



Department of Energy
Washington, DC 20585
OCT 28 1993

Mr. Joseph J. Holonich, Director
Repository Licensing and Quality
Assurance Project Directorate
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Holonich:

During the July 20, 1993, U.S. Nuclear Regulatory Commission (NRC)/U.S. Department of Energy (DOE) Quality Assurance (QA) quarterly meeting, DOE stated that the resolution of issues identified by the Site Characterization Plan (SCP) issues hierarchy were being tracked. It was further stated that before the Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O) took over this function from Science Applications International Corporation, the Technical Requirement Information Management System (TRIMS) database was thought to perform this function. At the request of NRC, DOE agreed to send the NRC information explaining TRIMS or other systems and provide sample reports from the database showing the relationship between study plans and SCP issues.

It should be noted that development of TRIMS was suspended in 1989 and a manual system is being utilized for tracking purposes. Consequently, the information contained in the July 20, 1993, NRC/DOE QA meeting minutes does not accurately reflect the present way we do this tracking. The enclosure is intended to clarify this point and describe how issues are currently tracked and how they might be tracked in the future. In addition, a primer on the impact of QA on issue resolution is presented since the TRIMS database was being discussed in this context when the action item was taken.

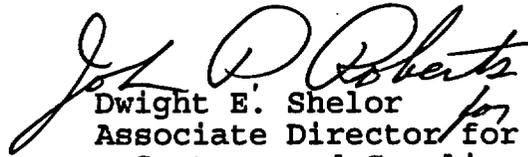
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The enclosure is intended for your use in addressing this action item. If you have any questions, please contact Sharon Skuchko of my office at (202) 586-4590.

Sincerely,



Dwight E. Shelor
Associate Director for
Systems and Compliance
Office of Civilian Radioactive
Waste Management

Enclosure:
Response to Action Item

cc w/Enclosure:

R. Dyer, YMPO
T. J. Hickey, Nevada Legislative Committee
R. Loux, State of Nevada
S. Zimmerman, State of Nevada
D. Bechtel, Las Vegas, NV
L. Fiorenzi, Eureka County, NV
R. Williams, Lander County, NV
P. Niedzielski-Eichner, Nye County, NV
W. Offutt, Nye County, NV
L. Bradshaw, Nye County, NV
C. Schank, Churchill County, NV
F. Mariani, White Pine County, NV
V. Poe, Mineral County, NV
J. Pitts, Lincoln County, NV
J. Hayes, Esmeralda County, NV
B. Mettam, Inyo County, CA
K. Hooks, NRC

RESPONSE TO ACTION ITEM FROM JULY 20, 1993, U.S. NUCLEAR
REGULATORY COMMISSION (NRC)/U.S. DEPARTMENT OF ENERGY (DOE)
QUALITY ASSURANCE (QA) MEETING

QA Impact on Issue Resolution

The issues hierarchy, as developed in the Site Characterization Plan (SCP), defines a set of issues that must be resolved by DOE to successfully design and build a repository that meets all regulatory requirements related to performance and design. The issues themselves were derived, in part, from the DOE siting guidelines in 10 CFR Part 960, from the NRC performance objectives and design criteria in 10 CFR Part 60 and 10 CFR Part 20, and from the EPA requirements in 40 CFR Part 191. These issues produced a suite of study plans that define data collection and scientific investigation activities necessary to support the resolution of issues. The data collected and activities performed while executing study plans will be used in the design and performance assessment calculations that support issue resolution.

Design and performance assessment calculations related to quality affecting work are performed under the QA program, as is the development of natural system models. These designs, calculations, and models form the technical bases for the resolution of issues with the NRC. The technical bases for issue resolution are, therefore, under the QA program.

Issue resolution uses both existing data and data collected under a 10 CFR Subpart G QA program. If existing data is used as the basis for a potential licensing position, then it is qualified using the QA procedure that implements NUREG 1298.

The actual preparation of the issue resolution reports is not a quality affecting process. Topical reports state a regulatory position, but only summarize the previously performed quality affecting work in such a way as to support that position. The QA procedure for document review is used to review and accept issue resolution reports. The tracking of issue resolution progress is not considered quality affecting; therefore, it is not controlled by the QA program.

DOE is currently developing the License Application Annotated Outline (LA AO) process to specifically identify all information needed in licensing. The acquisition of data needed in support of designs or analyses identified in LA AO information requests will, for the most part, be a quality affecting activity. In addition, as necessary, existing data will be qualified in accordance with the OCRWM QARD for use in licensing.

TRIMS Database

During the July 20, 1993, NRC/DOE QA meeting, it was suggested that a database was being used to track issue resolution and that it used to be the Technical and Regulatory Information Management System (TRIMS) database. Development of TRIMS was discontinued in 1989 and no further development is planned. Activities associated with issue resolution are not currently being tracked electronically since there is no need for such a capability at this time.

The Office of Civilian Radioactive Waste Management is currently attempting to define and evaluate what database functions outside of those currently available are necessary to support the licensing effort. Preliminary results of this evaluation suggest that additional database functions are necessary to manage the information needed to complete the LA AO, and track the status of both the SCP study plans and the resolution of SCP issues. Because the volume of data generated thus far to support these activities is modest, the data are easily managed without a major database application. A database system is currently being investigated to automate tracking of this information.

In the absence of a computer-generated output, the reader is encouraged to refer to Section 8.3 of the SCP for a presentation of how study plan activities relate to issues in the SCP issues hierarchy. For example, Table 8.3.1.2-1 relates SCP geohydrology activities to the issues, Table 8.3.1.3-1 relates SCP geochemistry activities to the issues, etc. See example pages 3 and 4 of Enclosure. The general plan for issue tracking and resolution is depicted schematically in Figure 8.2-6 (see page 5 of Enclosure).

Table 8.3.1.2-1. Activity parameters provided by the geohydrology program that support performance and design issues (page 1 of 38)

Calls by performance and design issues		Parameter category	Response by geohydrology characterization program	
Issue	SCP section		Activity parameter	SCP activity
METEOROLOGICAL CHARACTERISTICS				
1.12	8.3.3.2	Meteorological characteristics	Storm movement and intensity; meteorological input to unsaturated-zone infiltration and gas-phase circulation studies; (with integrated meteorological network)	8.3.1.2.1.1
2.1	8.3.5.3		Atmospheric pressure and pressure variability	8.3.1.2.1.1.1
2.2	8.3.5.4		Atmospheric stability; relations to storms	8.3.1.2.1.1.1
2.3	8.3.5.5		Atmospheric temperature	8.3.1.2.1.1.1
2.7	8.3.2.3		Humidity, relative; diurnal and seasonal variability	8.3.1.2.1.1.1
4.4	8.3.2.5		Precipitation chemistry	8.3.1.2.1.1.1
			Precipitation, intensity and duration (monthly and seasonal variability)	8.3.1.2.1.1.1
			Radiation and irradiation, infrared (diurnal and seasonal variability)	8.3.1.2.1.1.1
			Wind, speed, and direction (diurnal, seasonal, and storm-specific variability)	8.3.1.2.1.1.1
			Air temperature	8.3.1.2.1.2.1
			Precipitation, quantity and timing	8.3.1.2.1.2.1
			Air temperature	8.3.1.2.1.3.3
			Precipitation, quantities and frequency	8.3.1.2.1.3.3
			Precipitation	8.3.1.2.2.1.2

8.3.1.2-10

Table 8.3.1.3-1. Activity parameters provided by the geochemistry program that support performance and design issues (page 1 of 6)

Calls by performance and design issues		Response by geochemistry characterization program			
Issue	SCP section	Parameter category	Activity parameter	SCP activity	
1.1, Total system performance	8.3.5.13	Unsaturated zone geochemical properties (sorptive)	Sorption as a function of solid phase composition	8.3.1.3.4.1.1	
			Sorption as a function of sorbing element concentration	8.3.1.3.4.1.2	
			Sorption as a function of ground-water composition	8.3.1.3.4.1.3	
			Sorption on particulates and colloids	8.3.1.3.4.1.4	
			Statistical analysis of sorption data	8.3.1.3.4.1.5	
			Biological sorption and transport	8.3.1.3.4.2	
		Unsaturated zone geochemical properties (solubility of radionuclides)	Solubilities of compounds bearing radionuclides having significant representation in the inventory and half-lives > 20 yr	8.3.1.3.5.1.1 through 8.3.1.3.5.1.3	
				8.3.1.3.5.2.1	
				8.3.1.3.5.2.2	
		Saturated zone geochemical properties (sorptive)	Sorption mechanics for radionuclides	8.3.1.3.4.1.1	
			Sorption as a function of solid phase composition	8.3.1.3.4.1.1	
			Sorption as a function of sorbing element concentration	8.3.1.3.4.1.2	
			Sorption as a function of ground-water composition	8.3.1.3.4.1.3	
				Sorption on particulates and colloids	8.3.1.3.4.1.4

8.3.1.3-4

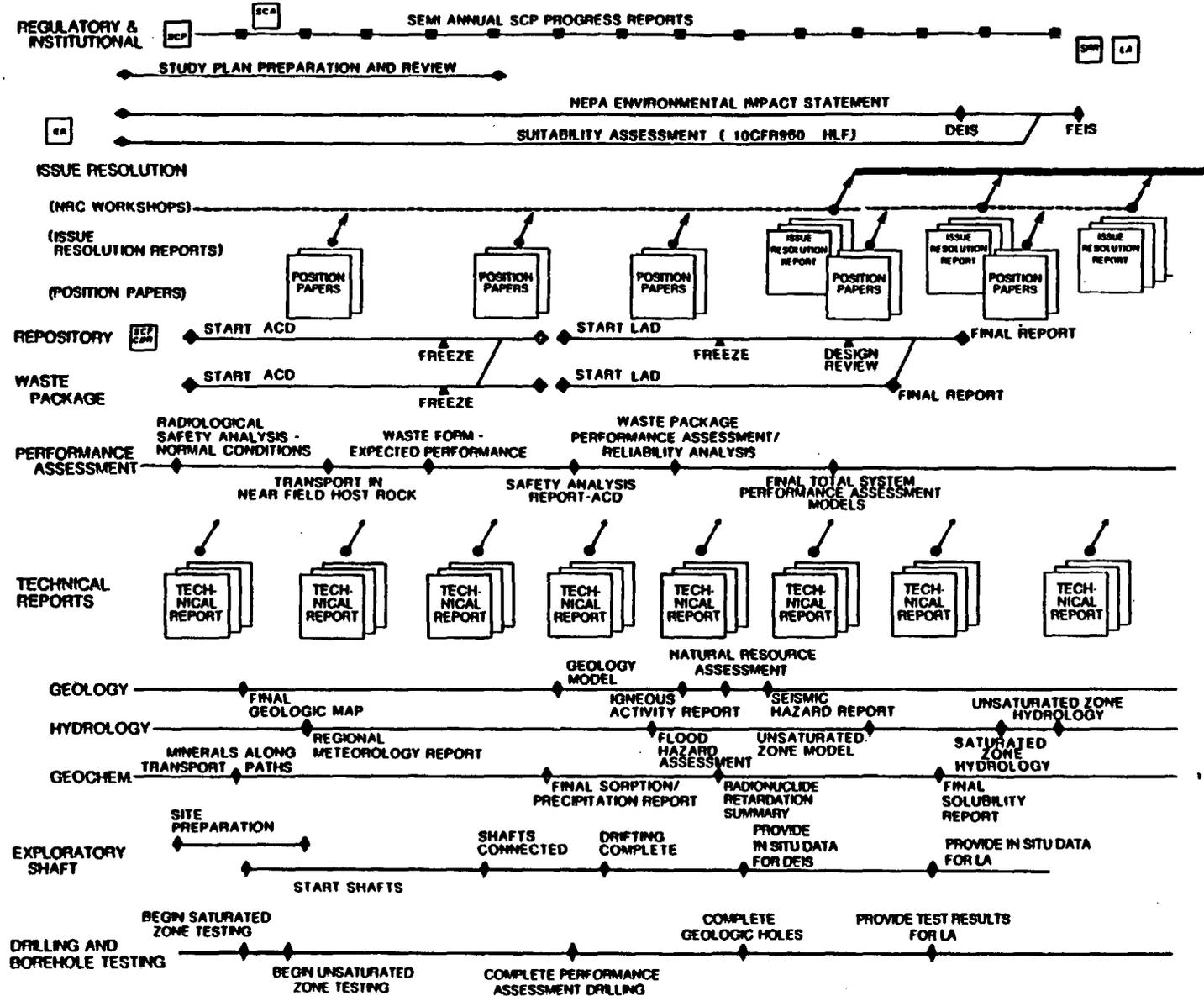


Figure 8.2-6. Schematic diagram showing utilization of site data by performance assessment and design, and for preparation of regulatory documents. (ACD - advanced conceptual design; DEIS - draft environmental impact statement; FEIS - final EIS; HLF - higher-level findings; LA - license application; LAD - LA design; NEPA - National Environmental Policy Act; SCA - site characterization analysis; SCP - site characterization plan; SRR - site recommendation report)