"HIDE AND GO SEEK" INFORMATION POLICIES AT THE NUCLEAR REGULATORY COMMISSION: ATTAINING IMPROVED PUBLIC DISCLOSURE COULD AVERT A NUCLEAR CATASTROPHE

SECTION 1: THE PERILS OF INFORMATION HIDING

One ordinary day, there is an earthquake followed by a tsunami, causing severe structural damage and explosions at Ordinary Nuclear Facility (ONF).[1] Subsequently, an uncontrollable fire engulfs ONF.[2] Further, the tsunami flood inundates ONF and its surroundings, leading to a complete power outage.[3] Radiation leaks into the air, ground, and water.[4]

Ordinary Person lived fifteen miles down the river from ONF.[5] She survived the earthquake and tsunami, but when she turned on the radio she

1. This is a summary of events at Fukushima, Japan on March 11, 2011. U.S. NUCLEAR REG. COMM'N, RECOMMENDATIONS FOR ENHANCING REACTOR SAFETY IN THE 21ST CENTURY: THE NEAR-TERM TASK FORCE REVIEW OF INSIGHTS FROM THE FUKUSHIMA DAI-ICHI ACCIDENT 7-10 (2011) [hereinafter U.S. NRC].

2. A wildfire broke out near the San Onofre nuclear facility on May 14, 2014. Morgan Lee, *Wildfire Triggers Nuclear Plant Evacuations*, SAN DIEGO UNION TRIB. (May 14, 2014, 4:00 PM), http://www.sandiegouniontribune.com/news/2014/may/14/wildfire-evacuations-nuclear-plant/.

3. In April 2011, Fort Calhoun nuclear facility was temporarily shut down due to deficiencies in flood planning and other violations. Josh Funk, *Fort Calhoun Nuclear Plant Has No Solid Timeline For Reopening, Regulators Claim*, HUFFINGTON POST (Jun. 1, 2012, 11:11 AM), http://www.huffingtonpost.com/2012/06/01/fort-calhoun-nuclear-plant_n_1562553.html.

4. *See, e.g.*, UNION OF CONCERNED SCIENTISTS, NUCLEAR FUEL CYCLE: A SURVEY OF THE PUBLIC HEALTH, ENVIRONMENTAL AND NATIONAL SECURITY EFFECTS OF NUCLEAR POWER 177-93 (D.F. Ford et al. eds., 1974). A case study of Nuclear Fuels Services, Inc. revealed contamination to land and wildlife. *Id.*

5. According to the United States Nuclear Regulatory Commission (U.S.NRC), as of 2008, approximately five million people lived within the ten-mile Emergency Planning Zones (EPZs). 2 U.S. NUCLEAR REG. COMM'N, REVIEW OF NUREG-0654, SUPP. 3, CRITERIA FOR PROTECTIVE

was surprised by another disaster: the explosion of ONF. Not knowing what to do, she relied on information from the federal and local governments to determine whether to evacuate from the area.[6] She was five months pregnant, and her family consisted of her husband, two children, ages two and six, and an elderly mother-in-law.[7]

Because the Person family operated a local business and their home was not within the zone of mandatory evacuation,[8] they decided to stay. Although Ordinary felt that she should leave with the young children even if her husband stayed to operate the business, it would be extremely costly, both emotionally and financially, to live separately. She tried to forget about increased radiation in the air, water, and food. To her psychological benefit, nobody, including the federal government, talked much about the dangers of radiation. The government repeated the same slogan: "There should be no immediate health impact."[9]

Three years go by, and everything seemed back to normal. ONF is still leaking radiation, but Ordinary cannot see, smell, or taste radiation. One day, she notices that her now five-year-old son's throat is swollen and takes him to the doctor. After medical exams, the doctor advises her that her son should be treated immediately for thyroid cancer.[10] Ordinary now regrets

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ACTION RECOMMENDATIONS FOR SEVERE ACCIDENTS, NUREG/CR-6953, at F-8 (2008). Further, the U.S. NRC projects that during the middle year of relicense (MYR), between 2030 and 2050, the U.S. population residing within the 50-mile radius of nuclear power plants currently in existence will be approximately 184 million. 1 U.S. NUCLEAR REG. COMM'N, GENERIC ENVIRONMENTAL IMPACT STATEMENT FOR LICENSE RENEWAL OF NUCLEAR PLANTS, NUREG-1437, at 10 tbl.5.3 (1996).

6. In Japan, the federal government released to the public after the explosions the System for Prediction of Environment Emergency Dose Information (SPEEDI), a real-time radiation data collection system. NUCLEAR EMERGENCY RESPONSE HEADQUARTERS, GOV'T OF JAPAN, REPORT OF JAPANESE GOVERNMENT TO THE IAEA MINISTERIAL CONFERENCE ON NUCLEAR SAFETY 37 (2011). "Although the results generated by SPEEDI are now being disclosed, it should have been done so from the initial stage." *Id.*

7. "Federal regulations restrict occupational workers' annual exposure to radiation. The limits for pregnant woman are lower than those applicable to men or non-pregnant women because of the sensitivity of the fetus." U.S. E.E.O.C. v. Catholic Healthcare W., 530 F. Supp. 2d 1096, 1100 (C.D. Cal. 2008).

8. On April 11, 2011, the Japanese Government announced that they had concluded to establish "Planned Evacuation Area" and "Evacuation Prepared Area" in the areas beyond the 20 kilometer radius from the Fukushima Dai-ichi Nuclear power plant, subsequent to evacuation of residents within the 3, 20, and 30 kilometer radius. U.S. NRC, *supra* note 1, at 14.

9. This was Japanese Chief Cabinet Secretary Yukio Edano's announcement following the Fukushima Dai-ichi explosions. CNN Wire Staff, *Japanese Officials Will Test Food, Seawater to Determine Health Risks*, CNN (Mar. 22, 2011, 5:59 AM), http://www.cnn.com/2011/WORLD/asiapcf/03/22/japan.nuclear.food/.

10. "The causative effect of radiation exposure on thyroid carcinoma has been scientifically established" especially when it is a large dose exposure and the victim is under age twenty.

having stayed, and she is also in fear of what might happen to other children. How did this all happen? Could anything have prevented this catastrophe?[11]

A: SUMMARY OF THIS PAPER

This note will discuss the current FOIA public information disclosure procedure and FOIA objectives.[12] Then this paper will examine current problems of information disclosure in U.S. and Japan.[13] Finally, this paper will argue that the current problem must be resolved through 1) Congress amending the Freedom of Information Act (FOIA) 5 U.S.C. section 552(a)(2)(D) to provide a better guideline and give less discretion to an agency when withholding material information; 2) Nuclear Regulatory Commission (NRC) implementing a new agency rule that interprets 5 U.S.C. section 552(a)(2)(D) to give it less discretion when withholding information; and 3) increasing funding for the ADAMS database.[14] Denying, delaying, or confounding public information access could lead to lack of transparency and slow response to nuclear energy safety problems that could prove detrimental when a disaster hits a commercial nuclear facility. It also undermines the democratic process by encouraging an inadequately informed public to voice (or not voice) opinions on nuclear energy issues.[15]

Also, this note will point out recent incidents of information delay in which the NRC could argue its withholding from the public was legally justified because the information did not fit under 5 U.S.C. section 552(a)(2)(D) or 10 C.F.R. section 9.15,[16] although some parts of it should

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Masahisa Saikawa & Haruki Akasu, *What Are the Risk Factors for Thyroid Cancer?*, *in* TREATMENT OF THYROID TUMOR 16 (Hiroshi Takami, et al., 2010).

11. This is a fiction created by the author based on actual events that have unfolded in Fukushima.

12. *Infra* Section 2.

13. *Infra* Section 3.

14. *Infra* Section 4; *see also infra* Section 2Ai for information on ADAMS.

15. Voicing opinions on issues such as the following determine the role of nuclear energy in the U.S. *See, e.g.*, 42 U.S.C. § 16271 (2012) (signed into law during the George W. Bush Administration, ordering that "[t]he Secretary shall conduct programs of civilian nuclear energy research, development, demonstration, and commercial application," and appropriating over two billion dollars for the fiscal years 2007, 2008, and 2009); In the Matter of S. Nuclear Operating Co., CLI-12-02 (2012) (appeal denied, Blue Ridge Envtl. Def. League v. N.R.C., 12-1106 (D.C. Cir. 2013)) (approving construction of two new reactors at Plant Vogtle, Ga., in a 4-1 vote).

16. "Each agency, in accordance with published rules, shall make available for public inspection and copying—[. . .] copies of all records, regardless of form or format, which have been released to any person under paragraph (3) and which, because of the nature of their subject matter, the agency determines have become or are likely to become the subject of subsequent

have been considered material information that should have been publicly available. The information should have fallen under 5 U.S.C. section 552(a)(2)(D) because even before the 2011 nuclear explosion at Fukushima, and especially afterwards, the NRC should have known that safety problems such as flooding, seismic issues, leaks, spills, waste storage, and fire protection at commercial nuclear facilities would be material information that the public would want and need to know to prevent a nuclear catastrophe in the U.S.[17]

SECTION 2: FOIA OBJECTIVE OF INFORMING THE PUBLIC

This section will analyze the history and current status of the FOIA. FOIA has allowed public access to information that was historically restricted.[18] As nuclear energy for commercial use progressed, more information concerning nuclear energy became available to the public.[19]

FOIA enables the public to obtain certain information that is in a particular administration's possession.[20] People's access to information has had historical importance even at the inception of the United States Constitution.[21] FOIA was enacted "in furtherance of the belief that 'an informed electorate is vital to the proper operation of a democracy.'"[22] When legislators enact laws partially based on public opinion, there is a

requests for substantially the same records." 5 U.S.C. § 552(a)(2)(D) (2012). "The NRC will make available for public inspection and copying any reasonably described agency record in the possession and control of the NRC under the provisions of this subpart, and upon request by any person." 10 C.F.R. § 9.15 (2014).

17. A potential failure to comply with safety standards can lead to costly litigation, such as nine environmental groups currently filing suit against the NRC over the waste storage issue alone. Nat. Res. Def. Council v. U.S. Nuclear Regulatory Comm'n, No. 14-1217 (D.C. Cir. filed Oct. 29, 2014).

18. James R. Newman, *Control of Information Relating to Atomic Energy*, 56 YALE L.J. 769, 777-78 (1947).

19. Today, the public has access to nuclear information through online libraries such as the Agency Documents Access and Management System (ADAMS). *See infra* Section 2Ai.

20. "(a) Each agency shall make available to the public information as follows. . . ." 5 U.S.C. § 552 (2012).

21. THE FEDERALIST NO. 49 (James Madison). Madison states that "the people are the only legitimate fountain of power, and it is from them that the constitutional charter . . . is derived. . . ." *Id.* "[A]nd how are the encroachments of the stronger to be prevented, or the wrongs of the weaker to be redressed, without an appeal to the people themselves, who, as the grantors of the commissions, can alone declare its true meaning, and enforce its observance?" *Id.*

22. Coastal States Gas Corp. v. Dep't of Energy, 644 F.2d 969, 974 (3d Cir. 1981) (*quoting* S.Rep. No. 813, 89th Cong., 1st Sess. 3 (1965), *reprinted in* FREEDOM OF INFORMATION ACT SOURCE BOOK: LEGISLATIVE MATERIALS, CASES, ARTICLES 38 (Comm. Print 1974)).

presumption that the public is able to express an informed opinion.[23] For the public to analyze and evaluate agency actions, it must have access to some information that agencies hold.[24] However, not all information is disclosed under the FOIA.[25]

A: Enactment of FOIA

The modern FOIA was a revision to section 3 of the Administrative Procedure Act, which controlled public information withholding and disclosure prior to its passage.[26] Before the amendment, the Administrative Procedure Act was "generally recognized as falling far short of its disclosure goals and came to be looked upon more as a withholding statute than a disclosure statute."[27] Clauses exempting disclosure such as "any function of the United States requiring secrecy in the public interest," and only making available "matters of official record" to "persons properly and directly concerned" with the information left more discretion to the withholding agency than the present FOIA.[28] Today, the FOIA eliminates the "properly and directly concerned" test of access and repeatedly states that official information shall be made available "to the public," "for public inspection," subject to nine exemptions.[29]

FOIA currently bars automatic disclosure under 5 U.S.C. section 552(a)(2)(D) even if information could be made public.[30] Although the

23. *See, e.g.*, the Government in the Sunshine Act, codified as 5 U.S.C. § 552b, which is based on the notion that the "Government is and should be the servant of the people, and it should be fully accountable to them for the actions which it supposedly takes on their behalf." H.R. Rep. No. 94-880 at 2 (1976), *reprinted in* 1976 U.S.C.C.A.N. 2184. The notion of transparency is also supported by the U.S. Constitution, declaring that Congress "shall make no law . . . abridging the freedom of speech, or of the press. . . ." U.S. Const. amend. I.

24. Pub. L. No. 89-487, 80 Stat. 250 (1966), an amendment to the predecessor of the current 5 U.S.C. § 552, states the purpose of the amendment as the following: "to clarify and protect the right of the public to information. . . ."

25. *See* exemptions (1) through (9) under 5 U.S.C. § 552(b) (2012).

26. Pub. L. 89-487 was enacted "[t]o amend section 3 of the Administrative Procedure Act, chapter 324, of the Act of June 11, 1946 (60 Stat. 238)." Pub. L. 89-487, 80 Stat. 250 (1966); *see also* Envtl. Prot. Agency v. Mink 410 U.S. 73, 79 (1973) (superseded by statute the holding of whether courts have power to hear appeal of FOIA agency withholding issues).

27. *Mink*, 410 U.S. at 79 (citing S. Rep. No. 813, 89th Cong., 1st Sess., 5 (1965)).

28. *Compare* Administrative Procedure Act, ch. 324, 60 Stat. 237 (1946), *with* 5 U.S.C. § 552 (1966) (setting forth three main rules of public disclosure through a) publication in the Federal Register, b) agency opinions and orders, and c) agency records; all subject to exemptions).

29. *Mink*, 410 U.S. at 79. *Compare* Administrative Procedure Act, ch. 324, 60 Stat. 237 (1946), *with* 5 U.S.C. § 552 (2012).

30. The exact wording of 5 U.S.C. § 552(a)(2)(D) (2012) insinuates that certain information may continue to be withheld (thus, nonpublic) by the agency unless there is a pattern of demand for that information.

Supreme Court in *N.L.R.B v. Sears, Roebuck & Co.* reiterated the purpose of the FOIA as "'establish[ing] a general philosophy of full agency disclosure unless information is exempted under clearly delineated statutory language,'" [31] and "[a]s the Act is structured, virtually every document generated by an agency is available to the public in one form or another, unless it falls within one of the Act's nine exemptions," [32] the first clause of subsection (a)(2)(D) limits making available "copies of all records" to information 1) that has already been requested using the procedure described in subsection (a)(3), and; 2) which "because of the nature of their subject matter, the agency determines have become or are likely to become the subject of subsequent requests for substantially the same record."[33]

The second dependent clause after the "and" in subsection (a)(2)(D) includes descriptions "have become" and "likely to become," leaving agencies such as the NRC much discretion as to whether public information is automatically disclosure-worthy.[34] If someone requests an agency-held information using subsection (a)(3) and NRC grants the request, the requester receives the information regardless of whether it has ever been requested or is unlikely to become requested in the future.[35] By leaving the interpretation of "likely" to the sole discretion of an agency such as NRC, much information has the potential of being withheld even if the same or similar information has been requested in the past.[36] More importantly, subsection (a)(2)(D) allows an agency to automatically withhold certain critical information without the public ever knowing of the information's existence because it includes no criteria to disclose when a reasonable citizen would want to know the material information.[37]

The NRC policy directives provide more insight into the creation of subsection (a)(2)(D).[38] The agency still engages in a cost-benefit analysis associated with what the agency does with excess public information, which

31. Nat'l Labor Relations Bd. v. Sears, Roebuck & Co., 421 U.S. 132, 136 (1975) (citing S. Rep. No. 813, 89th Cong., 1st Sess., 3 (1965) and *Mink*, 410 U.S. at 80, 93).

32. *Sears, Roebuck & Co.* stops short of deciding whether disclosure should be automatic. *See* 421 U.S. at 136.

33. Pay close attention to the effect of the "and." 5 U.S.C. § 552(a)(2)(D) (2012).

34. *Id.*

35. 5 U.S.C. § 552(a)(3) (2012).

36. 5 U.S.C. § 552(a)(2)(D) (2012).

37. See *infra* Section 3 for instances of how this is happening today.

38. U.S. NUCLEAR REG. COMM'N, RELEASE OF INFORMATION TO THE PUBLIC, TRANSMITTAL OF MANAGEMENT HANDBOOK 3.4 at 14 (Sep. 1993) (stating that records not routinely publicly released for substantive policy reasons included "[r]outine administrative records because of insufficient public interest and because their release would constitute an unwarranted administrative burden" before 1993).

can be expensive and time-consuming to organize or disclose.[39] Although the agency may now identify categories for processing certain frequently requested types of information and engages in some automated redaction,[40] it is still left with discretion to determine which "nature[s] of [the information's] subject matter" are "likely to become the subject of subsequent requests for substantially the same records."[41] If NRC determines that the information does not to belong to the frequently requested category, the only way to obtain the information is to file a FOIA request under 5 U.S.C. 552(a)(3).[42]

i: The Creation of Web-Based ADAMS Library

Moreover, current FOIA and NRC rules mandate release of information through the ADAMS library.[43] The Electronic Freedom of Information Act Amendments of 1996, signed into law by former President Bill Clinton, provides for electronic reading rooms and requires agencies to maintain online access through Internet or World Wide Web sites.[44]

Currently, when a user accesses Web-based ADAMS, the page will be in "Folder View" tab.[45] The "Recent Released Documents" file is in the left column of this tab.[46] This folder is further divided by indexes made of each month of the year, starting from October 1999.[47] Within each month, there

39. Mark Grunewald, *E-FOIA and the "Mother of All Complaints:" Information Delivery and Delay Reduction*, 50 ADMIN. L. REV. 345, 365 (1998).

40. Grunewald suggested this disclosure mechanism. *Id.* at 368.

41. 5 U.S.C. § 552(a)(2)(D) (2012).

42. This is assuming that the information has not been automatically disclosed pursuant to other subsections.

43. ADAMS is the official recordkeeping system by which NRC provides public access to documents also available in the Publicly Available Record System Library and the Public Legacy Library, accounting for more than 2.7 million records, with hundreds of new documents being added each day. *See ADAMS Public Documents*, U.S. NUCLEAR REGULATORY COMM'N, http://www.nrc.gov/reading-rm/adams.html (last visited Oct. 11, 2015) [hereinafter U.S. NRC]. *See* 22 Pub. L. No. 104-231, 110 Stat. 3048 (codified in 5 U.S.C. § 552). "Each agency shall make each such report available to the public including by computer telecommunications, or if computer telecommunications means have not been established by the agency, by other electronic means. . . ." 5 U.S.C. § 552 (2012). "[T]he term "record" and any other term used in this section in reference to information includes—any information that would be an agency record subject to the requirements of this section when maintained by an agency in any format, including an electronic format. . . ." 5 U.S.C. § 552(f)(2) (2012). "[A]n agency shall make reasonable efforts to search for the records in electronic form or format. . . ." 5 U.S.C. § 552(a)(3)(C) (2012).

45. *See Web-Based ADAMS*, U.S. NUCLEAR REG. COMM'N, http://adams.nrc.gov/wba/ (last visited Oct. 11, 2015).

46. *Id.*

47. *Id.*; *see also* 5 U.S.C. § 552(a)(2)(E) (2012) (requiring that "[e]ach agency [. . .] make the index [. . .] available by computer telecommunications by December 31, 1999").

are sub-indexes labeled by each date.[48] For example, if a user wanted to access files uploaded on February 9, 2015, she would first click the February 2015 folder, and then click on the more specific February 9, 2015 folder.[49] Then, to the right side of the "Folder View" tab, a list of documents in that folder would show twenty documents or subfolders per page.[50] For example, the February 9, 2015 folder alone currently has a total of 194 subfolders and documents.[51]

A document within the February 9, 2015 folder currently available for viewing is a subfolder titled "FOIA/PA-2015-0004A Appeal Denial of Information (FOIA/PA-2015-0057)."[52] To access this same information from a keyword search, the user must know of a keyword (such as the name of the appellant or file number) that would make the same document a "hit."[53] The "Advanced Search" tab is difficult to use as a first time user because unless the user has prior knowledge about the ADAMS database, she would most likely have to consult the User Guide to understand how search menus function.[54]

Perhaps to assist in overcoming technical challenges of ADAMS faced by the public, the NRC holds an ADAMS User Group Meeting approximately twice a year.[55] The meetings generally consist of announcements followed by members of the public asking questions and ADAMS operators answering them, usually lasting thirty minutes.[56] At the May 14, 2014 User Group meeting, a member of the public asked the following question: "[w]hy can't ADAMS use more traditional and well-known tools for searching?"[57] Answer: "[t]here are many other search tools that are used for retrieving information, such as ProQuest, Lexis/Nexis, Google, and others.[58] When the agency was developing ADAMS, the staff

48. *Web-Based ADAMS*, *supra* note 46.

49. *Id.*

50. *Id.*

51. This was the number displayed at the bottom of the page when the author accessed Web-based ADAMS on March 29, 2015. *Id.*

52. *Id.*

53. *Id.*

54. In the author's opinion, the ADAMS User Guide is filled with technical jargon and requires at least intermediate computer knowledge and skills to master. *See Web-based ADAMS User Guide, Release 1.3*, U.S. NUCLEAR REG. COMM'N (May 2012), http://www.nrc.gov/reading-rm/adams/wba-user-guide.pdf.

55. *See ADAMS User Group*, U.S. NUCLEAR REG. COMM'N (June 17, 2015), http://www.nrc.gov/reading-rm/adams/users-group.html.

56. *See e.g.*, *Agenda and Minutes from May 14, 2014 Meeting*, U.S. NUCLEAR REG. COMM'N (May 14, 2014), http://pbadupws.nrc.gov/docs/ML1418/ML14181B248.pdf.

57. *Id.* This question communicates a sense of frustration and bewilderment.

58. *Id.*

chose the software platform that provided the best match for the specific system requirements at the time.[59] Over the lifetime of ADAMS, the NRC has moved to a newer generation of that platform and continues to use it to support many agency information repositories, including ADAMS.[60] While Web-based ADAMS may not do everything in the way that other platforms do, it has proved to be a successful system for supporting public use of and access to NRC documents."[61]

Vast amounts of information are available in the Web-based ADAMS, yet at almost every meeting, an ADAMS user from the general public questions the usability of ADAMS and whether the NRC plans to improve it to make it more user-friendly.[62] Each time, the agency's reply circles around how successful the system already is and how extra improvement is difficult due to budgetary constraints.[63] Nevertheless, Web-based ADAMS is currently the single most prominent tool for the public to search, find, and view information related to commercial nuclear energy and safety.[64] Because the NRC has limited access to physical libraries, advocating improvement to Web-based ADAMS is crucial to keep up with and check changes in nuclear energy safety regulations.[65]

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59. *Id.*

60. *Id.*

61. *Id.* The responder, Chief Anna McGowan, User Services Branch, Office of Information Services, did not provide citations to support her assertion that the system has been "successful." *Id.*

62. Instances of the public raising questions about usability are in the Agenda and Minutes from November 5, 2014; May 14, 2014; October 30, 2013; May 8, 2013. *See Agenda and Minutes from Nov. 5, 2014 Meeting*, U.S. NUCLEAR REG. COMM'N (Nov. 5, 2014), http://pbadupws.nrc.gov/docs/ML1434/ML14349A562.pdf; U.S. NRC, *supra* note 57; *Agenda and Minutes from Oct. 30, 2013 Meeting*, U.S. NUCLEAR REG. COMM'N (Oct. 30, 2013), http://pbadupws.nrc.gov/docs/ML1334/ML13345A039.pdf; *Agenda and Minutes from May 8, 2013 Meeting*, U.S. NUCLEAR REG. COMM'N (May 8, 2013), http://pbadupws.nrc.gov/docs/ML1315/ML13154A027.pdf.

63. U.S. NRC, *supra* note 57. "The current budget status of the NRC does not look very hopeful for funding any major programming changes to the current version of WBA." U.S. NRC, *supra* note 43.

64. U.S. NRC, *supra* note 43.

65. NRC made a recent change to limit walk-ins of the Public Document Room and shift to access by appointment only. *Public Document Room*, U.S. NUCLEAR REG. COMM'N (Mar. 21, 2014), http://www.nrc.gov/reading-rm/pdr.html.

B: Evolving FOIA Objectives

Turning to FOIA objectives, the FOIA deals extensively with state secrecy.[66] In the context of nuclear power, the Atomic Energy Commission (AEC), which regulated atomic power before the NRC, kept data or information which was "born secret" in the hidden category "unless and until the Commission [felt] that it [could] satisfy, both intellectually and politically, the heavy burden of proving that published data [would] not adversely affect the common defense and security."[67] The AEC was created under the Atomic Energy Act (AEA) of 1946, which passed after the Senate Special Committee on Atomic Energy held its first public hearing on Senate Bill 1717, approximately six months after the destruction of Hiroshima and Nagasaki.[68] Although national security is not the only category of information that can lead to withholding information under the FOIA,[69] it was certainly the first and foremost type of information that the legislature sought to withhold when it passed the AEA.[70] The destructive capabilities of the atom as used in World War II[71] was enough to show the U.S. government what harmful potentials any nuclear power, whether used for war or peace, has.[72]

i: FOIA Objectives Post-WWII

After WWII, atomic energy became commercialized.[73] The first major U.S. commercial nuclear accident after the FOIA passage was the Three Mile Island (TMI) accident on March 28, 1979.[74] Although it is difficult to

66. 5 U.S.C. § 552 (2012) states that this section does not apply to matters "[. . .] established by an Executive order to be kept secret in the interest of national defense. . . ."

67. Oscar M. Ruebhausen & Robert B. von Mehren, *The Atomic Energy Act and the Private Production of Atomic Power*, 66 HARV. L. REV. 1450, 1474-75 (1953).

68. *Id.* at 1450.

69. See exemptions 2 through 9 under 5 U.S.C. § 552(b) (2012), such as protection of personal privacy, protection of trade secrets, protection of investigation tactics by law enforcement.

70. Newman, *supra* note 18, at 775-76.

71. "The United States Strategic Bombing Survey (USSBS) estimated between 70,000 and 80,000 deaths at Hiroshima, though that number does not include many who later died as a result of radiation sickness or other complications." SEAN L. MALLOY, ATOMIC TRAGEDY: HENRY L. STIMSON AND THE DECISION TO USE THE BOMB AGAINST JAPAN 139, fig. 10 (2008).

72. The atomic bomb was an essential characteristic of the Cold War: "[Truman] was convinced that the way to handle the Soviets was with strong words made stronger by the shadow of the mushroom cloud behind them." NEIL SHEEHAN, A FIERY PEACE IN A COLD WAR: BERNARD SCHRIEVER AND THE ULTIMATE WEAPON 54 (2009).

73. Joseph P. Tomain & Constance Dowd Burton, *Nuclear Transition: From Three Mile Island to Chernobyl*, 28 WM. & MARY L. REV. 363, 364 (1987).

74. *Id.*

know for certain, transparency laws such as 5 U.S.C. section 552 and 5 U.S.C. section 552b, and events such as the Chernobyl nuclear accident likely prevented nuclear power plants from increasing exponentially following the TMI accident.[75] The public was devastated that such an accident could occur despite safety assurances by scientists and regulators.[76]

A turning point in FOIA disclosure during this era was the litigations that followed the TMI accident.[77] In one instance, TMI Fund lawyers succeeded in reversing the Department of Energy (DOE)'s longstanding practice and policy to withhold low to medium level worker nuclear exposure records.[78] This FOIA request started in 1982, and the DOE turned over information in 1990, meaning that the record was withheld for eight years.[79]

Another controversial case that publicized information non-disclosure was the death of Karen Silkwood, who became known as a nuclear facility whistleblower.[80] On November 13, 1974, on her way to delivering exposure files and meeting with a New York Times reporter and union leader, Silkwood died in a car crash that was ruled an accident.[81] Subsequently, Silkwood's family litigated against Kerr-McGee for the mysteriously high level of plutonium which had contaminated Silkwood prior to her death.[82] This incident caused a stir among the AEC,

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75. Tomain hints that this is due to the high cost that burdens nuclear energy in the case of an accident. *See id.* at 364-65, 416.

76. "The Supreme Court, in contrast, deferred completely to the scientists of the AEC. It made a policy choice by relying on the assurances of these scientists that public safety would not be compromised." Diane Carter Maleson, *The Historical Roots of the Legal System's Response to Nuclear Power*. 55 S. CAL. L. REV. 597, 613 (1982).

77. *E.g.*, in 1981, citizens' groups won a class-action suit against the TMI facility, resulting in an out-of-court settlement of $25 million, part of which created the Three Mile Island Public Health Fund by General Public Utilities Corporation. GAYLE GREENE, THE WOMAN WHO KNEW TOO MUCH: ALICE STEWART AND THE SECRETS OF RADIATION 178 (1999). To analyze and assess radiation effects, "data collected on workers in the weapons industry [was] ideal." *Id.*

78. *Id.* at 182, 187-89.

79. *Id.* at 185-89. The DOE had refused by claiming a threat to national security (*See* 5 U.S.C. §552(b)(1)(2012)), but the information was finally made public, allowing researchers not part of DOE, which produced nuclear weapons, to assess health and environmental effects caused by production of nuclear weapons. *Id.*

80. *See generally* Silkwood v. Kerr-McGee Corp., 464 U.S. 238 (1984) (holding that state award of punitive damages arising out of escape of plutonium is not preempted by federal law); *see also* David Burnham, *Death of Plutonium Worker Questioned by Union Official; Union Has Car Responsible to A.E.C. 2,000 Accidents*, N.Y. TIMES, Nov. 19, 1974, at 28.

81. Burnham, *supra* note 81.

82. *Silkwood*, 464 U.S. at 243; *see also* Myrna Oliver, *Firm to Settle Silkwood Case: Kerr-McGee Will Pay $1.38 Million to Estate*, L.A. TIMES (Aug. 23, 1986), http://articles.latimes.com/1986-08-23/news/mn-15774_1_karen-silkwood. The settlement came after the 1984 *Silkwood* decision, and Kerr-McGee denied wrongdoing by settling the suit. *Id.*

commercial nuclear companies, and the general public because it shed light on the possibility that the search for nuclear information could lead to deathly consequences.[83]

ii: Contemporary FOIA Objectives

Both federal statutes and case law have supported agencies such as NRC's unwillingness to disclose nuclear energy information to the general public based on threat to national security. September 11, 2001 was a grim reminder to the U.S. government and public that attacks could occur on U.S. soil, including nuclear facilities. In response, Congress enacted the USA PATRIOT Act, increasing penalties for sabotage and conspiracy to sabotage nuclear facilities and fuel.[84] The FOIA and National Environment Policy Act (NEPA) both have specific or indirect disclosure exemptions for national security,[85] and the Supreme Court has upheld information withholding due to national security.[86]

In some instances, this fear of attacks on U.S. commercial nuclear facilities has led to stricter scrutiny of nuclear facility security by the public, as represented in the San Luis Obispo Mothers for Peace v. NRC decision.[87] Although the case centers around NEPA and Environmental Impact Statement requirement rules, the underlying purpose of the Mothers for Peace litigation was to obtain information about what the consequences of terrorism would be on a commercial nuclear facility by closing "'scientific uncertainty and gaps in the available information.'"[88] This same fear has prompted one writer to suggest a legal scheme of protecting the U.S. public

83. For how controversial the *Silkwood* case was at the time it was decided, see Monica A. Smith, Silkwood v. Kerr-McGee Corp.*: Preemption of State Law for Nuclear Torts?*, 12 ENVTL. L. 1059 (1982).

84. Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (codified in part as 42 U.S.C. § 2284 (2012)).

85. *See* 5 U.S.C. § 552(b)(1)(A) (2012) for FOIA's specific exemption for national security, and wording of 42 U.S.C. §§ 4331(b), 4332 (2012) (e.g., the government shall "use all practicable means, consistent with other essential considerations of national policy" to comply with NEPA), and 42 U.S.C. § 4332 (2012) generally for NEPA's indirect exemption for national security.

86. Weinberger v. Catholic Action of Hawaii/Peace Educ. Project, 454 U.S. 139 (1981) (dismissing case because NEPA and FOIA exemptions for national security applied).

87. San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm'n. 449 F.3d 1016 (9th Cir. 2006) (holding that NRC's categorical refusal under NEPA, to consider environmental effects of terrorist attack on proposed interim spent fuel storage installation or Diablo Canyon Power Plant in general, was not reasonable). *But see* N.J. Dep't of Envtl. Prot. v. U.S. Nuclear Regulatory Comm'n, 561 F.3d 132 (3d Cir. 2009) (reaffirming NRC's approach, thus creating a circuit split).

88. *San Luis Obispo Mothers for Peace*, 449 F.3d at 1033 (quoting the reply of Council on Environmental Quality, an executive office of the President, created under the NEPA.)

from terrorist attacks on commercial nuclear facilities by "freeing" the NRC and entrusting terrorism analysis concerning commercial nuclear safety exclusively to Homeland Security.[89] However, such a scheme would undermine NRC's civil purpose, which was to create a non-military, non-commercial commission to provide a more neutral oversight that is not exclusively military.[90] Yet, public opinion seemed to support *more* secrecy concerning commercial nuclear facilities in order to protect the public against terrorism,[91] until along came Fukushima.

The March 11, 2011 earthquake and tsunami, followed by the explosions at Fukushima Dai-ichi Nuclear Power Plants in Japan, led to international shock,[92] so much that the IAEA and NRC were compelled to conduct Fukushima reports and studies, as well as continuing correspondence with Japan.[93] Fukushima reminded the world that although war is capable of great destruction, so is a natural disaster or manmade accident, which succeeds in "sabotaging" humankind even during peacetime, as Japan was experiencing in 2011.

This additional concern after the Fukushima disaster explains the result in *New York v. Nuclear Regulatory Commission*.[94] That spent nuclear fuels, "[e]ven though [. . .] no longer useful for nuclear power, [. . .] poses a dangerous, long-term health and environmental risk,"[95] exposed on the ground without a permanent geologic repository,[96] raised questions as to

89. Alexander Briggs, *Managing the Line Between Nuclear Power and Nuclear Terror: Considering the Threat of Terrorism as an Environmental Impact*, 8 SETON HALL CIR. REV. 223, 252 (2011).

90. Neutrality, including public oversight, through the NRC was determined to be necessary to prevent military tyranny, which could result from giving it exclusive power. Maleson, *supra* note 76, at 598-600.

91. *See* 5 U.S.C. § 552(b)(1)(A) (2012).

92. The disaster was ranked as INES Level 7, the highest possible for nuclear accidents evaluated by the International Atomic Energy Agency (IAEA). U.S. NUCLEAR REG. COMM'N, *Reflections on Fukushima*, NUREG/KM-0008, 1 (Dec. 2014), http://pbadupws.nrc.gov/docs/ML1435/ML14353A089.pdf. It is also considered to be the worst civil nuclear accident in the past 30 years. *Id.*

93. *See* U.S. NRC, *supra* note 1, at 1-2; NUCLEAR EMERGENCY RESPONSE HEADQUARTERS, *supra* note 6.

94. 681 F.3d 471 (D.C. Cir. 2012) (holding that the NRC failed "to properly analyze the environmental effects of its permanent disposal conclusion"). The environmental assessment (EA) and resulting Finding of No Significant Impact (FONSI), which were based on the conclusion that spent nuclear fuel (SNF) could safely be stored in on-site storage pools for a period of sixty years after the end of a plant's life, were not supported by substantial evidence because the NRC failed to conduct a full examination of the possibilities of leaks and fires. *Id.* at 479.

95. *Id.* at 474.

96. The Yucca Mountain Nuclear Waste Repository Project's adjudicatory proceedings have been suspended since September 2011, but in August 2013 the D.C. Circuit ordered NRC to resume reviewing the application for the repository's license. *Backgrounder, Licensing Yucca*

whether mere confidence that everything will be okay is sufficient to protect the public from safety concerns such as terrorism, natural disasters, and accidents.[97] The outcome of this case reflected growing public concern over nuclear facilities' ability to withstand the test of time, at least for as long as humans exist.[98] Will the public continue to be informed about the status of facilities that span over hundreds of human measuring lives and keep up with advancements in nuclear technology?[99]

Secretive measures can become counterintuitive to preventing commercial nuclear facility accidents like that of Fukushima.[100] Designating *all* nuclear information as military secret for public safety is what the U.S. did prior to enacting AEA.[101] Laws freeing commercial nuclear information followed WWII and the Cold War. Yet with the onslaught of contemporary terrorism, the U.S. appears to have reverted to pre-AEA reasoning,[102] only to be reminded by Fukushima that the FOIA is and will be critical in preventing nuclear disasters caused by nature, and perhaps also by intentional acts.

SECTION 3: NUCLEAR ENERGY INFORMATION "HIDE AND GO SEEK"

Currently the public faces obstacles and confusion in obtaining public information regarding commercial nuclear safety.[103] Defects in information

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Moutain, U.S. NUCLEAR REG. COMM'N 1-2 (Sept. 2015), http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/yucca-license-review.pdf. Ethical, political, and environmental issues of storing nuclear waste in one location remain.

97. *U.S Nuclear Regulatory Comm'n*, 681 F.3d at 475, 478. NRC revised the Waste Confidence Findings to state that a repository will be available "when necessary"; before, the available date for the repository had been declared as between 2007-2009, which never happened. *Id.* at 475.

98. *Id*. at 474, 476 (commenting on time spans beyond human comprehension and the quality of human environment).

99. "NEPA is an 'essentially procedural' statute intended to ensure 'fully informed and well-considered' decisionmaking, but not necessarily the best decision." *Id.* at 476 (quoting Vt. Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 558 (1978)). This opinion shows that a decision is arguably as important as the public being informed about facts that lead to a decision in order to voice an opinion.

100. Arguably governments can prevent nuclear terrorism by withholding information (secretive measures). Yet the secretive measures would not be useful in preventing natural and human-made accidents because nature has no intent, and human accidents have little to no scienter. Further, as mentioned above, an accident can occur whether a country is in a state of war or peace, thus encompassing a greater timespan.

101. Before the AEA, atomic power was a military secret developed during World War II. Maleson, *supra* note 76, at 598-99.

102. *See* 5 U.S.C. § 552(b)(1)(A) (2012).

103. One stakeholder "claimed that certain information may be redacted in one document of a FOIA request, but the same information will appear unredacted in another document of a separate

disclosure can lead to an uninformed or indifferent public, setting the stage for a nuclear disaster that could have been prevented. As the Office of Inspector General points out, the NRC should consistently prepare information related to nuclear plant safety for disclosure in ADAMS[104] and label redacted information as clearly fitting a certain FOIA exemption even if it would only serve the purpose of giving notice that the document exists. Redefining subsection (a)(2)(D) would help resolve current problems regarding FOIA information disclosure.[105]

A: The Case of San Onofre Nuclear Generating Station, California

Recently, some nuclear facilities have taken steps to decommission, i.e., "shut down" facilities permanently, sometimes leading to complete dismantlement.[106] Even if a utility company states a reason, why it actually decided to decommission can be difficult to discern.[107] The decommissioning of SONGS stemmed from a controversial NRC issuance of a Confirmatory Action Letter (CAL) to allow SCE to return two units of SONGS to power operation after two newly installed steam generator systems experienced unexpected reactor coolant leaks as a result of degradation of coolant tubes, when arguably SCE should have applied for a license amendment.[108] Further, the NRC may have compromised safety by

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FOIA request." *Office of Inspector General, Audit of NRC's Freedom of Information Act Process*, U.S. NUCLEAR REG. COMM'N 10-11 (Jun. 2014), http://pbadupws.nrc.gov/docs/ML1416/ML14167A029.pdf. Further, "the documents come back with little or no redactions. Yet, the information is never publicly posted and he must go through the FOIA process each time for future requests." *Id.* Also, "[the stakeholder] believes NRC is inconsistent with its use of security designations to withhold information. He has submitted FOIA requests for information that was not publicly available, yet the information was sent to him completely unredacted. In his view, the documents should have been redacted or they should have already been publicly available. *Id.* NRC's Chief FOIA Officer confirmed that his biggest challenge was ensuring that NRC provides a consistent response to FOIA requests." *Id.*

104. *Id.* at 15, 22.

105. Its language leaves wide and unreliable discretion to the agency. 5 U.S.C. § 552(a)(2)(D) (2012).

106. Southern California Edison (SCE), which operated San Onofre Nuclear Generating Station (SONGS), in San Diego, Ca., announced its decision to permanently cease power operations and decommission Units 2 and 3 on June 7, 2013. S. CAL. EDISON, DOCKET NOS. 50-361 AND 50-362, SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 POST-SHUTDOWN DECOMMISSIONING ACTIVITIES REPORT 6, U.S. NUCLEAR REG. COMM'N 6 (Sept. 2014), http://pbadupws.nrc.gov/docs/ML1426/ML14269A033.pdf.

107. A facility could shut down because of economic, political, and safety reasons, or a combination of some or all. *See generally* Tomain & Burton, *supra* note 73 (analyzing the tie between nuclear energy and economy).

108. Memorandum from Morton Rosenberg, Legislative Consultant, to Hon. Barbara Boxer, Chairman, Senate Committee on Environment & Public Works, Legal Substantiality of the

relying on the nonpublic CAL process to allow the design and installation of the new generators that proved defective in the first place,[109] leading to a series of secret CAL decisions by the NRC, which the public learned of only after the leakage and report by SCE to NRC.[110]

In the months that followed, U.S. Senator Boxer (D-CA), who is Chairman of the Senate Committee on Environment and Public Works, inquired into this matter by requesting information from the NRC that would shed light onto the decision making process that led to the installation of the tubes.[111] However, the NRC withheld the information for several months based on separation of powers concerns.[112] Rosenberg argues that even if information is withheld against disclosure to the general public, it may still be available to oversight committees, especially because NRC is a creation of the Congress and is subject to its plenary oversight and investigatory power.[113]

Assuming that the initial CAL was withheld appropriately from the public because of an exemption under 5 U.S.C. § 552 or through the non-automatic disclosure rule under 5 U.S.C. § 552(a)(2)(D), the generator leakage at San Onofre might have been prevented if: 1) NRC disclosed the information despite the exemptions because of a heightened concern about safety; 2) an informant (likely to be SCE or NRC insider) disclosed the information to the public; or 3) NRC designated this information as public and disclosed it because a reasonable person would want to know the information in making a decision to inquire the NRC, after making appropriate redactions.

Nuclear Regulatory Commission's Grounds for Refusing to Comply With Valid Committee Requests for Documents 2-4 (May 2014), http://www.epw.senate.gov/public/_cache/files/1531c893-e3ae-4522-868b-114ef9d86da6/060214mortrosenbergboxermemo.pdf. An issuance of CAL "bypasses [. . .] public notice and participation processes. [. . .] [A] licensee must request a license amendment if the proposed action requires that existing technical specifications be changed [. . . .]" *Id.*

109. *See generally* S. Cal. Edison Co., 77 N.R.C. 307 (2013) (holding that the CAL process in the SONGS case constituted a de facto license amendment) (vacated by *In the Matter of Southern California Edison Company*, CLI-13-09 on mootness grounds because SCE subsequently decided to decommission and no live controversy remained). In this decision, Friends of the Earth challenged aspects of CAL issuance by arguing that SCE's replacement of steam generators in Units 2 and 3 in 2010 and 2011 without obtaining a license amendment was unlawful. *Id.*

110. Rosenberg, *supra* note 108.

111. *Id.* at 6.

112. *Id.* at 7 (citing Letter from Allison M. Macfarlane, to Senator Barbara Boxer, Chairman, Senate Committee on Environment & Public Works, on the NRC's production of documents requested by individual members of Congress or by committees 1-2 (Dec. 2013), http://www.nrc.gov/reading-rm/doc-collections/congress-docs/correspondence/2013/boxer-12-23-2013.pdf).

113. *Id.* at 8-15.

Option one would directly run afoul of the exemptions under 5 U.S.C. § 552(b).[114] Option two would subject informants to betray their employers or government and might even lead to prosecution or punishment.[115] Option three, of lessening the "likely" discretion under subsection D and disclosing material information even if it has never been requested under subsection 3,[116] and giving notice to the public through the ADAMS library in an accessible manner, could enable the public to get involved more in NRC decision-making processes and prevent unwarranted surprises concerning safety.

B: FOIA Disclosure Problems at Other U.S. Nuclear Plants

Instances of questionable information withholding practices continue. To illustrate, when Dave Lochbaum from Union of Concerned Scientists (UCS) submitted a FOIA request around July 2014 to the NRC for information regarding fire protection and emergency planning regulation since 2004, to his surprise, the information concerning fire protection was released almost immediately.[117] The NRC also added documents to its ADAMS library concerning fire protection problems at Sequoyah and Palisades nuclear plants without any redacted information.[118] Because NRC had no reason to withhold this information based on any of the FOIA exemptions, it likely made it available after applying the 5 U.S.C. section 552(a)(2)(D) discretion to disclose information based on the likeliness of

114. 5 U.S.C. § 552(b) (2012) states that FOIA does not apply to matters "[. . .] established by an Executive order to be kept secret in the interest of national defense. . . ."

115. USA PATRIOT Act could criminalize this based on the statute that criminalizes conspiracy to sabotage nuclear plant. 42 U.S.C. § 2284 (2012).

116. The possibility of this has been pointed out by Grunewald, *supra* note 39. However, his analysis stops short of delving into the particular agency discretion issue of 5 U.S.C. §552(a)(2)(D).

117. It took approximately three months. *See* Dave Lochbaum, *Senseless Deprivation: The NRC Hiding Documents from the Public*, ALL THINGS NUCLEAR (Oct. 17, 2014), http://allthingsnuclear.org/senseless-deprivation-the-nrc-hiding-documents-from-the-public/. An average FOIA request took 47 days in 2014. *See* ANNUAL FOIA REPORT FOR FISCAL YEAR 2014, U.S. NUCLEAR REG. COMM'N (2014), http://www.nrc.gov/reading-rm/foia/annual-reports/annual-foia-report-fy2014.pdf.

118. Lochbaum, *supra* note 117; *see also* LER 06-001-00 FOR SEQUOYAH NUCLEAR PLANT UNIT 1 RE POTENTIAL LOSS OF COMPONENT COOLING WATER TO THE SEAL WATER HEAT EXCHANGER DURING AN APPENDIX R FIRE, ML061080395, U.S. NUCLEAR REG. COMM'N (Apr. 2006), http://pbadupws.nrc.gov/docs/ML0610/ML061080395.pdf; LER 06-001-00 FOR PALISADES NUCLEAR PLANT, RE POTENTIAL LOSS OF PRIMARY COOLANT MAKEUP FUNCTION FOR POSTULATED FIRE SCENARIO, ML061070096, U.S. NUCLEAR REG. COMM'N (Apr. 2006), http://pbadupws.nrc.gov/docs/ML0610/ML061070096.pdf (both documents added in December 2014).

future request for the same information.[119] The NRC could withhold the information under subsection (a)(2)(D) because no one had requested the information before, or because even if it or similar information had been requested the NRC deemed the information unlikely to be requested again.[120] Lochbaum, not the NRC, made the information publicly available by submitting a FOIA request to obtain this information,[121] and he alleges that NRC had withheld this critical information intentionally for over eight years for unknown reasons.[122]

Lochbaum also came across documents related to plants such as Oconee, Turkey Point, Fort Calhoun, Shearon Harris, and Brown's Ferry, requesting the NRC for fire protection exemptions and subsequent approvals, all added to ADAMS as publicly viewable documents also eight years later.[123] As for emergency planning documents, the release came at a later date because of the "sheer volume of withheld information."[124]

In another instance, litigation has followed after discovery of another "secret decision" concerning the Diablo Canyon Power Plant (DCPP).[125] The NRC approved DCPP's update to the final safety analysis report

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119. Information is withheld, for example, if it is "specifically authorized under criteria established by an Executive order to be kept secret in the interest of national defense or foreign policy. . . ." 5 U.S.C. § 552(b)(1)(A) (2012). *See also* NRC Regs, 10 C.F.R. § 9.17 (2014), 10 C.F.R. § 9.19 (2014).

120. *See* 5 U.S.C. § 552(a)(2)(D) (2012).

121. FOIA requests are governed by 5 U.S.C. § 552(a)(3) (2012). These are specific requests different from automatic disclosures by the agency under 5 U.S.C. § 552(a)(1) and 5 U.S.C. § 552(a)(2).

122. *See* Lochbaum, *supra* note 117. According to Lochbaum, an NRC manager informed him of these documents concerning fire protection problems. *Id.* Note that this NRC insider-tipper was critical in the discovery of hidden information. Without his or her act, this information would have still been hidden.

123. *Id.*; *see, e.g.*, *Turkey Point, Units 3 & 4, Response to Request for Additional Information for Request for Exemption- Automatic Suppression in the Mechanical Equipment Room (Fire Zone 097) and Control Room Roof (106R)*, U.S. NUCLEAR REG. COMM'N, ML062010140 (Jul. 12, 2006) (appearing on Web-based ADAMS, the "date added" for this document is December 10, 2014, yet the "document date" is July 12, 2006), http://adams.nrc.gov/wba/ (select "Advanced Search" tab; fill in the criteria for the search under "Document Properties," using "Accession Number" as the Property, "starts with" as the Operator, and "ML062010140" as the Value; click "Search").

124. *See* Lochbaum, *supra* note 117. The information was released on December 10, 2014. *See, e.g.*, *Point Beach, Units 1 and 2, Emergency Plan Implementing Procedure Revisions*, U.S. NUCLEAR REG. COMM'N, ML14342A151 (May 19, 2003) (appearing on Web-based ADAMS with the "date added" listed as Dec. 2014, meaning it was withheld for over a decade), http://adams.nrc.gov/wba/ (select "Advanced Search" tab; fill in the criteria for the search under "Document Properties," using "Accession Number" as the Property, "starts with" as the Operator, and "ML14342A151" as the Value; click "Search").

125. Friends of the Earth v. NRC, No. 14-1213 (D.C. Cir. filed Oct. 28, 2014).

(FSAR) without notice and opportunity for a public adjudicatory hearing,[126] allowing it to operate despite seismic findings that showed the plant to be vulnerable to earthquake as evidenced in a differing professional opinion (DPO) by NRC's senior resident inspector, Michael Peck.[127] In light of this new material information, which had been nonpublic until obtained by Friends of the Earth,[128] Petitioner Friends of the Earth is seeking to overturn the decision that approved the FSAR.[129] UCS also filed a FOIA request for information regarding this matter, finding out that the communication between NRC and PG&E concerning this FSAR went back to 2011.[130] The NRC prioritization study in response to the Fukushima disaster for completing seismic risk evaluations had categorized DCPP as one of two U.S. nuclear plants "that have the highest [. . .] hazard relative to original plant seismic design-basis [. . .], as well as ground motions [. . .] that are [. . .] higher in absolute magnitude."[131]

To summarize, the above instances show problems arising from the current FOIA scheme. Sometimes the NRC makes a decision without material information being released to the public because the NRC has too much discretion to determine relevance or materiality under 5 U.S.C. section 552(a)(2)(D). By the time an insider tips an activist or an accident happens, causing the public to gain knowledge of existing information and then to make a FOIA request, the critical decision has already been made.[132]

126. *Id.*

127. *See* Dave Lochbaum, *Diablo Canyon: NRC Insider's Dissent*, ALL THINGS NUCLEAR (Aug. 27, 2014), http://allthingsnuclear.org/diablo-canyon-nrc-insiders-dissent/; *see also DPO Case File for DPO-2013-002*, U.S. NUCLEAR REG. COMM'N, ML14252A743 (Sept. 9, 2014), *available at* http://adams.nrc.gov/wba/ (select "Advanced Search" tab; fill in the criteria for the search under "Document Properties," using "Accession Number" as the Property, "starts with" as the Operator, and "ML14252A743" as the Value; click "Search"). .

128. *See* Lochbaum, *supra* note 127. Nearly a year later, the document has been made public. *See DPO Case File for DPO-2013-002*, *supra* note 127.

129. Friends of the Earth, No. 14-1213.

130. *See* Lochbaum, *supra* note 127.

131. *Screening and Prioritization Results for the Western United States Sites Regarding Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Seismic Hazard Re-Evaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights From the Fukushima Dai-ichi Accident*, U.S. NUCLEAR REG. COMM'N, ML15113B344 at 4 (May 13, 2015), http://adams.nrc.gov/wba/ (select "Advanced Search" tab; fill in the criteria for the search under "Document Properties," using "Accession Number" as the Property, "starts with" as the Operator, and "ML15113B344" as the Value; click "Search").

132. *See* S. Cal. Edison Co., 77 NRC 307; Friends of the Earth, No. 14-1213.

The public must then resort to the judicial appellate process, which is costly, time-consuming, and is unlikely to overturn agency action.[133]

C: Information Disclosure Problems at Japanese Nuclear Facilities

Parallels to the current U.S. information disclosure problems existed in Japan prior to March 11, 2011. An analysis comparing U.S. and Japanese information disclosure schemes may assist in avoiding similar pitfalls when a Fukushima-like natural disaster hits the U.S. From Japan, the U.S. may also learn the effect of information withholding on regulatory capture, emergency response, and safety.

After the explosions on March 11, 2011, the Japanese government created the Nuclear Regulation Authority (NRA) in 2012.[134] Some of its objectives are to improve problems of nuclear energy facilities investigation and release of public information.[135] The reason for creating the NRA to replace the Nuclear and Industrial Safety Agency (NISA)[136] was similar to why the U.S. government replaced the AEC with the NRC.[137] After the nuclear explosions at Fukushima Dai-ichi, the Japanese government concluded that hiding problems was detrimental in disaster prevention.[138]

Masaru Kobayashi, former general manager of the NISA seismic safety examination office, reported examples of information hiding in August

133. *See generally* Katherine A. Trisolini, *Decisions, Disasters, and Deference: Rethinking Agency Expertise After Fukushima*, 33 YALE L. & POL'Y REV. 323, 330-45 (2015) (discussing judicial deference to NRC).

134. Genshiryoku kisei iinkai secchihō [Act for Establishment of the Nuclear Regulation Authority], Law No. 47 of 2012, art. 2, para. 5 (Japan), *translated in* nsr.go.jp (provisional translation).

135. The NRA shall take care of the following: "[a]ffairs concerning investigations of causes of accidents that have resulted from the operation, etc. of reactors [. . . .]" *Id.* art. 4(1), para. 10. "The [NRA] shall secure the transparency in its operation through a thorough disclosure of the information that it holds with the aim of guaranteeing the public's right to know." *Id.* art. 25.

136. NISA was formerly a section of the Ministry of Economy, Trade and Industry. BASIC POLICY ON THE REFORM OF AN ORGANIZATION IN CHARGE OF NUCLEAR SAFETY REGULATION (CABINET DECISION) (AUG. 15, 2011), HON'YAKU DB (Japan), http://www.cas.go.jp/jp/genpatsujiko/pdf/kakugi_en_110815.pdf (provisional translation).

137. "The AEC itself increasingly came under attack, and it soon became a matter of conventional wisdom, however much an oversimplification, that the AEC's responsibility to *regulate* nuclear safety had been inherently compromised by its having been joined with the "inconsistent" responsibility to *promote* the development of nuclear energy." Richard Goldsmith, *Regulatory Reform and the Revival of Nuclear Power*, 20 HOFSTRA L. REV. 159, 170 (1991).

138. *See* BASIC POLICY ON THE REFORM OF AN ORGANIZATION IN CHARGE OF NUCLEAR SAFETY REGULATION, *supra* note 136.

2011.[139] According to this report, top bureaucrats put pressure on Kobayashi around 2009 by stating that Kobayashi would be fired if he continued to propose further seismic investigations of risks associated with the historic Jyogan earthquake, a historically recurring earthquake that could affect Fukushima.[140]

However, the Japanese government passed the Act on the Protection of Specially Designed Secrets in 2013, limiting dispersal of information related to defense, diplomacy, harmful activities, and terrorist activities.[141] NRA's challenge will be providing adequate disclosure of environmental impacts to prevent another Fukushima Dai-ichi type disaster notwithstanding this secrecy law, since Japan has enacted the Act on Access to Information Held by Administrative Organs, which has rules similar to the FOIA.[142]

Additionally, Post-3/11 information delay has caused confusion and frustration in Japan. The release to the public of SPEEDI, the real-time radiation dose monitoring system, was delayed over 10 days after the disaster.[143] Further, the Japanese government finally released interviews gathered from workers chronicling the disaster at Fukushima Dai-ichi, after withholding the reports for almost three years.[144] Fukushima Dai-ichi is

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139. *See* Akira Matsumoto, Chōshu kekkasho [Hearing Report] 1 (Aug. 2011), http://www.cas.go.jp/jp/genpatsujiko/hearing_koukai_3/110_koukai.pdf (Japan)(English translation unavailable).

140. Translated by author. *Id.*

141. Tokutei himitsu no hogo ni kannsuru hōritsu [Act on the Protection of Specially Designated Secrets], Law No. 108 of 2013, art. 3, para 5-9, appendix table i-iv, *translated in* http://www.japaneselawtranslation.go.jp (Japan).

142. *See, e.g.*, Gyosei kikann no hoyū suru jyōhō no kōkai ni kannsuru hōritsu [Act on Access to Information Held by Administrative Organs], Law No. 42 of 1999, art. 5 (Japan), *translated in* http://www.japaneselawtranslation.go.jp. Article 5 states: "[w]hen there is a Disclosure Request, unless any of the information listed in each of the following items (hereinafter referred to as "Non-Disclosure Information") is recorded in the Administrative Documents pertaining to the Disclosure Request, the head of an Administrative Organ shall disclose said Administrative Documents to the Disclosure Requester."

143. Norimitsu Onishi & Martin Fackler, *Japan Held Nuclear Data, Leaving Evacuees in Peril*, N.Y. TIMES, Aug. 8, 2011, at A1, http://www.nytimes.com/2011/08/09/world/asia/09japan.html?_r=0. The accident happened on March 11, and SPEEDI was released to the public on March 23. *Id.*

144. *See* Masao Yoshida, Chōshu kekkasho [Hearing Report] (Aug. 2011), http://www.cas.go.jp/jp/genpatsujiko/hearing_koukai_3/110_koukai.pdf (Japan), *translated in* Asahi Shimbun, http://www.asahi.com/special/yoshida_report/en. This document was made available to the public in Sept. 2014, but the record was made starting from July 2011. *See* Chief Cabinet Secretary, Press Conference (Sept. 11, 2014), http://japan.kantei.go.jp/tyoukanpress/201409/11_p.html.

still leaking radiation,[145] with additional problems such as a shortage and exploitation of radiation cleaners, [146] increased rates of thyroid cancer amongst children in Fukushima,[147] and dumping it into the Pacific Ocean.[148]

SECTION 4: IMPROVED DISCLOSURE COULD AVERT COMMERCIAL NUCLEAR DISASTER IN U.S.

The current information disclosure scheme can be improved in three ways: amending the FOIA, amending NRC rules, and increasing funds for ADAMS. These changes could demystify whether information about commercial nuclear facilities is generally "born secret" or born public.[149] Any reform to the current information disclosure scheme must consider what method would prevent a Fukushima-type disaster, whose cost is currently estimated as over 6.8 *trillion* yen (approximately fifty-seven *billion* dollars),[150] exposes humans to higher levels of radiation and risk of thyroid cancer,[151] and contaminates land for hundreds, if not thousands, of years to come.

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145. "The NRC and responsible federal, state and local governments do not see any evidence that the low levels of radiation leaking into the ocean from the Fukushima Daiichi NPS [(Nuclear Power Station)] pose any U.S. health or environmental risk." Jessica Kratchman & Chuck Norton, *Water Contamination- Impacts on the U.S. West Coast*, U.S. NUCLEAR REG. COMM'N, ML13263A306 (Sept. 20, 2013) (updated Jan. 2015), http://adams.nrc.gov/wba/ (select "Advanced Search" tab; fill in the criteria for the search under "Document Properties," using "Accession Number" as the Property, "start with" as the Operator, and "ML13263A306" as the Value; click "Search").

146. *Nagoya Exec Exploited Boy, 15, For Radioactive Clean-up Work*, ASAHI SHIMBUN (Feb. 19, 2015), http://ajw.asahi.com/article/0311disaster/fukushima/AJ201502190050.

147. "The thyroid cancer incidence rate identified thus far in Fukushima prefecture is higher than [that] found in the whole population of Japan, although further study is being done on the cancer rate in Japan." *NRC International Travel Trip Report, The International Workshop on Radiation and Thyroid Cancer*, U.S. NUCLEAR REG. COMM'N, ML14069A246 (Mar. 10, 2014) http://adams.nrc.gov/wba/ (select "Advanced Search" tab; fill in the criteria for the search under "Document Properties," using "Accession Number" as the Property, "start with" as the Operator, and "ML14069A246" as the Value; click "Search").

148. "Groundwater flowing into the basements of the damaged reactor and turbine buildings also fed the leaks. These leaks introduced radioactive material into the Pacific Ocean." Kratchman, *supra* note 145.

149. Ruebhausen and Mehren phrased the concept of information being withheld as "born secret." *Supra* note 67, at 1481. "Today all data in the atomic energy field is, so to speak, 'born secret' and is not unveiled until the Commission feels that it can justify to Congress that such data can be released without adversely affecting the common defense and security." *Id.*

150. Tokyo dennryoku kabushiki gaisha [Tokyo Electric Power Company (TEPCO)], [Concerning the Eighth Application to Change the Amount of Monetary Assistance] (Jun. 2015), http://www.tepco.co.jp/ir/tekiji/pdf/150629-1.pdf (Japan) (English translation unavailable).

151. *NRC International Travel Trip Report*, *supra* note 147.

Japan, after ending 2014 with a moratorium on operation of nuclear facilities, has restarted operation in 2015.[152] Soon after the Sendai Nuclear Power Plant resumed operation on August 11, 2015, Kyushu Electric Power Company detected cracks in the cooling system pipes, partially suspending operations until the problem was fixed.[153] Time will tell where Japan is headed with balancing ongoing cleanup of radiation leaked from Fukushima Dai-ichi with implementation of improved prevention strategies as it restarts other nuclear power plants.[154] The following proposals are for current U.S. information disclosure schemes, but it could help resolve problems Japan faces or will face in the future as well.

A: Amending the FOIA

The FOIA should be amended so that the NRC, the Executive branch, Congress, and Judiciary, all receive better guidance about information disclosure. As pointed out earlier, the language of 5 U.S.C. section 552 (a)(2)(D) is vague and inadequate, and it has created problems mentioned above of hiding important public information that could prevent nuclear disasters.[155]

Currently, U.S. Senator Leahy (D-VT) has introduced a FOIA Improvement Act bill[156] that proposes to amend 5 U.S.C. section 552 (a)(2)(D) to 1) require federal agencies to make agency records that can be disclosed under such Act available for public inspection in an electronic format, 2) limit the authority of an agency to charge a fee if the agency misses a deadline for complying with FOIA request, 3) establish a presumption in favor of disclosure and prohibit the application of exemptions from FOIA based on technicalities, 4) expand the authority and duties of the Chief FOIA Officer of each agency for promoting compliance with the FOIA disclosure requirements, and 5) establish a Chief FOIA

152. *News Release: Approval of Operational Safety Programs for Kyushu Electric Power Company's Sendai Nuclear Power Station Units 1 and 2*, NRA, JAPAN (May 2015), http://www.nsr.go.jp/data/000108443.pdf.

153. *Sendai Nuclear Plant Operator Set to Plug Leaks in 5 Cooling System Pipes*, ASAHI SHIMBUN (Aug. 2015), http://ajw.asahi.com/article/behind_news/social_affairs/AJ201508250046.

154. As of the end of 2012, the number of nuclear power plants in Japan (not including those undergoing decommission) was fifty. JAPAN NUCLEAR ENERGY SAFETY ORGANIZATION, OPERATIONAL STATUS OF NUCLEAR FACILITIES IN JAPAN, ISSN 1347-0493 at 13 (2013).

155. *See supra* Section 3.

156. S. 2520- FOIA Improvement Act of 2014, 113th Congress, https://www.congress.gov/bill/113th-congress/senate-bill/2520/text; *see also* S. 337- FOIA Improvement Act of 2015, 114th Congress, https://www.congress.gov/bill/114th-congress/senate-bill/337/text (updates the bill slightly such as changing the language under (a)(2)(D)(ii)(II) to "three or more times").

Officers Council to develop recommendations for increasing compliance with FOIA requirements.[157] The goal of this bill is to expand the program for the "efficient management of federal agency records to require agency heads to establish procedures for: 1) identifying records of general interest or use to the public that are appropriate for public disclosure, and 2) posting such records in a publicly-accessible electronic format."[158]

Although the bill attempts to improve information disclosure speed by penalizing the agency when it negligently engages in delaying the processing of information under a FOIA request,[159] it still leaves unresolved problems such as 1) relying on informants to find information, 2) requiring information to be requested for an unspecified number of times before it is entered into ADAMS, and 3) allowing the NRC too much discretion to determine the nature of the subject matter that is likely to be requested in the future. Thus, the revised statute would not solve the central problem: how can the public find out material information in the first place if the NRC is withholding it?

If 5 U.S.C. section 552 (a)(2)(D) is to be amended to address these issues, it should require a rigorous disclosure mechanism by eliminating the word "and" in the proposed subsection (D)(i) and replace it with "or."[160] With this change, records, which "because of the nature of their subject matter, the agency determines have become or are likely to become the subject of subsequent requests for substantially the same records,"[161] under D(ii), would be released to the public even if a FOIA request has never been made, leading to more automatic disclosures by the NRC in ADAMS.

This change would increase the volume of material information that a reasonable citizen would want to know available to the public and shift the burden to the public to research and challenge NRC information disclosure exemptions, policies, and decisions. The amendment would also preserve and further FOIA's objective to make commercial nuclear information available to the public to create public oversight on nuclear power.[162]

157. *See* S. 2520, Bill summary, www.congress.gov/bill/113th-congress/senate-bill/2520.

158. *Id.*

159. *See* S. 2520, *supra* note 156 ("if the agency fails to comply, [. . .] the agency may not assess any search fees").

160. "(D) copies of all records, regardless of form or format-- (i) that have been released to any person under paragraph (3); and [. . . .]" *Id.*

161. 11 C.F.R. § 4.4(a)(4) (2010).

162. Act of June 11, 1946, ch. 324, sec. 101, Pub. L. No. 89-487, 80 Stat. 250 (amended 1966).

B: Reinterpreting NRC Rule 10 C.F.R. 9.21

Changes to information disclosure practice should also come from within NRC. The June 2014 Audit Report of NRC's FOIA Process by the Office of Inspector General concluded that "NRC management has not implemented effective internal controls. As a result, FOIA processing costs are high and the timeliness requirements are not consistently met."[163] Further, it adds: "NRC is not in compliance with FOIA regulations as initial disclosure reviews of FOIA records are done at inconsistent management levels."[164]

Judicial appeal from an NRC decision might increase if this practice does not stop.[165] Further, a costly appeal might prove ineffective because courts generally defer to agency decisions.[166] Finally, with the current scheme, by the time a requester obtains information, a disaster may have already rendered the issue moot.

Most importantly, the NRC should clearly define what "the nature of their subject matter" and "likely to become the subject of subsequent requests" means.[167] If information relates to natural (e.g., weather, seism) safety threats to the plant, it should subject the information to automatic disclosure. Further, exemptions should be applied narrowly and specifically. Because the public's right to know a problem relating to commercial nuclear facility safety might coincide with an exemption, information should be disclosed automatically as much as possible after making necessary redactions.

Being able to "request" information after damage results has proven to be too late.[168] Ignorance caused by lack of information often leads to acquiescence in important decisions. The 2012 approval for combined licenses for two new nuclear power reactors, Units 3 and 4 at Vogtle Electric Generating Plant, came after the Energy Policy Act of 2005 was signed into law.[169] The U.S. will be vulnerable to commercial nuclear disasters as long as the public cherishes non-disclosure while the private sector promulgates nuclear energy.

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163. Office of Inspector General, *supra* note 103, at ii.

164. *Id.* at 16.

165. A requester under FOIA may seek judicial appeal. *See* 5 U.S.C. § 552 (2012). Also, NRC decisions are reviewable by federal courts. Nat. Res. Def. Council v. NRC, No. 14-1217 (D.C. Cir. filed Oct. 29, 2014).

166. *See* Trisolini, *supra* note 133.

167. *See* 10 C.F.R. §9.21(c)(5) (2005).

168. *See, e.g., supra* Section 3 (regarding SONGS and Fukushima Dai-ichi).

169. *See* In the Matter of S. Nuclear Operating Co., CLI-12-02, 1-2 (2012); *see also* 42 U.S.C. § 16271 (2012).

C: Increased Funding of ADAMS

Finally, this paper proposes increasing funds for ADAMS to provide better usability for the public.[170] Given the high costs of building, decommissioning, and treating contamination from a nuclear facility in the case of a disaster, more funds for ADAMS, a system that is critical to information disclosure, are necessary to prevent a nuclear disaster. Before more money is set aside to increase the nuclear energy budget, compensation funds,[171] or for the construction of a permanent nuclear repository at Yucca Mountain, the federal government should provide more funds for the ADAMS system to provide usability that compares to that of Google, Westlaw, or LexisNexis.[172]

SECTION 5: CONCLUSION

If NRC has withheld information relevant to nuclear safety, and no exemption applies, then that public information should be released almost automatically even if the information has never been requested. If the information fits an exemption, the NRC should redact the exempt material but make an effort to disclose the remaining information as much as possible.[173]

Delay or nondisclosure will increase the risk and severity of a nuclear disaster because the public will act without material information about nuclear safety. Defective nuclear facilities will likely multiply the damage from both terrorist attacks and natural disasters due to vulnerability.[174] The public not only has a strong interest in being informed about nuclear energy issues, but also has a right to know.[175] In order to stop and prevent this game of hide-and-go-seek with the NRC, public disclosure must become a

170. This proposal is in response to what the NRC had responded to a questioner at the ADAMS User Group Meeting. U.S. NRC, *supra* note 56.

171. The Price-Anderson Act currently governs compensation for nuclear accidents. *See, e.g.*, 42 U.S.C. § 9612 (2012).

172. Google and LexisNexis were some of the search engines suggested at a recent ADAMS User Group Meeting. U.S. NRC, *supra* note 56.

173. Redactions will be made pursuant to 5 U.S.C. § 552(b)(1)-(9) (2012).

174. *See supra* Section 2Bii. If the backup generators had been checked in Fukushima, it might not have run out of electricity after the explosion. Further, to the question of whether public disclosure of safety would invite more terrorist attacks, see discussion in Section 2Bii, supra. More information concerning nuclear safety would likely prevent both types of catastrophes--accidental and intentional--although possibly to a varying degree.

175. U.S. Const. amend. I.

priority in nuclear regulation if preventing commercial nuclear catastrophes matters at all to humankind.

Cassady S. Davidson[*]

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