U.S. DEPARTMENT OF ENERGY
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

NUCLEAR WASTE TECHNICAL REVIEW BOARD
FULL BOARD MEETING

SUBJECT: APPLICATION OF EXISTING DATA

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NUREG-1298

• Definitions

• Guidance

DOE Use of Existing Data

• Process

• Policy
NUREG-1298

“Qualification of Existing Data for High Level Nuclear Waste Repositories”

- Generic technical position
- Published by NRC staff in 1988
NRC Staff Position

“Data related to systems, structures, and components important to safety, to design and characterization of barriers important to waste isolation, and to activities related thereto which are used in support of a license application should be qualified to meet the quality assurance requirements of 10 CFR 60, Subpart G.”

NUREG-1298 (IV)(1.)
NUREG-1298 Definition: Qualification of Data

"A formal process intended to provide a desired level of confidence that data are suitable for their intended use."
Data Types

Generally Accepted
- Information generally accepted by engineering and scientific communities e.g., handbooks

Existing
- Developed by DOE program prior to implementation of 10CFR60 subpart G QA program
- Developed outside the DOE program e.g., scientific journals

Qualified
- Collected under 10CFR60 subpart G QA program
- Existing data qualified per guidance in NUREG-1298
NUREG-1298: Four Methods or Combination

- Peer review
- Corroborating data
- Confirmatory testing
- Equivalent QA program

or any other method accepted by NRC on a case-by-case basis
Qualified QA Programs

Raytheon
Lawrence Livermore
REECo
Sandia
U.S. Geological Survey
OCRWM
Los Alamos
T&MSS
CRWMS M&O

-existing data - qualified data

★ OCRWM issues acceptance letter to NRC

4INQOD5P.125 NWTRB/4-21/22-93
DOE has Adopted the Guidance from NUREG-1298

- Quality Assurance Requirements and Description Document (DOE/RW/0333P)
  - Supplement III.2.4 Data Validation and Qualification

- Administrative Procedure 5.9Q, Qualification of Existing Data
Any Data Can be Used in a License Application

Existing data will be qualified only in those cases where

• The existing data are needed to directly establish a licensing position

• And no alternative qualified data can be used
DOE Qualification Process - AP-5.9Q

Step 1

Identify Existing Data Set for Qualification

Step 2

Conduct Technical Assessment (QMP-02-08)

Conduct Peer Review (QAAP-3.3)

Step 3

Review Recommendations

Are Data Qualified?

No

Provide Instructions to Participants

Yes

Update Data Bases and Use Data
1. Will the existing data be relied on to establish a licensing position for which no alternative qualified data can be used?

2. To what extent do the controls under which the data were generated meet, in whole or in part, 10 CFR 60, Subpart G, requirements?

3. Are there existing technical or peer reviews that would lend confidence to the quality of the data? Were the data published in a refereed journal?

4. What, if any, corroborative data or confirmatory testing results are available?

5. Is additional confirmatory testing necessary?
Example of Qualification Process: Extreme Erosion

Step 1
Identified Erosion Data to Support Position on PAC [10CFR60.122(c)(16)]

Step 2
Selected Technical Assessment
Selected Team
Compared Technical & QA Procedures (then & now)

Step 3
Interviewed Principal Investigators
Examined Scientific Notebooks
Prepared Report and Recommendations to Qualify data
DOE Reviewed Report & Recommendation

Are Data Qualified?
Yes - September 1992
DOE Sent Letter to TPOs and Submitted Records
DOE Policy

Perform the investigations in the SCP in a manner to ensure that sufficient data to support a license application are developed under a 10 CFR 60 Subpart G Quality Assurance program.
The Decision to Qualify Existing Data

- Is a licensing decision
- Made as part of the issue resolution process
- On a case-by-case basis as components of the license application are prepared