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ENGINEERS INTERNATIONAL, INC.

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D1004

WM Project 10, 11, 16 '84

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Docket No. 7

PDR ✓

LPDR ✓ (B.I.S.)

01 August 1984

Ref. No. 1148-004-043

Project Letter No. 043

Distribution:

Buckley

Return to WM, 623-SS)

High Level Waste Technical Development Branch
Division of Waste Management
U. S. Nuclear Regulatory Commission
7915 Eastern Avenue
Silver Spring, MD 20910

Attention: Mr. John Buckley, Project Officer
Mail Stop 623-SS

Subject: Contract No. NRC-02-84-002
Meeting Report for July 16-20, 1984
Meetings Held in Las Vegas, NV, and Albuquerque, NM

Dear Mr. Buckley:

Enclosed is one (1) copy of the subject meeting report. The travel expense vouchers are being sent with the monthly report. If there are any questions, please contact me.

Sincerely,

ENGINEERS INTERNATIONAL, INC.

Swapan Bhattacharya
Lead Mining Engineer

SB/bt

Enclosure: 1

cc: Office of the Director, NMSS (Attn: Program Support Branch)
Division of Waste Management (Attn: Division Director)
Contracting Officer (Attn: Ms. Mary Mace)
High-Level Waste Technical Development Branch (Attn: Branch Chief)

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ENGINEERS INTERNATIONAL, INC.

MEETING REPORT

NRC Contract No. NRC-02-84-002, Task Order 004

EI Project No. 1148-004

TECHNICAL ASSISTANCE FOR IN SITU TESTING

DATE 16-20 July 1984

PLACE Sandia National Laboratories
Building 822
Albuquerque, NM 87185

PURPOSE Field visit to the G-Tunnel and Yucca Mountain, Nevada Test Site, Nevada, and data review meeting to obtain background data for review of the Environmental Assessment (EA) for the Nevada Nuclear Waste Storage Investigations (NNWSI) repository site.

PARTICIPANTS

See attached list.

DISCUSSION

On 16 July 1984 a meeting was held among the NRC staff and consultants at the El Morocco Hotel in Las Vegas, NV, in order to identify core boxes of interest among the core photographs from drillhole USW-G1, USW-G2, USW-G3, USW-G4, and UW 25a #1. About 43 core boxes were selected from the lot for detailed examination.

On the morning of 17 July 1984, NRC and its consultants were taken for a tour of the G-Tunnel. The tour began with a presentation by Roger Zimmerman on the objectives of the G-Tunnel test programs, tests currently in progress, and tests planned for the future on the NNWSI project. This was followed by a tour of the test facilities inside the G-Tunnel, including:

- small scale heater tests
- heated block experiment
- circular chain saw
- repository size experimental drift
- welded tuff exposure
- underground data processing/computer room.

Following the tour of the G-Tunnel, the NRC team made a trip to the Yucca Mountain area and observed the following sites:

- USGS drillhole No. USW-UZ6 site
- USGS drillhole No. USW-H6 site
- Drillhole Wash
- Exile Hill
- Fran Ridge (near USGS drillhole No. USW 25-h1)

Included among these were the sites provisionally selected for locating the Exploratory Shaft (ES) and the repository surface facilities.

The NTS tour ended with a trip to the core sheds for the USGS drillholes. NRC and its consultants examined the contents of the selected core boxes and any questions raised were addressed by Gary Dixon and other USGS personnel.

On 18 July 1984, the data review meeting commenced at the Sandia National Laboratories in Albuquerque, NM. Joe Tillerson introduced all Sandia and DOE personnel, followed by NRC and its consultants introducing themselves. King Stablein then presented NRC's objectives and work plan for the data reviews, and John Greeves reaffirmed NRC's intentions of not entering a dialog about data interpretations with DOE at this stage. Jerry Szymanski commented on his concern about releasing certain data to the public before detailed in-house reviews.

Tom Hunter next gave a slide presentation on the organizational structure at NNWSI and Sandia, and on the data base and DOE's policy regarding release of unreviewed material. NRC was advised to make requests for data release on a special form, and DOE will make every effort to make them available.

Joe Tillerson elaborated on the data review procedure and assured that at least one Sandia personnel will be present to answer any questions that may arise during preparation of the data review sheets. Joe Tillerson also identified the Sandia personnel that would be involved in each data review session.

Following the DOE presentations, NRC staff and consultants had an internal meeting to finalize the logistics of the data review process. Three subgroups were set up, headed by Piyush Dutta, Nailem Tanious, and Jaak Daemen to supervise the activities of the various groups and to ensure that the data sheets are filled out satisfactorily.

The individual groups then proceeded to fill out the data review sheets in their respective data areas for the next two days (19 and 20 July 1984). The distribution of personnel in the various groups are shown in attachment 2.

On 20 July 1984, the data reviews were completed. NRC staff and consultants met to exchange views on individual experiences during the data reviews. There was general agreement to the effect that Sandia personnel were very cooperative and that the data review process was generally satisfactory. Mixed feelings were expressed with regard to availability of data in certain areas. John Greeves concluded the meeting by summing up his observations and experiences during the entire meeting.

NRC DESIGN DATA REVIEW ATTENDANCE LIST
July 18, 1984

Attachment 1

<u>Name</u>	<u>Affiliation</u>
NRC Participants:	
John Greeves	NRC - FTS 427-4734
Piyush Dutta	NRC - FTS 427-4742
Naiem Tanious	NRC - FTS 427-4736
Newton King Stablein	NRC - FTS 427-4611
Jonathan Cutler	NRC - FTS 427-4597
Clayton L. Pittiglio, Jr.	NRC - FTS 427-4793
Paul T. Prestholt	NRC - FTS 598-6125
Susan G. Bilhorn	NRC - FTS 427-4682
Tom Schmitt	NRC/RES FTS 427-4318
Swapan Bhattacharya	Engineers International, Inc. (Consultant to NRC) (312)-963-3460
Edward E. Kollop	Bureau of Mines - DOI, FTS 776-0739
R. Lindsay Mundell	Bureau of Mines - DOI, FTS 776-0741
Jaak J. Daemen	University of Arizona
Mark Christianson	ITASCA Consulting Group Inc., Mpls. MN (612)944-7114
State of Nevada:	
Carl Johnson	State of NV - (702-885-3744)
NWSSI Participants:	
Jerry S. Szymanski	DOE-NV FTS 575-1030
Joe Tillerson	SNL - Geotechnical Project FTS 844-5575
Leo Scully	SNL - Repository Design FTS 844-1849
Brenda Langkopf	SNL - Repository Perform. Assess. FTS 844-8777
Barry Schwartz	SNL - Geotechnical Project FTS 846-8268
Fran Nimick	SNL - Geotechnical Project FTS 844-6696
Ronald H. Price	SNL - Geomechanics FTS 844-8980
William A. Olsson	SNL - Geomechanics FTS 844-7344
Edward W. Shepherd	SNL - Investigations Project FTS 846-0184
Thomas O. Hunter	SNL - Depart. Mgr.-Investigations Proj. FTS 844-9160
Judy A. Geltgey	SNL - Librarian FTS 844-3044
Joe A. Fernandez	SNL - Geotechnical Project FTS 844-2365
Roger Zimmerman	SNL - Geotechnical Project FTS 846-0187
Luke Vortman	SNL - Ground Motion & Seismic FTS 844-7563
Hugh MacDougall	SNL - Repository Design, FTS 844-3133
Mike A. Glora	SAI-LV FTS 575-1463
Mike L. Wilson	SAI-LV 702-732-3320
Weston Participant:	
Hank Bermanis	Weston (301-963-6821)

**NRC DESIGN/ROCK MECHANICS DATA REVIEW SCHEDULE
AT SANDIA NATIONAL LABORATORIES
(July 18-20, 1984)**

July 18 Wednesday		July 19 Thursday		July 20 Friday		
1:00-3:00	3:00-5:30	8:00-11:30	12:30-5:30	8:30-10:00	10:00-11:30	11:30-12:00
1:00 Introductory Remarks →J. Szymanski and K. Stablein	Rock Mechanics Testing, Lab tour & data [JT] [RP] [BO] (SB) (LM) (PD)(SB 2) (JC) Bldg. 849 Bldg. 823/1020	Mech. Prop. Data [RP] [BO] (SB) (LM) (TS) (JC) (SB 2) Bldg. 823/1020	Mech. Prop. Data [RP] [BO] (SB) (TS) (PP) (JC) (SB 2) Bldg. 823/1020	Rock Classification Data [BL] [FN] (SB) (MC) (EH) (SB 2) Bldg. 823/1020	NRC Reviewers' Conference Session Bldg. 822/A NRC Participants Only	Data Review Wrap-up K. Stablein and J. Szymanski
1:30 Synopsis - Data and Records Available T. O. Hunter and J. R. Tillerson						
2:30 Finalize Small Group Scheduling and Badging	Core handling & Storage facility lab tour & thermal prop. data [FN] [BS] (MC) (NT) (PP) (LP) Bldg. 672/2 & 4A Bldg. 892/1664B Bldg. 823/4071A	Bulk Prop. Data Data, Thermal Prop. Data [FN] [BS] (EH) (NT) (PP) (LP) Bldg. 823/4424B	Thermal Prop. Data [FN] [BS] (LM) (EH) (NT) (LP) Bldg. 823/4071A	Seismic Data [IM] [LV] (LM) (TS) (PP) (LP) (JC) Bldg. 823/4071A		Bldg. 822/A
Bldg. 822/A						
All NRC and NNWSI and Participants	G-Tunnel Rock Characterization- Data (Insitu Stress Data, Borehole Modulus Data) [RZ] [BL] (JD) (TS) (EH) (JG) (KS) Bldg. 823/4255	Small Diameter Heater Test Data [RZ] [BS 2] (JD) (PD) (MC) (JG) (KS) Bldg. 823/4255	Heated Block Test Data [RZ] [BS 2] (JD) (MC) (PD) (JG) (KS) Bldg. 823/4255	(1) Sealing Test Data (8:30-9:30) (2) Overflow data from any other area (9:30-10:00) [JT] [JF] (JD) (NT) (PD) (JG) (KS) Bldg. 823/4255		All NRC and NNWSI Participants

NRC Participants:

Paul Prestholt (PP), Thomas Schmitt (TS), Ed Hollop (EH), Lindsey Mundell (LM), Mark Christianson (MC), Swapn Bhattacharya (SB), Susan Billhorn (SB 2), Jaak Daeman (JD), Naïem Tanious (NT), Piyush Dutta (PD), John Greeves (JG), Larry Pittiglio (LP), King Stablein (KS), John Cutler, (JC).

NNWSI Participants:

Joe Fernandez [JF], Tom Hunter [TH], Brenda Langkopf [BL], Hugh MacDougall [HM], Fran Nimick [FN], Bill Olsson [BO], Ron Price [RP], Barry Schwartz [BS], Joe Tillerson [JT], Luke Vortman [LV], Roger Zimmerman [RZ], Bill Shepherd [BS 2]

ALL UNCLEARED VISITORS MUST REPORT EACH DAY FOR BADGING AT BUILDING 822