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ISSUE DATE: 8/8/80

MINUTES OF THE ACRS SUBCOMMITTEE MEETING ON THE
GENERAL ELECTRIC TEST REACTOR (GETR)
SUNOL, CA
JUNE 16 & 17, 1980

The ACRS Subcommittee on General Electric Test Reactor (GETR) met at Sunol Country Club, Sunol, CA on January 16 & 17, 1980 to continue its discussion on geology, seismology, and structural engineering aspects of the GETR facility.

The notice of this meeting was published in the Federal Register on May 30, 1980. The entire meeting was open to the public. The schedule of the meeting, the attendee list, and handouts received at the meeting are attached. There were six members of the public that made oral presentations at the meeting. They were: B. Weidenbaum, B. Gilchrist, D. Hughes, H. Hubbard, H. L. Halterman, and G. Barlow. Mr. E. Igne was the Designated Federal Employee for the meeting.

The meeting was attended by ACRS members, W. Kerr, Chairman of the Subcommittee, D. Okrent (June 17th only), and C. Siess. The ACRS consultants who attended the meeting were: S. Philbrick, G. Thompson, J. Maxwell, T. Pickel (June 16th only), M. White, P. Pomeroy, A. Ang, B. Page, and M. Trifunac.

A brief overview of the status of the GETR was presented by Mr. C. Nelson, NRC Project Manager, and they are as follows:

- The primary purpose of this meeting was to discuss the seismic design parameters.
- The landslide hazard has not yet been completely resolved. The Staff feels that this ussues is an important issue in the seismic design and in the determination of the structural adequacy of the facility. A schedule of implementation and completion of the landslide study is needed by GE, although this is not needed at this time in order to complete the evaluation of the GETR.
- The Staff has not completed its review of GE's structural analysis of the GETR facility. The SER on this item has not yet been issued.
- The Staff estimates that the SER on the structural aspects of the GETR should be issued in July and the completed SER on the GETR should be issued in August.

Mr. R. Dammitzel, Manager of the Vallecitos Nuclear Center, of which GETR is a part, identified the open issues and described how GE intended to resolve them. He further stated that the GETR facility meets the necessary requiremnts of keeping the fuel covered with water, which insures no release of the fission products.

Mr. D. Gilliland, Manager of Operation at GETR, described the GETR structures, systems, and equipment which are important to safety and the modifications which have been made to assure that the facility will meet the design basis criteria, that is, to ensure that the fuel remains covered with water at all times.

In response to a question, Mr. Gilliland stated that there is a seismic scram system at GETR. This system detects the horizontal components of the earthquake and scrams the reactor within 0.8 seconds. The scram is set at .01 g.

The modifications to the plant consisted essentially of reanalyzing the GETR facility and adding restraints supports, hangers, etc. to the reactor pressure system and canal storage system in order to maintain an adequate safety margin.

The GETR structures have been analyzed and modified to accept the following seismic design parameters:

- An 0.8g effective ground acceleration and Regulatory Guide 1.60 response spectrum shape.
- A one meter offset.
- The acceleration and surface offset have been assumed to act independently.

The above design parameters are in conflict with the Staff's seismic design criteria. The difference in design criteria is causing a delay in the Staff's evaluation of GETR structural modifications.

Mr. J. Reed, consultant to GE, presented the results of probability analysis on (1) surface rupture offset beneath the reactor building and (2) combined surface rupture offset vibratory ground motion. The model used in the analyses

accounted for the following characteristics:

- Offsets may occur due to unknown, undiscovered shears in the region.
- Offsets may occur between shears due to an offset occurring on existing shears.

The parameters affecting the results are as follows:

- The age of the soil beneath the reactor.
- Time period between offsets events.
- Strain rate on existing shears.
- Specified confidence value.

Results of the analysis are as follows:

- Probability of a future offset beneath the reactor building is 10^{-6} to 10^{-5}. GE assumed a value of 8000 yrs. for the time since the last offset. GE therefore stated that surface offset should not be considered as a design.
- If surface rupture must be considered beneath the reactor building, GE recommends one meter.

Mr. J. Martore of the NRC Staff presented the status of NRC evaluation of the plant structures. Mr. Martore stated the GETR acceptance criteria are as follows:

- The safety-related systems should safely shut down the reactor during a design basis accident.
- Assure integrity of concrete core structure which support other systems and components important to safety.
- Assure integrity of reactor vessel and canal fuel storage tanks.
- Assure capability of providing makeup water to spent fuel storage tanks and reactor vessel.

Mr. Martore then presented the revised NRC seismic design criteria as follows:

- Regulatory Guide 1.60 spectra anchored to 0.75g.
- Surface rupture offset of one meter of reverse-oblique met slip varying in dip from 10 to 45 degrees.

- Regulatory Guide 1.60 spectra anchored to 0.6g together with a surface offset of one meter as described above.

The GE structural analysis to date does not comply with the NRC requirements. More work is necessary by GE and NRC before this issue is resolved.

Mr. D. Yaden of Earth Sciences Associates, a consultant of GE, presented a chronology of the GETR landslide investigations performed to date, and discussed the proposed filed and laboratory investigations and analyses. The proposed program will include field borings, e-loggings, piezometer installation, and possibly test pits.

Six members of the public made oral presentations at the meeting. They are: Ms. Weidenbaum, Ms. Gilchrist, Ms. Hughes, Ms. Hubbard, Mr. Barlow, and Mr. Halterman.

Mmes. Weidenbaum, Gilchrist, Hughs, and Hubbard are associated with a pro-energy organization called Citizens for Total Energy. They all spoke for the resumption on GETR. Mr. Barlow is with the Friends of the Earth Foundation. He stated that the NRC has ignored the USGS recommendation that the amount of surface offset at the GETR site could exceed one meter. Mr. Barlow contends that the NRC is not capable of protecting the public health and safety.

Mr. Halterman is from Congressman R. V. Dellum's Office of the 8th District, CA. He stated that the geologic design criteria cannot yet be effectively evaluated until more information has been presented.

Mr. W. Hall, a consultant to NRC, made a presentation on seismic evaluation of the Vallecitos site. The recommended seismic criteria are as follows:

- Effects associated with the Calaveras Fault
  - acceleration of 0.6 to 0.75g for use in anchoring the Regulatory Guide 1.60 spectra
  - no fault offset transmitted to site
- Effects associated with Verona Fault
  - acceleration of 0.35 to 0.40g coupled simultaneously with a fault offset of one meter in any arbitrary direction

Mr. Slemmons, a consultant to the NRC, made a presentation on the assumptions of the input to the probabilistic analysis. He discussed the age of soil and paleosols, fault slip rates, recurrence intervals, and earthquake magnitudes. He also stated the conservatism in the probabilistic analysis performed by GE consultants, J.R. Benjamin Associates.

Mr. Vesely of NRC presented a review of the GETR probabilistic analysis. The summary of the review performed by NRC consultants, Lawrence Livermore Lab. and TERA is as follows:

- Experts found softness and sensitivities in JBA probability studies.
- Experts did not present any arguments on JBA probabilities being grossly in error.
- TERA's alternative probability model gave comparable results to JBA's.

In conclusion, Mr. Vesely stated that (1) from JBA's report and sensitivity analyses, a credible range for the offset probability is assessed to be 1×10^{-6}/yr to 1×10^{-4}/yr to an order of magnitude uncertainty and (2) JBA's analysis is credible and should be factored into decision making.

Mr. Justus of the NRC Staff presented a summary of the SER findings. These findings are listed below:

- Appendix A, 10 CFR 100 investigative requirements are not met.
- GETR is located within 3200 ft. wide Verona fault zone.
- The Verona Fault is capable.
- Future displacements will occur most likely on existing faults; faults may exist in GETR foundation soils.
- Loading by surface offset and peak acceleration must be considered to act simultaneously.
- Landslide hazard potential exists.
- Structural evaluation is being evaluated.

A member of the Subcommittee suggested that the NRC should develop independent capability in translating earthquake information into structural design basis. Currently, this seismic evaluation is being done by consultants to the NRC.

The structural evaluation, based on seismic design criteria performed by NRC consultants, has been accepted by NRC and GE as a conservative design basis. A member of the Subcommittee questioned the basis of the consultants' evaluation as conservative if the Staff or Licensee has no capability to perform an independent analysis.

The Subcommittee consultants recommended that additional dynamic analyses be performed on the structures to account for time effects of the earthquake surface offset which were neglected in the GE analysis. In addition, a member of the Subcommittee suggested that the effects of surface offset greater than one meter should be considered.

The Subcommittee noted that further information is not needed in the seismic area. It also decided that the GETR matter not be brough to the full ACRS until further progress is made on the resolution of outstanding issues. The final SER is tentatively scheduled to be completed in August 1980.

The meeting was adjourned at 6:30 p.m. on June 17, 1980.

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NOTE: For additional details, a complete transcript of the meeting is available in the NRC Public Document Room, 1717 H St., NW, Washington, DC 20555 or from Alderson Reporters, 300 7th St., SW, Washington, DC (202-554-2345).

Dated: May 27, 1980.

M. Rebecca Winkler,

Committee Management Coordinator.

[FR Doc. 80-16068 Filed 5-29-80; 8:45 am]

BILLING CODE 7555-01-M

Ad Hoc Subcommittee for Review of Warm Core Rings; Meeting

In accordance with the Federal Advisory Committee Act, as amended, Pub. L. 92-463, the National Science Foundation announces the following meeting:

NAME: *Ad Hoc* Subcommittee for the Review of the Warm Core Rings (WCR) Project of the Advisory Committee for Ocean Sciences.

DATE AND TIME: 19-20 June 1980, 8:30 a.m. to 5:00 p.m.

PLACE: National Science Foundation, 1800 G Street, NW, Room 643, Washington, DC 20550.

TYPE OF MEETING: Closed.

CONTACT PERSON: Dr. Rodger W. Barier, International Decade of Ocean Exploration, Science, Room 685, National Science Foundation, Washington, DC 20550; telephone 202/357-9749.

PURPOSE OF SUBCOMMITTEE: To provide the IDOE Ad Hoc Subcommittee members with additional expertise in the review and evaluation of proposals relating to oceanographic research related to the Warm Core Rings Project.

AGENDA: Detailed review and evaluation of proposals for support of the Warm Core Rings Project.

REASON FOR CLOSING: The proposals being reviewed include information of a proprietary or confidential nature, including technical information; financial data, such as salaries; and personal information concerning individuals associated with the proposals. These matters are within exemptions (4) and (6) of 5 U.S.C. 552b(c), Government in the Sunshine Act.

AUTHORITY TO CLOSE MEETING: This determination was made by the Committee Management Officer pursuant to provisions of Section 10(d) of Pub. L. 92-463. The Committee Management Officer was delegated the authority to make such determinations by the Director, NSF, on July 6, 1979.

M. Rebecca Winkler,

Committee Management Coordinator.

May 27, 1980.

[FR Doc. 80-16067 Filed 5-29-80; 8:45 am]

BILLING CODE 7555-01-M

Advisory Committee for Engineering and Applied Science; Open Meeting

In accordance with the Federal Advisory Committee Act, Pub. L. 92-463, the National Science Foundation announces the following meeting:

Name: Advisory Committee for Engineering and Applied Science—Task Group on Unique Problems in Engineering Research and Education.

Date: June 18, 1980.

Place: 1800 G Street, N.W., Room 421, Washington, D.C. 20550.

Type of meeting: Open.

Contact person: Ms. Mary F. Chezmar, Executive Secretary, Advisory Committee for Engineering and Applied Science, Room 537, National Science Foundation, Washington, D.C. 20550, telephone: (202) 357-9571.

Summary minutes: Ms. Mary Chezmar, Special Assistant, Directorate for Engineering and Applied Science, Room 537, National Science Foundation, Washington, D.C. 20550.

Purpose of Advisory Meeting: To provide advice, recommendations, and counsel on major goals and policies pertaining to Engineering and Applied Science activities and programs.

Agenda:

June 18—8:00 a.m. to 4:30 p.m.

Discussion of the NSF and Department of Education response to President Carter's request for a review, with recommendations, on whether U.S. science and engineering education is adequate to meet the Nation's long-term needs.

Discussion of National Academy of Engineering (NAE), Task Force on Engineering Education, study on issues in engineering education.

M. Rebecca Winkler,

Committee Management Coordinator.

May 27, 1980.

[FR Doc. 80-16068 Filed 5-29-80; 8:45 am]

BILLING CODE 7555-01-M

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards Subcommittee on the General Electric Test Reactor; Meeting

The ACRS Subcommittee on the General Electric Test Reactor (GETR) will hold a meeting on June 18-17, 1980, at the Sunol Valley Golf Club, 8900 Mission Road, (Highway 680, Andrade Turnoff), Sunol, CA. Notice of this meeting was published May 15.

In accordance with the procedures outlined in the Federal Register on October, 1979, (44 FR 56408), oral or written statements may be presented by members of the public, recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Subcommittee, its consultants, and Staff. Persons desiring to make oral statements should notify the Designated Federal Employee as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements.

The agenda for subject meeting shall be as follows:

Monday and Tuesday, June 16-17, 1980

8:30 a.m. until the conclusion of business each day.

The Subcommittee may meet in Executive Session, with any of its consultants who may be present, to explore and exchange their preliminary opinions regarding matters which should be considered during the meeting.

At the conclusion of the Executive Session, the Subcommittee will hear presentations by and hold discussions with representatives of the NRC Staff, the General Electric Company, their consultants and other interested persons as it continues its review of the geologic, seismologic and structural engineering aspects of the GETR plant site. Other matters related to the NRC Order to Show Cause may also be discussed.

It may be necessary for the Subcommittee to hold one or more closed sessions for the purpose of exploring matters involving proprietary information. I have determined, therefore, in accordance with Subsection 10(d) of the Federal Advisory Committee Act (Public Law 92-463), that, should such sessions be required, it is necessary to close portions of this meeting to protect proprietary information. See 5 U.S.C. 552b(c)(4).

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefor can be obtained by a prepaid telephone call to the cognizant Designated Federal Employee, Mr. Elpidio G. Igne (telephone 202/634-1414) between 8:15 a.m. and 5:00 p.m., EDT.

Dated: May 23, 1980.

John C. Hoyle,

Advisory Committee Management Officer.

[FR Doc. 80-16287 Filed 5-29-80; 8:45 am]

BILLING CODE 7590-01-M

ATTACHMENT A

ACRS SUBCOMMITTEE MEETING ON THE GENERAL ELECTRIC TEST REACTOR (GETR)
JUNE 16 & 17, 1980
SUNOL, CA

TENTATIVE SCHEDULE

JUNE 16, 1980

APPROXIMATE TIME		SPEAKER
8:30 a.m. - 8:45 a.m.	Chairman's Opening Statement	Kerr
8:45 a.m. - 9:00 a.m.	Introductory Statement	NRC Staff
9:00 a.m. - 9:15 a.m.	Introductory Statement	GE
9:15 a.m. - 10:15 a.m.	GETR Facility and Modifications Description, Required Safety System	GE
10:15 a.m. - 10:30 a.m.	********** BREAK **********	
10:30 a.m. - 11:30 a.m.	Seismic Analyses (Structures & Equipment) - Methodology	GE
11:30 a.m. - 1:00 p.m.	Result of Seismic Analyses (Structures & Equipment)	GE
1:00 a.m. - 2:00 p.m.	********** LUNCH **********	
2:00 p.m. - 3:30 p.m.	Status of NRC Evaluation of Plant Structures	NRC Staff
3:30 p.m. - 4:15 p.m.	Landslide Stability Program	GE
4:15 p.m. - 4:30 p.m.	********** BREAK **********	
4:30 p.m. - 5:30 p.m.	Public Comments*	
5:30 p.m.	End of Business Day	

NOTES:

*1. Request for oral statements:

(10 mins) a. Dee Price; SMUD Ratepayers Asso. (10 mins.)

b. Helen Hubbard; Citizens for Total Energy (15 mins.)
(5 mins) - Diane Hughes
(5 mins) - Sue Hughes
(5 mins) - Kaye Huhlman
(5 mins)

c. Allow 30 mins. for late requests
(15 mins) - H. Lee Halteman, Congressman Dellum's Office

ATTACHMENT B

JUNE 17, 1980

APPROXIMATE TIME		SPEAKER
8:30 a.m.	Chairman's Opening Statement	Kerr
	NRC PRESENTATION	
8:45 a.m. - 9:30 a.m.	Staff Review of Site Geology	GSB/HGEB
9:30 a.m. - 10:30 a.m.	Geology	USGS
10:30 a.m. - 10:45 a.m.	********** BREAK **********	
10:45 a.m. - 11:45 a.m.	Review of Probabilistic Analysis by NRC Consultants	LLL/TERA
11:45 a.m. - 12:15 p.m.	Review of Probabilistic Analysis	NRC Staff
12:15 p.m. - 1:15 p.m.	********** LUNCH **********	
1:15 p.m. - 1:45 p.m.	Proabilistic Analysis Input Assumptions	Slemmons
1:45 p.m. - 2:15 p.m.	Geology (Conclusions)	GSB
2:15 p.m. - 3:15 p.m.	Seismic Design Basis	NRC Staff (Hall)
3:15 p.m. - 3:30 p.m.	********** BREAK **********	
	GE PRESENTATION	
3:30 p.m. - 5:30 p.m.	Geology - soil age - interpretation of excavation photographs - etc.	GE
5:30 p.m. - 6:00 p.m.	Probability Analysis	GE
6:00 p.m. - 6:30 p.m.	Caucus and Adjournment	

ACRS SUBCOMMITTEE MEETING ON THE GENERAL ELECTRIC TEST REACTOR (GETR)
SUNOL, CA
JUNE 16 & 17, 1980

ATTENDEE LIST

ACRS

W. Kerr, Chairman
C. Siess
D. Okrent (17th only)
M. White, ACRS Consultant
P. Pomeroy, ACRS Consultant
A. Ang, ACRS Consultant
J. Maxwell, ACRS Consultant
T. Trifunac, ACRS Consultant
T. Pickel (16th only), ACRS Consultant
S. Philbrick, ACRS Consultant
B. Page, ACRS Consultant
G. Thompson, ACRS Consultant
E. Igne, Designated Federal Employee

GENERAL ELECTRIC COMPANY

D. Hilliland
R. Darmitzel
R. Sharpe, GE Consultant
G. Kost, GE Consultant
K. Gallen
E. Firestone
E. Strain
K. McCausland
R. Blood
M. Reynolds
W. Sabol
N. Fifer
D. Smith
R. Shlemon, GE Consultant
H. Stone
H. Kamil, GE Consultant
R. Kovach, GE Consultant
P. Karhel

NRC STAFF

R. Jackson
C. Nelson
P. Justus
W. Hall, NRC Consultant
R. Clark
D. Bernrueter, NRC Consultant
J. Martore
W. Burkhardt
G. Zwetzig, Region V
D. Swanson
J. Greeves
M. Wohl
D. Slemmons, NRC Consultant
W. Vesely

U.S. GEOLOGICAL SURVEY

J. Devine
W. Ellsworth
R. Morris
E. Brabb

EARTH SCIENCES ASSOCIATES

D. Yadon
R. Meehan
R. Harding
R. Wright

JACK R. BENJAMIN & ASSOCIATES

J. Reed

ATTACHMENT C

DAMES & MOORE

R. McGuire

SO. CALIFORNIA EDISON COMPANY

H. Hawkins

STANFORD UNIVERSITY

R. Jahns

CITIZENS FOR TOTAL ENERGY

H. Hubbard
E. Weidenbaum
B. Gilchrist
D. Hughes

CONG. DELLUMS' OFFICE

D. Redic
H. L. Halterman

ENGINEERING DECISION ANALYSIS CO, INC.

G. Kost

LAWRENCE LIVERMORE LABORATORY

P. Smith

TERA CORPORATION

B. Davis

WOODWARD-CLYDE CONSULTANTS

M. Power

ALAMEDA COUNTY PUBLIC WORKS

E. Callender
C. Cornstock

FRIENDS OF THE EARTH

G. Barlow

INDEPENDENT LIVERMORE

A. McGay

MEMBERS OF THE PUBLIC

B. Shockley
G. Kasali
V. Zwetzig
S. Rice, CDMG
B. Clark, Modesto Bee
K. McDonald, Valley Times
J. Miller, Oakland Tribune
S. Biley, Tri-Valley Herald