and no provision is being made to create them specially for the benefit of the LSS. Additionally, identifiers and descriptors (keywords) placed in RIS headers, derived almost exclusively from package titles, may be insufficient for LSS purposes, when the RIS headers are converted to LSS headers. Finally, differing formats for package tables-of-contents may be disadvantageous to LSS users.

The CNWRA, when it makes recommendations regarding the entry of Data-Record Packages into the LSS, will most likely advise that the packages be text-indexed, as well as scanned, as thoroughly as possible, to assist document retrieval through text search.

Looking ahead to the possibility of incorporating additional fields in the LSS bibliographic header, to facilitate retrieval of non-text-searchable material: A field for media category would probably be useful; the YMPO has found it so, and it appears to be particularly helpful for these "non-documents" (graphics, tapes, etc.). A field to indicate qualified status, also employed by the YMPO, would probably be useful, too. A field indicating regulatory category, however, is probably inadvisable, because it would require expertise that the CRF is incapable of providing; however, there is a field for "Activity Number" on the YMPO's TDIF input form, which refers to a section of the Site Characterization Plan, that might be helpful to LSS users. All of these thoughts will be subject to further investigation and discussion.

PROBLEMS ENCOUNTERED:

None.

PENDING ACTIONS:

As soon as it can be arranged, CNWRA representatives, accompanied by a YMPO representative, will visit Local Records Centers managed by two YMPO prime contractors - at Sandia National Laboratories (in Albuquerque) and the U.S. Geological Survey (in Denver). The visits will provide another level of detail in evaluating the complex infrastructure involved in the creation of Data-Record Packages.

RECOMMENDATIONS:

None.

SIGNATURES:

Steve Young

for Charles Acree

REFERENCES:

Trip Report - NRC/DOE Meeting on Technical Data, August 30, 1990

ENCLOSURES TO TRIP REPORT:

1. Record Source Implementation (procedure)
2. Local Records Center Operations (work instruction)
3. Central Records Facility Operations (technical procedure)
4. Record Source Implementation (quality management procedure)

CONCURRENCE SIGNATURES AND DATE:

Rawley D. Johnson — 11/15/90
Rawley D. Johnson
Director - IMS
Date

Allen R. Whiting — 11/16/90
Allen R. Whiting
Director-Systems Engineering and Integration
Date