

PDR -016



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

JUL 14 1987

Peter C. Thomas, Esquire
Simpson, Thacher & Bartlett
One Battery Park Plaza
New York, New York 10004

IN RESPONSE REFER
TO FOIA-87-40

Dear Mr. Thomas:

This is in further response to your letter dated January 16, 1987, in which you requested, pursuant to the Freedom of Information Act (FOIA), four categories of information concerning pressure suppression, which were clarified in the agreement reached in the meeting on January 16, 1987, regarding the scope of your request.

The enclosed documents are in response to category one of your request and were located in the files maintained by Dr. Joseph Lafleur. These documents were chosen for reproduction by representatives from your law firm or the firms of Mayer, Brown and Platt, and McDermott, Will and Emery. The review of seven additional documents maintained by Dr. Lafleur is continuing.

The enclosure to the document listed on the enclosed Appendix I has been referred to the Department of State for review and direct response to you. The covering route slip is enclosed.

The reproduction charge for the enclosed documents is \$12.40.

Sincerely,

Donnie H. Grimsley

Donnie H. Grimsley, Director
Division of Rules and Records
Office of Administration and
Resources Management

Enclosures: As stated

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APPENDIX I

<u>Number</u>	<u>Date</u>	<u>Description</u>
1.	9/26/72	Route slip to C. Beck, et al., from B. Thomas (1 page) w/enclosure 9/11/72 Airgram to Department of State from Amembassy Stockholm re: Safety Experiments at Marviken (LIMITED OFFICIAL USE) (9 pages)

SIMPSON THACHER & BARTLETT

A PARTNERSHIP WHICH INCLUDES PROFESSIONAL CORPORATIONS

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January 16, 1987

FREEDOM OF INFORMATION
ACT REQUEST

Donnie H. Grimsley
Director
Division of Rules and Records
Office of Administration
United States Nuclear
Regulatory Commission
Washington, D.C. 20555

FOIA-87-40

Rec'd 1-16-87

Dear Mr. Grimsley:

Pursuant to the Freedom of Information Act ("FOIA") (5 U.S.C. 552) and 10 C.F.R. Part 9, on behalf of Simpson Thacher & Bartlett, I hereby request information relating to pressure suppression containments of the type associated with boiling water reactors ("BWRs").

This request does not encompass (1) material already available in the Public Document Room and (2) material already produced to Edward Firestone on behalf of General Electric Company ("GE") (FOIA request 85-665). Correspondence concerning FOIA request 85-665 indicates that the scope of the original request was narrowed to four categories. Many of the requests below relate to categories of information apparently not sought by or made available to GE after discussions between Mr. Firestone and NRC employees.

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The following information about pressure suppression containments is requested for the time period 1955 to the present:

1. Documents, including files and communications, which pertain to these subject matters:

a. Containment tests run by Sargent & Lundy (Alf Kolflat) between 1956 and 1960 (see, e.g., Exhibit A).

b. Containment studies by the Armour Research Foundation and/or Illinois Institute of Technology between 1959 and the early 1960s.

c. Pressure suppression tests conducted at the condensing test facility at Moss Landing, California in 1958 and 1959 and reviewed by the AEC and ACRS in 1959 and 1960 (see, e.g., Amendment No. 3 to the Preliminary Hazards Summary Report for the Humboldt Bay Power Plant Unit No. 3, September 21, 1959).

d. Pressure suppression tests conducted at the transient test facility at San Jose, California in 1958 and 1959 and reviewed by the AEC and ACRS in 1959 and 1960 (see, e.g., Amendment No. 3 above).

e. Pressure suppression tests conducted in the Humboldt Bay 1/48th segment test facility at Moss Landing, California in May and June, 1960 and reviewed by the AEC and ACRS in 1960 and 1961 (see, e.g., Amendment No. 8 to the Preliminary Hazards Summary Report for the Humboldt Bay Power Plant Unit No. 3, May 27, 1960).

f. Pressure suppression tests conducted in the Bodega Bay 1/112th segment test facility at Moss Landing, California in 1962 and 1963 and reviewed by the AEC and ACRS between 1962 and 1964 (see, e.g., Appendix I and II to the Preliminary Hazards Summary Report for the Bodega Bay Atomic Park Unit No. 1, December 28, 1962).

g. Pressure suppression tests conducted in the Bodega Bay 1/8th segment, 1/4 scale multiple vent test facility at Moss Landing, California in 1963 (see, e.g., C.P. Ashworth, D.B. Barton, "Pressure Suppression Tests With Multiple Vents," October 25, 1963).

h. AEC question and Commonwealth Edison answer No. 5 regarding RCIC operations and vibrations

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observed in the condensing tests at Moss Landing in 1958 and 1959 (see, e.g., Exhibit B).

i. Removal of baffles from the torus or suppression pool of Mark I containments, 1967-70 (see, e.g., Amendment No. 5 to the Quad Cities Preliminary Safety Analysis Report, dated November 10, 1967, Amendment No. 1 to the Cooper Preliminary Safety Analysis Report, December 1, 1967 and, e.g., Exhibit C).

j. Size or pressure rating reduction of Brunswick pressure suppression containment and submissions, including possibly NEDE-10182 (see request 4m below), and questions regarding it between 1969 and 1971 (see, e.g., Exhibit D).

* k. AEC and ACRS concerns (including those of Herschel Specter, Herbert S. Isbin, Victor Stello and Robert Tedesco) pertaining to lateral loading, water hammer and vibrations on Mark II downcomers or vents raised in connection with the Shoreham docket (1968-70), Zimmer docket (1970-71) and Limerick docket (1970-71) (see, e.g., Exhibit E).

l. Pressure suppression work of GE's nuclear safety development subsection in 1969 and 1970.

m. Small-scale horizontal vent tests conducted by General Electric between 1971 and 1973 (see, e.g., Exhibit F).

n. Damage to and dislocation of baffles in the torus or suppression pool of Mark I containments due to relief valve discharges between 1970 and 1972.

o. Failure of torus suction ring header due to relief valve discharges at Quad Cities during start-up tests in May 1972.

p. Accident at the Wuergassen plant in West Germany, April 1972.

q. Incident at the KKM plant in Switzerland, July 1972.

r. Pressure suppression tests conducted at Marviken plant, Studsvik, Sweden between 1972 and 1974.

s. Communications between GE and the AEC or ACRS between 1969 and 1975 concerning hydrodynamic loads,

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including pool swell and chugging, in Mark I, Mark II or Mark III containments, including, but not limited to, documents which refer or relate to (i) the ACRS GE subcommittee meetings at GE's San Jose offices on August 1-2, 1973, (ii) visits of AEC staff employees (e.g., Gus Lainus, Robert Cudlin and Jack Kudrick) to GE's San Jose offices in September and November 1973, (iii) the ACRS Grand Gulf Subcommittee meeting in Los Angeles on October 25, 1973 and (iv) GESSAR question 3.35 and the answer thereto (see, e.g. Exhibit G).

t. Materials from the Hazards Evaluation Branch, the Chicago Operations Office and the San Francisco Operations Office on each of the subject matters listed above.

2. NRC or AEC files and communications of the following NRC or AEC employees which pertain to the subject matters listed in request 1 above:

- a. Clifford Beck
- b. Merson Booth
- c. Roger Boyd
- d. R.S. Brodsky
- e. Howard Brown
- f. Edson Case
- g. Robert Cudlin
- h. Richard DeYoung
- i. William F. Finan
- j. N. Grossman
- k. Stephen Hanauer (also ACRS files)
- l. Joseph Hendrie (also ACRS files)
- m. Lyall Johnson
- n. Donald Knuth
- o. Jack Kudrick
- p. Gus Lainus
- q. Robert Lowenstein
- r. A.R. Luedecke
- s. R.B. McCalley
- t. John A. McCone
- u. Peter Morris
- v. J. Newell
- w. Randolph Newton
- x. W. Oakley
- y. J.F. O'Leary
- z. Frank K. Pittman
- aa. Harold L. Price
- bb. Larry Shao
- cc. Herschel Specter

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- dd. Victor Stello
- ee. Tsung Ming Su
- ff. S.A. Szawlewicz
- gg. Robert Tedesco
- hh. R. Waterfield
- ii. Allen J. Vander Weyden
- jj. Robert Wilcox

3. ACRS files and communications of these ACRS members or employees which pertain to the subject matters listed in request 1 above:

- a. R. L. Doan (also AEC files)
- b. Dick Duffey
- c. W.K. Ergen
- d. R. Fraley
- e. F.A. Gifford
- f. J.B. Graham
- g. Herbert S. Isbin (also AEC files)
- h. David Okrent
- i. K.R. Osborn
- j. N. Palladino
- k. M.S. Plesset
- l. Chester Siess
- m. Leslie Silverman
- n. W.R. Stratton
- o. Theos ("Tommy") Thompson

4. The following specific documents:

a. GEAP 3143, "Test Report for the Pressure Suppression Development Program," prepared by Pacific Gas & Electric Company, April 2, 1959 (see, e.g., Exhibit H).

b. GEAP 3122, "Safeguards Analysis for Pressure Suppression System Concept," April 3, 1959.

c. GEAP 3171, "Considerations in Design of Pressure Suppression Systems," May 21, 1959.

d. Memorandum by Dr. Frank K. Pittman identified in the memorandum from Chairman John A. McCone to the General Manager, dated March 31, 1960 (see Exhibit I).

e. Memorandum by Howard Brown to the General Manager May 18, 1960, identified in a memorandum from Alexander J. Weyden through the General Manager to Chairman McCone, May 27, 1960 (see Exhibit J).

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f. Report by Merson Booth of the Hazards Evaluation Branch on the Humboldt Bay 1/48th segment tests, identified in a memorandum by the General Manager to Mr. Oakley, June 30, 1960 (see Exhibit K).

g. GEAP 3596, Tests of a Full Scale 1/48 Segment of the Humboldt Bay Pressure Suppression Containment, November 17, 1960, by GE (C.H. Robbins & D.H. Imhoff (see 4m below).

h. "NPR Primary Loop - Emergency Dump Tests," by H.G. Johnson, AEC, Richland, Washington, HW-68609, March 1961 (Exhibit L).

i. "Pressure Suppression Tests with Multiple Vents," by C.P. Ashworth and D.B. Barton, October 25, 1963.

j. "Closed-Tank Vapor Suppression Test Program," by F.L. Hovanec and R.C. Luken, BAW-3198-2, May 1964.

k. NUSA-86, "Some Thoughts on Condensation in Pressure Suppression Systems," by F.J. Moody, approved by A.P. Bray, October 12, 1964.

l. NUSA-94, "A Comparative Evaluation of Current Pressure Suppression Designs," by F.J. Moody, approved by A.P. Bray, November 9, 1964.

m. "Additional Information, Pressure Suppression Concept, Test Data Report," GE document NEDE-10182, May 1970, by D.R. Miller and F.J. Moody.

n. "Pressure Suppression Pool Investigations - Report #1," GE document NEDM-13036-1, July 1970, by E.R. Cramer and L.L. Myers, approved by J.L. Murray.

o. NEDM-13120, "ACCESS IV Containment," by G.E. Wade, approved by J.L. Murray, July 1970.

p. NEDM-13036-2, "Pressure Suppression and Weir Vent Test Program, Mini-Weir Horizontal Vent Tests," by R.C. Augenstein, approved by H.E. Townsend and J.L. Murray, April 1971 (also dated May 1972).

q. NEDM-13036-3, "Pressure Suppression Test Program, Small-Scale Horizontal Vent Tests," by L.L. Myers, approved by H.E. Townsend and J.L. Murray, October 1972.

r. NEDM-13351, "Pressure Suppression Test Program, Small-Scale Pool Swell Tests," by T.R. McIntyre, approved by H.E. Townsend and J.L. Murray, August 1973.

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s. GE Nuclear Safety Development Quarterly Reports, including the following reports:

- (1) Nuclear Safety Development Quarterly Report, First Quarter 1969;
- (2) NEDM-13019, Nuclear Safety Development Quarterly Report, Second Quarter 1969, July 1969;
- (3) NEDM-13044, Nuclear Safety Development Quarterly Report, Third Quarter 1969, October 1969;
- (4) NEDM-13071, Nuclear Safety Development Quarterly Report, Fourth Quarter 1969; January 1970;
- (5) NEDM-13098, Nuclear Safety Development Quarterly Report, First Quarter 1970, April 1970;
- (6) NEDM-13127, Nuclear Safety Development Quarterly Report, Second Quarter 1970, July 1970;
- (7) NEDM-13140, Nuclear Safety Development Quarterly Report, Third Quarter 1970, October 1970;
- (8) NEDM-13163, Nuclear Safety Development Quarterly Report, Fourth Quarter 1970, January 1971;
- (9) NEDM-13184-01, Nuclear Safety Development Quarterly Report, First Quarter 1971, April 1971;
- (10) NEDM-13184-02, Nuclear Safety Development Quarterly Report, Second Quarter 1971, July 1971;
- (11) NEDM-13184-03, Nuclear Safety Development Quarterly Report, Third Quarter 1971, October 1971;
- (12) NEDM-13184-04, Nuclear Safety Development Quarterly Report, Fourth Quarter 1971, January 1972;
- (13) NEDM-13281-01, Nuclear Safety Development Quarterly Report, First Quarter 1972, April 1972;
- (14) NEDM-13281-02, Nuclear Safety Development Quarterly Report, Second Quarter 1972, July 1972;

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(15) NEDM-13281-03, Nuclear Safety
Development Quarterly Report, Third Quarter 1972, October
1972;

(16) NEDM-13281-04, Nuclear Safety
Development Quarterly Report, Fourth Quarter 1972, January
1973;

(17) NEDM-13330-01, Nuclear Safety
Development Quarterly Report, First Quarter 1973;

(18) NEDM-13330-02, Nuclear Safety
Development Quarterly Report, Second Quarter 1973; and

(19) NEDM-13330-03, Nuclear Safety
Development Quarterly Report, Third Quarter 1973.

For each of the documents listed in request 4, I would appreciate learning (i) if the document was submitted to the NRC or AEC or ACRS, (ii) if so, whether it was submitted as part of a regulatory filing, (iii) who submitted it, (iv) when it was submitted, (v) if it still exists in NRC or AEC or ACRS files and (vi) if it was submitted as a proprietary or confidential document and, if so, its current status.

For the purposes of this request, files and communications include records as defined in 10 C.F.R. 9.3 and, in addition, all data, including published and unpublished memoranda, personal notes, notes of telephone conversations, films, photographs, microfiche, microfilm, tapes and other electronic means of recording data, published and unpublished reports and any other material in the possession of the Commission from whatever source on the subject of pressure suppression containments.

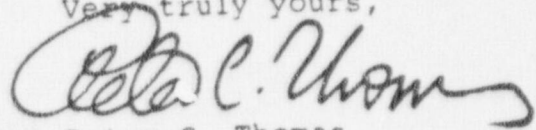
Donnie H. Grimsley

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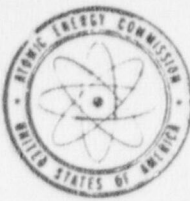
If you have any questions or need further
direction, please do not hesitate to contact me
(212-908-2535) or Jack Menz (212-908-3511).

Very truly yours,

A handwritten signature in dark ink, appearing to read "Peter C. Thomas". The signature is fluid and cursive, with a large initial "P" and a long, sweeping underline.

Peter C. Thomas

Attached Exhibits



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 22 1972

CH-1
Cg LHM
EJR
DWN
C. Beck
Henderson
1. Zuplan
2. Beck

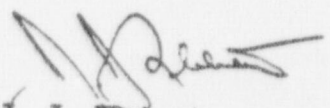
Files

MARVIKEN REACTOR TESTING

On November 16, 1972, Cliff Beck and I met at the H Street office with Mr. Ragnar Nilson, Vice President, AB Atomenergi, to discuss the Marviken reactor project. Seven of the anticipated 16 - 20 blowdown runs have been made to date and tests have been suspended to study preliminary results. Although not mentioned by Mr. Nilson, it is our understanding that serious problems have beset test instrumentation resulting in questionable data from these first runs. The project is apparently undergoing a period of reappraisal.

I spent considerable time explaining to Mr. Nilson that we were deeply interested in an exchange of safety research and development information on the Marviken project. I stated that all of the results of our multi million dollar program would be available for such an exchange, but that we had not previously contributed cash or extensive services to foreign programs and were reluctant to do so in this case.

Mr. Nilson stated that our position in this regard had been considered by the Board but they had decided we should be required to participate on a basis comparable to that of the other partners. The Board had specifically established the sum of \$315,000 as our contribution in cash and kind.


J. J. Flaherty
Assistant General Manager for
Energy and Development Programs

cc:
C. Beck, REG
RDT
DIP
OC

~~8747164139~~