Exhibit DPS-WKB-30

IN THE UNITED STATES COURT OF FEDERAL CLAIMS
(Electronically Filed on September 23, 2015)

ENTERGY GULF STATES, INC. and ENTERGY GULF STATES LOUISIANA, L.L.C.,	)	
Plaintiffs,	)	
v.	)	**No. 03-2625C (Judge Williams)**
THE UNITED STATES,	)	
Defendant.	)	

PLAINTIFFS' POST-TRIAL BRIEF

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September 23, 2015

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PLAINTIFFS' POST-TRIAL BRIEF

Pursuant to this Court's Order dated July 13, 2015, ECF No. 264, Plaintiffs Entergy Gulf States, Inc. and Entergy Gulf States Louisiana, L.L.C. (collectively, "Plaintiffs") respectfully file this post-trial brief in support of their damages claim in the instant action.[1] As established at trial and for the reasons set forth herein, the Court should enter judgment in favor of Plaintiffs in the amount of $49,687,975.

I. INTRODUCTION

Before the Court is Plaintiffs' partial breach of contract action against Defendant the United States (the "Government") for the Government's failure to timely accept spent nuclear fuel ("SNF") from the River Bend Station nuclear power plant ("River Bend") in accordance with the terms of the Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level

[1] References herein to Plaintiffs' trial exhibits shall be denoted by "PX __," the Government's trial exhibits shall be denoted by "DX __," and joint trial exhibits shall be denoted as "JX __." References herein to Plaintiffs' demonstrative exhibits shall be denoted by "PDX __" and the Government's demonstrative exhibits shall be denoted by "DDX __." References to the transcript of the May and June 2015 proceedings in this case shall be denoted by "Tr. __."

Radioactive Waste (the "Standard Contract"). The United States Court of Appeals for the Federal Circuit and this Court have already determined that the Government is liable for its breach of the Standard Contract. *See, e.g., Maine Yankee Atomic Power Co. v. United States*, 225 F.3d 1336, 1342 (Fed. Cir. 2000) ("The breach involved all the utilities that had signed the contract—the entire nuclear industry."); *Yankee Atomic Elec. Co. v. United States*, 42 Fed. Cl. 223, 235 (1998) ("DOE has breached the contract."). The purpose of the trial in this action was therefore to determine the quantum of Plaintiffs' damages for the Government's continuing partial breach of its contractual obligations. Plaintiffs claim a total of approximately $49.7 million in damages in this "Round I" SNF case, for damages incurred through December 31, 2010.[2] The Government does *not* contest approximately $36 million in Plaintiffs' claims, leaving in dispute the amount of $13.8 million. *See* DDX 001 (Defendant's Opening Statement Slides) at 5; DDX 005 (Peterson Demonstratives) at 3.

Here, all of Plaintiffs' claims relate to the Government's failure to commence SNF removal from River Bend, and more specifically relate to costs incurred by Plaintiffs as a result of the need to: (1) design, construct, and operate an Independent Spent Fuel Storage Installation ("ISFSI") and related plant modifications; (2) procure dry fuel storage casks and equipment; (3) load the storage casks; (4) move the storage casks to the ISFSI at River Bend; and (5) pay increased U.S. Nuclear Regulatory Commission ("NRC") fees as a consequence of the Government's breach. A summary of Plaintiffs' damages corresponding to these components of their claim follows below.

[2] For purposes of the instant action, the parties have agreed that damages are "cut off" as of December 31, 2010, with Plaintiffs retaining the right to bring future actions for damages incurred after this date resulting from the Government's continuing partial breach of the Standard Contract. *See Indiana Michigan Power Co. v. United States*, 422 F.3d 1369, 1377 (Fed. Cir. 2005).

SUMMARY OF DAMAGES

1. Dry Fuel Storage Facility and Procurement of Initial Three Casks	$ 28,696,000
2. Additional Cask Procurement	$ 13,911,000
3. Cask Loading	$ 3,682,000
4. Additional Security	$ 1,812,000
5. NRC Fees	$ 1,587,000
Total amount of claim:	$ 49,688,000[3]

See, *e.g.*, PDX 1 (Summary of Entergy Gulf States Past Damages By Damage Element Through December 31, 2010).

The mitigation costs incurred at River Bend are not unlike those that this Court has previously awarded to SNF plaintiffs in other Round I cases involving other Entergy subsidiaries. *See, e.g.*, *System Fuels, Inc. v. United States*, 79 Fed. Cl. 37 (2007) ("*ANO I*"), *reconsideration denied*, 79 Fed. Cl. 182 (2007), *aff'd in part*, *rev'd in part*, 457 F. App'x 930 (Fed. Cir. 2012) ("*ANO II*"); *System Fuels, Inc. v. United States*, 110 Fed. Cl. 583 (2013) ("*ANO I Remand*"); *System Fuels, Inc. v. United States*, 78 Fed. Cl. 769 (2007) ("*Grand Gulf I*"), *reconsidered on other grounds*, 92 Fed. Cl. 101 (2010), *aff'd in part, rev'd in part*, 666 F.3d 1306 (Fed. Cir. 2012) ("*Grand Gulf II*"); *Consolidated Edison Co. of New York, Inc. v. United States*, 92 Fed. Cl. 466 (2010) ("*Consolidated Edison*"), *aff'd in part, rev'd in part sub nom.*, *Consolidated Edison Co. of New York, Inc. v. Entergy Nuclear Indian Point 2, LLC*, 676 F.3d 1331 (Fed. Cir. 2012) ("*ENIP*").

[3] Plaintiffs' $49.7 million dollar claim includes various downward adjustments: $76,014 and $46,987 to the additional security costs portion of the claim; $99,325 to the NRC Fees portion of the claim; and $12,540 to the dry storage facility portion of the claim for the radiological consequence analysis. *See, e.g.*, DDX 005 at 2.

Moreover, by and large, the Government does not dispute that Plaintiffs incurred the costs they claim in this proceeding. Instead, the dispute over the $13.8 million that remains at issue is largely centered on the contours of the hypothetical "non-breach world." The Court, therefore, must resolve the competing claims of the parties as to how the U.S. Department of Energy ("DOE") and Plaintiffs would have performed at River Bend in the non-breach world. The Court must also determine whether the Government's failure to provide the information needed to construct a meaningful non-breach world should support findings in Plaintiffs' favor.

In this case, it is undisputed that, under the acceptance rates in DOE's 1987 Annual Capacity Report ("the 1987 ACR Rate"), DOE would have commenced performance at River Bend in 2006. *See, e.g.*, PX 171 (June 1987 Annual Capacity Report). The Government offers no challenge to the fundamental proposition that its breach caused Plaintiffs to construct the ISFSI, procure dry fuel storage casks, load those casks with SNF from the wet pool, and move them to the ISFSI at the plant. These dry fuel storage costs represent the bulk of the approximately $36 million in costs that the Government does not contest in this case. Instead, the Government, having failed to provide information about the non-breach world that only it could supply, will likely argue that Plaintiffs have not adequately depicted the non-breach world.

Based on the evidence presented at trial and for the reasons set forth herein, Plaintiffs respectfully submit that the Court should award to Plaintiffs the entirety of the $49,687,975 that they seek in this action.

II. RELEVANT FACTS

A. Introduction

1. The Nuclear Waste Policy Act Was Enacted to Codify the Federal Government's Longstanding Policy to Dispose of SNF and to Assure Sufficient Storage for Commercial Nuclear Utilities

In 1983, President Reagan signed into law the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. §§ 10101–10270 (2013) (the "NWPA"). The NWPA formalized the Government's long-standing policy of accepting responsibility and providing for the timely disposition of commercial SNF and high-level radioactive waste ("HLW"). *See* 42 U.S.C. § 10131(b)(2) (indicating that one purpose of the NWPA was "to establish the Federal responsibility, and a definite Federal policy, for the disposal of such waste and spent fuel").

In the NWPA, Congress expressly acknowledged that "a national problem has been created by the accumulation of . . . spent nuclear fuel from nuclear reactors . . . ." *Id.* § 10131(a)(2)(A). To solve this problem, one of the key purposes of the NWPA was to impose upon the Government a firm schedule and deadline by which the Government would assume responsibility for the disposal of commercially generated SNF. *See id.* § 10131(b)(1) (stating that a purpose of the NWPA was "to establish a schedule for the siting, construction, and operation of repositories" to receive SNF and HLW).

2. The River Bend Plant and Plaintiffs' Standard Contract

River Bend obtained a license from the NRC in November 1985, began commercial operations in June 1986, and for thirty years, with the exception of maintenance and refueling outages, has been in continuous operation since that time. *See* Second Am. & Supp. Compl. ¶ 2, ECF No. 175; Tr. 114:1–3 (Campbell). River Bend is located in St. Francisville, Louisiana. *See* Tr. 97:8–10 (Campbell). River Bend is a boiling water reactor. *See* Tr. 113:7–10 (Campbell).

River Bend supplies a dependable output of approximately 1,000 megawatts of electricity. *See* Tr. 114:12–14 (Campbell).

In section 302 of the NWPA, 42 U.S.C. § 10222, Congress authorized DOE to enter into Standard Contracts with generators and owners of SNF and HLW, pursuant to which DOE would accept, transport, and dispose of SNF and HLW. *See Grand Gulf II*, 666 F.3d at 1308. The Standard Contract provided that, in return for the utility's payment of fees into the Nuclear Waste Fund, DOE would begin to dispose of the SNF and HLW covered by the contracts no later than January 31, 1998, and would continue such services until disposal of all SNF and HLW was completed. *See id.*; 10 C.F.R. § 961.11 (1983), Art. II; *Indiana Michigan Power Co. v. U.S. Dep't of Energy*, 88 F.3d 1272, 1277 (D.C. Cir. 1996) ("*Indiana Michigan I*"). The NWPA required nuclear utilities to enter into contracts with DOE for the disposal of each utility's SNF and HLW. *See* 42 U.S.C. § 10222(a); *see also Northern States Power Co. v. United States*, 224 F.3d 1361, 1364 (Fed. Cir. 2000). Pursuant to § 10222(a) of the NWPA, DOE created the Standard Contract. *See Northern States*, 224 F.3d at 1364; *see also* 10 C.F.R. § 961.11 (2010).

On August 28, 1984, Plaintiffs entered into a contract with DOE, pursuant to which DOE would begin removal of SNF from River Bend by January 31, 1998. *See generally* JX 1 (the Standard Contract); Tr. 59:18–60:25 (Rives). For their part, Plaintiffs have paid all required fees for nuclear waste disposal services into the Nuclear Waste Fund in full compliance with the contract. *See* Tr. 65:15–23 (Rives). As of December 31, 2010, Plaintiffs' payments into the Nuclear Waste Fund stood at $152 million. *See* Tr. 68:5–14 (Rives).[4]

[4] As ordered by the United States Court of Appeals for the District of Columbia Circuit in *Nat'l Assoc. of Regulatory Util. Comm'rs v. U.S. Dep't of Energy*, 736 F.3d 517 (D.C. Cir. 2013), DOE suspended collection of the Nuclear Waste Fee in May 2014.

3. River Bend's Acceptance Rights under the 1987 ACR

The United States Court of Appeals for the Federal Circuit has held that the applicable contractual acceptance rate under the Standard Contract is the 1987 ACR Rate. *See, e.g.*, *Yankee Atomic Elec. Co. v. United States*, 536 F.3d 1268, 1273–74 (Fed. Cir. 2008) (requiring a model depicting DOE performance under 1987 ACR acceptance rates). The 1987 Mission Plan Amendment (the "1987 MPA") was prepared by DOE and is specifically referenced as the source providing the acceptance rates set forth in the 1987 Annual Capacity Report (the "1987 ACR"). *See* PX 172 (June 1987 Mission Plan Amendment) at 7. The 1987 ACR projects SNF acceptance rates for the first ten years of DOE performance (ramping up to a maximum rate of 2,650 metric tons of uranium ("MTU")/year), while the 1987 MPA projects acceptance rates through 2037 (ramping up to a maximum rate of 3,000 MTU/year). *See* PX 171 at 7; PX 172, App'x F at 61.

At trial, Ms. Eileen Supko testified as an expert and presented her analysis of the specific SNF acceptance rights for River Bend, using the acceptance rate in the 1987 ACR and the 1987 MPA and assuming that DOE timely began performance in 1998. *See* Tr. 1069:15–1070:14 (Supko); PX 1 (Dec. 17, 2010 Eileen Supko Expert Report Regarding Spent Nuclear Fuel Acceptance Rights Using the 1987 Annual Capacity Report Rates For Entergy Gulf States' River Bend Station).[5] As Ms. Supko explained in both her testimony and SNF Acceptance Rights report, River Bend's acceptance allocations were calculated by applying the overall acceptance rate, which is the aggregate rate at which a waste management system operated by DOE would have picked up or accepted SNF from the commercial nuclear industry, to the acceptance priority

[5] Ms. Supko was qualified as an expert in "nuclear fuel management, spent nuclear fuel storage and transportation and associated nuclear plant modifications and regulatory requirements." Tr. 1078:21–24 (statement of the Court).

ranking ("APR"), which is a chronological listing (required of DOE by the Standard Contract) of SNF discharges by date of discharge for all commercial nuclear power plants. *See* Tr. 1069:15–1070:14 (Supko); PDX 32 (Supko Demonstrative Slides); PX 1 at 5–6. The most recent APR was published by DOE in 2004, utilizing discharge data submitted by the utilities through December 31, 2002.[6] *See* Tr. 1082:17–1084:4 (Supko); PX 192 (July 2004 Acceptance Priority Ranking).

In preparing her analysis, Ms. Supko used her SPNTFUEL computer model; the model inputs information from all of the nuclear power plants in the United States, including: the amount of energy produced by the plants, the size of the reactor cores, the size of the spent fuel storage pools, spent fuel inventories, and historical discharge data. *See* PX 1 at App'x A. The model is used to project future discharges from the nuclear operating plants and, also, the amount of additional storage that might be required under varied spent fuel acceptance scenarios. *See id*. The SPNTFUEL model uses similar inputs as the model maintained by DOE and its contractors. *See* Tr. 1060:1–1061:19 (Supko). The Government did not contest the River Bend acceptance allocations presented by Ms. Supko at trial. As previously noted, it is undisputed that, under the 1987 ACR Rate, DOE would have commenced performance at River Bend in 2006.

B. The Government Breached the Standard Contract in 1998 and There Is No Date Certain for Performance by DOE

In 1994, DOE published a "Notice of Inquiry" in the Federal Register stating that DOE "has no statutory obligation to accept spent nuclear fuel beginning in 1998 in the absence of an operational repository or other facility constructed under the [NWPA], although the Department

[6] The chronological listing includes all SNF assemblies permanently discharged from U.S. commercial nuclear reactors through December 31, 2002, and was established by submissions from commercial nuclear operating companies through DOE's RW-859 forms. *See* PX 192 (July 2004 Acceptance Priority Ranking) at App'x A.

in implementing the Standard Contract may have created an expectation that it would begin accepting such spent nuclear fuel in 1998." Notice of Inquiry, 59 Fed. Reg. 27007, 27008 (May 25, 1994). A year later, DOE issued its "Final Interpretation of Nuclear Waste Acceptance Issues," which reiterated its position that DOE had no obligation to begin accepting SNF in 1998 and that DOE's performance would commence in 2010, at the earliest. *See* 60 Fed. Reg. 21793, 21794–95 (May 3, 1995). In 1996 and 1997, the United States Court of Appeals for the District of Columbia Circuit rejected the Government's interpretation of its obligation under the NWPA. *See Indiana Michigan I*, 88 F.3d at 1277; *see also Northern States Power Co. v. U.S. Dep't of Energy*, 128 F.3d 754, 755 (D.C. Cir. 1997).

DOE failed to begin performing in 1998 and, to date, has not begun performance of its obligations under Plaintiffs' (or any other plaintiff utility's) Standard Contract. *See, e.g.*, *Grand Gulf II*, 666 F.3d at 1308–09 ("Because collection and disposal of SNF and HLW did not begin on January 31, 1998, this [C]ourt held in *Northern States Power Co. v. United States*, 224 F.3d 1361, 1366 (Fed. Cir. 2000), and *Maine Yankee Atomic Power Co. v. United States*, 225 F.3d 1336, 1343 (Fed. Cir. 2000), that the DOE had breached the Standard Contract with the nuclear energy industry."). For over twenty-five years, DOE's management of the waste disposal program has been marked by delays and failure to perform. For example, in 1989, DOE announced that it would not begin accepting fuel at a repository until at least 2010, and DOE maintained its commitment to a 2010 date until as recently as 2004. *See Indiana Michigan Power Co. v. United States*, 60 Fed. Cl. 639, 644 (2004) (citing a DOE official's 2004 testimony that DOE is "marshaling its resources" for "aggressive management" of the Yucca Mountain Project, and that he is "confident" that DOE will meet the 2010 deadline). In its most recent strategy document issued in January 2013, DOE indicates that it has some plans for a pilot

interim SNF storage facility by 2021, and its current plans are to "facilitate" a geologic repository operational by 2048. *See* Tr. 66:17–67:1 (Rives); *see also* DOE, Strategy for the Management and Disposal of Used Nuclear Fuel and High Level Radioactive Waste at 2 (Jan. 2013), *available at* http://energy.gov/downloads/strategy-management-and-disposal-used-nuclear-fuel-and-high-level-radioactive-waste (last accessed Sept. 15, 2015).

C. Plaintiffs Mitigated DOE's Breach by Constructing and Implementing Dry Fuel Storage at River Bend

As discussed above, had DOE performed in accordance with the Standard Contract, Plaintiffs would not have needed to implement dry fuel storage at the River Bend plant. *See, e.g.*, Tr. 52:7–21, 67:12–68:4 (Rives). The Government does not challenge this key proposition.

Plaintiffs commenced dry fuel storage operations at River Bend in 2005 with Holtec International ("Holtec") as the cask vendor. *See* Tr. 93:16–18 (Rives). Plaintiffs selected Holtec to be their dry storage cask vendor because Holtec had a technically superior product and its overall bid was lower. *See* Tr. 93:19–23 (Rives). The Holtec storage cask system, also used by other Entergy facilities, includes a welded-lid multipurpose canister stored inside a vertical concrete and steel cask, or "overpack." *See* Tr. 130:23–131:15 (Campbell). Use of the Holtec cask storage system requires specific handling procedures that are unique to the particular Holtec dry fuel storage system at River Bend. *See* Tr. 168:25–169:11 (Campbell); *see also, e.g.*, PDX 5 – PDX 13 (plant photos).

1. Capital Work Order N60230: Dry Fuel Casks – ESI – RB

After evaluating numerous alternatives, Plaintiffs determined that dry cask storage was the least-cost option for the long-term storage of SNF at River Bend. *See* Tr. 67:18–24, 93:19–94:10 (Rives). Capital Work Order N60230 captured the costs associated with the initial project scoping activities related to deciding what dry fuel storage system to select for River Bend. *See*

Tr. 126:20–129:19 (Campbell). Capital Work Order N60230 also captured the costs associated with evaluating the available storage options and developing a bid specification for the procurement of dry storage casks for use at River Bend and other nuclear plants owned by Entergy. *See* Tr. 126:20–129:19 (Campbell); Tr. 93:6–23 (Rives). The Operations Dry Storage Peer Group was assembled on a fleet-wide level to determine the most cost-effective approach to implementing dry fuel storage. *See* Tr. 128:2–7, 129:5–9 (Campbell). (River Bend paid for only its share of the cost. *See* Tr. 129:10–15 (Campbell).) Capital Work Order N60230 further captured contract labor and contract engineering services related to selecting a dry fuel storage system. *See* Tr. 127:12–16 (Campbell).

After rigorous evaluation of the available dry cask storage technology, Plaintiffs selected the Holtec HI-STORM system. *See* Tr. 126:20–127:11 (Campbell); Tr. 93:16-23 (Rives). Plaintiffs prepared an engineering scoping report and performed technical evaluations to determine site-specific requirements. *See* Tr. 129:10–15 (Campbell).

The costs for these dry storage-related activities were charged to Capital Work Order N60230 and would not have been incurred if River Bend had not needed additional spent fuel storage space as a result of DOE's breach. *See* Tr. 129:16–19 (Campbell). The costs charged to Capital Work Order N60230, including those described above, total approximately $446,000 through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 (Dec. 17, 2010 Expert Report of Kenneth Metcalfe) at 18–19; *see also* PDX 4 (Summary of Total Claimed Incurred Costs by Work Order).

2. Capital Work Order N70543: Dry Spent Fuel Storage – Casks Batch (1–3)

Capital Work Order N70543 captured the costs for purchasing the initial three Holtec dry storage casks (multi-purpose canisters ("canister" or "MPC") and overpacks) for River Bend. *See* Tr. 129:23–130:22 (Campbell). These initial three casks were loaded and placed on the

River Bend ISFSI pad between December 2005 and July 2006. *See, e.g.*, PX 96 at 19. An MPC is a stainless steel storage canister that holds the spent fuel assemblies. *See* Tr. 130:23–131:6 (Campbell). The MPC has a grid for holding fuel assemblies inside of it similar to what is in the spent fuel pool racks. *See* Tr. 130:23–131:6 (Campbell). The MPCs for River Bend will hold sixty-eight boiling water reactor spent fuel assemblies. *See* Tr. 130:23–131:6 (Campbell). Once the MPC is loaded with SNF, welded closed, sealed, and dried, it is placed into the HI-STORM, which stands for Holtec International Storage Module. *See* Tr. 131:9–15 (Campbell). The HI-STORM is a large concrete and steel storage cask that is designed to protect the MPC inside and to allow cooling of the fuel while it is in storage. *See* Tr. 131:9–15 (Campbell).

Although Plaintiffs generally charge various cask loading activities to another (non-Capital) Work Order, Plaintiffs charged the costs associated with sealing the first three Holtec MPCs, including lid welding and drying, to Capital Work Order N70543. *See* Tr. 130:4–8 (Campbell); PX 96 at 19. Welding Services provided lid welding and helium leak testing. *See* PX 96 at 19. Holtec provided licensing support, training materials (including mock-ups and scale models), and assistance with the development of cask loading procedures, as well as overall project management. *See* PX 96 at 19. Plaintiffs charged these Welding Services and Holtec costs incurred to Capital Work Order N70543. *See* PX 96 at 19.

In addition, as described at trial by Mr. Jerrell Campbell, the Senior Project Manager for Dry Fuel Storage at River Bend, "There were a large number of activities associated with implementing the . . . Holtec dry fuel storage [system] at River Bend Station." Tr. 129:23–130:1 (Campbell). Capital Work Order N70543 captured the costs associated with these activities, including the "large amount of engineering work" required. *See* Tr. 129:23–130:2 (Campbell). Capital Work Order N70543 also captured the costs to develop the procedures necessary for

implementing dry fuel storage, which are the procedures for the work activities to load a Holtec storage cask. *See* Tr. 130:2–17 (Campbell).

The River Bend plant was originally designed for a spent fuel transportation (or shipping) cask system, the IF-300 system. *See* Tr. 554:7–16 (Clevenger); Tr. 206:9–12 (Campbell). The River Bend Fuel Building crane and its related structure were likewise designed and installed to handle spent fuel *transportation* cask systems. *See* Tr. 602:3–9 (Clevenger). Because the plant was designed for a transportation cask system and not a storage cask system, a number of plant modifications, engineering work, and procedures were required to implement the Holtec dry fuel storage system at River Bend.

In particular, in preparation for loading dry storage casks, Plaintiffs evaluated the capabilities of River Bend's Fuel Building cask handling crane. *See* PX 96 at 19. The Fuel Building cask handling crane is rated for 125 tons and is not single failure proof. *See* Tr. 584:5–9, 604:15–23 (Clevenger). In order to accommodate the HI-STORM canister system, the existing 125-ton crane had to be modified to incorporate a redundant rigging system for HI-STORM loading. *See* Tr. 586:12–587:18 (Clevenger). Ms. Eve Clevenger, Lead Engineer for the River Bend Dry Fuel Storage Project, explained that the purpose of redundant rigging is to prevent the crane from dropping a load; redundant rigging provides a secondary load path to the cask crane main hook so that if there were a problem or the cask crane main hook failed, the redundant load path would carry the load. *See* Tr. 586:12–18 (Clevenger). Plaintiffs also installed remote controls on the cask crane to reduce the crane operator's exposure to radiation dose due to streaming from the top of the cask. *See* Tr. 625:14–626:6, 633:6–22 (Clevenger); PX 670 (Dec. 18, 2003 Remote Operation of the Cask Pool Crane). Mr. Campbell explained that the radiation dose from the Holtec casks would have been too high where the operator was

supposed to sit in the crane as the reason for installing the remote controls. *See* Tr. 219:1–25 (Campbell). Ms. Clevenger testified that the high radiation dose necessitating the remote controls resulted from a gap between the canister and the transfer cask inherent in the Holtec design. *See* Tr. 633:12–22 (Clevenger). If River Bend had been handling a transportation cask that complied with the NRC's radiation standards for transportation casks, Plaintiffs would not have needed to install the remote controls to avoid the radiation dose issue with the Holtec HI-TRAC. *See* Tr. 632:3–8 (Clevenger).

Further related to the Fuel Building cask handling crane, Plaintiffs re-performed a seismic analysis to confirm that the crane is qualified to maintain its load during a seismic event. *See* Tr. 613:1–6 (Clevenger); JX 22 (Mar. 8, 2005 Letter to NRC – License Amendment Request 2004-26), Att. 1 at 6. Originally, Plaintiffs had designed and procured the Fuel Building cask handling crane as a seismically qualified structure and had performed a seismic analysis of the crane with no load on the crane hook. *See* JX 22, Att. 1 at 6; Tr. 610:17–25 (Clevenger). If Plaintiffs had been loading a DOE-supplied transportation cask, Plaintiffs would not have needed to review the seismic qualifications of the cask handling crane because, as Ms. Clevenger testified, "the drops would be acceptable." Tr. 611:19–612:1 (Clevenger). Ms. Clevenger explained that if Plaintiffs had been handling a DOE-supplied transportation cask that was qualified to be dropped from the crane, Plaintiffs would not have needed to perform a separate seismic analysis of handling the transportation cask. *See* Tr. 611:5–11 (Clevenger). Indeed, no NRC regulation requires the cask crane structure to be seismically qualified to handle a spent fuel transportation cask. *See* Tr. 612:9–12 (Clevenger). Plaintiffs, however, are loading Holtec *storage* casks, and therefore needed to and did re-perform the seismic analysis with a load on the

hook to ensure that the crane was qualified to maintain its load (that is, a Holtec HI-TRAC) during a seismic event. *See* Tr. 613:1–6 (Clevenger).

Relatedly, Plaintiffs added impact limiters in the washdown pit and cask pool. *See* Tr. 587:23–25 (Clevenger). An impact limiter is a device to absorb energy on impact, which reduces the loading or the stresses on an object that might be dropped. *See* Tr. 588:1–5 (Clevenger). If River Bend had been handling a spent fuel transportation cask consistent with the original design basis, and not a Holtec storage cask, Plaintiffs would not have needed to install redundant rigging on the crane or add impact limiters to protect against a cask drop. *See* Tr. 588:13–20 (Clevenger).

Plaintiffs also installed a work platform, including grating and handrails, over the cask washdown pit to facilitate the Holtec MPC closure welding operations. *See* Tr. 225:22–226:11 (Campbell). This platform was not required for loading the spent fuel transportation cask that the plant was designed for, *see* Tr. 226:20–227:4 (Campbell), nor was it required for the plant's previous loading of radioactive waste transportation casks, *see* Tr. 235:2–8 (Campbell). The work platform, therefore, would not have been required for loading a DOE transportation cask suitable for use at the River Bend site.

Further, Plaintiffs installed insulated chiller propylene glycol lines for the forced helium dehydration system that River Bend uses for drying the MPC. *See* Tr. 634:4–10, 635:7–24 (Clevenger). The chiller lines support the forced helium dehydration system, which dehydrates the Holtec storage canister. *See* Tr. 636:22–637:6 (Clevenger). The system blows hot helium through the canister, the wet and hot helium returns to the forced helium dehydration system where it is cooled and chilled, and then the ice is filtered out of the flow. *See* Tr. 636:22–637:6 (Clevenger). DOE was required under the Standard Contract to provide the auxiliaries necessary

for its cask system, and would have been responsible for any drying equipment needed to use the DOE cask. *See* PX 960 (Defendant's Responses to Plaintiffs' First Set of Requests for Admission, Jan. 27, 2014) at 7 ("Defendant admits that DOE will provide the casks and all 'special tools, equipment, lifting trunnions, spare parts, and consumables needed to use and perform incidental maintenance on the cask(s),' as required by Article IV.B.2(c) of the Standard Contract."). Plaintiffs, therefore, would not have needed to install these lines had DOE performed.

Plaintiffs also needed to amend their licensing basis with the NRC to permit the lifting and movement of spent fuel storage casks, rather than transportation casks. *See* JX 22; JX 26 (Sept. 21, 2005 Letter to NRC – License Amendment Request 2004-26); Tr. 602:6–606:5 (Clevenger). Ms. Clevenger explained that River Bend needed to take additional measures with its plant design to accommodate the Holtec storage cask system. *See* Tr. 605:7–21 (Clevenger). Ms. Clevenger testified that, if DOE had brought a transportation cask to River Bend that was within the design parameters of the cask system that was in the design basis (that is, suitable for use at the River Bend site), Plaintiffs would have been able to use that cask system without modifying the Fuel Building crane. *See* Tr. 606:6–11 (Clevenger).

Further, Plaintiffs added a concrete pedestal in the cask washdown pit for the dry fuel storage project. *See* Tr. 205:21–23 (Campbell); Tr. 615:22–616:2 (Clevenger). Mr. Campbell explained that Plaintiffs poured concrete creating a pedestal to raise the HI-TRAC cask up to a working level so the workers could access the top of the HI-TRAC to perform the detailed and required welding and drying operations on the canister. *See* Tr. 205:24–206:5 (Campbell). The concrete pedestal in the cask washdown pit was added specifically for the Holtec storage cask system and the associated welding operations. *See* Tr. 206:6–22 (Campbell); Tr. 615:22–616:13

(Clevenger). If Plaintiffs had been handling a transportation cask system (particularly a bolted-closure system as DOE says it would have brought, which required limited work to close), consistent with the plant's original design, Plaintiffs would not have needed to build a pedestal in the cask washdown pit. *See* Tr. 618:20–619:5 (Clevenger).

The costs to perform the various engineering analyses described above, related licensing work, and to procure and install the rigging system were charged to Capital Work Order N70543. *See, e.g.*, Tr. 131:16–23 (Campbell); PX 96 at 19–20. Indeed, Mr. Campbell explained that "one of the big activities was the license amendment requests that we submitted to the NRC regarding use of our redundant rigging system for our crane." Tr. 131:18–23 (Campbell). The costs that Plaintiffs incurred to provide operational demonstrations to the NRC are likewise included in Capital Work Order N70543. *See* Tr. 131:18–23 (Campbell).

Plaintiffs also added a jib crane in order to move some of the equipment used in the Holtec operations—a forced helium dehydration skid and the welding system—to an upper platform area. *See* Tr. 186:12–20, 200:12–17, 266:23–267:6, 269:12–17 (Campbell); DX 114 (plant photos) at photo 10; PDX 18. The jib crane is used to move the Holtec MPC lid, as well, but the jib crane would not have been installed for that purpose if it had not already been required to lift the dehydration skid. *See* Tr. 270:18–271:17 (Campbell). If DOE had performed its obligations under the Standard Contract, DOE would have brought equipment to River Bend for use with DOE's cask system, and the forced helium dehydration system would not have been needed on the upper platform, and no jib crane would have been required. The Government's technical expert, Mr. Warren Brewer, while contending that the same jib crane would have been required for DOE performance, could not identify the cask drying system that DOE would have brought for its casks, nor the size of the equipment. *See* Tr. 1909:4–19 (Brewer). Mr. Brewer

likewise could not say where the DOE cask drying system would have been placed at River Bend. *See* Tr. 1910:16–23 (Brewer). The jib crane, therefore, would not have been required had DOE performed.

The costs for these dry storage-related activities that were charged by Plaintiffs to Capital Work Order N70543 would not have been incurred had DOE performed. *See* Tr. 133:20–23 (Campbell). The costs charged to Capital Work Order N70543 total approximately $10,971,000 through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 19–20; *see also* PDX 4.

3. Capital Work Order N70732: Dry Spent Fuel Storage – Site Improvements

The costs that Plaintiffs incurred to construct the River Bend ISFSI were charged to Capital Work Order N70732. *See* Tr. 133:24–134:12 (Campbell). Capital Work Order N70732 also captured the costs associated with the design of the ISFSI and ensuring that the ISFSI complied with the applicable NRC security and plant operational requirements. *See* Tr. 133:24–134:12 (Campbell).

The costs for these dry storage-related activities were charged by Plaintiffs to Capital Work Order N70732 and were incurred only because Plaintiffs needed to implement dry fuel storage at River Bend due to DOE's breach. *See* Tr. 138:8–13 (Campbell). The costs charged to Capital Work Order N70732 total approximately $11,109,000 through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 20; *see also* PDX 4.

4. Capital Work Order N70971: Dry Spent Fuel Storage – Site Equipment[7]

Plaintiffs needed to purchase certain customized equipment to load Holtec dry fuel storage casks and to transport the casks from the River Bend Fuel Building to the ISFSI. *See* Tr. 138:14–20 (Campbell). This equipment was purchased from Holtec and includes the major components associated with loading the MPC and the HI-STORM, which are (1) the HI-TRAC transfer cask, a large shielding cask used to transfer the loaded MPC into the HI-STORM; (2) a mating device; (3) a forced helium dehydration system, including a chiller unit; (4) a vertical cask transporter, used to move the empty and loaded HI-STORM casks; and (5) two lift yokes required to lift the MPC and HI-STORM. *See* Tr. 138:22–139:19, 201:11–14 (Campbell).

The costs for this dry storage-related equipment were charged by Plaintiffs to Capital Work Order N70971 and would not have been incurred if River Bend did not need additional storage space due to DOE's breach. *See* Tr. 140:4–7 (Campbell). These costs charged to Capital Work Order N70971 total approximately $3,997,000[8] through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 20; *see also* PDX 4.

5. Capital Work Order N70989: Dry Spent Fuel Storage – Casks 4, 5, 6, and 7

Capital Work Order N70989 captured the costs to procure dry fuel storage casks four, five, six, and seven, including the cask systems—the MPC and the HI-STORM—for each of the four casks. *See* Tr. 140:11–23 (Campbell). The costs that Plaintiffs incurred to weld, seal, dry,

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[7] The costs charged to this Work Order were originally charged to Capital Work Order N70732 but were transferred in 2004 to Capital Work Order N70971. *See* PX 96 at 20 n.30.

[8] The River Bend plant shares the HI-TRAC transfer cask, the vertical cask transporter, a lift yoke, and mating devices with another plant owned by a different Entergy subsidiary, the Grand Gulf nuclear power station ("Grand Gulf"). *See* PX 96 at 20 n.31. In the trial of the Grand Gulf case, the plaintiffs in that case did not claim the costs associated with this shared equipment. *See id*.

and leak test casks four through seven, and to place those four casks on the ISFSI at River Bend, are also captured by Capital Work Order N70989, as are the costs incurred for contract labor associated with loading those four casks. *See* Tr. 140:11–23 (Campbell).

The costs for these dry storage-related activities were charged by Plaintiffs to Capital Work Order N70989 and would not have been incurred if Plaintiffs had not needed to implement dry fuel storage at River Bend due to DOE's breach. *See* Tr. 141:3–6 (Campbell). The costs charged to Capital Work Order N70989 total approximately $4,168,000 through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 21–22; *see also* PDX 4.

6. Capital Work Order N71035: Dry Spent Fuel Storage – Phase II

Capital Work Order N71035 captured costs that Plaintiffs incurred to make improvements to the heavy haul path from the Fuel Building to the ISFSI, which were necessary to transport the very heavy Holtec dry storage casks using the vertical cask transporter. *See* Tr. 141:7–20 (Campbell). Plaintiffs use the vertical cask transporter to move the loaded casks from the Fuel Building to the River Bend ISFSI. *See* Tr. 141:7–20 (Campbell). The original heavy haul path would not support the weight of the vertical cask transporter and the casks. *See* Tr. 141:7–20 (Campbell). To support dry fuel storage operations at River Bend and to permit transportation of the Holtec storage casks using the vertical cask transporter, Plaintiffs made necessary improvements to the heavy haul path. *See* Tr. 141:7–20 (Campbell).

In particular, Plaintiffs performed work to identify, analyze, and reinforce or relocate underground utilities along the cask transportation route. *See* Tr. 141:7–20 (Campbell); Tr. 1201:19–1202:11 (Supko). Plaintiffs also installed certain cask handling fixtures, such as the yoke extension hanger. *See* Tr. 1103:5–1104:4, 1197:5–1198:2 (Supko); *see also* PDX 32 at 10.

The costs for these dry storage-related activities were charged by Plaintiffs to Capital Work Order N71035 and would not have been incurred if Plaintiffs had not needed to implement dry fuel storage at River Bend due to DOE's breach. *See* Tr. 143:7–10 (Campbell). The costs charged to Capital Work Order N71035 total approximately $1,712,000 through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 21; *see also* PDX 4.

7. Capital Work Order N71074: Dry Spent Fuel Storage – Site Improvements II

Capital Work Order N71074 captured the costs that Plaintiffs incurred to construct a turning pad at the River Bend ISFSI and to purchase a work platform for use with the HI-STORM. *See* Tr. 143:11–144:2 (Campbell). The weight of the vertical cask transporter and loaded cask was tearing up the ground as it approached the ISFSI pad. *See* Tr. 143:11–144:2 (Campbell). To prevent that damage, Plaintiffs built a concrete turning pad. *See* Tr. 143:11–144:2 (Campbell). Plaintiffs also constructed an outside work platform to bolt up around the HI-STORM for use when working on the cask. *See* Tr. 143:11–144:2 (Campbell). Plaintiffs needed a platform that workers could use to access the cask, so Plaintiffs installed steel decking and beams underneath to allow workers to access the top of the HI-TRAC for welding and drying operations. *See* Tr. 225:18–226:11 (Campbell). Plaintiffs designed the work platform and handrail for the dimensions of the Holtec cask system and installed them specifically for use of that system. *See* Tr. 226:12–19 (Campbell).

The costs for these dry storage-related activities were charged by Plaintiffs to Capital Work Order N71074 and would not have been incurred if Plaintiffs had not needed to implement dry fuel storage at River Bend due to DOE's breach. *See* Tr. 144:11–14 (Campbell). The costs charged to Capital Work Order N71074 total approximately $474,000 through December 31,

2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 21; *see also* PDX 4.

8. Capital Work Order N71083: Dry Spent Fuel Storage – Casks 8, 9, 10, and 11

Capital Work Order N71083 captured all of the costs that Plaintiffs incurred to procure, load, weld, dry, and store Holtec dry fuel storage casks eight through eleven. *See* Tr. 144:19–23 (Campbell). These costs would not have been incurred if Plaintiffs had not needed to implement dry fuel storage at River Bend due to DOE's breach. *See* Tr. 144:24–145:2 (Campbell).

Capital Work Order N70183 also captured costs incurred for River Bend's participation in the Holtec Users Group. The Holtec Users Group is an industry forum where utilities that are users of the Holtec dry fuel storage cask system get together to share ideas, operating experience, and knowledge of their uses of the Holtec system. *See* Tr. 272:10–273:9 (Campbell). River Bend participates in the Holtec Users Group, as do most, if not all, users of the Holtec system in the United States. *See* Tr. 273:24–274:6 (Campbell). Benefits of participation in the Holtec Users Group include sharing operating experience and efficiencies with loading the Holtec storage cask system, lessons learned, and methods to simplify or improve the loading process. *See* Tr. 273:3–8 (Campbell). Mr. Campbell testified that the Holtec Users Group is of value to River Bend in its dry fuel storage operations and that he would not want to be operating the Holtec system without access to information from other Holtec system users. *See* Tr. 274:7–13 (Campbell).

These dry fuel storage–related costs charged to Capital Work Order N71083 total approximately $4,883,000 through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 22; *see also* PDX 4.

9. Capital Work Order N71084: Dry Spent Fuel Storage – Casks 12, 13, 14, and 15

Capital Work Order N71084 captured all of the costs that Plaintiffs incurred to procure, load, weld, dry, and store Holtec dry fuel storage casks twelve through fifteen. *See* Tr. 145:3–11 (Campbell). These costs would not have been incurred if Plaintiffs had not needed to implement dry fuel storage at River Bend due to DOE's breach. *See* Tr. 145:12–15 (Campbell). The costs charged to Capital Work Order N71084 total approximately $4,860,000 through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 22; *see also* PDX 4.

10. Operations & Maintenance ("O&M") Work Order N07145: High Level Waste Facility

O&M Work Order N07145 captured the costs that Plaintiffs incurred to load the Holtec dry fuel storage casks and to perform preventative maintenance activities on the cask components in preparation for a cask loading campaign. *See* Tr. 145:16–146:5 (Campbell). This O&M Work Order also captured the costs of transporting some of the dry fuel storage components that Plaintiffs share with the Grand Gulf plant back to River Bend in preparation for cask loading. *See* Tr. 145:16–146:5 (Campbell). River Bend and Grand Gulf share the vertical cask transporter, the HI-TRAC transfer cask, the mating device, some rigging systems, a lift yoke, and some radiation shielding components associated with the cask. *See* Tr. 146:6–22 (Campbell).

None of the capitalized costs—for example, welding, sealing, and leak testing the cask—are captured by O&M Work Order N07145. *See* Tr. 145:16–23, 148:23–149:9 (Campbell). Rather, O&M Work Order N07145 captures the costs of specific O&M activities, including non-destructive examination inspections of all of the lifting components, and preventative maintenance on all of the components purchased from Holtec. *See* Tr. 148:1–15 (Campbell).

Pursuant to the Holtec cask's Certificate of Compliance[9], Plaintiffs are required to perform these inspections and maintenance activities prior to each cask loading campaign. *See* Tr. 148:1–22 (Campbell).

The costs for these dry storage-related O&M activities were charged by Plaintiffs to Capital Work Order N07145 and would not have been incurred if Plaintiffs had not needed to implement dry fuel storage at River Bend due to DOE's breach. *See* Tr. 146:25–147:3, 150:15–20 (Campbell). The costs charged to Capital Work Order N71074 total approximately $3,120,000 through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 22; *see also* PDX 4.

11. O&M Work Order N09271: Vacuum Sipping

O&M Work Order N09271 captured the costs of vacuum sipping spent fuel assemblies, which is an activity that Plaintiffs must perform in advance of loading the spent fuel assemblies into the Holtec dry storage system. *See* Tr. 150:21–151:4 (Campbell). In accordance with the Holtec Certificate of Compliance, only fuel assemblies that are intact, meaning that there is no potential breach or failure of the fuel, may be loaded into the Holtec MPCs and casks for dry storage. *See* Tr. 150:21–151:4 (Campbell). To perform the required vacuum sipping, special equipment provided by Westinghouse was installed in the spent fuel pool at River Bend. *See* Tr. 151:5–19 (Campbell). Fuel assemblies are placed into that equipment, water is flowed through

[9] A Certificate of Compliance for a spent fuel cask is a document that the NRC issues to the cask vendor that certifies the cask as appropriate for either the storage of SNF under 10 C.F.R. Part 72 or the transportation of SNF under 10 C.F.R. Part 71. *See, e.g.*, Tr. 1575:19–1576:17 (Vukovics); Tr. 555:7–556:10 (Clevenger). The Certificate of Compliance identifies the design requirements and licensing requirements for that particular cask system, and outlines the specific requirements with which vendors and users must comply. *See, e.g.*, Tr. 152:2–16 (Campbell); Tr. 1570:21–1571:6 (Vukovics). Plaintiffs cannot load any fuel assemblies to the Holtec storage system that do not meet the criteria specified in the Holtec cask's Certificate of Compliance. *See* Tr. 165:2–6 (Campbell); Tr. 1570:21–1571:6 (Vukovics).

the assembly, and instrumentation then looks for a radioactive indication of a potential failure of that assembly. *See* Tr. 151:5–19 (Campbell). A fuel assembly that completes this process without any indication of failure can then be placed into a Holtec storage canister. *See* Tr. 151:5–19 (Campbell).

The costs for these dry fuel storage–related O&M activities were charged by Plaintiffs to Capital Work Order N09271 and would not have been incurred if Plaintiffs had not needed to implement dry fuel storage at River Bend due to DOE's breach. *See* Tr. 152:17–20 (Campbell). The costs charged to Capital Work Order N09271 total approximately $562,000 through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 22; *see also* PDX 4.

D. The NRC Would Not Have Charged Additional Generic NRC Fees But For DOE's Breach

Prior to 1999, the NRC charged a separate fee, under 10 C.F.R. § 171.16, only to those nuclear utilities that had licensed and built dry storage facilities at their plant sites.[10] *See* PX 870 (Jesse L. Funches, July 30, 2013 Expert Report on Nuclear Regulatory Commission Annual Fee For Spent Fuel Storage/Reactor Decommissioning) at 6; *see also* Tr. 855:21–856:7, 868:4–14 (Funches); Tr. 1481:3–1493:20 (Metcalfe); PX 96 at 24. This fee recovered the costs of NRC generic activities related to dry storage of SNF.[11] *See* PX 870 at 6. In the late 1990s, given DOE's anticipated failure to begin accepting SNF by the 1998 deadline, the NRC recognized that

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[10] As of 1998, there were only eleven nuclear power plants with onsite ISFSIs in the United States (and many of those would not have been required but for DOE's breach). *See* Tr. 868:15–19 (Funches); Tr. 1487:3–8 (Metcalfe).

[11] The costs for NRC activities directly related to a specific utility (that is, those that are not "generic" in nature), including those related to a particular ISFSI, are billed to the appropriate utility separately, under 10 C.F.R. Part 170. *See* PX 870 at 5.

there would be both a significant increase in the quantity of SNF that would have to be stored onsite throughout the commercial nuclear power industry and a related increase in the NRC's generic activities. *See id.* at 7. As a consequence, the NRC began to evaluate alternative methods of more equitably allocating the cost of its generic activities related to SNF across the industry. *See id.* at 7; DX 014 (Nov. 5, 1998 Memorandum from J. Funches to NRC Commissioners – FY 1999 Fee Rulemaking). In fact, as one alternative, the NRC considered seeking legislation that would allow it to recover its generic dry storage costs directly from DOE or the Nuclear Waste Fund (that is, those generic costs associated with the NRC's efforts to regulate and ensure the safe storage of the significantly increased onsite inventories of SNF that would result from DOE nonperformance). *See* PX 870 at 8; PX 864 (Congressional Testimony of NRC Chairman Ivan Selin, Mar. 3, 1995) at 2; Tr. 869:3–9, 869:20–25 (Funches).

Ultimately, the NRC changed its fee structure in 1999, replacing the 10 C.F.R. § 171.16 ISFSI Fee with a new fee called the Spent Fuel Storage/Reactor Decommissioning Fee ("SFS/RD Fee"). *See* PX 870 at 7. Instead of the 10 C.F.R. § 171.16 ISFSI Fee, which had been equitably imposed on only those reactor owners having an ISFSI, the new SFS/RD Fee, effective in 1999, began to be (and continues to be) imposed on *all* reactor owners regardless of whether or not they had dry storage, or whether their reactors are operational or permanently shut down, so long as SNF remains onsite. *See* PX 870 at 7. The new fee recognized that DOE's breach would require most, if not all, U.S. commercial reactors to install dry storage because of the SNF that DOE was contractually obligated, but failed, to remove. *See* PX 870 at 7–8; DX 014 at Att. 2, p. 4. From an economic, accounting, and funding perspective, this action was the NRC's response to the requirement that it equitably allocate its generic costs related to onsite SNF storage. *See* PX 870 at 7–9; *see also, e.g.*, Tr. 1504:4–1516:13 (Metcalfe).

At trial, Mr. Jesse Funches, the Chief Financial Officer ("CFO") for the NRC at the time that the NRC adopted the SFS/RD Fee, testified as to his expert opinion regarding the assessment and allocation of NRC fees in general, and the SFS/RD Fee in particular. *See, e.g.*, Tr. 846:3–9, 850:9–852:5, 857:3–23 (Funches). Mr. Funches, as the NRC's CFO, was responsible for developing the recommendation to the Commission to establish the SFS/RD Fee, thereby imposing on all power reactor licensees a share of the NRC's generic costs for dry storage. *See* Tr. 857:3–10 (Funches). Based on his role as CFO, the NRC documents leading up to adoption of the SFS/RD Fee, and his unique interactions with the NRC Commissioners and senior staff, Mr. Funches concluded that the anticipated increase in dry storage resulting from DOE's breach was the substantial cause of the SFS/RD Fee's creation. *See, e.g.*, PX 870 at 2–3, 7–8; Tr. 865:22–866:15, 870:1–17, 873:12–20 (Funches).

Plaintiffs would not have needed an ISFSI at River Bend without DOE's breach; thus, commencing in 1999, Plaintiffs would not have borne these new SFS/RD fees if DOE had performed under the Standard Contract. *See, e.g.*, PX 870 at 3. Plaintiffs' claim for NRC fees totals $1,587,000, and these costs are appropriately included in Plaintiffs' damages claim. *See* PDX 4; Tr. 1483:12–14 (Metcalfe).

E. Plaintiffs Incurred Additional Security Costs to Protect the ISFSI

Plaintiffs were required to implement additional security measures as a result of the dry fuel storage project, particularly because of the need to expand the Protected Area at River Bend to include the ISFSI. *See* Tr. 153:3–11 (Campbell). The NRC issues regulations regarding security at nuclear power plants with which Plaintiffs are required to comply. *See, e.g.*, Tr. 2223:5–7, 2224:17–2225:3 (James); PX 960 at 17 ("[D]efendant admits that 10 C.F.R. Part 73 prescribes NRC 'requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites

and in transit and of plants in which special nuclear material is used.' 10 C.F.R. 73.l(a). Defendant admits that plaintiffs are obligated to meet all applicable requirements set forth in 10 C.F.R. Part 73."). In accordance with those regulations, River Bend is required to provide physical protection for the entire Protected Area at the plant. *See* Tr. 2210:9–14 (James). The ISFSI must be in the Protected Area, so installation of the ISFSI necessitated Plaintiffs procuring and installing the same equipment for the expanded Protected Area. *See* Tr. 2210:9–14 (James). In particular, Plaintiffs installed additional fencing, gates, a vehicle barrier system, and closed-circuit television, and Plaintiffs added armed responders and armed response positions. *See* Tr. 2210:3–8, 2216:15–21 (James). Plaintiffs also procured and installed a security barrier to ensure protected access for the movement of loaded casks from the Fuel Building to the ISFSI. *See* Tr. 2218:18–2219:16 (James).

Further, Plaintiffs purchased and installed an additional Bullet Resistant Enclosure ("BRE") near the ISFSI. *See* Tr. 2213:4–7 (James). A BRE is a structure that provides physical protection for armed security officers. *See* Tr. 2213:8–11 (James). This additional BRE was required because the Protected Area was expanded to include the ISFSI. *See* Tr. 2215:10–24 (James). The NRC requires the BRE to be manned by security personnel twenty-four hours per day, seven days per week. *See* Tr. 153:7–20 (Campbell); Tr. 2226:8–10, 2229:12–17 (James). Since 2004, this BRE has been staffed continuously by five full-time equivalent ("FTE") security personnel. *See* Tr. 2226:11–14, 2228:15–20, 2238:24–2239:7 (James).

The costs for the additional security at the River Bend ISFSI would not have been incurred if Plaintiffs had not needed to implement dry fuel storage at River Bend due to DOE's breach. *See* Tr. 154:7–10 (Campbell); Tr. 2225:7–2226:7, 2227:4–23, 2211:14–20 (James) (testifying that if the ISFSI had not been built, expansion of the Protected Area boundary would

not have been necessary). The costs for staffing the additional BRE from 2004 through 2010 total approximately $1.6 million through December 31, 2010, and are appropriately included in Plaintiffs' damages claim. *See* PX 96 at 23; *see also* PDX 4.

F. Plaintiffs Incurred Payroll Loaders and Materials Loaders Costs as Part of Their Mitigation Efforts

At trial, Ms. Stephanie Barras testified about her previous role in the IntraSystem Affiliate Billing department of Entergy Services, Inc., working to ensure that Entergy's system-wide costs are allocated appropriately. *See* Tr. 437:5-438:3 (Barras). Toward that end, Plaintiffs use certain Work Orders to capture amounts related to both the direct and indirect costs (*i.e.*, overheads) associated with operating Plaintiffs' highly regulated business. *See* Tr. 465:6–466:7, 473:2–5 (Barras). Overhead amounts are applied to Plaintiffs' recorded direct costs in the form of payroll loaders, capital suspense loaders, and material loaders. *See* Tr. 465:6–15 (Barras). A loader is an adder that is added to a transaction to account for the indirect costs associated with that transaction. *See* Tr. 440:15–18 (Barras). Payroll loaders enable Plaintiffs to determine the fully loaded costs of an employee's wages, including items like payroll taxes, employee benefits, and employee allocations, such as medical, dental, vision, and disability costs. *See* Tr. 440:19–21, 451:10–14, 457:2–8, 465:6–15 (Barras). Payroll loaders assist Plaintiffs by accounting for the actual services that are provided by the company and the actual costs incurred by the company. *See* Tr. 444:15–17 (Barras). Only internal labor costs are burdened with payroll loaders. *See* Tr. 446:3–7 (Barras). The payroll loader amounts are calculated and applied as overhead costs to all applicable utility projects using direct labor (including those related to dry fuel storage)—a mechanism that allows Entergy to appropriately record costs that it has incurred as part of its overall operations. *See, e.g.*, Tr. 446:8–18, 448:19–25 (Barras). Payroll loaders were charged to labor performed at River Bend during the claim period consistent with Entergy's

standard accounting practice to apply the indirect costs associated with labor to the correct projects. *See* Tr. 448:19–25 (Barras).

Entergy uses Resource Codes to distinguish the types of costs associated with a particular transaction. *See* Tr. 449:5–10 (Barras). As pertains here, Entergy uses Resource Codes to identify the transactions containing costs that should be burdened with payroll loaders. *See* Tr. 449:15–24 (Barras). In booking payroll loaders, Entergy uses six distinct Resource Codes, two of which are Resource Codes 019 and 060. *See* Tr. 449:25–450:10 (Barras). Resource Code 019 captures certain benefit costs, and Resource Code 060, which was introduced in 2010, is for stock options. *See* Tr. 449:25–450:10, 451:19–452:13 (Barras). The charges associated with Resource Codes 019 and 060 are included in payroll loaders, and therefore in Plaintiffs' damages claim, because they are indirect costs associated with labor and represent the company's actual costs of doing business. *See* Tr. 454:3–8, 457:13–16, 458:3–20, 459:5–8 (Barras).

Plaintiffs' damages claim also includes certain materials loaders, which the Government challenges in part. *See* DDX 005 (contesting $98,548 in materials loaders). As Ms. Barras testified at trial, materials loaders include costs for operating the storeroom at River Bend and for staffing the "supply chain function." Tr. 463:17–464:25 (Barras). The challenged materials loaders costs relate specifically to two Holtec invoices from 2001 for equipment used for the dry fuel storage project at River Bend; both invoices were assigned Resource Code 095, which, per Entergy's standard accounting practice, triggered a materials loader charge. *See* DDX 005; Tr. 2158:2–2160:25 (Peterson).

In accounting for its overhead costs, Entergy consistently applies those costs in a manner that is in full accordance with Generally Accepted Accounting Principles ("GAAP") and Federal Energy Regulatory Commission ("FERC") regulations. *See* Tr. 455:16-22 (Barras).

Conceptually, the methodology for calculating payroll loaders is very similar to that for calculating capital suspense loaders and materials loaders. *See* Tr. 444:7–14, 463:9–16 (Barras); *see also* PX 960 at 17 ("[D]efendant admits that plaintiffs in this case followed the same corporate procedures to determine and apply capital suspense rates as were followed in *ANO I* and *Grand Gulf I*."); *id.* at 18 ("[D]efendant admits that plaintiffs in this case followed the same corporate procedures to determine and apply materials loaders rates as were followed in *ANO I* and *Grand Gulf I*."). Furthermore, all such loaders are subject to state regulatory review. *See* Tr. 466:22–467:23 (Barras). The Federal Circuit has held that capital suspense loaders and materials loaders are recoverable as a matter of law. *Grand Gulf II*, 666 F.3d at 1312. The payroll and materials loaders that Plaintiffs claim in this case are appropriately included as damages because they are costs that Plaintiffs actually incurred as part of the mitigation efforts undertaken at River Bend and were accounted for in a manner conceptually approved by the United States Court of Appeals for the Federal Circuit.

III. ARGUMENT

A. Legal Standard

The "remedy for breach of contract is damages sufficient to place the injured party in as good a position as it would have been had the breaching party fully performed." *Indiana Michigan Power Co. v. United States*, 422 F.3d 1369, 1373 (Fed. Cir. 2005) ("*Indiana Michigan II*"). Such damages include mitigation expenses of the non-breaching party, specifically its costs of arranging alternatives to the breaching party's required performance. *See* Restatement (Second) of Contracts (1981) § 347, cmt. a, b (expectation damages include costs to "arrange a substitute transaction" and "costs incurred in a reasonable effort, whether successful or not, to avoid loss"); *Hughes Communications Galaxy, Inc. v. United States*, 271 F.3d 1060, 1067–68 (Fed. Cir. 2001).

The United States Court of Appeals for the Federal Circuit has provided the legal framework for determining damages in cases involving the Government's continuing partial breach of the Standard Contract, where the non-breaching party (a plaintiff nuclear plant owner or operator) has taken prudent steps to mitigate its damages prior to and after the breach. *See Indiana Michigan II*, 422 F.3d at 1374–75. Indeed, the Federal Circuit's seminal decision on the recovery of damages in the partial breach, SNF context provides that "[d]amages for a breach of contract are recoverable where: (1) the damages were reasonably foreseeable by the breaching party at the time of contracting; (2) the breach is a substantial causal factor in the damages; and (3) the damages are shown with reasonable certainty." *Indiana Michigan II*, 422 F.3d at 1373 (citing *Energy Capital Corp. v. United States*, 302 F.3d 1314, 1320 (Fed. Cir. 2002)). "Plaintiffs bear the burden to establish the alleged mitigation costs were caused by the breach." *Grand Gulf II*, 666 F.3d at 1312; *see also Yankee Atomic Elec. Co.*, 536 F.3d at 1273–74 (requiring a plaintiff to show causation utilizing the acceptance rates in the 1987 ACR and to present a "comparison between the breach and non-breach worlds").

The standard for recovery of damages occurring during the ongoing partial breach is similarly well-settled. *See Yankee Atomic Elec. Co.*, 536 F.3d at 1273 (affirming the use of the substantial causal factor test but requiring the use of certain SNF acceptance rates in modeling the breach and non-breach worlds). This Court has also consistently held that the Government, as the breaching party, bears the burden of showing that the mitigation efforts of Plaintiffs, as the non-breaching parties, were unreasonable. *See*, *e.g.*, *Carolina Power & Light Co. v. United States*, 82 Fed. Cl. 23, 44 (2008), *aff'd in part, vacated in part, and remanded*, 573 F.3d 1271 (Fed. Cir. 2009); *ANO I*, 79 Fed. Cl. at 52 (citing *Tennessee Valley Authority v. United States*, 69 Fed. Cl. 515, 523 (2006)).

As established at trial and as set forth herein, Plaintiffs have met their burden of submitting a "hypothetical model establishing what [their] costs would have been in the absence of breach." *Energy Nw. v. United States*, 641 F.3d 1300, 1305 (Fed. Cir. 2011). While the Federal Circuit in *Energy Northwest* required a SNF plaintiff to present a plausible, hypothetical but-for world for purposes of assessing plant modifications (which Plaintiffs did at trial), it did not dispense with the established body of case law recognizing that reasonable and foreseeable mitigation damages caused by the breach are recoverable. *See, e.g.*, *id.*; *Indiana Michigan II*, 422 F.3d at 1557 (quoting Restatement (Second) of Contracts § 357, cmt. c (1981) ("[T]he general principle is that all losses, however described, are recoverable.")).

Furthermore, Plaintiffs, the non-breaching parties, were not required at trial to present a non-breach world model that favored the Government, but rather a plausible model reflecting how Plaintiffs would have operated had DOE performed. *See, e.g.*, *Koby v. United States*, 53 Fed. Cl. 493, 497 (2002) (citing *In re Kellett Aircraft Corp.*, 186 F.2d 197, 198–99 (3d Cir. 1950) ("The rule of mitigation of damages may not be invoked by a contract breaker as a basis for hypercritical examination of the conduct of the injured party, or merely for the purpose of showing that the injured person might have taken steps which seemed wiser or would have been more advantageous to the defaulter.")); *Ketchikan Pulp Co. v. United States*, 20 Cl. Ct. 164, 166 (1990) (holding that the injured party does not have to undertake extraordinary efforts to "ferret out the single best situation which will absolutely minimize the breaching party's damages"). A plaintiff is "not precluded from recovery . . . to the extent that [it] has made reasonable but unsuccessful efforts to avoid loss." *Indiana Michigan II*, 422 F.3d at 1375 (quoting Restatement (Second) of Contracts § 350(2)).

At trial, through the testimony of Ms. Supko and Mr. Metcalfe, Plaintiffs presented models plausibly depicting how River Bend would have operated had DOE performed. These models meet all of the standards articulated to date by the Federal Circuit for partial breach, SNF damages cases like the one now before this Court. Such models, however, cannot devolve into the realm of speculation. As *Energy Northwest* itself notes: "*Carolina Power* properly urges caution when speculating about the future in a case of partial breach—usually, the proper approach is to wait for those events to actually occur, and to resist premature conclusions." *Energy Nw.*, 641 F.3d at 1306–07 (citing *Carolina Power*, 573 F.3d at 1277).

The Federal Circuit has also recognized, post–*Energy Northwest*, that the trial court is well-positioned to exercise its own good judgment in weighing the competing claims of the parties in assessing SNF damages, even absent the presentation of a detailed non-breach world model. *See Grand Gulf II*, 666 F.3d at 1310, 1313. Finally, as the Federal Circuit recognized in *Energy Northwest*, where the Government has "obstructed [Plaintiff] from presenting, on the available evidence, its best possible model of what the DOE would have done absent breach," the Court has "a variety of remedial measures available, up to and including the resolution of fact issues against" the Government. *See Energy Nw.*, 641 F.3d at 1308; *see also Southern Nuclear Operating Co. v. United States*, 637 F.3d 1297, 1304 (Fed. Cir. 2011).

B. Plaintiffs Have Established That They Are Entitled to All Mitigation Damages Claimed in This Case

As noted above, the Federal Circuit's original decision on the recovery of damages in the partial breach, SNF context provides that damages are recoverable where: (1) the damages were reasonably foreseeable by the breaching party, (2) the breach is a substantial causal factor in the damages, and (3) the damages are shown with reasonable certainty. *Indiana Michigan II*, 422

F.3d at 1373 (citing *Energy Capital Corp.*, 302 F.3d at 1320). These three requirements are all met here for each of the discrete elements of Plaintiffs' $49.7 million claim.

First, over the past decade of SNF jurisprudence, the Federal Circuit has recognized that the costs of additional onsite storage at a plaintiff utility's plant were inherently foreseeable in the event of DOE nonperformance under the Standard Contract. Indeed, two of the main objectives underlying the NWPA and the Standard Contract were (1) ensuring that utilities would not have to build any additional at-reactor storage after 1998, and (2) working off the backlog of SNF already stored onsite as of 1998. *See Indiana Michigan II*, 422 F.3d at 1375 ("Having been placed in a position where they are required to find alternate storage for SNF, the [plaintiff] utilities must *de facto* accept responsibility to guard against the environmental impact of improperly-disposed and maintained SNF, a situation which the NWPA was enacted to avoid"); *Commonwealth Edison Co. v. United States*, 56 Fed. Cl. 652, 667 (2003) ("deposition testimony of several DOE officials involved with the SNF program supports plaintiff's assertion that the intent of the NWPA and the parties was to avoid the construction by utilities of additional at-reactor storage"). Plaintiffs respectfully submit that the underlying rationale of these decisions remains valid today, and provides sound precedent for determining that Plaintiffs' claimed costs were foreseeable. Moreover, the Government did not raise any challenge to the foreseeability of Plaintiffs' claimed costs at trial.

Second, with regard to causation, Plaintiffs established at trial that the costs in question would not have been incurred but for DOE's partial breach of the Standard Contract. *See, e.g.*, Tr. 52:7–21, 67:12–68:4 (Rives); Tr. 126:20–154:11 (Campbell) (offering testimony that the work performed and costs incurred under the Work Orders forming the basis of Plaintiffs' claims would not have been necessary had River Bend not needed to implement dry fuel storage).

Notably, the costs incurred to procure dry fuel storage casks and to load SNF into those casks at River Bend—efforts that Plaintiffs reasonably undertook to store SNF that DOE was obligated, but has failed, to accept under the Standard Contract—constitute the vast majority of Plaintiffs' damages in this case. *See, e.g.,* PDX 1; PDX 4. Specifically, all of the five major components of Plaintiffs' damages claim are inextricably linked to Plaintiffs' dry fuel storage efforts at River Bend: (1) Dry Fuel Storage Facility and Procurement of Initial Three Casks ($28,696,000); (2) Additional Cask Procurement ($13,911,000); (3) Cask Loading ($3,682,000); (4) Additional Security ($1,812,000); and (5) NRC Fees ($1,587,0000). *See* PDX 1. In one of its trial demonstratives, the Government itself recognizes that most of Plaintiffs' claimed damages are related to Plaintiffs' dry fuel storage efforts. *See* DDX 001 at 6.

At trial, Mr. Frank Rives, the Director of Nuclear Fuels at Entergy Services, Inc., testified that, had DOE commenced contractual performance in 1998, the construction of the dry fuel storage facility at River Bend would not have been necessary, and Plaintiffs would not have needed to procure and load dry fuel storage casks. *See* Tr. 52:7–21, 67:12–68:4 (Rives). Through the testimony of Plaintiffs' technical expert, Ms. Eileen Supko of Energy Resources International, and Plaintiffs' damages expert, Mr. Kenneth Metcalfe[12] of the Kenrich Group LLC, Plaintiffs established that, in the non-breach world, construction of the River Bend ISFSI and procurement of dry fuel storage casks would not have been required. *See* Section II.A.3, *supra* (establishing acceptance rates for River Bend); Tr. 1374:18–20, 1382:21–1383:3 (Metcalfe) (concluding based on his fuel management model that Plaintiffs would not have needed to construct an ISFSI at River Bend but for DOE's breach); PX 126 (Spreadsheet – Spent

[12] Mr. Metcalfe was qualified as an expert in the area of "economic damages and regulatory accounting in the public utilities industry." Tr. 1318:20–1319:1 (Statement of the Court).

Nuclear Fuel Inventory, Breach Scenario); PDX 33 (Metcalfe Demonstratives) at 25. Various fact witnesses provided similar, supporting testimony. *See, e.g.,* Tr. 52:7–21, 67:12–68:4 (Rives); Tr. 129:16–19 (Campbell); Tr. 2225:7–2226:7, 2227:4–23, 2211:14–20 (James). Accordingly, the causation requirement for the dry fuel storage project and associated costs has undoubtedly been met.

Third, regarding "reasonable certainty," the Federal Circuit's predecessor court held that it is "sufficient if the evidence adduced enables the court to make a fair and reasonable approximation of the damages." *Locke v. United States*, 151 Ct. Cl. 262, 267–68 (1960). "If a reasonable probability of damage can be clearly established, uncertainty as to the amount will not preclude recovery." *Id*. Plaintiffs presented clear evidence at trial regarding the reasonable certainty of their damages. *See, e.g.*, Section II.C, *supra*; Section III.C.4, *infra*. That evidence, coupled with the auditable methodology of Mr. Metcalfe's expert report, and supported by voluminous company records in the work papers accompanying Mr. Metcalfe's expert report and supplements,[13] more than meet the "fair and reasonable approximation" standard in *Locke*. In addition, the damages sought in this case are "cut off" as of December 31, 2010; thus, they have already been incurred and are by definition more reasonably certain than the future lost profits of a new venture that the Federal Circuit affirmed in, for example, *Energy Capital Corp.*, 302 F.3d at 1320.

[13] At trial, Mr. Metcalfe identified and described the work papers accompanying his expert report and supplements, which are organized into various binders. *See* Tr. 1531:8–1538:17 (Metcalfe). Illustrative examples of records and the Kenrich work papers were admitted as substantive evidence and as demonstrative exhibits at trial. *See, e.g.*, Tr. 1401:22 (statement of the Court admitting PX 792); Tr. 1409:12–13 (statement of the Court admitting an excerpt of PX 802); PDX 33 (Metcalfe Demonstratives).

Moreover, the Government stipulated that Plaintiffs provided sufficient support for $47,829,675 of their incurred costs. *See* Joint Stipulations for Trial, ECF No. 220 (per Stipulation No. 4, the Government "agrees that $47,829,675 sought in Plaintiffs' Damages Claim is supported by adequate contemporaneous documentation to demonstrate that such costs were incurred for the particular activity to which they have been assigned in Plaintiffs' accounting system."). As to the remaining costs that the Government claims are unsupported, Mr. Metcalfe's testimony, discussed more fully in Section III.C.4 below, described in detail how these costs were in fact supported by various invoices and accounting documents and that—in his opinion as a Certified Public Accountant ("CPA")—he was "[h]ighly confident" that the amounts were paid by River Bend and properly included in Plaintiffs' claim. *See, e.g.,* Tr. 1297:20–23, 1539:1–12 (Metcalfe). Consequently, Plaintiffs have satisfied the reasonable certainty requirement for the entirety of their damages claim.

In summary, the principles underlying the elements of foreseeability, causation, and reasonable certainty are well-settled in SNF cases before this Court and the Federal Circuit. As detailed more fully below, Plaintiffs respectfully assert that they have met all of the elements of this accepted methodology in presenting their damages claim here, and that they are entitled to all damages claimed.

C. The Government Has Failed to Satisfy Its Burden to Show That Plaintiffs' Mitigation Efforts Were Unreasonable, and the Government's Proposed Offsets and Reductions to Plaintiffs' Claims Are Speculative and Flawed

Plaintiffs' $49.7 million claim for damages incurred through December 31, 2010 reflects the prudent actions of an operating utility attempting to mitigate the direct and foreseeable harm that resulted from the Government's partial breach of the Standard Contract. As the non-breaching party, Plaintiffs had and have a duty to mitigate losses that could have been avoided by "reasonable efforts." *Robinson v. United States*, 305 F.3d 1330, 1333 (Fed. Cir. 2002) (citing

Restatement (Second) of Contracts § 350 cmt. b). Assuming, therefore, that the other elements required to prove damages are met, if Plaintiffs' efforts are reasonable, then they are recoverable. *See Indiana Michigan II*, 422 F.3d at 1375 ("Once a party has reason to know that performance by the other party will not be forthcoming, . . . he is expected to take such affirmative steps as are appropriate in the circumstances to avoid loss by making substitute arrangements or otherwise.").

Whether the injured party's mitigation efforts are reasonable is determined under the circumstances. *See Home Savings of Am. v. United States*, 399 F.3d 1341, 1353 (Fed. Cir. 2005); *see also Northern Helex Co. v. United States*, 455 F.2d 546, 553 (Ct. Cl. 1972) (guiding principle in determining mitigation is "whether in individual circumstances, the [claimant] exercised 'reasonable commercial judgment'"). In more recent cases involving particular cost elements (specifically, plant modification costs), the Federal Circuit has explained that this Court must also determine whether the plaintiff has considered its non-breach world costs, so as not to put the injured party in a better position than if the breach had not occurred. *See, e.g.*, *Yankee Atomic Elec. Co.*, 536 F.3d at 1273–74 (requiring model depicting DOE performance under 1987 ACR acceptance rates); *Energy Nw.*, 641 F.3d at1306–08 (requiring consideration of non-breach world plant modifications).

Whether the evidence in the record supports the recoverability of certain costs in Plaintiffs' claim is a matter reserved for the trier of fact—here, the Court. In other words, the Court is tasked with rendering findings of fact on the three elements required to recover damages, including the key element of causation. *See, e.g.*, *Inwood Laboratories, Inc. v. Ives Laboratories, Inc.*, 456 U.S. 844, 856 (1982) ("Determining the weight and credibility of the evidence is the special province of the trier of fact").

To the extent that the Government argues that it is sufficient or appropriate for the Government's proffered experts to specify a litany of "non-breach" scenarios to support the Government's proposed damages deductions, these deductions should be subject to at least the same evidentiary burden discussed above (that is, "reasonable certainty"), if not a more rigorous standard. Otherwise, Plaintiffs, as the non-breaching party, would bear an unjustifiably disproportionate risk at trial regarding proof of damages as compared to the Government. *See In re Kellett Aircraft*, 186 F.2d at 198–99 (rejecting the breaching party's "hypercritical examination of the conduct of the injured party"); *see also Southern Nuclear*, 637 F.3d at 1304 (requiring the "government to be precise about the nature and amount of the avoided costs it claims were involved" and noting that "[s]hould the government fail to timely point out specific shortcomings in the plaintiff's causation proof on the issue of saved costs and, in appropriate circumstances, produce supporting evidence, the court is entitled to treat the issue as waived.").

Where the Government cannot, or will not, respond to discovery requests regarding how it would have performed its contractual obligations in the non-breach world, the burden of proving the non-breach world lies with the Government, not with Plaintiffs. *See, e.g., Boston Edison Co. v. United States*, 658 F.3d 1361, 1369–70 (Fed. Cir. 2011) ("If such a model cannot be produced without assistance from the breaching party, and the breaching party fails to aid the plaintiff in constructing a model of the non-breach world, the trial court may be justified in drawing factual inferences regarding that issue in favor of the plaintiff.") (citing *Energy Nw.*, 641 F.3d at 1309); *LaSalle Talman Bank, F.S.B. v. United States*, 317 F.3d 1363, 1374 (Fed. Cir. 2003) ("when damages are hard to estimate, the burden of imprecision does not fall on the innocent party"); *Locke*, 151 Ct. Cl. at 267 ("The defendant who has wrongfully broken a contract should not be permitted to reap advantage from his own wrong by insisting on proof

which by reason of his breach is unobtainable.") (citation omitted). The Government has, to date, fallen short of meeting its initial burden of establishing whether and what costs Plaintiffs would have incurred regardless of DOE's breach. *See System Fuels, Inc. v. United States*, 120 Fed. Cl. 737, 747–52 (2015) (Fed. Cir. docketed June 11, 2015) ("*ANO III*"). Not only has the Government fallen short of its burden, it has unjustifiably refused to support its position in discovery. In particular, the Government has failed to provide any meaningful information as to the type of cask (including its weight, dimensions, and capacity) that DOE would have brought to River Bend had DOE performed. *See generally, e.g.*, PX 960.

As noted above, the Government contests $13.8 million of Plaintiffs' damages claim. The following chart identifies the issues, and the amounts associated therewith, that the Government challenges:

1.	Site Modifications to Handle Heavy Loads	$ 3,122,653
2.	Site Modifications to Load a Cask	$ 1,075,196
3.	Actions to Load SNF	$ 5,702,670[14]
4.	Payroll Loader Costs	$ 267,289
5.	Material Loader Costs	$ 98,548
6.	Allegedly Unsupported Costs	$ 226,589
7.	Additional Security Costs	$ 1,691,238
8.	NRC Part 171 Fees	$ 1,586,586

[14] The Government's damages expert, Mr. Robert Peterson, did not address or discuss this proposed deduction for cask loading costs in his expert report (DX 097) or trial testimony. *See* DDX 005 (Peterson demonstratives). Mr. Peterson challenges only $8,564,357 of Plaintiffs' claim, which does not include this proposed deduction for cask loading costs. *See* DDX 005. Plaintiffs dispute both the amount and basis for the Government's proposed deduction of $5.7 million for cask loading costs.

Total deductions proposed by the Government	$ 13,770,768

See, e.g., DDX 001 at 6.

Plaintiffs addressed each of these claim elements at trial. Plaintiffs respectfully submit that all of these disputed costs are recoverable since they were foreseeable, were caused by the Government's breach, and can be proven with reasonable certainty. Individual cost elements challenged by the Government are discussed below.

1. This Court Should Award in Its Entirety Plaintiffs' Claim for Site Modifications to Handle Heavy Loads and to Load a Storage Cask

In this case, the Government's experts propose to deduct approximately $4.1 million (combining line items 1 and 2 from the table above) from Plaintiffs' damages claim for extensive and costly plant modifications on the theory that these costs would have been incurred in the non-breach world. *See, e.g.*, DDX 001 at 5–6. Those challenged costs are for, *inter alia*, the installation of redundant rigging on the River Bend Fuel Building crane, the addition of impact limiters in the washdown pit and cask pool, the installation of chiller lines, the construction of a concrete pedestal in the cask washdown pit, the installation of a jib crane, improvements to the heavy haul path, and the construction of a turning pad and outside work platform.

Similar arguments made by the Government challenging the types of site modifications at issue here have been considered and rejected in other SNF cases. These other decisions provide persuasive support for the various site modification costs that Plaintiffs claim here. For instance, this Court in *Grand Gulf I* awarded the plaintiffs $2,670,203 in costs for constructing the cask transfer path and widening the haul path; $798,000 in costs for replacing the Turbine-Generator Storage Building with the Dry Fuel Equipment Storage Building; and $31,000 in costs for installing ISFSI electrical and security systems, which included extending the Protected Area to encompass the ISFSI. *See Grand Gulf I*, 78 Fed. Cl. at 800–05. The Court in that case also

awarded the plaintiffs various other costs for modifications to the Auxiliary Building at that plant. *See id.* (awarding $851,526 in costs for modifying the railroad bay floor, $533,323 in costs for civil engineering work in cask handling areas necessitated by the use of Holtec casks, $381,401 in costs for electrical service modifications, $353,396 in costs for relocating the horizontal fuel transfer system insert storage rack, and $310,688 in costs for designing and installing the auxiliary building bay door). Notably, the Federal Circuit explicitly affirmed this Court's decision to award all of the aforementioned claimed plant modification costs in *Grand Gulf I*. *See Grand Gulf II*, 666 F.3d at 1313. Recently, in Round 2 of the Grand Gulf plant case, this Court awarded the plaintiffs $460,978 for modifications to the haul path at the Grand Gulf plant, and $550,166 for costs incurred to install a work platform in the cask washdown pit. *See System Fuels, Inc. v. United States*, 120 Fed. Cl. 635, 655, 675 (2015) (Fed. Cir. docketed June 11, 2015) ("*Grand Gulf III*").

Moreover, in a different SNF case involving the Arkansas Nuclear One ("ANO") plant, this Court awarded all of the plaintiffs' claimed costs to upgrade the crane used to handle Holtec casks, designated the L-3 crane. *See ANO I*, 79 Fed. Cl. at 61 ("The court finds that [the plaintiffs'] decision to upgrade the L-3 crane was a reasonable step in mitigating the damages caused by DOE's nonperformance."); *ANO I Remand*, 110 Fed. Cl. at 602 ("Plaintiffs have demonstrated with reasonable certainty that the L-3 crane upgrade could reasonably have been avoided if DOE had performed, and thus they are entitled to full recovery for the costs of that upgrade."). Recently, in Round 2 of the ANO plant case, this Court awarded the plaintiffs $65,182 for maintenance work performed on the rail lines at ANO. *See ANO III*, 120 Fed. Cl. at 765.

A number of engineers and technical personnel who either currently work or did work at River Bend—including Jerrell Campbell, Eve Clevenger, Paul Gritton, and Andre James—testified at trial, and explained why the implementation of the Holtec dry fuel storage system required plant modifications at River Bend. *See* Section II.C, *supra*. As in the *Grand Gulf I* and *ANO I* cases, the comparable costs incurred by Plaintiffs here are directly attributable to DOE's breach, are specific to the Holtec storage cask system, and should be awarded to Plaintiffs in their entirety.

During the Court's visit to River Bend this past June, and through the demonstratives covered in the testimony of Mr. Campbell, Ms. Clevenger, and Mr. James, the Court had an opportunity to see firsthand the various modifications that Plaintiffs were forced to implement as a result of the dry storage effort at River Bend. *See, e.g.*, PDX 5; PDX 12; PDX 29. Through the testimony of these fact witnesses and Ms. Supko, and as discussed above, the Court was presented with persuasive evidence as to why the plant modifications would not have been necessary in the absence of DOE's breach and the resulting need to implement dry fuel storage efforts at River Bend. *See* Section II.C, *supra*; PX 3 (Aug. 12, 2011 Eileen Supko Supplemental Expert Report Regarding DOE's Plausible Non-Breach Performance and Plant Modifications At River Bend Station) at 3, 22–23.

In sum, as in the *Grand Gulf* and *ANO* cases, the comparable costs incurred by Plaintiffs here are directly attributable to DOE's breach, are specific to the Holtec storage cask system, and should be awarded to Plaintiffs in their entirety.

2. This Court Should Award Plaintiffs' Claim for Cask Loading Costs in Its Entirety

Plaintiffs' damages claim includes costs incurred to load SNF to Holtec dry fuel storage casks at River Bend. Based on its opening statement, the Government challenges $5,702,670 of

those costs for cask loading activities, apparently because the Government contends that such costs would have been incurred in the non-breach world. *See* DDX 001 at 6, 12. The Government's technical expert, Mr. Warren Brewer, theorized at trial that all of Plaintiffs' actual cask loading costs should be subtracted from Plaintiffs' damages claim because these same costs would have been incurred in loading casks to DOE. *See* DDX 004 (Brewer Demonstratives) at 2, 35–36. The Government's damages expert, Mr. Robert Peterson, however, testified that, other than fuel sipping costs, Mr. Peterson is not questioning Plaintiffs' claimed cask loading costs. *See* Tr. 2179:5–2180:10 (Peterson). Mr. Peterson has also not provided any explanation for the computation of the $5,702,670 in alleged loading costs that the Government now challenges. *Cf.* DX 097 (Oct. 5, 2011 Expert Report of Robert A. Peterson). Accordingly, the Government has proffered no evidence that explains what costs Plaintiffs would have incurred to load DOE transportation casks in the non-breach world, or why those costs total $5.7 million.

To the extent that the Government will argue in its post-trial brief that Plaintiffs have not sustained the burden of proving their actual, incurred cask loading costs to a reasonable certainty, the Government is demonstrably wrong. Various fact witnesses at trial, including Mr. Campbell, Ms. Clevenger, and Mr. Vukovics, explained the effort associated with loading Holtec storage casks at River Bend. *See* Section II.C, *supra*. Mr. Metcalfe then reviewed the cognizant Work Orders and monetized those costs.

Furthermore, as discussed more fully below, the Government's failure to provide meaningful information as to how it would have performed in the non-breach world means that it would require considerable speculation to reasonably estimate the costs of loading SNF to DOE. Only the Government has the ability to describe how the Government would have performed had it not breached its contractual obligations. Where the absence of that information falls squarely

at the Government's feet (it was the Government that cancelled the Yucca Mountain program and the related cask development efforts, not Plaintiffs), the Government's failure to provide the information as to how it would have performed means that it would require considerable guesswork for Plaintiffs to determine their costs to load DOE casks. The Government seeks unfairly to place the consequences of the Government's own failure on the Plaintiffs. *See Locke*, 151 Ct. Cl. at 267 ("The defendant who has wrongfully broken a contract should not be permitted to reap advantage from his own wrong by insisting on proof which by reason of his breach is unobtainable.") (citation omitted); *id.* ("The most elementary conceptions of justice and public policy require that the wrongdoer shall bear the risk of the uncertainty which his own wrong has created.") (citation omitted).

All of the costs that Plaintiffs incurred to load Holtec storage casks constitute a damage mitigation effort that is completely different from what loading transportation casks to DOE will entail, if and when DOE commences performance. If Plaintiffs do not recover their actual, incurred storage cask loading costs now, they will not be made whole. And, their position could even worsen if they must incur additional loading costs in the future to load DOE transportation casks.

Plaintiffs demonstrated definitively at trial that the costs to load the specific Holtec welded-closure storage casks would not have been incurred in any version of the non-breach world. *See* Sections II.C, III.B, *supra*. Any reductions to Plaintiffs' damages for cask loading costs are therefore more properly characterized as an offset for which the Government bears the burden to prove that the costs have actually been avoided, rather than deferred. *See Energy Nw.*, 641 F.3d at 1305–06.

a. Reconciling *Yankee Atomic*, *Carolina Power*, and *Energy Northwest*

Properly understood, *Energy Northwest* seeks to harmonize two earlier decisions of the Federal Circuit—namely, *Yankee Atomic* and *Carolina Power*—by establishing the time frames and circumstances under which their standards apply, specifically in the context of plant modification costs. *See Energy Nw.*, 641 F.3d at 1305–07 (comparing *Yankee Atomic*, 536 F.3d 1268, with *Carolina Power*, 573 F.3d 1271, and noting that "[t]hese cases address separate aspects of the damages analysis"). In clarifying the interplay between the standards in *Yankee Atomic* and *Carolina Power*, *Energy Northwest* notes that, in the context of plant modification costs, a SNF plaintiff must first establish causation by showing that its costs to perform mitigation efforts would not have been necessary in a plausibly drawn hypothetical non-breach world before the burden shifts to the Government to prove entitlement to an offset. *See Energy Nw.*, 641 F.3d at 1307 ("Before considering any offsets to the award, the trial court had an obligation to first establish that the entire awarded damages were actually caused by the breach."). Once a plaintiff has shown that certain costs would not have been incurred in a plausible non-breach world (for example, by establishing the costs related to long-term onsite SNF storage efforts), the burden then shifts to the Government to prove entitlement to an offset by demonstrating that the plaintiff has avoided certain costs as a result of its mitigation efforts. If, however, the costs have not been avoided but rather simply deferred, then the Government has failed to satisfy its burden. *See Carolina Power*, 573 F.3d at 1277.

To date, *Carolina Power* is the only decision of the Federal Circuit that squarely addresses the recovery of cask loading costs by a plaintiff utility. *See generally id*. It holds that such costs are recoverable, and that costs for loading DOE casks are "deferred [] costs." *Id.* at 1277. *Energy Northwest* did not overrule *Carolina Power*, which determined that loading to

DOE is a deferred activity, the costs of which cannot be considered until such loading occurs when DOE commences performance. *See id*. This case presents essentially the same issue that the Federal Circuit addressed and resolved in *Carolina Power*.

b. Plaintiffs Would Not Have Incurred Any Storage Cask Loading Costs in the Non-Breach World

Here, it is undisputed that, had DOE performed, Plaintiffs would not have needed to implement dry fuel storage at River Bend, and thus would not have needed to load SNF to any Holtec welded-closure dry storage casks. *See* Section II.C, *supra*. In addition, the Federal Circuit affirmed the holding in *Sacramento Mun. Util. Dist. v. United States*, 70 Fed. Cl. 332, 372 (2006), *aff'd in part, rev'd in part*, 283 F. App'x 766 (Fed. Cir. 2008), in which the trial court determined that, because "DOE and [the plaintiff] both contemplate that DOE will still perform under the Standard Contract at some future date, any benefit to SMUD, because of delayed loading costs, would be entirely speculative." The ruling in *Sacramento Municipal Utility District* is fully consistent with the Federal Circuit's view that "recovery for speculative damages is precluded." *Indiana Michigan II*, 422 F.3d at 1373. It is also in full accord with the holding of the Federal Circuit in *Carolina Power*, 573 F.3d at 1277, which specifically considered and rejected the Government's claim for cask loading offsets. Just as there are no future damages compensable today, so too can there be no future offsets, as the Federal Circuit recently affirmed. *See Sacramento Mun. Util. Dist. v. United States*, 566 F. App'x 985, 997 (Fed. Cir. 2014). As such, because Plaintiffs would not have incurred costs to load SNF to Holtec welded-closure dry storage casks had DOE performed, and because the Federal Circuit has determined that costs to load to DOE are deferred costs rather than avoided costs, Plaintiffs are entitled to the entirety of their claimed storage cask loading costs.

Nothing in *Energy Northwest* or its reading of *Yankee Atomic* (which was decided before *Carolina Power*) displaces *Carolina Power*'s applicability to cask loading costs or its place as the second step of the inquiry regarding the recoverability of plant modification costs. Specifically drawing a distinction between the cask loading scenario presented in *Carolina Power* and the issues arising in both *Yankee Atomic* and *Energy Northwest*, *Energy Northwest* noted that "*Carolina Power* presents a separate, if superficially similar, issue." *Energy Nw.*, 641 F.3d at 1306. As if to further highlight the differences between the issues, *Energy Northwest* described the policy rationale in *Carolina Power* as follows:

> The underlying logic [in *Carolina Power*] was that the court would not draw premature conclusions about what the utilities future loading costs might or might not be. It was impossible to award the government its full requested offset without concluding that the utilities' future loading costs would be zero. The court declined to so speculate . . . .

Energy Nw., 641 F.3d at 1306. Similar to *Carolina Power*, the issue here relates specifically to cask loading costs.

Any attempted application of the *Energy Northwest* opinion (which addressed plant modification costs to transfer fuel into casks that may or may not have been required during the claim period in the hypothetical non-breach world, not costs that may or may not be offset depending upon how DOE is hypothesized to act in the future) to the deferred cask loading costs at issue here is a misuse of the opinion and, if adopted, would result in an error of law as well as manifest injustice to Plaintiffs. The purpose of the *Energy Northwest* but-for world model is to isolate costs that were not caused by the Government's breach. For example, if the Fuel Building in which casks are loaded with SNF at River Bend had no door, such that empty casks could not be moved into the building and loaded casks could not be removed from the building, then a door would need to be installed in both the breach and non-breach worlds. The but-for model thus shows that the door installation was not caused by the Government's breach, but by a

deficiency in the plant design. Here, by contrast, the record demonstrates that if DOE had performed, Plaintiffs would have never needed to implement dry fuel storage at River Bend, and would have never needed to load a Holtec welded-closure storage cask. Indeed, if DOE had performed, Plaintiffs would have been loading DOE-supplied bolted-closure transportation casks, and only those casks, beginning in 2006. Plaintiffs' loading of Holtec storage casks was thus undeniably caused by DOE's breach because this particular task would have never occurred in the non-breach world.

The objective of the *Energy Northwest* non-breach world modeling exercise is to ascertain causation *vel non* for plant modification costs included in a damages claim. Where the facts indisputably prove, however, that costs incurred during a claim period are unique to the breach world, as storage cask loading costs are here, the but-for world modeling task as to those costs is inapplicable. Plaintiffs proved that loading storage casks is an activity unique to the breach world, and any further non-breach world modeling is not required (nor would it be meaningful).

To this point, for costs that will need to be incurred in the future, the but-for model tells us nothing about causation. One must look at whether the costs will be incurred in the future under the Standard Contract. Given that DOE has stated unequivocally that it will not accept the loaded storage casks under the existing Standard Contract, *see, e.g.,* PX 960 at 15 ("[D]efendant admits that, absent an amendment to the Standard Contract, canistered fuel could not be accepted for transport and disposal by DOE."), there can be no dispute that Plaintiffs will incur costs to unload the SNF currently in the Holtec welded-closure storage casks and reload that SNF to a DOE transportation cask in the future.

Additionally, granting Plaintiffs recovery of their storage cask loading costs is fully consistent with the Federal Circuit's reasoning in *Dominion Resources, Inc. v. United States*, 641 F.3d 1359 (Fed. Cir. 2011). There, the Federal Circuit rejected the Government's argument that it was entitled to benefit from the fact that the utility had not yet paid the one-time fee to DOE, and the Standard Contract offered a favorable interest rate on such deferred payments. *See id.* at 1365. The Federal Circuit held similarly in *Yankee Atomic*: "Just as the utilities cannot now collect damages not yet incurred under the ongoing contract, *see Indiana Michigan II,* 422 F.3d at 1376–77, the Government cannot prematurely claim a payment that has not become due." *Yankee Atomic*, 536 F.3d at 1281. In the instant case, Plaintiffs have already incurred the claimed damages—that is, costs to load Holtec welded-closure storage casks. Plaintiffs have not yet incurred any costs to load DOE-supplied bolted-closure transportation casks. In other words, Plaintiffs have already incurred costs to perform an activity that was caused by DOE's breach, costs neither required nor anticipated by the Standard Contract. Plaintiffs have not yet, but will eventually when DOE performs, incur costs to perform a different activity required by the Standard Contract (that is, the loading of DOE transportation casks), the costs of which are Plaintiffs' responsibility. Just like the one-time fee in *Yankee Atomic*, Plaintiffs' obligations to incur costs to load SNF to DOE transportation casks has not yet become due because DOE has not yet performed. It is contrary to law to deny Plaintiffs recovery of costs already incurred to perform an activity outside of their contractual obligations because Plaintiffs will at some unknown time incur some undefined and uncertain costs to fulfill their contractual obligations. As the Federal Circuit noted in *LaSalle Talman Bank*, "when damages are hard to estimate, the burden of imprecision does not fall on the innocent party." *LaSalle Talman Bank*, 317 F.3d at 1374; *see also Locke*, 151 Ct. Cl. at 267 ("The defendant who has wrongfully broken a contract

should not be permitted to reap advantage from his own wrong by insisting on proof which by reason of his breach is unobtainable.") (citation omitted).

c. The Government Failed to Establish that DOE Will Remove the Loaded Holtec Storage Canisters

The Government contends that, because DOE will eventually remove the loaded Holtec canisters from River Bend, Plaintiffs will avoid any loading costs that they may be compensated for today. The Government, however, failed to establish that DOE will accept the SNF in the Holtec welded-closure storage casks in which that fuel is currently stored at River Bend. Further to that point, Plaintiffs demonstrated at trial that they will need to remove the SNF that is currently in Holtec storage casks and reload that SNF to DOE when DOE performs.

DOE has stated that "the Department of Energy's position has been since 1992 that the standard contract does not cover the acceptance of spent fuel while contained in multi-element sealed canisters." Tr. 1102:18–21 (Zabransky), Nov. 7, 2014, *System Fuels, Inc. v. United States*, No. 03-2621C (Fed. Cl.) (Williams, J.) ("*Waterford* Trial Tr.")[15]; PX 960 at 13 ("[D]efendant admits that the Standard Contract for the River Bend plant will have to be amended to provide for the acceptance of canistered fuel."). Even further, DOE's position is that it will not accept canistered SNF, such as the SNF that is in Holtec dry storage canisters at River Bend, under the Standard Contract unless there is an amendment to the Standard Contract, the

[15] The parties filed a Joint Motion to Admit Prior Trial Testimony of David Zabransky, ECF No. 215, which the Court subsequently granted. *See* Order, ECF No. 216. The parties' motion sought to admit as substantive evidence in this case the prior trial testimony of David K. Zabransky, which Mr. Zabransky provided in the November 2014 trial of *System Fuels, Inc., Entergy Louisiana, Inc., and Entergy Louisiana, LLC v. United States* ("*Waterford*"), No. 03-2621C (Fed. Cl.) (Williams, J.). As explained in the parties' motion, the parties agreed that, references in Mr. Zabransky's testimony to "Waterford," "Waterford 3," or any variation thereof, shall be considered references to "River Bend," "River Bend Station nuclear power plant," or the appropriate variation thereof. *See* Joint Mot. 2, ECF No. 215.

terms of which DOE has refused to define. *See Waterford* Trial Tr. 1102:15–1110:15 (Zabransky); *see also Waterford* Trial Tr. 1104:11–23 (Zabransky) (testifying that DOE's position is that "a multi-assembly canister was not an acceptable waste form under the contract without a modification of the contract"). Mr. David Zabransky, former Director of the Office of Standard Contract Management for DOE and Contracting Officer for the Standard Contract, previously testified that, absent an amendment to the Standard Contract, SNF in dry casks will need to be unloaded from those casks and loaded into DOE-supplied transportation casks. *See Waterford* Trial Tr. 1102:24–1103:12 (Zabransky); PX 960 at 15 ("[D]efendant admits that, absent an amendment to the Standard Contract, canistered fuel could not be accepted for transport and disposal by DOE."). Mr. Zabransky also acknowledged that, in the non-breach world, none of Plaintiffs' canisters could have gone into Yucca Mountain because they were not "disposable." *See Waterford* Trial Tr. 1121:22–1122:1 (Zabransky). According to Mr. Zabransky, if DOE were to continue to use the geologic repository contemplated by the Standard Contract as the method of disposal "the fuel [stored in dry casks at River Bend] needs to be taken out and repackaged into a suitable package that can go for disposal with a million year lifetime, which is a very specific container." *Id.*

The Government's inability to offer any assurances that it can or will accept the loaded Holtec storage canisters at River Bend is fatal to its effort to avoid paying now for the costs incurred by Plaintiffs for loading and closing the Holtec storage casks. As the *Energy Northwest* decision makes clear, "a defendant seeking an offset has an obligation to 'move forward by pointing out the costs it believes the plaintiff avoided because of its breach,' or risk having the issue both determined against it and waived on appeal." 641 F.3d at 1308 n.5. Not only has the Government failed to "point[] out the costs" for loading the DOE-supplied bolted-closure

transportation casks, it cannot prove that DOE will accept the loaded Holtec storage canisters (and the evidence presented at trial was all to the contrary). The Government, therefore, failed to establish that Plaintiffs will not need to reload the SNF to DOE-supplied bolted-closure transportation casks if and when DOE performs, and likewise did not carry its burden to prove that Plaintiffs have avoided any cask loading costs. *See, e.g.*, *Carolina Power*, 573 F.3d at 1277. Plaintiffs will therefore need to re-characterize, repackage, and reload the SNF currently in Holtec storage casks at River Bend before transportation to DOE. *See* Tr. 1582:1–10 (Vukovics) ("We'll have to move that overpack back into the fuel building; open it up; take the multipack-purpose [sic] canister out to remove the 68 fuel assemblies; bring in the transportation cask that the DOE provided; and load the fuel assemblies into that.").

Additionally, Plaintiffs established at trial that loaded fuel at River Bend may not meet the NRC licensing requirements at 10 C.F.R. Part 71 for transportation of spent fuel, and that, when DOE eventually performs, some canistered fuel at River Bend may no longer be transportable. *See* PX 960 at 16 ("[D]efendant admits that whether or not canistered fuel at River Bend may or may not be transportable when DOE begins SNF acceptance from River Bend will be determined by applicable NRC regulations and cask certificates of compliance at the time of transport."). In fact, the NRC assumes that casks need to be periodically opened and repackaged after sitting in storage at an ISFSI. *See, e.g.*, PX 950 (NRC Final Rule – Continued Storage of Spent Nuclear Fuel, Sept. 19, 2014). As such, River Bend will need to re-characterize and repackage the SNF in storage before that SNF can be safely loaded to DOE.

Spent fuel casks must comply with 10 C.F.R. Part 71 license requirements in order to be transported. *See* Section II.C.10, *supra*. But, not all of the fuel that has been or will be loaded into the Holtec canisters at River Bend is compliant with Part 71 requirements. *See* 1601:24–

1602:9, 1579:12–24 (Vukovics). The Holtec canisters being used at River Bend are not licensed for the transportation of "high burnup fuel,"[16] and River Bend is currently generating "high burnup fuel." *See* Tr. 1602:3–15, 1603:21–23, 1615:22–1616:3 (Vukovics). As such, that fuel, which River Bend will load into Holtec canisters, is not transportable under the Holtec canister's Certificate of Compliance. *See* Tr. 1570:18–1571:6 (Vukovics). Nor has the NRC indicated a present intent to license transportation of "high burnup fuel." *See, e.g.*, PX 952 (NRC Interim Staff Guidance Memorandum No. 11, Rev. 3, Nov. 17, 2003) at 2. In addition, because of concerns regarding canister degradation over time and transportation cask license renewals, the Holtec canisters that are transportable today may not be transportable whenever DOE ultimately performs. *See id.*; *see also* PX 960 at 8; Tr. 1577:13–21, 1580:4–8, 1582:16–23 (Vukovics). Consequently, the Government's premise that the loaded Holtec canisters could simply be extracted from the storage modules for transportation by DOE without repackaging cannot be accepted.

d. Loading Holtec Storage Casks Is a Different Activity than Loading DOE Transportation Casks

The costs that Plaintiffs may eventually incur to load DOE bolted-closure transportation casks are different and entirely separate from the costs that Plaintiffs have already incurred loading Holtec welded-closure storage casks. It is undisputed that DOE has not provided any transportation casks to River Bend. *See* Section II.A.2, *supra*. It is also undisputed that Plaintiffs will incur additional loading costs in the future when DOE actually brings

[16] "Burnup" is a unit of measurement of the amount of energy that has been produced by a particular fuel assembly in megawatt days per metric ton of uranium. *See, e.g.*, Tr. 1602:10–25 (Vukovics). "High burnup fuel" is SNF with a burnup rate over 45,000 megawatt days per metric ton (or 45 gigawatt days per metric ton). *See* Tr. 1602:20–25, 1603:17–20 (Vukovics).

transportation casks to River Bend. *See* Section III.C.2.c, *supra*. Despite Plaintiffs' discovery requests and multiple opportunities to provide information in this and other SNF trials, the Government has completely failed to describe the type of cask that DOE would have brought to River Bend for loading in the non-breach world. *See generally, e.g.*, PX 960 (Defendant's Responses to Plaintiffs' First Set of Requests for Admission). Notwithstanding the dearth of information provided by the Government, it is without question that the Holtec welded-closure storage casks are not even in the realm of potential DOE-supplied cask options because DOE has admitted that it would have supplied a bolted-closure transportation cask. *See* PX 960 at 10 ("[D]efendant admits that it would have supplied transportation casks with bolted closures, pursuant to the terms of the Standard Contract, had it begun performance in 1998."); *see also Waterford* Trial Tr. 1127:12–16 (Zabransky). Because of DOE's refusal to identify its transportation cask system, it would require considerable speculation and guesswork to estimate what it would have cost to load those hypothetical casks during the claim period, even if that were required. *See, e.g.*, PX 960 at 11 ("[D]efendant admits that DOE does not know the specific cask(s) that would have been selected and supplied to River Bend for the delivery of SNF to DOE had DOE begun performance in 1998."). Disallowing storage cask loading costs, even if Plaintiffs had some burden to identify transportation cask loading costs (which they did not), would be nonsensical—an apples and oranges proposition.

Further in this respect, other than asserting that it will supply a bolted-closure transportation cask, DOE (through the discovery process and otherwise) has failed to identify the basic dimensions or the fuel-assembly capacity of the cask that it will bring to River Bend. *See generally, e.g.*, PX 960. DOE has also failed to advise Plaintiffs as to the licensing requirements of the cask that it will bring to River Bend, which in turn will determine what fuel can be loaded

to DOE. *See* PX 960 at 7 ("[D]efendant admits that it does not know the requirements of the certificates of compliance . . . ."). DOE has similarly failed to identify what auxiliary equipment will be needed to handle and load the DOE transportation cask. *See* PX 960 at 7 ("[D]efendant admits that it has not yet identified the cask systems and equipment it will make available to River Bend pursuant to Article IV.B.2 of the Standard Contract."). At this time, Plaintiffs do not even know what materials will be used in the manufacture of the DOE transportation cask, or what that cask will weigh. In short, assessing key and important features of the DOE transportation cask requires substantial speculation. Such speculation provides no basis for either awarding or reducing damages in the context of a suit for partial breach damages. *See Indiana Michigan II*, 422 F.3d at 1377 (rejecting claim for future damages and holding, "Indiana Michigan can, however, obtain recovery for post-breach damages as they are incurred").

As noted above, at trial Plaintiffs established that to load Holtec welded-closure dry fuel storage casks is a much more involved and difficult process than Plaintiffs would have had to engage in if DOE had brought any variety of bolted-closure transportation casks to River Bend. For example, at trial, the Government's technical expert Mr. Warren Brewer described a number of the significant differences between the loading operations for each type of cask. *See, e.g.*, Tr. 1922:15–19 (Brewer).

In addition, Mr. Frank Rives testified at trial about the effort associated with loading Holtec storage casks, and the likelihood that additional loading costs will be incurred in the future when DOE eventually performs. As Mr. Rives observed, since DOE has testified that it will not remove canistered fuel under the Standard Contract, Plaintiffs will need to "pull the casks back into the [spent fuel] pool[,] unload those casks[,] and [] load to a DOE cask." Tr. 94:17–22 (Rives). Mr. Rives explained that, under these circumstances, Plaintiffs will incur

costs perhaps "three times the real cost" of loading to DOE, without even considering that loading a welded-closure Holtec storage cask is much more complex than loading a hypothetical DOE-supplied bolted-closure transportation cask, and thus more expensive. Tr. 94:17–95:15 (Rives).

Plaintiffs proved that the activities and resultant costs to load Holtec welded-closure storage casks are starkly different from the activities and resultant costs that Plaintiffs would have incurred to load any variety of DOE-supplied bolted-closure transportation casks. Plaintiffs thus established with certainty that the costs to load these particular Holtec welded-closure storage casks would not have been incurred in the hypothetical non-breach world. The contracted performance, therefore, for which Plaintiff have bargained, the loading of DOE-supplied bolted-closure transportation casks, has not yet come due. Pursuant to the Federal Circuit's pronouncements in *ANO II*, *Energy Northwest*, and *Carolina Power*, the trial court may not deduct any such costs from a plaintiff's claim unless the Government can show that the costs have been avoided rather than simply deferred. *See ANO II*, 457 F. App'x at 934; *Energy Nw.*, 641 F.3d at 1305–06; *Carolina Power*, 573 F.3d at 1277. The Government was and is unable to carry that burden. Because of the Government's failure to identify or describe the transportation casks that DOE would have brought to River Bend in the non-breach world or the casks that it will bring when it eventually performs, other than their bolted closure mechanism, it would require considerable speculation and guesswork to determine the costs to load those unidentified, undescribed casks. Accordingly, because the Government did not prove that Plaintiffs avoided any cask loading costs, this Court should award Plaintiffs all of their incurred cask loading costs.

In sum, because Plaintiffs met their initial burden of proving that these particular costs to load Holtec welded-closure storage casks would not have been incurred but for DOE's breach,

the burden then shifted to the Government to prove that the storage cask loading costs that Plaintiffs did incur have allowed Plaintiffs to avoid additional loading costs. The Government did not meet this burden. As such, the Government failed to show that Plaintiffs' future transportation cask loading costs have been avoided rather than simply deferred. Without this showing, there is no basis to deduct any of Plaintiffs' incurred storage cask loading costs from their damages claim, and thus, this Court should award Plaintiffs the entirety of their claimed cask loading costs.

3. This Court Should Award Plaintiffs' Claims for Payroll and Materials Loaders in Their Entirety

Plaintiffs' damages claim includes certain costs related to payroll loaders that were attributable to the internal labor charges associated with dry fuel storage. In particular, Plaintiffs claim $265,576 in costs allocated to Resource Code 019 and $1,713 in costs allocated to Resource Code 060. The Government concedes that these costs were incurred and that they are supported by adequate contemporaneous documentation, but contests the recovery of these costs because the Government alleges that these costs are unrelated to the underlying changes in labor activity. *See* Joint Stipulations at ¶ 6(m), ECF No. 180; DX 097 at 14–15.

The evidence presented at trial demonstrated that there is a sufficient nexus between the $267,289 in payroll loaders that the Government now challenges and the internal labor costs incurred to mitigate the Government's breach. Ms. Barras explained that Resource Code 019 captures costs associated with providing benefits to both former and current employees, while Resource Code 060 captures stock option costs. *See* Section II.F, *supra*. In addition, the testimony of Ms. Barras demonstrated that Plaintiffs' payroll loaders are conceptually the same as the materials and capital suspense loaders that the Federal Circuit has determined are recoverable as a matter of law. Section II.F, *supra; ANO II*, 457 F. App'x at 935–36; *Grand*

Gulf II, 666 F.3d at 1312. The Government is not entitled to be treated more favorably as regards payroll loaders than the other capital projects to which such loaders are allocated on a *pro rata* basis in accordance with FERC rules and GAAP.

Furthermore, in two very recent decisions, this Court allowed other Entergy affiliates to recover payroll loaders. *See Grand Gulf III*, 120 Fed. Cl. at 663; *ANO III*, 120 Fed. Cl. at 759. In *Grand Gulf III*, the Court found that the plaintiffs in that case had established that their claimed payroll loaders complied with the GAAP. *See Grand Gulf III*, 120 Fed. Cl. at 663. Although the Court noted that the plaintiffs in *Grand Gulf III* did not segregate costs associated with retired employees and stock options, the Court acknowledged that the Federal Circuit had previously held that SNF plaintiffs need not show their damages "with absolute exactness or mathematical precision." *Id.* (quoting *Indiana Michigan II*, 422 F.3d at 1373). As a result, the Court awarded all payroll loaders claimed in that case. *See id.* In *ANO III*, the Court similarly allowed payroll loaders with regard to Resource Code 019 (the bulk of the claimed amount), although it declined to award Resource Code 060 stock option costs because the connection between stock option costs and efforts to mitigate the breach of the Standard Contract had not been sufficiently shown in that case. *See ANO III*, 120 Fed. Cl. at 759.

Here, Plaintiffs submit that the testimony presented at trial sufficiently shows that the relative portion of stock option costs captured in Resource Code 060 would not have been incurred but for Plaintiffs' significant efforts to mitigate DOE's breach. *See* Section II.F, *supra*. The Government complains that the management employees who primarily receive stock options were not directly working on the River Bend dry fuel storage project. It is axiomatic, however, that without the existing management structure, and the required compensation to keep those managers employed in a competitive industry, the dry fuel storage project could not have been

executed. One need only look at the management hierarchy shown on the signature page of the Government's pleadings in this case, which includes managers who did not work at the trial, to realize that a management structure is required to accomplish complicated tasks.

As these indirect costs were validly incurred, the Government's position, if adopted, would effectively and inequitably shift these costs to other projects. The payroll loaders that Plaintiffs have included in their claim for mitigation costs are proper components of economic damages that should be awarded to Plaintiffs in their entirety.

In addition, as regards materials loaders,[17] the Federal Circuit has determined that materials loader charges are recoverable as a matter of law. *See Grand Gulf II*, 666 F.3d at 1312. The materials loader charges here relate to two Holtec invoices for equipment delivered to the River Bend site. *See* Tr. 2148:12–24 (Peterson). As Mr. Peterson conceded at trial, each invoice received a material loaders charge, per Entergy's standard accounting practice. *See* Tr. 2158:6–2159:19 (Peterson). Consequently, as a matter of fact and law, Plaintiffs' claim for materials loaders should be granted in its entirety.

4. This Court Should Reject the Government's Proposed Deductions for Allegedly Unsupported Costs

The Government asserts that Plaintiffs have failed to support $226,589 of their claimed costs. *See, e.g.*, DDX 001 at 6. At trial, Mr. Metcalfe walked through many of these transactions, one by one, describing how these allegedly unsupported costs were in fact supported by various invoices and other business records. *See, e.g.*, Tr. 1407:19–1412:21, 1414:13–25 (Metcalfe); PX 447 (DP Engineering Contract Order No. 10093755); PX 802 (Accounting Support for Third-Party Transactions) (excerpt); PDX 33 at 33–34. Mr. Metcalfe

[17] The Government questions $98,548 in claimed materials loaders. *See* DDX 005 at 3.

testified that he reviewed various forms of documentation, reviewed specific line items and documentation with technical personnel to verify that the costs were in fact incurred for the reason stated on the invoice, and then matched the invoice numbers to accounting reports, verifying the amounts, dates of payment, etc. *See, e.g.,* Tr. 1428:1–22 (Metcalfe); PDX 33 at 4–5. Mr. Metcalfe testified that in his opinion as a CPA, he was "[h]ighly confident" that the amounts were paid by River Bend and properly included in Plaintiffs' claim. *See* Section III.B, *supra*.

For example, Mr. Metcalfe walked through DP Engineering invoice number 05-089 in the invoiced amount of $26,200. *See* Tr. 1410:1–9 (Metcalfe). Mr. Metcalfe identified the contract number as 10093755, reviewed its scope, and then reviewed a screenshot of Plaintiffs' accounting system with the amount marked as paid, and a copy of the check sent for payment. *See* Tr. 1410:1–1413:17 (Metcalfe); PDX 33 at 33–35; PX 802 at 16636. Accordingly, Plaintiffs have demonstrated that they incurred and paid these claimed costs, and the Court should award these damages to Plaintiffs in their entirety.

5. This Court Should Award Plaintiffs' Claim for Additional Security Costs in Its Entirety

The Government challenges Plaintiffs' claim for $1,644,251 in additional security costs on the grounds that Plaintiffs have not calculated these costs to a reasonable certainty. *See* DDX 005 at 5. Contrary to the Government's assertion, these costs have been reasonably estimated by knowledgeable River Bend personnel and Mr. Metcalfe, as Plaintiffs established at trial.

Mr. Paul Gritton, the former Site Finance Manager at River Bend, explained that, until 2009, the security officers at River Bend were supplied by the Wackenhut Corporation ("Wackenhut"). *See* Tr. 733:19–734:10 (Gritton). Mr. Andre James was the Security Manager for River Bend through 2011 and the Contract Manager during the time that River Bend's

security staff was provided by Wackenhut. *See* Tr. 2194:14–20, 2232:13–19 (James). When the Wackenhut contract ended in mid-2009, the security officers became Entergy employees. *See* Tr. 733:19–734:10 (Gritton); Tr. 2195:6–11, 2231:23–2232:3 (James). When Wackenhut sent an invoice for security work, Plaintiffs would allocate the costs in that invoice to specific project charge codes. *See* Tr. 2305:16–19 (James); *see, e.g.,* PX 806 (Wackenhut invoice showing handwritten allocations) at 10388. Mr. James testified that he reviewed the dollar figures that were allocated to the specific project codes for the Wackenhut security invoices and verified their accuracy. *See* Tr. 2233:5–13 (James). Accordingly, Plaintiffs established these costs to a reasonable certainty at trial.

The Government does not contest that Plaintiffs were required to expand the Protected Area to encompass the ISFSI and to construct a new BRE near the ISFSI to support the expanded Protected Area. Yet, the Government questions whether Plaintiffs needed to hire additional security personnel to man this new post. The Government's position pushes beyond the outer limits of common sense.

The evidence presented at trial demonstrated that Plaintiffs needed to hire additional security officers due to the implementation of dry fuel storage at River Bend. *See* Section II.E, *supra*. As a result of DOE's breach of its contractual obligation to remove SNF from River Bend, Plaintiffs built a dry fuel storage facility onsite. *See* Section II.C, *supra*. Per NRC regulations, the ISFSI must be inside the Protected Area and appropriately guarded. *See* Tr. 2210:3-14 (James); Section II.E, *supra*. To comply with NRC regulations, Plaintiffs were required to expand the Protected Area and implement various modifications to secure the ISFSI, which included constructing an additional BRE. *See* Section II.E, *supra*. The NRC further required Plaintiffs to continuously man that new post; thus, Plaintiffs needed to hire additional

security officers. *See* Section II.E, *supra*. The River Bend security force consists of five shifts, which means that one new post (that is, one new BRE) requires the staffing of five additional officers. *See* Section II.E, *supra*.

Mr. Paul Gritton testified that he provided the Kenrich Group LLC with the information for the number of man hours per year for the security estimate. *See* Tr. 751:2–753:22 (Gritton). To calculate that amount, Mr. Gritton determined that each FTE worked 2,080 straight time hours plus 260 overtime hours each year, for a total of 2,340 hours per year. *See* Tr. 772:12–773:24 (Gritton); PX 121 (Spreadsheet – TWC Incentive, Billing Information 2003 through 2008); PX 122 ((Spreadsheet – TWC Incentive, Billing Information 2009).

Had DOE performed, Plaintiffs would not have needed to construct the ISFSI and thus would not have needed to expand the Protected Area at River Bend. Without an ISFSI or expanded Protected Area, Plaintiffs would not have needed to construct a new BRE, and would not have required additional security personnel to man that post. Consequently, the evidence presented at trial established that the hiring of five additional security officers was directly and proximately caused by DOE's breach.

As the Federal Circuit has instructed, Plaintiffs must establish the amount of damages with reasonable certainty, not mathematical exactitude. *See Indiana Michigan II*, 422 F.3d at 1373 (Damages "need not be 'ascertainable with absolute exactness or mathematical precision.'") (quoting *San Carlos Irrigation & Drainage Dist.*, 111 F.3d 1557, 1563 (Fed. Cir. 1997)). The estimate of additional security costs certainly meets that standard. As discussed above, the evidence presented at trial demonstrated Plaintiffs' estimated additional security costs to a reasonable certainty and Plaintiffs are therefore entitled to recover those costs in their entirety.

6. This Court Should Award Plaintiffs' Claim for NRC Fees in Its Entirety

a. Federal Circuit Precedent Does Not Preclude the Award of NRC Fees

In *Boston Edison Co. v. United States*, this Court awarded another SNF plaintiff (a separate legal subsidiary of Entergy Corporation) its claimed damages for NRC Part 171 fees. *See Boston Edison Co. v. United States*, 93 Fed. Cl. 105, 125–28 (2010), *aff'd in part, rev'd in part, and remanded*, 658 F.3d 1361 (Fed. Cir. 2011). In *Boston Edison*, this Court conducted a thorough causation analysis and determined that "but for DOE's breach, [plaintiff] would not have been assessed NRC generic costs for dry storage activities that it incurred after the 1999 rule change." *Id.* at 128. On appeal, the Government declined to challenge the detailed causation findings of the *Boston Edison* trial court. *See Boston Edison*, 658 F.3d at 1368 ("At trial, the government argued that [plaintiff] should not recover any damages for fees associated with wet storage . . . . However, the government does not renew that argument in this court."). Rather, the Government argued only that it was entitled to a partial offset for a specific portion of the NRC fees paid by the plaintiff. *See id.* ("The government argues that the damages award must be adjusted to reflect any decrease in [plaintiff's] wet storage and decommissioning fees due to the fact that more entities were helping to pay the NRC's wet storage and decommissioning costs."). The Federal Circuit sustained the Government's appeal on that limited basis and remanded the case back to the trial court. *See id.* at 1370. On remand, the parties reached an agreement as to the appropriate quantum of NRC fees to be awarded to the plaintiff and the Court entered a final judgment in accordance with the parties' stipulation. *See Boston Edison Co. v. United States*, 106 Fed. Cl. 330, 332 (2012).

Following closely on the heels of the *Boston Edison* trial, the Court in *Consolidated Edison* similarly determined that the Government's breach caused the NRC's 1999 changes to its

fee structure and awarded the plaintiff its claimed damages for NRC Part 171 fees. *See Consolidated Edison*, 92 Fed. Cl. at 513–16. Notwithstanding the Government's decision not to appeal the trial court decision in *Boston Edison* that there was a causal link between the NRC's change to its fee collection regime and the Government's breach, the Government appealed this Court's causation analysis in *Consolidated Edison* regarding NRC fees. *See generally ENIP,* 676 F.3d 1331. The Federal Circuit reversed this Court's award of NRC fees, finding that the proof submitted by the plaintiff in that case was "insufficient as a matter of law to demonstrate that the new NRC rules were the result of the government breach." *Id.* at 1339. The Federal Circuit, however, did not conclude that causation could not be established between the Government's breach and the NRC's restructuring of its fee collection regime. Rather, the Federal Circuit merely held that, based on the record presented at trial in that case, "[the plaintiff] has not established that its generic fees increased as a result of DOE's breach." *Id*. at 1340.

Subsequent decisions of this Court have made clear that the Federal Circuit's opinion in *ENIP* did not foreclose litigation of the NRC fees issue or render any decision on the ultimate question of fact regarding causation between the Government's breach and the NRC's 1999 changes to its fee structure. *See Alabama Power Co. v. United States*, 119 Fed. Cl. 615, 641 (2014) ("To be clear, the court does not hold that plaintiffs cannot, as a matter of law, establish causation."); *Energy Nw. v. United States*, 115 Fed. Cl. 69, 76–77 (2014) ("[The Court] is not convinced that [*ENIP*] inexorably dictates an entry of judgment for the government on [the plaintiff's NRC fees] claim."); Order 3–4, Nov. 8, 2013, ECF No. 129, *Alabama Power Co. v. United States*, No. 08-237C (Fed. Cl.) (Merow, S.J.) ("While the Court in *Consolidated Edison* did find that the evidence presented in that case was insufficient to establish causation, it did not

find, as a matter of law, that the rule change was not caused by DOE's breach of the Standard Contract.") (citing *ENIP*, 676 F.3d at 1339). *ENIP* did not decide or otherwise comment on the compensability of NRC fees as a matter of law. Rather, the Federal Circuit merely held that the plaintiff in that case, based on that particular evidentiary record, had failed to meet its burden of proving causation. *See ENIP*, 676 F.3d at 1339–40. It is also noteworthy that, unlike this case, the evidentiary record in *Consolidated Edison* did not include the testimony of Mr. Funches, the NRC's CFO when the 1999 rule change was adopted and the NRC official who drafted the rule.

b. Mr. Funches's Expert Testimony Is Reliable and Convincing

In this case, Plaintiffs proffered two experts who testified in support of Plaintiffs' claim for generic NRC fees: Mr. Jesse Funches and Mr. Kenneth Metcalfe. Mr. Funches has over twenty-five years of experience with the development, implementation, and explanation of the NRC program budgets and related activities. *See* Tr. 849:10–858:5 (Funches). This includes the budget structures and the fees charged to NRC applicants and licensees. *See* Tr. 856:5–858:23 (Funches). Mr. Funches had held a number of positions at the NRC from 1978 through 2007, and was the NRC's CFO at the time of the 1999 rule change. *See* Tr. 841:16–846:9, 855:3–10 (Funches). Starting in 1978, Mr. Funches served first as an assistant and advisor to the Chairman of the NRC, then as the Director of the Planning and Program Analysis Staff in the NRC's Office of Nuclear Reactor Regulation, and then as the Director of the Planning and Program Analysis Staff in the NRC's Office of Nuclear Material Safety and Safeguards. *See* Tr. 841:16–846:9 (Funches). In these positions, Mr. Funches managed a staff in planning, budgeting, and accounting for and controlling NRC resources. *See* Tr. 841:16–846:9 (Funches). In 1990, Mr. Funches became the Deputy Controller of the NRC. *See* Tr. 845:5–8 (Funches). As Deputy Controller, Mr. Funches was responsible for developing the first 10 C.F.R. Part 170 and 10 C.F.R. Part 171 fee rules to implement the new 100 percent fee recovery requirement imposed on

the NRC by the Omnibus Budget Reconciliation Act of 1990, Pub. L. No. 101-508, 104 Stat. 1388. *See* Tr. 853:7–16 (Funches); PX 870 at 4. That responsibility included the development and drafting of the 1990 Part 171 rule assessing on those utilities with onsite dry storage the annual fee to recoup the NRC's costs for dry cask storage generic activities. *See* Tr. 853:17–854:23 (Funches); PX 870 at 4.

Mr. Funches became the NRC's CFO in 1997 and held that position through his retirement in 2007. *See* Tr. 846:3–9 (Funches); PX 870 at 4. As the CFO, Mr. Funches continued to be responsible for assessing fees to recover the NRC's budgeted costs and for the NRC's promulgation of its fee rule each year. *See* Tr. 855:3–10, 857:11–23, 858:6–23, 859:10–860:12 (Funches). In this role, Mr. Funches ultimately recommended that the NRC adopt the SFS/RD Fee. *See, e.g.*, Tr. 857:3–10 (Funches) (". . . I made a recommendation to the Commission for that fee, and the Commission ultimately approved it."). Mr. Funches was personally and directly involved in the decision to change the fee rules that resulted in Plaintiffs being charged with generic NRC fees, as well as in the development of the methodology that set the amount of the fees. *See* Tr. 857:3–858:5 (Funches); PX 870 at 4. At trial, Mr. Funches was qualified as an expert in "NRC annual fee assessment, including the spent fuel storage/reactor decommissioning fee adopted in 1999" (Tr. 862:13–863:16), and his expert testimony provided insight into, among other things, how the NRC assesses and recovers its fees, the considerations underlying the NRC's adoption of the SFS/RD Fee in 1999, and the effects of the 1999 fee revision on utility plaintiffs. *See, e.g.*, Tr. 867:21–870:17, 873:12–20, 874:14–22, 877:5–878:8, 880:23–883:17, 891:25–892:19, 893:15–894:17, 895:8–15, 896:4–9, 907:7–908:2, 910:12–911:1 (Funches); JX 3 (Mar. 9, 1998 Memorandum from J. Hoyle to J. Funches & J. Callan – COMSAJ-98-001/COMEXM-98-001 – Annual Fees for Storage of Spent Fuel); JX 4 (Dec. 1998

Notation Votes Regarding FY 1999 Fee Rulemaking from Commissioners Merrifield & McGaffigan); DX 010 (Feb. 27, 1998 Memorandum from J. Funches to NRC Commissioners – FY 1998 Proposed Fee Rule); DX 014.

Although the Government contends that Mr. Funches's opinion is based on hearsay and speculation, the Government fails to recognize that it was Mr. Funches who recommended adopting the SFS/RD Fee to the NRC Commissioners and, as such, he has unique insight into why the fee was adopted. Experts are permitted and expected to make conclusions based on available data. *See Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 148-49 (1999) ("Experts of all kinds tie observations to conclusions through the use of what Judge Learned Hand called 'general truths derived from . . . specialized experience.'"). Consequently, Mr. Funches's testimony is not speculation; rather, it is his expert opinion based on his extensive experience with and specialized knowledge of the NRC and its fee allocation methodology, including the development of the specific fee rule at issue here.

c. Mr. Funches's Report and Testimony Establish That Generic NRC Fees Would Not Have Been Assessed at River Bend Absent DOE's Breach

Mr. Funches' report and testimony established that one of the primary reasons given by the NRC for restructuring its 10 C.F.R. Part 171 fees was to give equivalent fee treatment to wet and dry fuel storage. *See* Tr. 851:6–18, 866:23–867:12, 876:22–877:4, 878:1–8, 985:13–986:2 (Funches); PX 870 at 7–9; JX 3; DX 009 (Feb. 2, 1998 Memorandum from S. Jackson & E. McGaffigan, Jr. to J. Hoyle – Annual Fees for Storage of Spent Fuel). If DOE had performed in accordance with the Standard Contract, however, no utilities would have been faced with increasing their onsite spent fuel storage capacity after 1998 and the "wet versus dry" storage decision-making conundrum would never have materialized. *See* Tr. 891:25–892:19 (Funches); PX 870 at 7–8; Section II.A.1, *supra*. Additionally, had DOE performed in accordance with its

contractual obligation, the NRC would have had no reason to change its fee structure in 1999.[18] An industry-wide need for expanded dry fuel storage would not have materialized but for DOE's delay and breach of the Standard Contract. Absent DOE's breach, the NRC would have no justification to assess generic dry storage-related fees on the entire industry since only a very small portion of the industry would benefit from generic dry-storage related costs. *See* PX 870 at 7–8. Had DOE performed, River Bend would not have built an ISFSI, and therefore, Plaintiffs would not have incurred the NRC Part 171 SFS/RD Fees associated with generic NRC activities relating to onsite dry storage.

Mr. Metcalfe corroborated Mr. Funches's testimony at trial and reiterated that Plaintiffs would not have had to pay the SFS/RD Fee that was imposed on them starting in 1999 if DOE had commenced performance in 1998. *See* Tr. 1486:5–1487:2 (Metcalfe). Mr. Metcalfe testified that the suggestion of the NRC Commissioners that the additional regulatory costs should come from the Nuclear Waste Fund, including the views of then–NRC Commissioners Merrifield and McGaffigan individually, would only make economic sense if the additional costs were in fact related to DOE's delay in picking up SNF. *See* Tr. 1495:24–1496:25, 1503:14–1509:5, 1517:3–1518:16, 1519:12–1520:4 (Metcalfe); PX 969 (NRC Rule – 10 C.F.R. Parts 170 and 171, Revision of Fee Schedules; 100% Fee Recovery, FY 1999, June 10, 1999).

In sum, because Plaintiffs would not have incurred the generic NRC Part 171 Fees but for DOE's breach, the Court should award Plaintiffs the entirety of their claim for NRC fees.

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[18] In the non-breach world, the NRC generic dry spent fuel storage-related charges would continue to have been assessed only on the few utilities with dry storage facilities. (As noted above, as of 1998, there were only eleven dry storage facilities, most of which would not have existed in the non-breach world.) In other words, the NRC would have had no reason to charge *all* power reactors for the generic costs associated with dry storage. *See* PX 870 at 7–8.

IV. CONCLUSION

For the reasons set forth above, Plaintiffs have carried their burden and met the foreseeability, causation, and reasonable certainty requirements as to each element of their claimed damages. The Government has failed to show that the way that Plaintiffs planned, designed, licensed, constructed, and have operated the dry fuel storage facility at River Bend represent an unreasonable response to the Government's breach of the Standard Contract. Accordingly, Plaintiffs respectfully submit that the evidence presented at trial demonstrated Plaintiffs' entitlement to its $49.7 million damages claim in this case, and that judgment should be rendered by the Court for Plaintiffs in that amount.

Dated: September 23, 2015

Respectfully submitted,

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