



Department of Energy
Washington, DC 20585

SEP 11 1989

John Linehan, 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, D.C. 20555

Dear Mr. Linehan:

This is in response to your letter dated April 24, 1989, in which you made two requests that information be provided to you.

The first request, for a copy of the Site and Engineering Properties Data Base (SEPDB), was fulfilled on June 30, 1989. On that day, a copy of the SEPDB was provided to the NRC representative in Nevada, Paul Prestholt. The transmittal was in the form of a Computer Compatible Tape (CCT). The data is in the INGRES format required by the NRC and its contractor, Southwest Research. A copy of the tape is enclosed for your records (Enclosure 1).

We view the second request for geoscience information as five discrete requests for a variety of information on a range of topics. These five items and the corresponding source materials for those items are summarized in Enclosure 2. Enclosures 3 through 5 provide detailed lists of source documents. Four CCTs, containing meteorologic data, are also enclosed (Enclosure 6) in response to NRC request Item 2 of Enclosure 2. These tapes are in ASCII format. Format information and a copy of the NNWSI Meteorological Monitoring Plan are included with Enclosure 6. Source documents which were not provided to the NRC as Site Characterization Plan references are also enclosed (Enclosure 7).

Because of their bulk and special characteristics (i.e., magnetic media), copies of the enclosures will be sent to all State of Nevada and affected parties by the Yucca Mountain Project Office (YMPO) under separate cover after YMPO has inquired of the party's desire to receive the information.

This transmittal should satisfy the NRC requests for data outlined in your April 24, 1989, letter. If you have any questions or comments concerning this matter, please contact me on 586-1462.

Sincerely,

Gordon Appel, Chief
Licensing Branch
Office of Civilian Radioactive
Waste Management

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FULL TEXT ASCII SCAN

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cc:

R. Loux, State of Nevada
K. Stablein, NRC
D. Bechtel, Clark County, NV
M. Baughman, Lincoln County, NV
S. Bradhurst, Nye County, NV

Enclosures:

1. SEPDB CCT
2. Summary of Geoscience Information
3. List of Documents Containing Seismic Data
4. List of NNWSI Hole History Reports
5. List of Documents Containing Hydrologic Pumping Test Data
6. Meteorologic Data (CCTs), Formats, and NNWSI Meteorological Monitoring Plan
7. All documents that are referenced in Enclosures 2 through 5 that do not have asterisks.

ENCLOSURE 2

SUMMARY OF GEOSCIENCES INFORMATION

Item 1

- a) Continuous down-hole pressure measurements and previously supplied manually-obtained measurements of water levels:

The data obtained from the continuously monitored program is currently being compiled by USGS investigators. Plans call for distribution of these data as a USGS Open File Report to be released by the end of August 1989. The DOE will forward a copy of this document to you as soon as it is received.

- b) Regional seismic data (including earthquakes, blasting-related mining construction, and underground nuclear explosions (UNES)):

Enclosure 3 lists documents containing seismic data. Documents indicated with an asterisk (*) were provided to the NRC as SCP references. If the NRC cannot locate those documents, copies can be provided. The remaining documents are enclosed (enclosure 7).

Seismic data tapes:

The USGS, which holds this information, has been duplicating the seismic data tapes in response to a request from the State of Nevada. To date, 460 of an estimated 540 9-track tapes have been copied by the USGS. One copy of each tape has been forwarded by the Yucca Mountain Project Office (Project Office) to the State of Nevada at a cost of \$18,000. A second copy of each of the 460 tapes is retained at the Project Office. The Project Office has begun duplication of the available 460 tapes. Due to a limited number of compatible tape drives, the rate for copying these tapes will be about 14 tapes per week. The tapes will be forwarded to you at two week intervals beginning on September 1, 1989. The total request, including the additional 120 tapes not yet received from the USGS, should be completed by April of next year.

c) Water level data from wells on the Nevada Test Site:

The Water Resources Division of the USGS is presently developing a data management system to capture water level monitoring data for the entire NTS. They are presently working on capturing the data from current records of monitoring activities, and plan to incorporate prior records of monitoring activities at a later date. The USGS will publish an open file report containing this information by the end of October 1989. The report number and author have not been determined. The DOE will forward a copy of this document to NRC as soon as it is received.

Item 2

a) Barometric pressure data from the meteorological stations closest to the Yucca Mountain wells:

Barometric pressure data are available from the Yucca Flat (December 1961 to May 1978) and Desert Rock National Weather Service stations on the NTS (May 1978 to present).

Four magnetic CCTs containing this data are included as Enclosure 6. The tapes consist of one tape from Yucca Flat, one tape from Desert Rock, and two tapes of NNWSI Meteorological Data. Also included are the formats for the data and a copy of the NNWSI Meteorological Monitoring Plan.

Items 3 and 4

a) History of each well:

Various reports published by Fenix and Scisson of Nevada (FSN) and routinely distributed to the NRC contain this information. Enclosure 4 lists the FSN reports. Documents marked with an asterisk (*) were provided to the NRC as SCP references. If the NRC cannot locate those documents, copies can be provided. The remaining documents (numbers 14 and 15) are included.

Item 5

Hydrologic pumping tests:

Enclosure 5 lists publications containing pumping data. Documents marked with an asterisk (*) were provided to the NRC as SCP references. If the NRC cannot locate those documents, copies can be provided. The remaining documents are enclosed.

ENCLOSURE 3

LIST OF DOCUMENTS CONTAINING SEISMIC DATA

1. Announced United States Nuclear Tests, July 1945 through December 1987, NVO-209, Rev. 8
- *2. Historical Catalog of Southern Great Basin Earthquakes 1868-1978 (USGS-OFR-87-80)
3. Analysis of Earthquake Data Recorded by Digital Field Seismic Systems, Jackass Flats, Nevada (USGS-OFR-86-420)
- *4. Evaluation of the Seismicity of the Southern Great Basin and Its Relationship to the Tectonic Framework of the Region (USGS-OFR-87-408)

* SCP Reference

ENCLOSURE 4

LIST OF NNWSI HOLE HISTORY REPORTS

- *1. NNWSI Hole Histories, UE-25a#1, UE-25a#3, UE-25a#4/, UE-25a#5, UE-25a#6, UE-25a#7, (DOE/NV/10322-9)
- *2. NNWSI Hole Histories, UE-25WT#3, UE-25WT#4, UE-25WT#5, UE-25WT#6, UE-25WT#12, UE-25WT#13, UE-25WT#14, UE-25WT#15, UE-25WT#16, UE-25WT#17, UE-25WT#18, (DOE/NV/10322-10)
- *3. NNWSI Hole Histories, UE-25RF#1, UE-25RF#2, UE-25RF#3, UE-25RF#3B, UE-25RF#4, UE-25RF#5, UE-25RF#7, UE-25RF#7A, UE-25RF#8, UE-25RF#9, UE-25RF#10, UE-25RF#11, USW WT-1, USW WT-2, USW WT-7, USW WT-10, USW WT-11, (DOE/NV/10322-11)
- *4. NNWSI Hole Histories, UE-29a#1, UE-29a#2, (DOE/NV/10322-12)
- *5. NNWSI Hole Histories, UE-25b#1, (DOE/NV/10322-13)
- *6. NNWSI Hole Histories, UE-25c#1, UE-25c#2, UE-25c#3, (DOE/NV/10322-14)
- *7. NNWSI Hole Histories, UE-25h#1, (DOE/NV/10322-15)
- *8. NNWSI Hole Histories, UE-25p#1, (DOE/NV/10322-16)
- *9. NNWSI Hole Histories, USW VH-1, USW VH-2, (DOE/NV/10322-17)
- *10. NNWSI Hole Histories, USW H-1/, USW H-3, USW H-4, USW H-5, USW-H-6, (DOE/NV/10322-18)
- *11. NNWSI Hole Histories, USW G-1, USW G-2, USW G-3, USW G-4, USW GA-1, USW GU-3, (DOE/NV/10322-19)
- *12. NNWSI Hole Histories, UE-25 UZ#4, UE-25 UZ#5, USW UZ-1/, USW UZ-6, USW UZ-6s, USW UZ-7, USW UZ-8, USW UZ-13, (DOE/NV/10322-20) *13. NNWSI Hole Histories, Unsaturated Zone-Neutron Holes 76 Boreholes drilled between May 1984 and February 1986, (DOE/NV/10322-21)
- 14. NNWSI Drilling and Mining Summary (DOE/NV/10322-24)
- 15. NNWSI 51 Seismic Hole Histories (DOE/NV/10322-25)

* SCP Reference

ENCLOSURE 5

LIST OF DOCUMENTS CONTAINING HYDROLOGIC PUMPING TEST DATA

Geohydrologic data for test well UE-25b#1, Nevada Test Site, Nye County, Nevada USGS OFR 83-855).

Geohydrology of volcanic tuff penetrated by well UE-25b#1, Yucca Mountain, Nye County, Nevada (USGS WRIR 84-4253).

*Geohydrologic data for test well UE-25p#1, Yucca Mountain area, Nye County, Nevada (USGS OFR 84-450).

*Geohydrology of rocks penetrated by test well UE-25p#1, Yucca Mountain area, Nye County, Nevada (USGS WRIR 84-4248).

*Geohydrologic data for test well USW G-4, Yucca Mountain area, Nye County, Nevada (USGS OFR 84-063).

Geohydrology of rocks penetrated by test well USW G-4, Yucca Mountain, Nye county, Nevada (USGS WRIR 86-4015).

*Geohydrologic and drill-hole data for test well USW H-1, adjacent to Nevada Test Site, Nye county, Nevada (USGS OFR 83-141).

Geohydrology of test well USW H1, Yucca Mountain, Nye County, Nevada (USGS WRIR 83-4032).

*Preliminary evaluation of hydrologic properties of cores of unsaturated tuff, test well USW H-1, Yucca Mountain, Nevada (WRIR 84-4193).

*Geohydrologic and drill-hole data for test well USW H-3, Yucca Mountain, Nye County, Nevada (USGS OFR 84-149).

*Geohydrology of test well USW H-3, Yucca Mountain, Nye County, Nevada (USGS WRIR 84-4272).

*Geohydrologic and drill-hole data for test well USW H-4, Yucca Mountain, Nye County, Nevada (USGS OFR 84-449).

*Geohydrology of rocks penetrated by test well USW H-4, Yucca Mountain, Nye County, Nevada (USGS WRIR 85-4030).

*Identification and characterization of hydrologic properties of fractured tuff using hydraulic and tracer tests--test well USE H-4, Yucca Mountain, Nye County, Nevada (USGS WRIR 85-4066).

*Geohydrologic data for test well USW H-5, Yucca Mountain area, Nye County, Nevada (USGS OFR 83-853).

*Geohydrologic data for test well USW H-6, Yucca Mountain area, Nye County, Nevada (USGS OFR 83-856).

*Geohydrologic data and test results from well J-13, Nevada Test Site, Nye County, Nevada (USGS WRIR 83-4171).

*Water supply for the Nuclear Rocket Development Station at the U.S. Atomic Energy Commission's Nevada Test Site (USGS WSP 1938).

Hydraulic tests and chemical quality of water at well USW VH-1, Crater Flat, Nye County, Nevada (USGS WRIR 86-4359).

Aquifer test data are not available for test holes UE-25C#1, USW G-1, USW G-2, USW G-3, USW WT-1, USW WT-2, UE-25 WT #3, UE-25 WT #4, UE-25 WT #12, UE-25 WT #13, UE-25 WT #14, UE-25 WT #15, UE-25 WT #16, UE-25 WT #17, and USW VH-2 because hydraulic testing was not done in these holes.

* SCP Reference