FOIA/PA REQUEST
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Action Off: Pool
Related Cases: (2000-0368)

From: "NC-WARN" <NC-WARN@pobox.com>
To: <foia@nrc.gov>
Date: Tue, Mar 20, 2001 7:28 PM
Subject: Followup to FOIA 2000-0368

March 20, 2001

Russell Powell, Chief

FOIA-LPDR Branch

Division of Freedom of Information and Publication Services Office of Administration

U.S. Nuclear Regulatory Commission Washington, DC 20036

VIA E-MAIL foia@nrc.gov ATTACHMENTS BY FAX: (301) 415-5130

Dear Mr. Powell:

On behalf of North Carolina Waste Awareness and Reduction Network (NC-WARN), and pursuant to the Freedom of Information Act, 5 U.S. C. 552(b), et. seq., I hereby request that you make available copies of all documents in the U.S. Nuclear Regulatory Commission's possession which include, describe or discuss:

A) Any drafts, comments on, redrafts of, suggestions for changes in, or any other documents related to any document or documents or other information referenced in and/or listed or made available pursuant to FOIA/PA 2000-0368 dated 9/14/2000, to which this request is a followup.

B) Specific to document G/1 NEI letter to Hon. Greta J. Dicus, Chairman, NRC, 8/24/1999, any replies, comments on (see handwritten note, "comments pls" on page 1) and also the "detailed review" by NEI mentioned in paragraph 3 of the letter, and/or any other "study" referred to in the letter.

1.. underlying data and inputs (including unadjusted accident or failure probabilities) to and/or for the draft final technical study of spent fuel pool accident risk at decommissioning nuclear power plants (draft published Feb 2000 or in 1st quarter of year 2000)

1A) any dissenting opinions, differing opinions, or data not in accord with the above study, whether provided to the ACRS and/or ACNW or not

b.. each issue raised in the ACRS letter #4711885, dated 4-13-2000, re the above report draft, including but not limited to:

2A) each or any or any combination of the "ten commitments" discussed in the

draft report (i.e. the commitments suggested by NEI) and/or the realism, likelihood of implementation, cost of implementation, benefit(s) of implementation, and/or impact on probability estimates including those for

any accident(s), incident(s), or releases of radioactive material from spent fuel, thereof.

2B) each or any or any combination of the four additional changes discussed in

the above-referenced draft report, and/or the realism, likelihood of implementation, cost of implementation, and/or impact on probability estimates for any accident(s) or incidents or releases of radioactive material from spent fuel,

thereof.

2C) ACRS' recommendation to put the rulemaking for integrated decommissioning on hold' or any delay(s) or changes in the rulemaking for integrated decommissioning

2D) acceptance criteria for fuel uncovery frequency

2E) justification for any staff or other estimates of fuel uncovery frequency

2F) any effects of enhanced release of Ruthenium isotopes, including those under air oxidation conditions and/or incorporating the MELCOR release code(s) and/or other estimates of ruthenium release at different temperatures and/or under oxidation, nitridation, fire, criticality or other conditions in or including spent nuclear fuel

2G) effects of MACCS code expert elicitation (ACRS 4.13.2000 p.2, ff) or other estimates of greater or wider spread of radionuclides in release(s) of radioactive material from spent fuel pools and/or pool buildings

2H) zirconium hydrides, including spontaneous combustion of them and/or zircalloy and/or zirconium-containing nuclear fuel cladding, their rate of formation, their formation and/or prevalence in the cladding of high-burnup nuclear fuel, definition(s) of high-burnup including any specific megawatt-days per metric ton Uranium or other numerical definitions or estimates of burnup

2I) exothermic reactions with zirconium and/or zirconium hydride(s) and/or oxides(s) and/or nitride(s) by (a) oxygen (b) ozone (c) oxides (d) oxidizers of any kinds (f) nitrogen (g) water (h) steam (i) chlorine (j) chlorine-containing ions or compounds (k) intermetallic interaction(s) with aluminum (l) any interactions with carbides, boron and/or boron carbide(s), including reaction rates at different temperatures, interactions examined or not examined, any references to other studies of any of these matters or related matters, and/or effect(s) on probability estimates and/or on licensing or continuing to license wet storage of spent fuel

2J) zirconium-air interactions (in or out of water and/or steam)

2K) breakaway oxidation of nuclear fuel cladding, breakaway of fuel cladding due to any of the above factors including Zr hydride combustion, nitrogen-Zr reaction(s), greater-than-parabolic heat increase(s), waste fuel decay heat,

waste fuel temperature, Zr or Zr alloy cladding temperature, and/or synergism of any factors in degrading, puncturing, flaking off, or loosening cladding and/or exposing nuclear fuel pellets

2L) uncertainties in risk estimate(s), release estimate(s), reaction rate(s), effects, magnitude(s) of effect(s), or accidents of any kind involving wet storage of spent nuclear fuel

2M) Ruthenium isotope content of nuclear fuel(s) of whatever enrichment and/or burnup, including MOX fuel.

2N) Ruthenium volatility at various temperatures, and/or ruthenium toxicity, inventory, and/or biological effectiveness and/or radiotoxicity and/or biohazard, for each or any or all ruthenium isotope(s)

2 O) Impact of additional ruthenium release on immediate deaths, cancer deaths, curies of radionuclides released, biohazard, plume spread, plume radiotoxicity and/or hazard(s)

2P) Decrepitation of UO2, UO2-containing material(s) (including spent fuel pellets and/or other spent fuel), zirconium and/or zirconium alloys and/or cladding, including release fraction of radionuclides including fuel fines

2Q) Effect of decrepitation by oxidation, nitridation, or other means upon release fraction, plume spread, plume radioactivity, immediate deaths, cancer deaths, genetic defects, probability of accident(s) and/or incident(s), regarding spent fuel or otherwise

2R) Plume energy, plume radionuclide inventory, and/or plume spread, whether in the MACCS code, expert elicitation regarding the above, and/or realistic estimates of plume energy, radionuclide inventory, and/or plume spread, for radioactive releases, including ruthenium isotopes, fuel fines, noble gases, radioiodine(s), radiocesium isotopes, and/or any other constituent(s) of spent nuclear fuel including plutonium

2S) Plutonium oxidation to the VI state in air or otherwise in the environment, from Pu metal, PuO2 or other plutonium source(s)

2T) Estimates of consequences including radionuclide releases, land and/or farmland contamination, property damage, deaths, cancers, genetic defects and/or other adverse effects including chemical toxicity, of any and/or all of the above and/or items below, or of spent fuel radionuclide releases by any means including leaking fuel assemblies and/or transportation accidents in addition to the above and to items below.

2U) Data or information from ORNL and/or Canada and/or any other source concerning increased releases, or amount of releases of cesium, tellurium, ruthenium and/or other radionuclides at temperatures below 1000 degrees C

2V) any reanalysis done by NRC staff on any of the above or below issues or matters, whether in response to ACRS or otherwise

2W) PHEBUS studies and/or data, including what PHEBUS studies have been done and/or are planned, funding and/or cancellation of any such studies

2Y) bounding calculation(s) of zircaloy heatup, oxidation, nitrification, and/or breakup or disintegration, decrepitation, or other failure, cracking, developing holes etc. including cladding breakup

2Z) effects on zircaloy of long term wet storage, including effects of neutron irradiation, spent fuel decay heat and/or radiation

2 AA) zircaloy melting

2 BB) fires involving zirconium, zircalloy, aluminum alloys, and/or spent fuel

2 CC) Gas or other reactions with fuel cladding below the 'conservative ignition temperature' for zirconium alloy nuclear spent fuel cladding

2 DD) heat inputs from any of the above or below, and/or heat losses in spent fuel pools

2 EE) zirconium alloy cladding rupture and/or temperature or conditions for rupture(s)

2 FF) zirconium alloy cladding failure without rupture

2 GG) probability and/or uncertainty of seismic events (including magnitude of such events) and/or consequences thereof, at or involving spent fuel pool(s)

2 HH) type(s) and probability and/or uncertainties of human error in spent fuel pool accident(s) and/or spent fuel pool accident probability analysis

2 II) intermetallic reactions between zirconium, zirconium cladding and/or aluminum and/or aluminum alloys including aluminum alloys used in BorAl shields and/or with stainless steel, including effects of fires or criticality on such interactions and/or their intiation or rate(s) or consequences

This request covers but is not limited to all draft and final reports, correspondence, viewgraphs (vu-graphs, etc.) or copies thereof, memoranda, notes, records of telephone contacts, electronic communications including fax transmissions and Email, or other written records, whether in paper, computer or other files including compact discs, etc..

NC WARN requests that this request be deemed continuing.

Pursuant to our request, please provide all documents and communications prepared or utilized by, in the possession of or routed through the NRC related to each of the above items.

For any portion of the request that you deem appropriate to deny, NC-WARN requests that you describe the information that is denied, identify the exception to the FOIA on which you rely, and explain how that exception

applies to the withheld information.

Pursuant to NRC regulations at 10 CFR 9.41, NC-WARN requests that any searching and copying fees incurred as a result of this search be waived, and provides the following information in response to the eight criteria listed in Section 9.41(b):

1) Purpose of request:

The purpose of the request is to gather information on the mechanisms of spent fuel accidents and NRC's analysis or lack thereof, for them

The requested information is currently not available in the NRC's Public Document

Room

2) Extent to which NC-WARN will extract and analyze the substantive content of the records:

NC-WARN is qualified to make use of the requested information. Our staff and cooperating experts have demonstrated the ability to interpret information and communicate that information in a form comprehensible to the general public. Members of NC-WARN have published articles in news media of general circulation in North Carolina including the Raleigh News & Observer, Chapel Hill (NC) Herald, . NC-WARN is quoted as a reliable source of information on nuclear issues in newspapers and on radio and television across the North Carolina. NC-WARN was a key source of information to the public concerning low-level radioactive waste issues during the State of North Carolina's now-withdrawn membership in the Southeast LLRW Compact. NC-WARN was first to inform the general public of plans for a significant expansion of spent nuclear powerplant fuel storage proposed on 1998 for the Shearon Harris nuclear plant near Apex NC.

NC-WARN has a working relationship with attorneys, physicists, nuclear engineers, physical chemists, systems analysts, medical doctors, materials scientists and other respected professionals who contribute to the full understanding of technical records.

3) Nature of the specific activity or research in which the records will be used

and NC-WARN's qualifications to utilize the information for the intended use in such a way that it will contribute to public understanding:

NC-WARN seeks the requested information solely to contribute to and help shape the public debate on adequate worker and public health and safety. NC-WARN intends to use the information in order to advance the concerns for public understanding and safety.

4) Likely impact on the public's understanding of the subject as compared to the level of understanding of the subject prior to disclosure:

Since complete information on the above-referenced items is not available to the general public, NC-WARN will be able to provide the first comprehensive review of this information which can impact public health and safety.

5) Size and nature of the public to whose understanding a contribution will be

made:

NC-WARN's information is regularly reported in news media reaching millions of citizens in North Carolina ranging from Winston-Salem, Greensboro, Apex, Chapel Hill, Pittsboro, Raleigh, Fayetteville and Charlotte for examples, including over 3 million people and including the general public as well as public officials and specialists in health and safety related issues.

a.. Means of distribution of the requested information:
NC-WARN provides information via reports, news releases, press conferences, newsletters, e-mail and other means. NC-WARN has been a key provider of information on nuclear, toxics and other health- and safety-related issues since 1990.

7) Whether free access to information will be provided:

NC-WARN will provide access to information received under this request freely.

8) No commercial interest by NC-WARN or any other party:

NC-WARN is a nonprofit organization (501(c)3) and has zero commercial interest, nor is party to any commercial interest in the above-requested information. To NC-WARN's best knowledge, no other commercial interest is involved with this request.

Sincerely,

Jim Warren

Executive Director

xc: Senator John Edwards

Rep. David Price

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