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From: Jeff Skov [<mailto:jmskov@earthlink.net>]
Sent: Friday, December 20, 2013 3:44 PM
To: RulemakingComments Resource
Subject: Comment for the Record, Docket ID No. NRC-2012-0246

Please accept the attached comment for the record relative to the U.S. Nuclear Regulatory Commission's (NRC's) Proposed Rule, "Waste Confidence—Continued Storage of Spent Nuclear Fuel" (78 FR 56775), and Associated Draft Generic Environmental Impact Statement (DGEIS) (78 FR 56621), under Docket ID No. NRC-2012-0246.

I would appreciate an email back confirming that you received the attached.

Thank you for the opportunity to comment.

Jeffrey M. Skov
Dallas, Texas

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Comment by Jeffrey M. Skov
As Requested by the U.S. Nuclear Regulatory Commission (NRC)
Relative to the NRC's Proposed Rule,
"Waste Confidence—Continued Storage of Spent Nuclear Fuel" (78 FR 56775), and
Associated Draft Generic Environmental Impact Statement (DGEIS) (78 FR 56621)
December 20, 2013

Summary

Prior to finalizing the rule and associated DGEIS, the NRC should:

- Complete an analysis to determine the root and contributing causes of the failures of the NRC's management and oversight systems relative to compliance with the Nuclear Waste Policy Act of 1982, as amended ("NWPA"),¹ that led to the ruling in *In re: Aiken County*, dated August 13, 2013,² by the U.S. Court of Appeals for the District of Columbia Circuit ("D.C. Circuit Court");
- Complete an "extent of condition" evaluation to determine whether NRC's implementation of other statutes and regulations has been or is similarly affected;
- Implement immediate corrective actions to address any failures identified by the extent of condition evaluation;
- Formulate and implement robust corrective actions to prevent recurrence based on the root cause analysis and extent of condition evaluation; and
- Issue a report documenting the above.

The report should directly answer the questions listed in the "Discussion" section below.

The activities of the NRC's Office of the Inspector General (OIG) should be included within the scope of the root cause analysis and extent of condition evaluation.

Consideration should be given to tasking an independent outside entity to complete the requested actions.

The requested actions are consistent with commonsensical management principles; the expectation expressed in the concurring opinion in *In re: Aiken County* that "[t]oday's judgment should ensure that the Commission's next chapter begins with adherence to the law"; the principles embodied in the agency's regulations at [10 CFR 50, Appendix B](#), Criterion XVI, "Corrective Action," which the agency applies to its licensees; and the traits of a positive safety culture (see the NRC's "[Final Safety Culture Policy Statement](#)," 76 FR 34773, 34777-34778, dated June 14, 2011).

The requested actions are warranted because of (1) the significance of the failures of NRC's management and oversight systems that led to the *In re: Aiken County* ruling; (2) the need to assure that

¹ Codified at Title 42, The Public Health and Welfare, of the U.S. Code, Section 10101, *et seq.*

² 725 F.3d 255 (D.C. Cir. 2013).

those systems are repaired sufficiently to provide confidence that this rulemaking is well supported by rigorous, across-the-board statutory compliance; and (3) the need to assure that the DGEIS assumption of ongoing "institutional controls" is valid.

As discussed below, until the requested actions are completed, the rulemaking and DGEIS are patently defective.

More importantly perhaps, the requested actions will also help assure that the NRC's quest for waste confidence, and, more broadly, the nation's quest for safe, secure, ultimate³ disposal of its spent nuclear fuel (SNF) do not (further) devolve into a Sisyphean ordeal—with nuclear power proponents, nuclear weapon nonproliferationists, and rule-of-law advocates forever pushing the "waste" boulder up the mythological hill, only to have political operatives roll it back down again.

Discussion

The NWPA is the "definite Federal policy"⁴ that establishes waste confidence. Its very purpose is to "establish a schedule for the siting, construction, and operation of repositories *that will provide a reasonable assurance that the public and the environment will be adequately protected* from the hazards posed by high-level radioactive waste and such spent nuclear fuel as may be disposed of in a repository"⁵ (emphasis added). Its status as law was thrown into question by the U.S. Department of Energy's (DOE's) March 3, 2010,⁶ motion before NRC's assigned Atomic Safety and Licensing Board ("Licensing Board") to withdraw the Department's construction authorization application for the Yucca Mountain repository, and NRC's decisions, actions, and inactions in response to that motion. However, the August 13, 2013, *In re: Aiken County* ruling by the D.C. Circuit Court reaffirmed that the NWPA is indeed the law of the United States. The Court held that the NRC had been "flouting" and "defying" it. NRC did not request a rehearing following this ruling.

It is well-documented that the Yucca Mountain repository is of intense political interest.⁷ However, we should not accept that NRC's violation of the NWPA is just "politics as usual." NRC's management and oversight systems need to be sufficiently robust to overcome political intrusions, whether overt or covert, before they lead to unlawful actions. That NRC cannot be insulated from politics does not excuse its "flouting" and "defying" the law, in the words of the D.C. Circuit Court.

³ The enormous residual energy content of the nation's spent nuclear fuel (SNF) (*see* FN 32, *infra*), the proposition that the world's fossil fuel supplies are finite and decreasing, the growing deterioration of the world's air quality resulting from fossil fuel combustion (*see* FN 19, *infra*), and the emerging burgeoning of robotics all suggest that SNF energy recovery may be a prosperous and beneficial future enterprise. For purposes of this comment, however, that is a decision for a younger generation.

⁴ NWPA, Sec. 111(b)(2); codified at 42 U.S.C. 10131(b)(2).

⁵ *Id.* at Sec. 111(b)(1); codified at 42 U.S.C. 10131(b)(1).

⁶ Available in ADAMS (<http://adams.nrc.gov/wba/>) at Accession Number ML100621397.

⁷ *See, e.g.*, "In Deal, Aide to Reid To Be Named to NRC," Washington Post, November 23, 2004 ("In a deal to let 175 of President Bush's nominees take office, an adviser to new Democratic leader Harry M. Reid, the Senate's staunchest opponent of a nuclear waste dump in his home state of Nevada, will be named to the Nuclear Regulatory Commission."); "[Reid to National Republicans on Their Desire to Ship Nuclear Waste to Yucca Mountain: 'Hell No,'](#)" Sen. Harry Reid Press Release, September 17, 2010 ("Nevada is not the nation's dumping ground and it never will be as long as I have something to say about it").

The use of that word "flouting" by the Court is particularly troubling since it conveys the Court's conclusion that there was an element of *contempt* in NRC's actions.⁸ The concurring opinion went so far as to declare that "a systematic campaign of noncompliance" was being "orchestrated." That word "orchestrated" is often associated with conspiracy indictments.

The D.C. Circuit Court is generally held to be the second highest court in the United States.⁹ Its August 13, 2013, ruling was effectuated by issuing a "writ of mandamus" to the NRC. A writ of mandamus is a court order used, *inter alia*, to compel a government agency to do its duty. The Court's rules¹⁰ identify it as an "extraordinary" writ.¹¹ The U.S. Supreme Court calls it a "drastic" remedy.¹² Seasoned government attorneys allow that a writ of mandamus issued by the D.C. Circuit Court is a serious legal order, reflective of egregious agency behavior.

I have been told that the NRC has never received one.

The failures of NRC's management and oversight systems in this instance were significant:

- The NRC's errant efforts to close out the Yucca Mountain licensing proceeding have cost U.S. taxpayers upwards of \$805 million,¹³ based on the consequent 41 months (at least) of additional, unjustified expenditures from the Treasury Department's taxpayer-supplied Judgment Fund to

⁸ To "flout" means "to show contempt (for)" ([Collins](#)), "to treat with contemptuous disregard" ([Merriam-Webster](#)), "[t]o show contempt for; scorn" ([American Heritage](#)). The word thus goes beyond insouciant and even willful violation of the law; it connotes—it means—*contemptuous* disregard for the law.

⁹ See, e.g., "[President Obama Announces Three Nominees for the D.C. Circuit Court](#)," White House Blog, dated June 4, 2013, quoting President Obama: "The D.C. Circuit is known as the second highest court in the country, and there's a good reason for that."

¹⁰ CIRCUIT RULES of the UNITED STATES COURT OF APPEALS for the DISTRICT OF COLUMBIA CIRCUIT (Together with the corresponding Federal Rules of Appellate Procedure), Circuit Rules Effective January 1, 1994, As Amended Through December 1, 2013, Federal Rules Effective July 1, 1968, As Amended Through December 1, 2013 (see [here](#)).

¹¹ See Rule 21, "Writs of Mandamus and Prohibition, and Other *Extraordinary* Writs" (emphasis added).

¹² See, e.g., [Cheney v. United States Dist. Court for D.C.](#), 542 U.S. 367 (2004) ("In light of the *drastic* nature of mandamus" (emphasis added); "This is a '*drastic* and extraordinary' remedy 'reserved for really extraordinary causes'" (quoting *Ex parte Fahey*, 332 U.S. 258, 259–260 (1947)) (emphasis added)).

¹³ Through September 30, 2013, the Judgment Fund has paid out \$3.691 billion, comprising \$2.7 billion in settlements and \$991 million in court-awarded damages, to nuclear utilities as a result of the federal government's breach of the NWPAs-prescribed "standard contracts"—see DOE's Fiscal Year 2013 audit report for the Nuclear Waste Fund (NWF), Report [OAS-FS-14-02](#), dated December 2013, p. 18. Based on the time duration between February 1, 1998 (*i.e.*, the breach start date), and September 30, 2013 (the "as of" date indicated in the DOE audit report), which is about 188 months (*i.e.*, 11 mos. for 1998; 12 mos. each for 1999 through and including 2012, or 12 x 14 = 168 mos.; and 9 mos. for 2013), the breach has been costing the Judgment Fund, on average, about \$19.633 million per month (*i.e.*, \$3.691b ÷ 188 mos. = \$19.633m per month). NRC's [NUREG-1100, Vol. 26](#), documented NRC's decision to commence "an orderly closure of the agency's Yucca Mountain licensing support activities." *In re: Aiken County* ruled that closure decision was not lawful. Therefore, the NRC's share of the government's delay in curing the breach can reasonably be measured from February 2010, when NUREG-1100, Vol. 26, was issued, to August 13, 2013, when *In re: Aiken County* was issued. That's about 41 months (*i.e.*, 10 mos. in 2010, 12 mos. each in 2011 and 2012, and 7 mos. in 2013). Thus, at \$19.633 million per month for 41 months, the NRC's share of the federal government's delay in implementing the NWPAs has cost the Judgment Fund at least \$805 million. Significantly, that money comes from the U.S. taxpayers and not from the utility-supplied Nuclear Waste Fund.

nuclear utilities in settlements and court-awarded damages resulting from the U.S. government's breach of the NWPA-prescribed "standard contracts."

- The NRC's errant decisions were less protective of the public health and welfare because they served to prolong storage of SNF at the plant sites, which are usually near both important sources of fresh water and significant population centers, and summarily to foreclose its placement deep underground in a dry, desert environment, far removed from population centers, on an expansive, guarded federal government reservation.¹⁴ The delay attributable to NRC's errant actions has required utilities to transfer a corresponding additional amount of SNF from their spent fuel pools to dry casks; each of these manipulations presents a non-zero risk of mishap. Protracted dry cask storage at the plant sites provides the additional concerns that the casks are situated (1) in the weather and are therefore susceptible to weather-related degradation (see, *e.g.*, NRC's Information Notices [2012-20](#), "Potential Chloride-Induced Stress Corrosion Cracking of Austenitic Stainless Steel and Maintenance of Dry Cask Storage System Canisters," and [2013-07](#), "Premature Degradation of Spent Fuel Storage Cask Structures and Components from Environmental Moisture") and (2) in conspicuous view to terrorist planners.¹⁵ That latter concern reflects that NRC's errant decisions have a national security aspect.
- The NRC's errant efforts allowed petitioners in *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012) to argue in their opening brief that "over fifty years after beginning the search for a repository, the United States is no further along in finding [a] permanent disposal solution for nuclear waste than it was in the 1970s." The D.C. Circuit Court in its June 8, 2012, ruling in that case went so far as to declare that "[t]he Commission apparently has no long-term plan other than hoping for a geologic repository." It was that June 8, 2012, ruling, decided against the NRC, that precipitated this waste confidence rulemaking.
- The NRC's actions and inactions provided the National Association of Regulatory Utility Commissioners (NARUC) with powerful ammunition in its successful action against the DOE seeking to discontinue utility payments into the Nuclear Waste Fund (NWF). Absent NRC's enforcement of its own Licensing Board's denial¹⁶ of the DOE motion to withdraw the Yucca Mountain application—creating a fiction that the NWPA had somehow been repealed and therefore that Yucca Mountain was no longer "[a]pprov[ed] . . . for the development of a repository for the disposal of high-level radioactive waste and spent nuclear fuel,"¹⁷—the Secretary of Energy was reduced to presenting "an enormous range of possible costs" as a basis for arguing that utility payments into the NWF should continue. In its [ruling](#), dated November 19, 2013, the D.C. Circuit Court held that the Secretary's "presentation reminds us of the lawyer's song in the musical, 'Chicago,' – 'Give them the old razzle dazzle.'" Had the NRC abided by the NWPA, this entire, expensive, time-consuming litigation would have been avoided.

¹⁴ Although the ultimate licensing and opening of Yucca Mountain cannot be presupposed, NRC's compliance with the NWPA would at least have let the NWPA-prescribed process continue, and certainly (as described above) at least 41 months of continued onsite storage would have been avoided.

¹⁵ The June 2, 2006, ruling of the U.S. Court of Appeals for the Ninth Circuit in *San Luis Obispo Mothers v. NRC*, 449 F.3d 1016 (9th Cir. 2006), lends substantial credence to the proposition that onsite dry cask storage might lead to or increase the risk of a terrorist attack because (1) the presence of the casks would increase the probability of a terrorist attack on the plant, and (2) the casks themselves would be a primary target for a terrorist attack.

¹⁶ LBP-10-11 dated June 29, 2010; available in ADAMS (<http://adams.nrc.gov/wba/>) at Accession Number ML101800299.

¹⁷ Public Law 107-200.

- The errant decisions have forced NRC to essentially disempower itself—the agency declared that it will not issue any new power reactor or Independent Spent Fuel Storage Installation (ISFSI) licenses or license renewals until "waste confidence" can be restored (see NRC's Order No. [CLI-12-16](#), dated August 7, 2012, and associated [SECY-12-0132](#), dated October 3, 2012).
- Very real also, although perhaps hard to quantify, is the public health toll attributable to NRC's failure to abide by the NWPA. Any delay in deploying additional nuclear power stations necessarily means prolonged use of fossil fuel combustion for large-scale electricity generation. The resulting effluents translate directly to some number of additional cases of heart and lung diseases, cancers,¹⁸ prenatal neurological development problems owing to exposure to mercury in the womb, early-onset asthma attributable to ozone, etc. Some fraction of these additional cases will result in premature deaths. Senator Jim Jeffords' comments on the Senate floor on June 26, 2002 (see in the Congressional Record for that date, pp. S6052-S6053), provide a good summary of these untoward, power-plant-related health effects.¹⁹
- Also difficult to quantify is the burden that NRC's errant decisions have placed on the nation's economy. The delay and resulting uncertainty stemming from the NRC's decisions—uncertainty associated both with resolving the waste confidence issue and with trust in the regulator to implement federal statutes enacted to provide waste confidence—cause investors to doubt the future availability of inexpensive, plentiful, constant, reliable, non-price-volatile baseload electricity for industrial-scale enterprises in the U.S. Therefore they invest instead overseas where such doubt is minimized.

¹⁸ See, e.g., "[IARC: Outdoor air pollution a leading environmental cause of cancer deaths](#)," International Agency for Research on Cancer, Press Release No. 221, dated October 17, 2013 ("the risk of developing lung cancer is significantly increased in people exposed to air pollution. . . . The predominant sources of outdoor air pollution are transportation, *stationary power generation*, industrial and agricultural emissions, and residential heating and cooking." (emphasis added)); "[Smoggy Beijing sees lung cancer cases soar](#)," BBC News, November 9, 2013 ("The number of lung cancer cases in the Chinese capital Beijing has soared over the last decade. . . . According to figures published by the state-run Xinhua news agency, they have increased by more than 50%. . . . Correspondents say Chinese people are becoming increasingly worried about the health problems caused by the thick air pollution that often blankets much of their country.")

¹⁹ [148 Cong. Rec. S6052](#) ("Studies show that 30,000 Americans die every year due to powerplant pollution—30,000 deaths from powerplant pollution alone. Incredible. . . . Powerplant pollution results in 20,000 hospitalizations each year, 600,000 asthma attacks, 5 million days of lost work due to pollution-related illness, and 18,000 cases of bronchitis. . . . Powerplant pollution has resulted in mercury advisories in 44 of the 50 States. In these 44 States, our citizens are asked not to eat the fish caught in the lakes and streams. . . . Because of powerplant pollution, 6 million American women and children are exposed to mercury levels well above those considered safe by Federal health authorities. . . . According to the CDC, the Centers for Disease Control and Prevention, 10 percent of women in the United States have mercury levels above those considered protective of newborns. As a result, as many as 390,000 children are born each year at risk for neurological development problems due to exposure to mercury in the womb. The March issue of the Journal of the American Medical Association found that millions of people who live in areas polluted by fine particles have about the same increased risk of dying from heart or lung disease or lung cancer as people who live with a cigarette smoker. . . . This is simply the beginning of my list regarding the impacts of powerplant pollution. . . . There is acid rain, smog, lung disease, heart disease, asthma, on and on. . . . Just this year, a respected public health journal published the first study showing a direct connection between the onset of asthma in young, healthy children and their exposure to ozone. The journal found that children exercising outdoors are more likely to contract asthma if they live in areas polluted with high ozone concentrations. This dangerous ozone is created by pollution from old power plants.")

- Importantly, the NRC's decisions, actions, and inactions that led to the *In re: Aiken County* ruling and, indeed, the text of the ruling itself substantially undermine the agency's reputation as an independent and transparent regulator. Such a tarnish is hard to remove, even once the decision is made to do so. The NRC Chairman's prepared remarks for presentation on November 11, 2013, at the American Nuclear Society's Winter Meeting²⁰ are illuminating in this regard. In six pages, the words *independent* and *independence* appear 13 times, and the words *transparent* and *transparency* appear 3 times. However, the word "Yucca" does not appear, even though the current NRC has been reduced to veritable impotence—disempowered of its fundamental authority to issue or renew power reactor licenses—because of its decisions relative to Yucca Mountain, and despite the fact that the agency is under a writ of mandamus—a "drastic" remedy—from the second highest court in the United States, to "promptly continue with the legally mandated licensing process" for Yucca Mountain. Those prepared remarks thus suggest that the NRC is still in denial regarding the import and effect of the writ of mandamus, that it still considers Yucca Mountain to be a dead proposition, that it still views the NHPA to be some sort of "okay-to-violate" ("OTV") statute,²¹ and that it regards "independent" as a word like "um" or "uh"—to be used liberally without much thought or concern that some meaning will be conveyed.

Commonsensical management principles dictate that significant failures by an organization warrant (1) study to understand both the extent and the causes (root and contributing) of the failures and (2) subsequent formulation and implementation of suitable corrective actions to prevent recurrence. These principles are embodied in the agency's regulations at [10 CFR 50, Appendix B](#), Criterion XVI, "Corrective Action,"²² which it applies to its licensees, and are consistent with the traits of a positive safety culture (see the NRC's "[Final Safety Culture Policy Statement](#)," 76 FR 34773, 34777-34778, dated June 14, 2011), including, in particular:

- Leadership Safety Values and Actions—Leaders demonstrate a commitment to safety in their decisions and behaviors.
- Problem Identification and Resolution—Issues potentially impacting safety are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.
- Continuous Learning—Opportunities to learn about ways to ensure safety are sought out and implemented.

²⁰ NRC document [S-13-011](#), released November 14, 2013.

²¹ The proposition that there are "okay-to-violate" ("OTV") statutes is a very slippery slope that opens the door for multiple difficult questions; for example: Can the NRC give the public some criteria for determining which statutes are OTV statutes? Are those criteria inviolable or are some of them OTV also? Which ones? Are there OTV regulations also? If NRC designates its OTV statutes based on input from, say, Senator Reid's office, could those communiques be posted on NRC's website, so that NRC's current list of OTV statutes is readily discernable? Should NRC rulemaking documentation include certification that the rule was prepared, reviewed, and adopted only in accordance with statutes that were not and are not on the current NRC OTV List (*and* that the rule itself has been designated to not be OTV)?

²² In relevant part, this criterion states: "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. *In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition*" (emphasis added).

- Questioning Attitude—Individuals avoid complacency and continuously challenge existing conditions and activities in order to identify discrepancies that might result in error or inappropriate action.

The extent of condition evaluation is important to determine whether there are other statutes and regulations that the NRC is "flouting" and/or "defying." This is not a splenetic concern. That is, there were several clear indicators that should have made apparent that NRC was failing to implement the NWPA, including:

- The plain language of the NWPA ("The Commission shall consider an application for a construction authorization" and "shall issue a final decision approving or disapproving the issuance of a construction authorization" within three years, with provision for a one-year extension);
- The ruling of the Yucca Mountain Licensing Board in LBP-10-11,²³ dated June 29, 2010 ("[W]e deny DOE's motion to withdraw the Application. We do so because the Nuclear Waste Policy Act of 1982, as amended (NWPA), does not permit the Secretary to withdraw the Application that the NWPA mandates the Secretary file [and] at this point, mandates progress toward a merits decision by the Nuclear Regulatory Commission on the construction permit.");
- The ruling in (the previous) *In re: Aiken County*, 645 F.3d 428, 436 (D.C. Cir. 2011), on July 1, 2011, which contested the DOE's attempted withdrawal of the application and apparent decision to abandon development of the repository ("[W]e note that the NWPA requires the Commission to review the application . . . and therefore we must assume that the Commission will comply with its statutory mandate");²⁴
- The Order of the Commission itself that sustained the ruling of its Licensing Board, CLI-11-07, dated September 9, 2011 ("[T]he Commission finds itself evenly divided");
- The NRC's own pleadings in *In re: Aiken County*, filed with the D.C. Circuit Court on February 13, 2012 ("The NWPA directs NRC to issue a decision approving or disapproving an application within 3 years from the date the application is submitted, but allows the agency a one-year extension. 42 U.S.C. § 10134(d).");
- My comment of February 17, 2012²⁵ ("Rather than expend limited resources on efforts to extend the time that increasing quantities of spent nuclear fuel may be stored at the nation's reactor plant sites . . . the NRC should simply proceed to comply with Section 114(d) of the Nuclear Waste Policy Act of 1982, as amended (NWPA)" (footnote omitted)); and
- The D.C. Circuit Court's Order, dated August 3, 2012, holding the mandamus proceeding in abeyance (as described in *In re: Aiken County*: "[W]e followed a cautious approach in our decision more than a year ago when we declined to issue mandamus against the Commission at that time. But the

²³ 71 NRC 609 (2010); see at <<http://pbadupws.nrc.gov/docs/ML1305/ML13056A621.pdf>>, beginning at p. 609. Also available in ADAMS (<http://adams.nrc.gov/wba/>) at Accession Number ML101800299.

²⁴ The concurring opinion by Judge Kavanaugh in that case culminated—after 19 pages of well-reasoned, tightly woven legal analysis—with the clear conclusion that "*the ball in this case rests . . . with the Nuclear Regulatory Commission*" (emphasis added).

²⁵ Available in ADAMS (<http://adams.nrc.gov/wba/>) at Accession Number ML12052A045.

Court's majority clearly warned that mandamus would eventually have to be granted if the Commission did not act or if Congress did not change the law. Since then, despite the clear warning, the Commission has still not complied with the statutory mandate. On the contrary, the Commission has reaffirmed that it has no plans to comply with the statutory mandate. In the face of such deliberate and continued agency disregard of a statutory mandate, our precedents strongly support a writ of mandamus.").

Given all these clear and conspicuous indicators, and NRC's actions and inactions in response thereto, over the course of 41 months,²⁶ it is reasonable to question whether NRC has sufficiently robust management and oversight systems to identify what compliance looks like.

The thoroughness of the cause analysis is also important. For example, it has been posited that NRC did not complete its review of the Yucca Mountain application because the Congress failed to appropriate sufficient funding. Fair enough. However, a probing analysis would inquire further: Why did the Congress fail to appropriate sufficient funds for NRC to continue its review? The answer to that may be that NRC *failed to request* sufficient funds. For example, see NUREG-1100, Vol. 26, dated February 2010, Executive Summary, pp. 9-10: "The FY 2011 budget *request* for High-Level Waste Repository is \$10.0 million ... Major activities the *requested* resources will support include the following: ... Work related to an orderly closure of the agency's Yucca Mountain licensing support activities ..." (emphasis added). A thorough cause analysis would then seek to understand why the NRC failed to make the request for sufficient funding. The "why" question is then repeated until a root cause is determined. This methodology has been termed the "why staircase" by root cause analysis practitioners.

The questioning attitude is also crucial. The public, the nuclear industry, and doubtless the NRC Staff would appreciate answers to a variety of questions:

- Why did over a year go by between receipt of all briefs (on July 19, 2010²⁷) requested by the NRC Secretary's Order of June 30, 2010²⁸ (which established an expedited briefing schedule relative to Commission consideration of Licensing Board Order LBP-10-11²⁹), and the Commission's subsequent Order sustaining the Licensing Board's ruling, CLI-11-07, on September 9, 2011, even though the Commission was on record (CLI-10-13, dated April 23, 2010), on this very matter, with this guiding leadership touchstone: "[W]e think the prudent course of action is to resolve the matters pending before our agency as expeditiously and responsibly as possible"?
- Relatedly, are the words "expeditiously" and "responsibly" terms of art within the agency, and, if so, should they be properly defined in the U.S. Code of Federal Regulations (CFR) so that no one is potentially misled? Note that a year's delay is all the more conspicuous given that the statutory scheme only allows three years total (with the possibility for an additional fourth year if warranted) for the NRC to render a final decision on the merits on the DOE's Yucca Mountain construction authorization application.

²⁶ That is, from NUREG-1100, Vol. 26, dated February 2010 to In re: Aiken County, dated August 13, 2013,

²⁷ See "2010 Annual Report on Commission Adjudication," SECY-11-0008 ("OCAA Report"), at Attachment: "Commission Adjudicatory Decisions, January–December 2010," p. 9 (January 13, 2011).

²⁸ Available in ADAMS (<http://adams.nrc.gov/wba/>) at Accession Number ML101810432.

²⁹ 71 NRC 609 (2010); see at <http://pbadupws.nrc.gov/docs/ML1305/ML13056A621.pdf>, beginning at p. 609. Also available in ADAMS (<http://adams.nrc.gov/wba/>) at Accession Number ML101800299.

- Since considerable benefits from the NRC's errant decisions run to the nuclear utilities—*e.g.*, their SNF management costs are being paid by the taxpayer through the Treasury Department's Judgment Fund, the considerable corpus³⁰ of their investment into the NWF is being preserved, and they retain title and ready access to a quantity of SNF that, as of almost a decade ago, had the energy equivalent of *over six billion barrels of oil* (see [here](#);³¹ search for "6 billion barrels of oil")³²—was consideration given to the potential appearance of collusion between the NRC and the nuclear utility industry, especially when not a single utility joined in the petition for mandamus that resulted in the D.C. Circuit Court's August 13, 2013, ruling? Does NRC refute this implication?
- Was consideration given to pursuing obstruction of justice charges in accordance with 18 U.S.C. 1505 or conspiracy charges in accordance with 18 U.S.C. 371, since (1) "a systematic campaign of noncompliance" was *evidently* being "orchestrated" within NRC, as stated in the concurring opinion in *In re: Aiken County*, and (2) outside "advice" in that regard (*i.e.*, to unlawfully "close out" the Yucca Mountain licensing proceeding) had been provided, as stated by counsel for NRC at oral argument³³ for *In re: Aiken County* on May 2, 2012?
- Why does this comment need to be made? That is, when faced with the D.C. Circuit Court's August 13, 2013, ruling, and possessed of common sense, and familiar both with the traits of a positive safety culture and the content and intent of 10 CFR 50, Appendix B, Criterion XVI, and mindful that the significance of the NRC's failures is likely *per se*, since it was pronounced by the second highest court in the United States, but also circumstantially apparent (in accordance with the Statement of Considerations supporting the 10 CFR 50.9 rule³⁴) from the lengths NRC has gone to evaluate and/or address the ramifications of the condition—*e.g.*, NRC's recent effort to evaluate the need for expedited transfer of SNF from pools to dry casks,³⁵ this rulemaking initiative, etc.—why has no root cause analysis been initiated already? Should efforts be initiated to bolster a questioning attitude within NRC?

In re: Aiken County identified serious failures of the NRC's management and oversight systems relative to the NWPA, and the clear potential for a virtual colander of compliance relative to other statutes and

³⁰ See "Department of Energy's Nuclear Waste Fund's Fiscal Year 2013 Financial Statement Audit," [OAS-FS-14-02](#), December 2013 ("As of September 30, 2013, the U.S. Treasury securities held by the Department related to the NWF had a market value of \$36.6 billion").

³¹ Testimony of Mr. Kyle E. McSparrow, Deputy Secretary, U.S. Department of Energy, before the U.S. Senate Committee on Energy and Natural Resources, [S. Hrg. 108-658](#), July 13, 2004, p. 10.

³² For comparison purposes, consider that, as of December 17, 2013, the price of oil (light crude) was \$97.51 per barrel and the price of gold was \$1,244.40 per ounce (troy). There are 147.3 million ounces (troy) of gold in the United States Bullion Depository at Fort Knox, Kentucky (see [here](#)). That gold is worth \$183.3 billion (*i.e.*, 147.3 million oz. troy times \$1244.40 per oz. troy). Six billion barrels of oil are worth \$585 billion (*i.e.*, 6 billion barrels times \$97.51 per barrel). Thus, the nation's spent nuclear fuel constitutes an asset worth over three times more than all the gold in Fort Knox.

³³ See on p. 39 of the transcript, lines 5-6.

³⁴ 52 FR 49362, 49364, dated December 31, 1987 (As applied to licensees: "The fact that a licensee considers information to be significant can be established, for example, by the actions taken by the licensee to evaluate that information. Thus . . . there are objective indicia of recognition that can be used by the NRC in determining whether a licensee in fact recognizes the significance of the information in question.").

³⁵ See "Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor," Draft Report, June 2013; available in ADAMS (<http://adams.nrc.gov/wba/>) at Accession Number ML13133A132.

regulations. Without significant efforts to understand the extent and causes of the failures, and to establish sound, thoughtful corrective actions to prevent their recurrence, the NRC cannot in good faith attest that the instant rulemaking complies with any governing statute. The rulemaking is consequently defective.

The final reason that NRC must take the requested actions relates to the assumption in the DGEIS of ongoing "institutional controls."³⁶ Implicit in this assumption, and made clear by the words themselves, is a requirement that the governing institutions have control. In the wake of *In re: Aiken County* that cannot be said of the NRC; at least, that is, until the actions requested herein are completed. As a result, the DGEIS is defective.

The requested actions will serve to repair NRC's problematic management and oversight systems, and ensure a rigorous, across-the-board statutory compliance paradigm at NRC going forward.

Conclusion

Prior to finalizing the waste confidence rule and associated DGEIS, the NRC should determine the extent and causes (root and contributing) of the failures of the agency's management and oversight systems that led to the adverse ruling in *In re: Aiken County*. Any failures identified by the extent of condition evaluation should be addressed immediately. Robust corrective actions to prevent recurrence should then be formulated and implemented, based on the results of the root cause analysis and extent of condition evaluation. Finally, NRC should issue a report documenting the above.

The report should directly answer the questions listed in the "Discussion" section above.

The activities of the NRC's Office of the Inspector General (OIG) should be included within the scope of the root cause analysis and extent of condition evaluation.

Consideration should be given to tasking an independent outside entity to complete the requested actions.

These actions are warranted because of:

- (1) the significance of the failures, including the considerable financial impact to the taxpayer attributable to the NRC's unjustified delay—over \$805 million,³⁷ as detailed above—the added risk to the public health and safety from the additional months of proximity of the majority of nation's spent nuclear fuel to sizeable fresh water sources and significant population centers, the risks

³⁶ Per Section 1.8.3 of the DGEIS: "To evaluate the potential environmental impacts of continued storage, this draft GEIS makes several assumptions. . . . Institutional controls, i.e., the continued regulation of spent nuclear fuel, will continue. This assumption avoids unreasonable speculation regarding what might happen in the future regarding Federal actions to provide for the safe storage of spent fuel."

³⁷ As a final point of comparison, had this \$805 million been afforded to the United Nations Children's Fund, UNICEF (formerly the United Nations International Children's Emergency Fund), some 1,290,000 infants and children could have been nourished, vaccinated, and provided emergency medical care over the course of those 41 months when the NRC had "the ball" (see FN 24, *supra*) but unlawfully failed to advance it. That is, based on the 50¢ per day per child value quoted by Ms. Alyssa Milano in UNICEF's recent television advertisement (see [here](#)), \$805 million divided by \$0.50 per child per day, divided by 30.4375 days per month (on average), divided by 41 months equals 1,290,000 children.

associated with additional SNF handling evolutions at the plant sites, the numerous adverse health impacts from protracted national reliance on fossil-fueled power plants, and creditable indirect economic and national security impacts;

- (2) the need to assure that NRC's management and oversight systems are repaired sufficiently to provide confidence that this rulemaking is well supported by rigorous, across-the-board statutory compliance; and
- (3) the need to assure that the DGEIS assumption of ongoing "institutional controls" is valid.

As discussed above, until the requested actions are completed, the rulemaking and DGEIS are patently defective.

I appreciate the opportunity to provide this comment.

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