



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

PDR/016

JUL 11 1985

Ms. Nina Bell
Nuclear Information and Resource Service
1346 Connecticut Avenue, NW, 4th Floor
Washington, DC 20036

IN RESPONSE REFER
TO FOIA-84-430

Dear Ms. Bell:

This is the final response to your letter dated May 23, 1984, in which you requested, pursuant to the Freedom of Information Act (FOIA), six categories of documents regarding the Charleston earthquake of 1886 and seismic design for the Vogtle nuclear power plant.

Documents 1 and 2 of the enclosed appendix are already available in the NRC Public Document Room (PDR). Document 3 is being placed in the PDR in folder FOIA-84-430 under your name.

This completes NRC's action on your request.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. M. Felton".

J. M. Felton, Director
Division of Rules and Records
Office of Administration

Enclosure: As stated

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APPENDIX

1. 11/19/82 Draft Commission paper, "Clarification of U. S. Geological Survey Position Related to Seismic Design Earthquakes in the Eastern Seaboard of the United States." (7 pages)
Accession No. 82121300064
2. 10/82 "Studies of Postulated Millett Fault," Vols. 1 and 2 (809 pages)
Accession No. 8210150373
3. 03/23/82 Memo to EDO from J. Ahearne; USGS Earthquake Analysis (1 page)
w/enclosure:

3/19/82 Memo to Chairman Palladino from W. J. Dircks;
Summary of Meeting Held at USGS. (4 pages)



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

Enclosure 2

March 23, 1982

OFFICE OF THE
COMMISSIONER

MEMORANDUM FOR: Executive Director/for Operations ✓
FROM: John Ahearne *J. Ahearne*
SUBJECT: USGS EARTHQUAKE ANALYSES

On March 19, 1982 you reported on a recent meeting with the USGS. In Secy-82-53 you had alerted us to some of the issues to be discussed. However, from your recent memorandum it is not clear to me what are the USGS's positions on the Charleston earthquake and on eastern earthquakes in general. Can you prepare a description for me?

cc: Chairman Palladino
Commissioner Gilinsky
Commissioner Roberts
OPE
OGC

- B.D. Kraw -

~~DOPE~~

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Rec'd Off, EDO
Date 3/24/82
Time 12:30

March 19, 1982

MEMORANDUM FOR: Chairman Palladino

FROM: William J. Dircks
Executive Director for Operations

SUBJECT: SUMMARY OF MEETING HELD AT USGS

On March 1, 1982, Harold Denton, Jim Knight and I met with Dallas Peck, Director, U.S. Geological Survey (USGS) and members of his staff. I requested this meeting in a letter of December 14, 1981 to Dr. Peck for the purpose of discussing the continuing need for review assistance from the USGS and to assure continued coordination of review schedules necessary to meet plant licensing requirements. A list of attendees is attached.

The interaction between NRC and USGS continues to be effective. Conduct of a comprehensive safety review requires input from USGS research in both specific site and regional matters as well as topical issues such as earthquake hazard estimation. Close coordination between the USGS and NRC staffs assure that pertinent information flowing from USGS research programs is brought into NRC safety evaluations in a timely fashion. The particularly rapid development of information in the area of strong ground motion that has occurred in the past few years has made this coordination all the more necessary.

Better understanding of the geologic basis for certain eastern seismic events such as the New Madrid and Charleston earthquake has been gained through USGS research. The geological process occurring in the New Madrid region is now considered to be well understood. We spent considerable time on the Charleston issue. The geologic features related to the Charleston, South Carolina event under current hypothesis may not be unique to the Charleston area. The cumulative displacements over geologic time are small on these features. In light of today's knowledge, it may not be appropriate to fix a single location for the Charleston event but to express the probability, albeit low, of such an earthquake occurring anywhere in a large region. Probabilistic characterizations may also be more appropriate for some western sites of complex geology such as the Hanford, Washington area. The USGS and NRC staffs will work closely on these developments to assure effective communication.

Dupe

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4pp

March 19, 1982

Other parts of interest resulting from the meeting included:

- A briefing on the proposed safety goals for nuclear power plants would be useful as one means of assisting communication between the USGS and NRC staffs with regard to the evaluation and use of probabilistic methods in seismic hazard and safety evaluation. This briefing will be arranged at the earliest opportunity.
- Probabilistic characterization of seismic activity may appear to conflict with the approach of Appendix A to 10 CFR 100. The need for revision of Appendix A is well recognized and is planned to start when NRC staff resources are available. USGS assistance in this effort will help assure the application of best available technology.
- The use of peak "g" values is inappropriate for setting design seismic input because there is little, if any, correlation to damage. Cooperative efforts between USGS, NRC and the National Science Foundation in the field of engineering seismology are desirable and could lead to the development of appropriate conservative yet rational design input parameters.
- Continued NRC support for the state geologic agencies is desirable, particularly in light of reductions in the USGS budget for funding seismic instrument networks. Seismic networks in the region of several operating plants have provided the information necessary for timely and accurate interpretation of actual ground motion by both the NRC staff and the state agencies during recent small earthquakes.

Finally, Dr. Peck and Jim Devine stressed a point that they wished us to bring to the ASLB Panel's attention. The duration and scope of the NRC hearing process often makes USGS planning for NRC assistance difficult. In some cases, the Hearing Boards have been issuing subpoenas directly to individual USGS staff members. These individuals, many times, have been pursuing research that is on the fringes of generally accepted geologic or seismic science and do not represent USGS position. Dr. Peck emphasized that the Boards should attempt to use proper channels and procedures when seeking USGS views. He recognizes and respects the right of intervenors to seek out and subpoena USGS individuals to support a particular position

Chairman Palladino

-3-

March 19, 1982

staked out in a case but he felt that if the Boards wanted official USGS positions, they should use accepted channels that exist through the Director's office. I have discussed this with Tony Cotter and provided him with the contact point at USGS.

(Signed) William J. Dircks

William J. Dircks
Executive Director
for Operations

Enclosure
List of attendees

CC: Commissioner Gilinsky
Commissioner Ahearne
Commissioner Roberts
- SECY
OGC
OPE
HRDenton/NRR
BPCotter/ASLBP
RBMinogue/RES

Distribution
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OFFICE	EDO						
SURNAME	WJDircks/sms						
DATE	3/19/82						

ATTENDEES

NRC/USGS MEETING - MARCH 1, 1982

NRC

W. Dircks, Executive Director for Operations
H. Denton, Director, Office of Nuclear Reactor Regulation
J. Knight, Assistant Director for Components & Structures Engineering

USGS

D. Peck, Director, USGS
D. Frederick, Associate Director, USGS
J. Devine, Assistant Director for Engineering Geology
R. Hamilton, Chief Geologist



Nuclear Information and Resource Service

1346 Connecticut Avenue NW, 4th Floor, Washington, D.C. 20036 (202) 296-7552

May 23, 1984

James M. Felton, Director
Division of Rules and Records
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

FREEDOM OF INFORMATION
ACT REQUEST

FOIA-84-430

Rec'd 5-29-84

FREEDOM OF INFORMATION ACT REQUEST

Dear Mr. Felton:

Pursuant to the Freedom of Information Act, 5 U.S.C. 522, as amended, the Nuclear Information and Resource Service requests the following documents regarding the Charleston Earthquake of 1886 and seismic design for the Vogtle nuclear power plant. Please consider "documents" to include reports, studies, test results, correspondence, memoranda, meeting notes, meeting minutes, working papers, graphs, charts, diagrams, notes and summaries of conversations and interviews, computer records, and any other forms of written communication, including internal NRC Staff memoranda. The documents are specifically requested from, but not limited to, the Office of the Executive Legal Director (OELD); Office of Nuclear Regulatory Research (Research); Office of Nuclear Reactor Regulation (NRR); Generic Issues Branch of the Division of Safety Technology, NRR; and the Operating Reactors Branches of the Division of Licensing. In your response, please identify which documents correspond to which requests below.

Pursuant to this request, please provide all documents prepared or utilized by, in the possession of, or routed through the NRC related to:

1. The Millett earthquake fault postulated to exist 7 miles from the Vogtle reactor site (USGS Open File Report No. 82-156);
2. The implications for the siting and seismic design of the Vogtle nuclear plant of the 1886 Charleston earthquake;
3. The development (and any subsequent reanalysis) of a Safe Shutdown Earthquake (SSE) and an Operating Basis Earthquake (OBE) for the Vogtle nuclear plant;
4. Contract No. RS-RES-84-128 "Charleston Earthquake

~~84-2260075~~

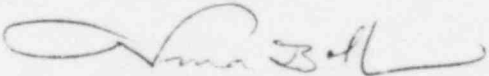
Research Program";

5. All correspondence between USGS and the NRC regarding the Charleston earthquake, the Millett fault or the Vogtle nuclear plant; and

6. All NRC Staff memoranda or correspondence related to the seismic design and/or siting of the Vogtle nuclear plant.

In our opinion, it is appropriate in this case for you to waive copying and search charges, pursuant to 5 U.S.C. 552(a)(4)(A) "because furnishing the information can be considered as primarily benefiting the general public." The Nuclear Information and Resource Service is a non-profit organization serving local organizations concerned about nuclear power and providing information to the general public.

Sincerely,

A handwritten signature in cursive script, appearing to read "Nina Bell".

Nina Bell
Nuclear Safety Analyst

cc: File