In the United States Court of Federal Claims

Nos. 04-83C & 04-84C
(Filed: October 15, 2008)

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DOMINION RESOURCES, INC. and
DOMINION NUCLEAR
CONNECTICUT, INC.,

Plaintiffs,

and

DOMINION RESOURCES, INC. and
VIRGINIA ELECTRIC AND
POWER COMPANY,

Plaintiffs,

v.

THE UNITED STATES,

Defendant.

Contracts;
Spent Nuclear Fuel;
Damages

* *

Brad Fagg, Washington, DC, with whom were *Paul M. Bessette, David M. Kerr* and *D. Bruce McPherson*, for plaintiffs.

Lisa L. Donahue, United States Department of Justice, Civil Division, Commercial Litigation Branch, Washington, DC, with whom were *Gregory G. Katsas*, Assistant Attorney General, *Jeanne E. Davidson*, Director, and *Harold D. Lester, Jr.*, Assistant Director, *Marian E. Sullivan*, Senior Trial Counsel, *Andrew P. Averbach*, Department of Justice, Civil Division, *Christopher J. Carney*, Department of Justice, Civil Division, *Scott Slater*, Department of Justice, Civil Division, and *Jane K. Taylor*, Department of Energy, Office of General Counsel, for defendant.

OPINION

BRUGGINK, *Judge.*

This is one of a number of cases before the court involving contracts for the disposal of commercially-generated spent nuclear fuel ("SNF") by the United States. The Department of Energy ("DOE") failed to collect and dispose of spent nuclear fuel beginning January 31, 1998, as directed by the terms of DOE's Standard Contract. As a result of DOE's failure, plaintiffs Dominion Resources, Inc.—Dominion Nuclear Connecticut, Inc. ("DNC") and Dominion Resources, Inc.—Virginia Electric and Power Company ("VEPCO") respectively claim damages of $52,001,303 and $121,915,726. We refer to the two corporations collectively here as "Dominion" or "plaintiffs." The Tucker Act, 28 U.S.C. § 1491(a) (2006) provides jurisdiction over plaintiffs' claim. *See PSEG Nuclear, L.L.C. v. United States*, 465 F.3d 1343 (Fed. Cir. 2006).

Only damages are at issue here because defendant's liability for partial breach of contract has been established in prior cases. *See Maine Yankee Atomic Power Co. v. United States*, 225 F.3d 1336, 1337-40 (Fed. Cir. 2000) ("Maine Yankee"); *N. States Power Co. v. United States*, 224 F.3d 1361, 1367 (Fed. Cir. 2000). In a prior opinion, *Dominion Resources, Inc. v. United States,* 77 Fed. Cl. 151 (2007), we granted plaintiffs' motion to dismiss defendant's counterclaim and defendant's claim for an offset against damages.

DNC operates three nuclear reactors at one power plant in Connecticut. These are referred to as Millstone Units 1, 2, and 3. VEPCO operates three nuclear reactors at two power plants in Virginia. These reactors are referred to as North Anna and Surry Units 1 and 2.[1]

DNC is the current holder of the three Standard Contracts for Millstone

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[1]Millstone Units 1 and 2 and Surry Units 1 and 2 are wholly-owned by Dominion. Dominion is the majority owner of Millstone Unit 3. Minority ownership interests in Unit 3 also are held by Massachusetts Municipal Wholesale Electric Co. and Central Vermont Public Service Corp. Dominion is also the majority owner of North Anna Units 1 and 2. Minority ownership interests also are held by Old Dominion Electric Cooperative. Dominion is authorized to act for purposes of this action on behalf of the minority owners of Millstone Unit 3 and North Anna Units 1 and 2.

Units 1, 2, and 3. Those contracts were originally executed by Northeast Utilities Service Company, an affiliate of the then-owner of the Millstone plants. The Standard Contracts were assigned to DNC in 2001 when Millstone was sold. VEPCO was the original signatory and remains the current holder of the single Standard Contract for North Anna and Surry.

Plaintiffs claim that the government's failure to begin picking up nuclear waste in January 1998 made it necessary to take interim measures to store this material on site. As of May 2008, when this case went to trial, the government still had not constructed a SNF repository. It remains uncertain when DOE will commence performance of the Standard Contract.

While nuclear utilities may recover mitigation damages caused by DOE's partial breach, they may not recover forecasted future costs. *Ind. Mich. Power Co. v. United States*, 422 F.3d 1369, 1375-77 (Fed. Cir. 2005). Accordingly, plaintiffs seek to recover mitigation costs incurred through June 30, 2006. Plaintiffs retain the right to bring subsequent claims for future damages incurred thereafter. *See id*. at 1378.

At the North Anna facility in Virginia, plaintiffs constructed an Independent Spent Fuel Storage Installation ("ISFSI") with the capacity for three pads. The government does not challenge plaintiffs' assertion that the installation of the second pad at the North Anna ISFSI was prompted by the breach, but it does assert that the ISFSI and the first pad would have been constructed even if the government had performed.

Plaintiffs also seek reimbursement of expenses associated with modifications to the loading facilities at North Anna. There was already an ISFSI at the Surry facility prior to the breach. Plaintiffs claim that the breach caused them to load additional casks on the second pad at the Surry ISFSI, and to build a third pad and install ten casks there. Defendant questions charges related to the second pad; it does not question costs for the third pad. At Millstone, plaintiffs seek reimbursement for construction of an ISFSI at Unit 2, for an inter-unit transfer study, for additional storage racks at Unit 3, and associated expenses.

Plaintiffs assert the following claims: 1) $71,629,207 to design and construct an ISFSI and procure and load spent fuel dry storage casks onto the ISFSI at North Anna; 2) $50,286,519 to construct a third spent fuel storage pad at the Surry ISFSI and procure and load spent fuel dry storage casks at Surry, from the second cask loaded in 2000 and onward; 3) $1,138,620 to conduct studies for potential inter-unit transfer of spent fuel at Millstone; 4) $12,803,274 to add additional racks to the Millstone Unit 3 spent fuel pool; and 5) $38,059,409 to design and construct an ISFSI and procure and load spent fuel dry storage casks onto the ISFSI at Millstone. The total claim amounts to $174,605,091.

The court conducted a ten-day trial in Washington, D.C., in May 2008. The witnesses in order of appearance were: Tom Alan Brookmire, Supervisor of Nuclear Engineering in Dominion's Nuclear Spent Fuel Group; Marvin Lee Smith, Project Director in Dominion's New Plant Licensing Project group; Brian Harold Wakeman, Engineer III in Dominion's Nuclear Spent Fuel Group; Michael J. Rutkoske, former consultant engineer for Dominion; Carl Whitaker, Senior Nuclear Engineer at Dominion; Wesley Allen Jenkins, Senior Control Specialist in Dominion's New Plant Licensing Project group; Kerry L. Baseshore, Director of Nuclear Analysis and Fuel at Dominion; Robert L. Morgan, former Director of DOE's Office of Civilian Radioactive Waste Management ("OCRWM"); David K. Zabransky, nuclear utility specialist in OCRWM's Office of Waste Management; John D. Dakers, Project Manager at Dominion; Luis L. Nunez, Jr., Project Manager in Nuclear Licensing and Operation Support at Dominion; Lee D. Katz, Controller for Dominion Generation; Thomas Pollog, a DOE engineer in the Office of Waste Management within OCRWM; Michael J. Lawrence, DOE's former Director of OCRWM; Lee O. Hill, Nuclear Fuel Procurement engineer at Dominion; Dr. Johnathan Neuberger, Ph.D., defendant's expert in finance and risk management; Loring E. Mills, former executive with Edison Electric Institute ("EEI"); Joseph M. Grillo, defendant's expert in nuclear power management and operations, reactor operations, and nuclear fuel handling and oversight; R. Larry Johnson, defendant's expert in financial analysis, cost accounting, auditing, and analysis of economic damages; and Christopher Kouts, DOE's Director of Office of System Analysis and Strategy Development in OCRWM. Excerpts from the trial testimony of these witnesses is referred to herein as "Tr."

The court also accepted the parties' designations of deposition and trial testimony[2] from eight witnesses: Lake H. Barrett, DOE's former Deputy

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[2]This is testimony from trials in other spent nuclear fuel cases: *Sys. Fuels,*
(continued...)

Director of the OCRWM; Alan Brownstein, DOE's former Director of the OCRWM Regulatory Coordination Division; Christopher Kouts; Ronald A. Milner, former Chief Operating Officer of the OCRWM; Robert M. Rosselli, former Director of DOE's Resource Management Division; Nancy H. Slater, former team leader in the OCRWM Regulatory Coordination Division; Victor W. Trebules, former Director of the Office of Project Control at OCRWM; and Robert L. Morgan.

Subsequent to the trial, the Federal Circuit resolved issues common to SNF cases in *Sacramento Municipal Utility District v. United States*, Nos. 2007-5052, et al., slip op. 2008 WL 3539880 (Fed. Cir. Aug. 7, 2008), *Pacific Gas and Electric Co. v. United States*, 536 F.3d 1282 (Fed. Cir. 2008), and *Yankee Atomic Electric Co. v. United States*, 536 F.3d 1268 (Fed. Cir. 2008). The parties submitted supplemental briefs on the effect of these opinions on this case. The matter is ready for resolution.

For reasons explained below, the court disallows two elements and reduces two elements of plaintiffs' damages claims. We conclude that plaintiffs would have incurred costs to upgrade its cranes at Millstone Units 2 and 3 absent DOE's partial breach. We also conclude that "Allowance for Funds Used During Construction" ("AFUDC") is unallowable as plaintiffs have not demonstrated that defendant's breach caused Dominion to borrow funds for capital construction costs. Basing damages on the 1987 Annual Capacity Reports, discussed below, also requires us to reduce costs for construction of the North Anna ISFSI by $3,690,264.08. We further reduce plaintiffs' claimed damages for labor costs and other costs that were inadequately supported in plaintiffs' accounting records. Deduction of these

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[2](...continued)
Inc. v. United States, 79 Fed. Cl. 37 (2007); *S. Nuclear Operating Co. v. United States*, 77 Fed. Cl. 396 (2007); *Sacramento Mun. Util. Dist. v. United States*, 74 Fed. Cl. 727 (2006), *aff'd-in-part, rev'd-in-part*, *Sacramento Mun. Util. Dist. v. United States*, Nos. 2007-5052, et al., slip op. 2008 WL 3539880 (Fed. Cir. Aug. 7, 2008); *Pac. Gas & Elec. Co. v. United States*, 73 Fed. Cl. 333 (2006), *aff'd-in-part, rev'd-in-part*, *Pac. Gas & Elec. Co. v. United States*, 536 F.3d 1282 (Fed. Cir. 2008); *Yankee Atomic Elec. Co. v. United States*, No. 98-126, 2004 WL 2450874 (Fed. Cl. Sep. 14, 2004), *aff'd-in-part, rev'd-in-part*, *Yankee Atomic Elec. Co. v. United States*, 536 F.3d 1268 (Fed. Cir. 2008).

disallowed items from VEPCO's total claim, $121,915,726, yields a recovery to VEPCO of $112,106,460.92. Deduction of the disallowed items from DNC's total claim of $52,001,303 yields a recovery to DNC of $42,689,970.00.[3]

FACTS

I. The Nuclear Waste Policy Act of 1982

Spent nuclear fuel must be removed periodically as part of the process of refueling a nuclear reactor. *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 195 (1983). Generally, this spent fuel, which is highly radioactive, is stored in a water-filled pool at the reactor site. *Id.* In 1977, the federal government barred reprocessing of SNF and high level radioactive waste ("HLW") indefinitely. 42 U.S.C. §§ 7101 et seq. (2006). Congress found that "nuclear waste creates potential risks and requires safe and environmentally acceptable methods of disposal," and that "a national problem has been created by the accumulation of . . . [SNF] from nuclear reactors." 42 U.S.C. § 10131(a)(2) (2000). To provide a means for disposal of SNF, Congress in 1983 enacted the Nuclear Waste Policy Act of 1982 ("NWPA"), Pub. L. No. 97-425, 96 Stat. 2201 (codified at 42 U.S.C. §§ 10101-10270 (1982)). Through the NWPA, Congress sought:

> (1) to develop repositories to ensure the protection of the public and the environment from the hazards posed by SNF and HLW; (2) to establish federal responsibility and a definite federal policy for the disposal of SNF and HLW; (3) to define the relationship between the federal government and state governments with respect to the disposal of SNF and HLW; and (4) to establish a Nuclear Waste Fund, financed by nuclear utilities, to pay for the costs of the disposal of SNF and HLW, ensuring that such costs would be borne by those responsible for generating such SNF and HLW.

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[3]The parties requested the court to separate damages as between DNC and VEPCO but initially did not provide separate calculations for certain items. The court incorporated the damage calculations provided by the parties after trial into the trial record through an order dated September 5, 2008.

Pac. Gas, 73 Fed. Cl. at 342 (citing 42 U.S.C. § 10131(b)).

To achieve these goals, the NWPA authorized the Secretary of Energy, the President of the United States, and Congress to determine a site for a repository for the permanent deep geologic disposal of SNF and HLW. 42 U.S.C. §§ 10132, 10134, 10135 (2006). It also authorized a study by the Secretary of Energy on the possibility of utilizing monitored retrievable storage ("MRS") facilities. *Id.* § 10161(b). In the NWPA, Congress noted that "long-term storage of [HLW] or [SNF] in monitored retrievable storage facilities is an option for providing safe and reliable management of such waste or spent fuel." *Id.* § 10161(a)(1). The NWPA did not authorize an MRS facility but provided for this option to be authorized later. *Pac. Gas & Elec., Co.*, 73 Fed. Cl. at 343. The MRS, unlike the repository, was considered a temporary storage option.

II. Standard Contract

The NWPA authorized the Secretary of Energy "to enter into contracts with any person who generates or holds title to [HLW], or [SNF], of domestic origin for the acceptance of title, subsequent transportation, and disposal of such waste or spent fuel." 42 U.S.C. § 10222(a)(1). DOE implemented the NWPA through the Standard Contract for Disposal of Spent Nuclear Fuel and/or High-level Radioactive Waste, codified at 10 C.F.R. § 961.11 (2008), which was a product of notice and comment rule-making. *See Standard Contract for Disposal of Spent Nuclear Fuel and/or High Level Radioactive Waste*, 48 Fed. Reg. 16590-01 (Apr. 18, 1983). On January 19, 1983, DOE held a meeting and announced that the Standard Contract would be adopted as a regulation. The plan was that DOE would issue a Federal Register notice, thereby allowing the utilities to comment on a draft contract. The process did not involve genuine negotiations between DOE and the utilities.[4] The draft

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[4] Mr. Mills, who provided comments to DOE, testified:

> [T]here was not an opportunity to negotiate a contract as was a standard approach in business, to sit down across the table and negotiate a contract, so we were disappointed in the process and realized that we really had no – did not have the ability to get into the contract what we believed was an equitable basis

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contract was issued on February 8, 1983. Comments on the draft contract were due by March 7, 1983.

Neither the utilities individually nor the EEI, an association of U.S. shareholder-owned electric companies, had further opportunity for input or negotiation until the Standard Contract was published on April 8, 1983. The utilities were presented with a generic contract. Thus, the moratorium on commercial reprocessing of SNF left nuclear power generators with a choice between entering into the contract with DOE or having the Nuclear Regulatory Commission ("NRC") order them to cease operation of their nuclear plants. *See* 42 U.S.C. § 10222(b)(1)(A).

Contracts between the DOE and nuclear utilities had to be executed no later than June 30, 1983. *Id.* § 10222(b)(2)(A)-(B). VEPCO elected to enter into a contract with DOE on June 15, 1983 for the North Anna and Surry stations. Northeast Utilities Service Company entered into three contracts, one for each Millstone Unit, with DOE on June 30, 1983.

The NWPA outlines the key elements of the Standard Contract: the utilities would pay a fee and, in exchange, DOE assumed the "responsibility, following commencement of operation of a repository, to take title to the [SNF] or [HLW] involved as *expeditiously* as practicable upon the request of the generator or owner of such waste or spent nuclear fuel." 10 C.F.R. § 961.11 (emphasis added). The Standard Contract did not specify the rate at which SNF would be accepted but did set out a process or "mechanism" to complete performance. The services contracted for were to begin no later than January 31, 1998, and to continue "until such time as all SNF and/or HLW . . . has been disposed of." *Id.*

The NWPA called for the creation within DOE of an OCRWM. The OCRWM would be responsible for undertaking DOE's obligations under the Standard Contract and for implementing the NWPA. One of its obligations would be to prepare a "mission plan . . . [to] provide an informational basis sufficient to permit informed decisions to be made in carrying out the

[4](...continued)

> because it was issued by DOE behind closed doors after we issued the comments.

Mills Tr. 2222:20-2223:3.

repository program and the research, development, and demonstration programs required under this [Act]." 42 U.S.C. § 10221(a). These mission plans would serve "as a means of both planning the program and demonstrating its conformance to the requirements of the Act." DOE Draft Civilian Radioactive Waste Management Program Mission Plan (Dec. 20, 1983) ("1983 Draft Mission Plan") at 1-2.

Following commencement of the mission plan process, the Standard Contract contemplated completion of a number of steps, referred to collectively as the annual capacity schedule ("ACS") process. The first was the issuance, commencing in 1987, of an annual report on the anticipated receiving capacity of the DOE storage facility ("ACR"). During trial, the parties refer to the rate at which, collectively, DOE was capable of receiving SNF from the industry as the "acceptance rate." The volume of this material was expressed in terms of metric tons of uranium ("MTU").

Beginning in 1991, the ACR would be accompanied by an annual priority ranking, reflecting the utilities' standing, in terms of the age of their nuclear waste ("APR"). These would be followed by the submission of the utilities' Delivery Commitment Schedules ("DCS"), reflecting the SNF the utilities wished DOE to pick up. Once the DCSs were approved by DOE, the utilities were to submit a final delivery schedule ("FDS") to DOE. All these events were intended to culminate in the first pickup by DOE of SNF material by the end of January 1998.

III. Actual Performance

At the time the mission plan was being developed, the utilities' expectation was that DOE would begin receiving fuel at a rate sufficient to cover all the fuel discharged through 1998 and begin working off the accumulated backlog. Dominion's case is predicated on the assumption that, beginning in 1998, there would be no need for additional on-site storage facilities. Much of the trial, therefore, was devoted to whether DOE had contractually warranted either that Dominion (and other utilities) would not have to build additional storage facilities, irrespective of a specific acceptance rate, or whether DOE had guaranteed a sufficiently high specific acceptance rate to preclude additional storage facility construction, depending on the utility's individual circumstances.

The Federal Circuit in *Pac. Gas*, recently resolved this issue. 536 F.3d

1282. The Federal Circuit agreed with the lower court that "the damages analysis for the partial breach requires some minimum acceptance rate." *Id.* at 1290. Thus, it rejected plaintiffs' argument that "DOE had an obligation to accept SNF/HLW at a rate that would prevent the utilities from bearing the costs of additional on-site waste storage facilities after January 31, 1998." *Id.* at 1288. Instead, it found that the ACS process, although not contractually binding, set out the mechanism by which the firm acceptance rate would be determined under the Standard Contract. *Id.* at 1288-89. It concluded, however, that the 1987 ACS process, and not the 1991 ACS process chosen by the trial court in that case, best reflected the parties' intent regarding the contractual acceptance rate. *Id.* at 1290-91.

In *Pac. Gas*, the Federal Circuit relied on the parties' post-formation conduct to interpret the contract. *Id.* The ACS processes constitute the parties' post-formation conduct in relation to the language of the contract, and the standard contract "specified that the ACS process would set the proper acceptance rate." *Id.* at 1290. Accordingly, the court decided that "the Standard Contract required DOE to accept SNF/HLW in accordance with the 1987 ACR process" and rejected subsequent ACS processes as tainted by the specter of breach. *Id.* at 1291. The acceptance rates in the 1987 ACR are 1200 MTU/year in 1998, ramping up to 2000 MTU/year by 2003, and then to 2650 MTU/year from 2004 through 2007. *See* DOE, Annual Capacity Report (June 1987) ("1987 ACR") at 7. The Federal Circuit reasoned that the 1987 ACS process provides the "best available pre-breach snapshot of both parties' intentions for an acceptance rate" because it was issued several months before the passage of the Nuclear Waste Policy Amendments Act of 1987 ("Amendments Act"), Pub. L. No. 100-203, § 5021, 101 Stat. 1330-232 (current version at 42 U.S.C. § 10162(b) (2006)), which made timely performance of the contract extremely difficult. *Pac. Gas,* 536 F.3d at 1292.

The Amendments Act was precipitated by DOE's March 1987 public announcement that the first repository operations would occur at least five years later than anticipated. To cope with the delay in constructing the first repository and commence operations as scheduled in 1998, DOE proposed that Congress authorize construction of an MRS facility.[5] DOE, Monitored

[5] DOE intended to use the MRS as a temporary storage facility and also to prepare SNF for placement in the repository. DOE anticipated that an MRS (continued...)

Retrievable Storage Submission to Congress (March 1987) ("MRS Submission to Congress") at 2 ("the MRS facility would be critical to the DOE's ability to accept waste for disposal in 1998"). Congress responded by enacting the Amendments Act. The Amendments Act required DOE to build a permanent repository at Yucca Mountain, Nevada. *See* 42 U.S.C. § 10172. The Act also authorized the Secretary of Energy in the meantime to "site, construct and operate" one MRS facility. *Id.* However, the Amendments Act created three "'linkages' between the DOE's authority to proceed with an MRS and progress by the DOE on the permanent repository." *Sys. Fuels, Inc.*, 79 Fed. Cl. at 44. First, the Act required the Secretary of Energy to recommend a location for the permanent repository before DOE could site the MRS. *See id.* (citing 42 U.S.C. § 10165(b)). Second, construction of the MRS facility could not begin until a license had been obtained to construct the permanent repository. 42 U.S.C. § 10168(d)(1),(2).[6] Third, the Amendments Act limited the total capacity of an MRS to 10,000 MTU "until the permanent repository became operational." *Tenn. Valley Auth. v. United States*, 69 Fed Cl. 515, 520 (2006) (citing 42 U.S.C. § 10168(d)(3)). The maximum capacity of the MRS was also limited to no more than 15,000 MTU. *Sys. Fuels, Inc.*, 79 Fed. Cl. at 46. These linkages proved more stringent than the linkages DOE had proposed, and DOE realized its performance would be substantially delayed.

DOE's initial response to the "Amendments Act was basically to give up the ghost on the MRS." Kouts, Tr. at 2780. In other words, DOE was not "assuming that an MRS would be in the system." *Id.* DOE therefore continued to publish ACRs in 1988, 1989, and 1990, which set out projected

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[5](...continued)
"would significantly reduce the need for new temporary storage capacity at reactor sites." MRS Submission to Congress, at 3. With the MRS, DOE projected reaching "full-scale operation at a rate of about 2500 to 3000 MTU per year . . . by 2004." *Id.* at 20. After a few months, the Mission Plan Amendment was issued. It more explicitly stated that "[i]f the Congress does not approve the MRS facility, the transfer of the waste to DOE facilities may not be able to begin in 1998." DOE, OCRWM Mission Plan Amendment (June 1987) at 63.

[6]Construction of the MRS was to remain contingent on the validity of this license. 42 U.S.C. § 10168(d)(1),(2). If the license was revoked or construction of the repository ceased, DOE could not proceed with constructing the MRS. *Id*.

acceptance rates based on a ramp-up to operation of a repository without an MRS. As early as the 1988 ACR publication, DOE "recognize[d] that, under current conditions, operations of and waste acceptance at a DOE facility probably cannot begin in 1998." DOE, Annual Capacity Report (June 1988) ("1988 ACR") at 4. DOE acknowledged:

> The delay in the repository schedule first noted in the <u>OCRWM Mission Plan Amendment</u> published in June 1987 and the conditions imposed on the siting and construction of an MRS facility by the Nuclear Waste Policy Amendments Act of 1987 (the Amendments Act) make it unlikely that DOE will be able to start accepting SNF significantly before 2003.

Id. (emphasis in original). In its Annual Capacity Report of 1991, DOE stated that initial acceptance of SNF would not begin until at least 2007 "[i]f the current linkages between MRS facility construction and repository construction are maintained." DOE, Annual Capacity Report (Dec. 1991) ("1991 ACR") at 4. Despite this acknowledgment, the acceptance rates published in the 1991 ACR "assume commencement of facility operations in 1998." *Id.* These acceptance rates also assumed that Congress would remove the linkages associated with the repository development. *Id.*

Based on this record, the Federal Circuit concluded that these linkages "presented the specter of an impending breach" which tainted post-1987 ACS processes. *Pac. Gas*, 536 F.3d at 1291. It also concluded DOE "may have put forth the 1991 acceptance rates as a litigation strategy, to minimize DOE's exposure for its impending breach, rather than as a realistic, good faith projection for waste acceptance." *Id.* Even the 1987 ACR, which was the first ACR issued, "could reflect some distortion, given its preparation nearly contemporaneous with the 1987 Amendments Act." *Id.* In 1987, DOE's proposed linkage between the MRS and the repository made it foreseeable that performance would not occur by January 31, 1998. *Id.* at 1291-92. However, the Federal Circuit reasoned that "DOE was merely addressing a contingency rather than a known reality at the time of the 1987 report." *Id.* at 1292. The 1987 ACR therefore presents DOE's "last attempt to comply with the terms of the contract" and is thus "the most reasonable measure of the contractual acceptance rate." *Id.* Accordingly, the court adopted the 1987 ACR rates to assess damages, and we must do the same. The 1987 ACR rates begin at 1200 MTU/year in 1998, increase to 2000 MTU/year in 2003, and then increase to 2650 MTU/year in 2004.

In dating DOE's partial breach of the Standard Contract, the Federal Circuit noted that "the government unequivocally announced in 1994 that it would not meet its contractual obligations beginning in 1998." *See Ind. Mich.*, 422 F.3d at 1375 (holding "partial breach claimants may recover pre-breach mitigation damages"). The Federal Circuit later clarified that it viewed "1994 as the latest possible date for the utilities' duty to mitigate, not the earliest." *Yankee Atomic Elec. Co.*, 536 F.3d at 1275.

IV. Plaintiffs' Mitigation Efforts

A basic understanding of SNF and plaintiffs' business policy is required to evaluate plaintiffs' mitigation efforts. Nuclear fuel comes in the form of finger-sized pellets of uranium dioxide and is placed in fuel rods made of zirconium alloy. The rods are roughly thirteen feet long and a half inch in diameter. These rods are bundled together into fuel assemblies. Each piece of nuclear fuel is handled as a fuel assembly or a square matrix of fuel rods. Between 189 and 264 fuel rods may be held together mechanically in an assembly. These assemblies are installed in the plant's reactor core. *Sys. Fuels, Inc.,* 79 Fed. Cl. at 48. "Inside the reactor core, nuclear fission produces heat which is used to make steam to turn a turbine, generating electricity." *Id.* Typically, fuel rods remain in the core "for two or three cycles of twelve to eighteen months each, until 3% of the U^{235} isotope has been 'burned.'" *Id.* Afterwards, the uranium is classified as SNF because it is less efficient for producing electricity. *Id.* SNF, however, is highly radioactive and must be moved to a pool containing treated water, "where the products from the fission can decay." *Id.* SNF is removed as an assembly, and these assemblies are placed in racks. Every eighteen months, around one-third of these fuel assemblies is discharged into the pool.

The pools at the nuclear reactors store spent nuclear fuel in racks. Each rack contains roughly a ten by ten matrix of cells, and each cell in the rack holds an assembly. Thus, each rack may hold 1000 assemblies or even more depending on its size. If the reactor is a boiling water reactor, the pool is usually located within the reactor building itself. A boiling water reactor "generates power by boiling water within the reactor and transporting that steam over to the turbine to produce power and electricity." Brookmire, Tr. at 12. If the reactor is a pressurized water reactor, then the pools are separately attached to the reactor building with a canal that leads into the reactor building. These canals are used to transport a fuel assembly from the reactor side to the spent fuel pool side. A pressurized water reactor is similar to the boiling water reactor except that two main loops exist to produce the power. The primary loop is at high pressure, but "the water does not come to bulk boiling as in a [boiling water reactor]." *Id.* at 14. After roughly five years, the SNF is still radioactive but may be moved to dry storage casks. *Sys. Fuels., Inc.*, 79 Fed. Cl. at 48.

VEPCO's policy is "to plan and conduct interim spent fuel storage activities . . . [to] maintain at a minimum, full core discharge capability or full core reserve for one unit in their spent fuel pools at all times." Spent Nuclear Fuel Management Plan, Surry and North Anna Power Stations (Feb. 2003) ("SNF Management Plan") at 3. Full core reserve ("FCR") means having "the ability to maintain sufficient space in the storage pools to offload or remove an entire complement of fuel assemblies from a reactor." Brookmire, Tr. at 22. FCR is necessary "for reactor in-service inspections that are conducted at five year intervals." SNF Management Plan at 3. FCR may also be necessary to conduct certain kinds of reactor vessel repairs such as adjusting how flow is conducted within the reactor or repairing the residual heat removal system. VEPCO's policy notes that FCR "may also be necessary at other times for inspection of or repairs to the reactor vessel or components of the primary coolant system." *Id.* While maintaining FCR is neither a statutory nor regulatory requirement, the plaintiffs' "ambition [is] to maintain full core reserve." Brookmire, Tr. at 25. Maintaining FCR is both a prudent operating and management practice in the industry. *Carolina Power & Light Co. v. United States*, 82 Fed. Cl. 23, 33 (2008).

A. North Anna Power Station

The North Anna Power Station is a two-unit site located near Mineral, Virginia. North Anna Units 1 and 2 are pressurized water reactors that began commercial operation in 1978 and 1980, respectively. These units share a single spent fuel pool. The operating licenses for Units 1 and 2 expire in 2038 and 2040, respectively.

An ISFSI was constructed at North Anna in 1998 pursuant to a site-specific NRC license for the North Anna site. An ISFSI is "a separate facility or installation on the nuclear site's property to store spent fuel assemblies in a dry fashion, dry inert atmosphere, in specialized canisters." Brookmire, Tr. at 22. The ISFSI is located near the center of the North Anna site within a separate, secured area. The ISFSI can eventually accommodate three storage pads. The pads are about 230 feet in length, 40 feet in width, and consist of three feet of concrete. One pad ("Pad 1") was fully constructed before VEPCO brought this action; the second pad ("Pad 2"), which was under construction when VEPCO first brought this action, is now in operation. Pad 1 has the capacity to store 28 casks. Since June 30, 2006, 24 casks have been stored there. Since March 2008 two casks have been loaded on Pad 2. VEPCO uses the TN-32 metal cask storage system and at the commencement of this case, was in the midst of changing to the Nuclear Horizontal Modular Storage ("NUHOMS") cask storage system. VEPCO contends that, but for the breach, it would not have had to construct the ISFSI. Consequently, it seeks mitigation damages in the amount of $71,629,207 for the North Anna ISFSI.

B. Millstone Power Station

The Millstone Power Station is a three-unit site near New London, Connecticut. DNC seeks damages associated with costs incurred for Millstone Units 2 and 3. Millstone Unit 2 is a pressurized water reactor. It began commercial operation in 1975 and currently is licensed to operate through 2045. Millstone Unit 3 is also a pressurized water reactor that began commercial operation in 1986 and is licensed to operate through 2045.

In 2000, DNC added fourteen new rack modules to the existing twenty-one rack modules in the Unit 3 spent fuel pool. Even with these additional racks, DNC realized that Millstone Unit 3 would eventually lose FCR prior to the end of its expected license life. DNC seeks damages for these fourteen new rack modules and also seeks damages for heat load calculations that it claims were necessary to obtain a license amendment to accommodate additional spent fuel storage capacity.

Even with the racking modules at Millstone Unit 3, DNC realized that Millstone Unit 2 would lose FCR in 2005. To assess its fuel storage options, DNC conducted a study of inter-unit transfers of spent fuel from the Unit 2 to Unit 3 spent fuel pool. In relation to the inter-unit transfer, DNC claims that it upgraded cranes to "single failure-proof" in order to comply with NRC regulations. In the process, it increased the actual capacity of the Millstone Unit 2 crane from 100 tons to 125 tons. The capacity of the Millstone Unit 3 crane remained 125 tons. DNC claims damages for upgrading these cranes, as they later supported the transfer of spent fuel using heavy casks to the Millstone

ISFSI.[7] Ultimately, DNC decided against an inter-unit transfer because it would require a license amendment from the NRC. Instead, it constructed an ISFSI at Millstone in 2004 and loaded two casks.[8] DNC seeks damages for modifications made at Millstone Unit 2 to facilitate the loading and closure of the spent fuel dry storage casks and for mobilizing and demobilizing equipment and workers to load fuel onto the Millstone ISFSI.

In sum, plaintiffs seek mitigation damages at Millstone in the amount of $38,059,409 for costs associated with constructing the ISFSI and upgrading the cranes, $12,803,274 for the Millstone Unit 3 rack project and heat load calculations, and $1,138,620 for the inter-unit transfer study.

C. Surry Power Station

The Surry Power Station is a two-unit site located near Jamestown, Virginia. Surry Units 1 and 2 are PWRs that began commercial operation in 1972 and 1973, respectively. These units share a single spent fuel pool. The current operating licenses for Units 1 and 2 expire in 2032 and 2033, respectively.

VEPCO constructed an ISFSI at Surry in 1986 with Pad 1 and installed Pad 2 in 1995. As of June 30, 2006, Pad 1 contained twenty-eight loaded dry storage systems, and Pad 2 contained twenty-seven loaded dry storage systems. A third pad ("Pad 3"), constructed adjacent to Pad 1, contained eighteen dry storage systems. Spent fuel was loaded onto Pad 3 in 2007. VEPCO primarily used the General Nuclear Systems, Inc. CASTOR V/21 dry cask storage system at the Surry ISFSI through 1996. Since then, Dominion has used the TN-32 system, but is changing to the NUHOMS system for spent fuel loading onto Pad 3.

VEPCO claims that if DOE had performed according to the Standard Contract, VEPCO would not have loaded two dry storage casks onto Pad 2 in 2000 and would not have constructed Pad 3 at the Surry ISFSI. VEPCO seeks

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[7]Defendant challenges the costs for the crane upgrades at Millstone Units 2 and 3. Defendant argues that plaintiffs would have upgraded these cranes absent DOE's partial breach to satisfy NRC regulations.

[8]DNC uses the Transnuclear Standardized NUHOMS system at the Millstone ISFSI.

mitigation damages for cask purchase and loading costs associated with one of the casks on Pad 2 in 2000, as well as all casks thereafter through June 30, 2006, and costs associated with design and construction of Surry ISFSI Pad 3. Plaintiffs seek a total of $50,286,519 for costs associated with the Surry ISFSI.[9]

DISCUSSION

I. *Standards for Decision*

The Federal Circuit has held, in connection with these SNF cases, that "mitigation damages are available for pre-breach costs should the obligee elect to treat the obligor's breach as partial." *Ind. Mich.*, 422 F.3d at 1375. The remedy, in that event, "is damages sufficient to place the injured party in as good a position as it would have been had the breaching party fully performed." *Id*. at 1373 (citing *San Carlos Irrigation & Drainage Dist. v. United States*, 111 F.3d 1557, 1562 (Fed. Cir. 1997)). "[T]he general principle is that all losses, however described are recoverable." *Id.* "Mitigation is appropriate where a reasonable person, in light of the known facts and circumstances, would have

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[9]Defendant asserts that under the 1991 ACR acceptance rates, which it argued should be used for calculating damages, ten casks would have been loaded to Pad 2 at Surry absent DOE's partial breach. The 1991 ACR acceptance rates begin at 400 MTU/year in 1998, increase to 600 MTU/year in 1999 and to 900 MTU/year in 2000. Thus, defendant seeks a reduction for those casks. Plaintiffs, at trial, argued for a steady 3000 MTU/year acceptance rate. The acceptance rates in the recently published 2004 ACR ramp up to 3000 MTU/year. The 2004 ACR acceptance rates begin at 400 MTU/year in 2010, increase to 600 MTU/year in 2011, to 1200 MTU/year in 2012, to 2000 MTU/year in 2013 and to 3000 MTU/year in 2014. The rate at which DOE was obligated to accept SNF affects the number of casks that would have been loaded to Pad 2 at Surry absent DOE's partial breach. Thus, defendant also provided a calculation of damages using the acceptance rates in the 2004 ACR. Under the 2004 ACR acceptance rates, which are higher than the 1991 ACR acceptance rates, defendant did not argue for a reduction of plaintiffs' claimed damages for loading these casks on Pad 2 at Surry. Defendant also did not argue for a reduction of plaintiffs' claimed damages for loading these casks on Pad 2 at Surry under the 1987 ACR acceptance rates, the rates which the Federal Circuit decision in *Pac. Gas* requires us to apply.

taken steps to avoid damage." *Id.* at 1375. "[O]nce 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." *Id. See also Home Sav. of Am. v. United States*, 399 F.3d 1341, 1353 (Fed. Cir. 2005) (explaining that "[w]hen mitigating damages from a breach, a party 'must only make those efforts that are fair and reasonable under the circumstances.'").

The burden rests on the non-breaching party to present evidence about its condition, assuming full government performance, in order to allow the court to compare the breach and non-breach worlds and accurately assess damages. *Yankee Atomic Elec. Co.*, 536 F.3d at 1273. In other words, the non-breaching party must establish "a plausible 'but-for' world" to recover expectancy damages. *Bluebonnet Sav. Bank FSB v. United States*, 67 Fed. Cl. 231, 238 (2005). Plaintiffs thus must show that the damages: (1) were reasonably foreseeable by the breaching party at the time of contracting, (2) would not have been incurred but for the breach, and (3) are shown with reasonable certainty. *Carolina Power & Light Co.*, 82 Fed. Cl. at 41-42; *Ind. Mich.*, 422 F.3d at 1373. Defendant does not challenge the foreseeability element of plaintiffs' claim but challenges the causation and reasonable certainty elements of certain claims.

A. Causation

We note that "the selection of an appropriate causation standard depends upon the facts of the particular case and lies largely within the trial court's discretion." *Citizens Fed. Bank v. United States*, 474 F.3d 1314, 1318 (Fed. Cir. 2007). While courts have differed as to which standard to use in SNF cases, we elect the more generally used "but-for" causation standard instead of the substantial factor standard. *See Carolina Power & Light Co.*, 82 Fed. Cl. at 42-43 (comparing courts using but-for standard in SNF cases to courts using substantial factor standard). Under this standard, "[a] plaintiff must show that but for the breach, the damages alleged would not have been suffered." *San Carlos Irrigation & Drainage Dist.*, 111 F.3d at 1563.

B. Reasonable Certainty

Absolute certainty is not required to recover damages because "the risk of uncertainty must fall on the defendant whose wrongful conduct caused the damages." *Energy Capital Corp. v. United States*, 302 F.3d 1314, 1327 (Fed.

Cir. 2002). If "a reasonable probability of damages can be clearly established, uncertainty as to the amount will not preclude recovery." *Glendale Fed. Bank, FSB v. United States*, 378 F.3d 1308, 1313 (Fed. Cir. 2004) (quoting *Locke v. United States*, 151 Ct. Cl. 262 (1960)). However, "recovery for speculative damages is precluded." *Ind. Mich.*, 422 F.3d at 1373 (quoting *San Carlos Irrigation & Drainage Dist.*, 111 F.3d at 1563.) In assessing certainty, the court may "act upon probable and inferential as well as direct and positive proof." *Id.* at 267-68 (quoting *Bigelow v. RKO Radio Pictures*, 327 U.S. 251, 26 (1946)).

C. Reduction of Damages by Asserted by Defendant

After plaintiffs demonstrate foreseeability, causation, and certainty, defendant may attempt to reduce damages by showing either that plaintiffs did not undertake reasonable mitigation efforts or that the efforts they did undertake were unreasonable. *Ind. Mich.*, 422 F.3d at 1375; *Sys. Fuels, Inc.*, 79 Fed. Cl. at 52; *S. Nuclear Operating Co. v. United States*, 77 Fed. Cl. at 403-04 (2007). Defendant may also seek to reduce damages where, as a result of defendant's breach, Dominion Resources avoided an expense. *Libson Contractors, Inc. v. United States*, 828 F.2d 759, 769 (1987). "Any 'benefits' the government seeks to offset must be shown to a reasonable certainty, or they must be denied as too speculative to meet the standards set forth by the Federal Circuit in *Indiana Michigan*." *Carolina Power & Light Co.*, 82 Fed. Cl. at 44 (quoting *Sys. Fuels, Inc.*, 79 Fed. Cl. at 71).

II. Disputed Mitigation Costs

The evidence demonstrates, and defendant does not contest, that when Dominion realized DOE's performance was unlikely, they undertook efforts to avoid having to shut down power plants by storing fuel on an interim basis. Defendant does not argue that Dominion failed to take appropriate steps to mitigate the loss. However, defendant resists eleven particular elements of the claimed costs, each of which we address below.

A. Construction of North Anna ISFSI

The issue is whether, in 1993, plaintiffs would have commenced planning construction of an ISFSI at North Anna, notwithstanding DOE's anticipated breach. Defendant contends that, even in the absence of a breach, plaintiffs would have been compelled to build an ISFSI. Plaintiffs contend that they could not have coped with their SNF storage needs without construction of an ISFSI in view of the anticipated breach and that, if DOE had commenced the pick up of SNF at the rate projected in the 1987 ACR, there would have been no need for an ISFSI. At trial, the parties presented various causation models, all premised on conditions as they existed in 1993, projecting anticipated storage needs and comparing them to defendant's contractual obligations. Because the parties disagreed on defendant's performance obligations, their models used the varying acceptance rates published in the 1987, 1991, and 2004 ACRs. After trial, the Federal Circuit's ruling in *Pac. Gas* dictates use of the 1987 ACR rates. 536 F.3d at 1291.

In the fall of 1993, plaintiffs anticipated that DOE would not perform at all in 1998 or at any foreseeable point thereafter. The utilities, therefore, had to make plans for that eventuality. Mr. Wakeman, a senior engineer in DNC's Nuclear Spent Fuel Group, prepared a technical report, dated September 15, 1993, and entitled, "Alternatives for Expansion of Interim Spent Nuclear Fuel Storage at the North Anna Power Station." Although plaintiffs anticipated no performance by DOE, Mr. Wakeman nevertheless attempted to determine what DOE's responsibilities were under the Standard Contract in his report. Therefore, he had to base those projections on the acceptance rates published in some particular ACR, and he used the then most recently published allocations in the 1991 APR and the ramp-up rate in the 1991 ACR, which ramps up to 900 MTU after two years.[10]

In his analysis, Mr. Wakeman took account of the fact that utilities are permitted to exchange DOE pick-up allocations with other nuclear units owned by the utility.[11] As Mr. Wakeman explained at trial, even though his report states

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[10]Plaintiffs' use of the 1991 ACR is understandable as they were assessing the status of maintaining FCR in light of the most current ACR available in 1993. We note plaintiffs' use of the 1991 ACR for this limited purpose only and do not take projections based on the 1991 ACR into account in assessing damages.

[11]North Anna and Surry are under the same contract with DOE, thus allowing plaintiffs to assume sharing of allocations between the stations. DOE Contract No. DE-CR01-8344423, at 12 ("Purchaser shall have the right to determine which SNF and/or HLW is delivered to DOE . . . ."). Mr. Zabransky, a DOE contracting officer, also confirmed at trial that "the (continued...)

that he did not assume sharing of allocations, his projections are built on the assumption of some sharing. Under that assumption, DOE would pick up more fuel from North Anna than from Surry. Under the 1991 ACR acceptance rates, his report estimated a loss of FCR by fifty-two assemblies in February 1999 which would continue and increase to a loss of FCR by 116 assemblies in September 1999. The report projected that additional storage would be needed to accommodate about 1800 spent fuel assemblies that would be discharged from April 1999 until the Unit 2 license expiration date in 2020. If shipments by DOE to a MRS began in 1998, plaintiffs contemplated a need for additional storage for 512 spent fuel assemblies at North Anna "in order to make full core reserve and actually a comfortable margin against full core reserve." Wakeman, Tr. at 543. An expected three year delay in constructing the repository increased the anticipated need for additional storage to 768 fuel assemblies. Thus, cost estimates in the report were based on a minimum storage requirement of 800 fuel assemblies and a maximum of 1800 fuel assemblies, once again based on the use of the 1991 ACR acceptance rates.

In the 1993 report, Mr. Wakeman considered different options to address the need for additional storage at North Anna. These included reracking the existing storage pool, rod consolidation, constructing a new storage pool, transhipping the fuel to the Surry ISFSI, and constructing an ISFSI for dry storage of casks. Reracking would require a temporary crane to remove existing racks and install new racks. The entire reracking project would cost approximately $29,869,836 for 800 new fuel assemblies, and $60,529,992 for 1800 fuel assemblies; this estimate was based on the reracking effort at Maine Yankee, a different nuclear facility. Reracking would require about one year to complete unless the licensing process was contested, in which case it would take three years to complete. Rod consolidation was eliminated as an option due to past failures experienced at Millstone with such technology. A new storage pool would require installation of several different support systems (scaffolding, vacuum pumps and control system, nitrogen supply, tool and spare parts storage) and transfer cask handling equipment (cask lifting yoke, lid lifting equipment, cask transporter); its construction would cost approximately $105 million, and take two to three years to complete. Transhipment to the Surry ISFSI would also

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[11](...continued)
Department's position has been, as long as I've been award of it, that a single utility entity could trade its allocations within its family as it saw fit." Zabransky, Tr. at 1499.

require installation of several different support systems, and cost $34,298,817 for 800 fuel assemblies, and $70,968,589 for 1800 fuel assemblies. A license amendment for transhipment could take two years and another two years would be required to complete modifications to the station. Mr. Wakeman also considered three dry storage technologies which called for metal and concrete casks as well as horizontal concrete modules. All three options would require construction of an ISFSI. Dry storage would require a preparation or testing area for storage or transfer casks which would in turn require support systems and cask handling equipment. Additionally, a rail spur and service road for transportation of the casks were required.

Ultimately, Mr. Wakeman recommended and plaintiffs selected dry storage using metal casks, estimated at $29,241,125 for 800 additional fuel assemblies and $59,901,281 for 1800 additional fuel assemblies. Reracking would have been more costly. Construction of a storage pool was also not cost effective and may have taken seven to eight years to complete. Transhipment was the most costly alternative and would have required a lengthy licensing effort; thus, it was eliminated as an option. According to Mr. Wakeman, metal casks provided the best option because the same cask design could be used at both Surry and North Anna, "resulting in a lower unit cost at both stations due to procurement of larger quantities." Alternatives for Expansion of Interim Spent Nuclear Fuel Storage at the North Anna Power Station (Sept. 1993) ("Alternatives for SNF at North Anna") at 47. The goal was to have an operational ISFSI by June 1998. Mr. Wakeman estimated that completion of a safety evaluation would take one year, completion of a license would take about three years, and cask procurement and construction of an ISFSI would take about eighteen months. Thus, the total anticipated construction time for an ISFSI was five years. Based on Mr. Wakeman's projections, "storage space in the pool [would] not be adequate for full core discharge after the North Anna Unit 1 refueling outage in 1999." *Id.* The North Anna ISFSI would provide enough storage capacity to last through 2020, the year North Anna's license expired. Thus, plaintiffs assert that they chose to construct the North Anna ISFSI because they anticipated that DOE would not perform and needed a long-term storage option to allow North Anna to operate through 2020, the year its license expired.

The analysis heretofore has been based on Mr. Wakeman's 1993 report, which used the 1991 ACR acceptance rates. Prior to trial, Mr. Wakeman prepared a report for purposes of trial to demonstrate the effect that the 1987 ACR acceptance rates would have on plaintiffs' calculated damages for the

North Anna and Millstone sites. In light of the Federal Circuit's recently issued decision in *Pac. Gas*, this turns out to be the correct rate. If DOE had performed at the 1987 ACR acceptance rates, and plaintiffs had exchanged priorities with Surry, then plaintiffs would not have lost FCR at North Anna through the end of its license life. If plaintiffs' assumption that sharing with Surry is permissible was correct, then these calculations in turn are also correct. Plaintiffs assert that they would have ultimately used as many Surry allocations as possible at North Anna to avoid the expense of an ISFSI. They note that Dr. Neuberger, defendant's expert witness, in his causation models, also assumed that Surry gave all of its allocations to North Anna in the early years.

In Dr. Neuberger's causation model, he nonetheless criticizes Mr. Wakeman's assumption that all of Surry's allocations could have been used for North Anna under the 1987 ACR ramp-up rate. Dr. Neuberger notes that Mr. Wakeman's report, produced in 1993, states that "for equity reasons" he did not assume sharing of allocations between North Anna and Surry. Mr. Wakeman was considering the possible reaction of Surry County residents who might have been disgruntled with Dominion's decision to share allocations because Surry fuel would not be removed as quickly as they expected. We find it more likely than not, however, that, even at the risk of upsetting Surry County residents, plaintiffs would have used as many Surry allocations as possible for North Anna to avoid the expense of building a long-term storage facility. The residents in Surry County were aware that nuclear fuel was being stored there.

Defendant also contends that plaintiffs simply preferred the ISFSI over other dry storage options for other reasons and did not seriously consider or evaluate other options. Defendant contends that "the only evidence of the type of storage option that VEPCO would have chosen suggests that it would have constructed an ISFSI." Def.'s Post-Trial Br. at 17. Even if defendant is correct, however, we find this unremarkable given that the government's non-performance would have been catastrophic, creating a pressing need for a long-term storage solution such as an ISFSI. The marginal differences between performance at the 1987 ACR rate, which plaintiffs could have coped with, and the lower performance at the 1991 rate were made irrelevant by the fact that *no* performance was likely as of 1993. It therefore means nothing that the only viable option contemplated in 1993 was an ISFSI because the government put plaintiffs in the unexpected position of having to create facilities to store large quantities of fuel for an indefinite period. We agree with plaintiffs that "not a scintilla of evidence in the massive record . . . even fairly suggests–that Dominion would have built an ISFSI under an assumption of reasonable DOE performance at something like the 3000 MTU/year rate." Pl.'s Post-Trial Br. at 11.

The reason plaintiffs only considered long-term storage options to prevent loss of FCR in 1993 is because they prudently, and in retrospect, accurately, did not expect defendant to perform at all. Among these long-term storage options (i.e. re-racking, rod consolidation, constructing a new storage pool, transhipping the fuel to the Surry ISFSI), constructing an ISFSI was viewed as the most cost effective solution. We see no reason to second guess that decision. We conclude that plaintiffs have demonstrated both causation and reasonable certainty with respect to the North Anna ISFSI.

Plaintiffs concede that under the 1987 ramp-up rate, Dominion would have loaded two additional spent fuel storage casks at the Surry site, reducing Dominion's damages for the North Anna ISFSI by $3,690,264.08 for the purchase, loading, project management and NRC fees for two additional casks at Surry. Accordingly, the reduced figure of $67,938,942.92 for the North Anna ISFSI will be included in the damages award.

B. Heat Load Analysis at Millstone Unit 3

Defendant challenges causation with respect to the heat load analysis performed at Millstone Unit 3. Plaintiffs assert that the heat load analysis resulted from the need for an increased storage capacity license amendment at Millstone Unit 3, triggered by defendant's partial breach. Defendant contends that it was not.

Plaintiffs applied for two different license amendments at Millstone Unit 3. The "full core offload as normal" ("FCO") license amendment concerned an event triggered by defendant's partial breach, while the increased storage capacity license amendment concerned a non-breach event. Defendant concedes that the need for increased storage capacity at the Millstone Unit 3 spent fuel pool was caused by DOE's partial breach. It argues, however, that the heat load analysis initially supported plaintiffs' application for the FCO license amendment, triggered by the non-breach event; thus, costs associated with the heat load analysis are not recoverable. The issue, therefore, is whether the FCO license or increased storage capacity license necessitated the heat load analysis.

The heat load analysis was submitted as part of the FCO license which occurred before the licensing effort to increase storage capacity at Unit 3.

Whitaker, Tr. at 853.[12] Plaintiffs explained that they chose to conduct the heat load analysis as part of the earlier FCO license because it laid the groundwork for the increased storage capacity license.[13] For the FCO license, plaintiffs needed a heat load analysis to prove to NRC that the full core offload procedure would be safe. The original heat load analysis for the Millstone Unit 3 spent fuel pool assumed storage for 2169 fuel assemblies and would have sufficed for the FCO license. However, another heat load analysis would have been required for the subsequent increased storage capacity license. Both plaintiffs' and defendant's witnesses agreed to this fact. Accordingly, plaintiffs conducted a new heat load analysis that assumed increased storage of approximately 3048 spent fuel assemblies. Plaintiffs chose to submit this heat load analysis with the application for the FCO license amendment. This new heat load analysis was subsequently used to meet the thermal hydraulic requirements for the increased storage capacity license.

Defendant reasons that the heat load analysis was necessitated by the FCO license merely because the heat load analysis was submitted with the application for the FCO license. Defendant concedes, however, that another heat load analysis was required for the increased storage capacity license and that the need for increased storage was caused by its partial breach. While this analysis was submitted with the earlier non-breach related license application, defendant's partial breach necessitated the increased storage capacity license which, in turn, required an additional heat load analysis. Plaintiffs anticipated the need for analysis to meet the requirements for the increased storage capacity license and chose to conduct it before submitting the application for the increased storage capacity license. We find that plaintiffs have met their burden of proof with respect to causation and certainty of damages. We find, in addition, that this expense was foreseeable in the event of breach. Accordingly, the costs associated with the heat load analysis, $427,909, an amount defendant

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[12]The transcript states that "[t]he work on the full core offload as normal license amendment and the work on the adding additional storage racks was going on in basically parallel paths, with the license amendment for the 'full core offload as normal' being ahead of it." Whitaker, Tr. at 853.

[13]The design change packages for both license amendments were submitted a few months apart from each other in 1999. Plaintiffs pursued the FCO license amendment to eliminate the restriction on the license which limited full core offload ("where the core was offloaded fully from the reactor vessel to the spent fuel pool") to six times. *Id.* at 830.

does not dispute, will be included in plaintiffs' damages.

C. North Anna Plant Modifications

We have addressed all of plaintiffs' affirmative claims. Defendant also contends that the amounts plaintiffs claim for additional work are overstated. It seeks a credit, for example, for the value of those future costs plaintiffs have, it contends, avoided. It specifically seeks to reduce plaintiffs' damages for costs associated with the following modifications made at North Anna: installation of a work platform, addition of a cask pedestal to accommodate use of a nozzleless handling tool, installation of vacuum drying support equipment, modification of cask loading pit gate, additional radiation shielding in decontamination building, demolition of cask area pumpdown equipment, removal of equipment for work laydown area, floor upgrades, and addition of radio control for cask handling crane.

Defendant argues that these modifications would have been required at some point regardless of the type of cask used by DOE. It asserts that its expert, Mr. Joseph Grillo, has sufficient information to anticipate the range of casks DOE would have used so that he can demonstrate with reasonable certainty the modifications which would have been necessary at North Anna, absent DOE's breach. Plaintiffs respond that the original facility at North Anna was not "set up for or designed for the handling of a TN-32 storage cask which by then was [plaintiffs'] chosen cask," making modifications necessary. Wakeman, Tr. at 561-62. Plaintiffs also note that under the Standard Contract, DOE must provide casks that are "suitable for use at the [p]urchaser's site." Art. IV.B.2. Therefore, plaintiffs reason that the casks DOE should provide, absent breach, may not have required any modifications at their site. Plaintiffs contend that the uncertainty associated with the type of casks DOE would have provided in the but-for world should preclude the requested reduction.

Defendant's expert, Mr. Grillo, claims that he may accurately predict the range of casks that DOE would have provided to collect SNF in the but-for world, based on regulations promulgated by the NRC and Department of Transportation. While we acknowledge that these regulations provide some fixed parameters for casks, the uncertainties in Mr. Grillo's report outweigh any certainty that these regulations may provide. These uncertainties include the differences in height, diameter, and weight among the possible hypothetical DOE casks. These differences significantly impact the need for other alterations. We note that Mr. Grillo's report compares storage casks to transportation casks. Plaintiffs purchased storage casks, whereas defendant would have provided transportation casks. Inherent differences exist between these two. For instance, storage casks are bolted; transportation casks are welded. It is also uncertain whether DOE would have used truck or rail casks, although plaintiffs had previously identified a rail cask as their proposed spent fuel delivery method to DOE. In Mr. Grillo's but-for universe, the difference in diameter between the smallest possible rail cask, a TN-32, and largest possible cask, TS-125, is twenty-two inches. While twenty-two inches may seem insignificant, this difference determines the necessity for and dimensions of a work platform. Also, the largest truck cask is about forty-seven inches in diameter; the smallest is about forty inches in diameter. The diameter of the largest rail cask is ninety-six inches; the smallest is about ninety-one and a half inches. Thus, the difference in the diameters between the truck and rail casks is significant. Finally, truck casks weigh approximately 50,000 pounds, whereas rail casks may weigh up to 285,000 pounds. Significantly different modifications at North Anna would have been required if the cask DOE provided was twenty-two inches longer in height and over five times greater in weight. Thus, the uncertainties inherent in identifying possible hypothetical DOE transportation casks make our determinations of necessary modifications at North Anna equally uncertain. We thus agree with plaintiffs that the assumptions underlying Mr. Grillo's report have not been demonstrated with reasonable certainty.

Defendant also characterizes some modifications at North Anna as unrelated to DOE's non-performance and necessary in the but-for world. One of these modifications, the purchase of the nozzleless handling tool, plaintiffs have removed from their claim. They still maintain their claim for the cask pedestal modification to the spent fuel pool cask loading pit, however. Defendant describes the installation of the cask pedestal as necessary in the but-for world to "remove the height difference between [SNF] assemblies in the spent fuel pool storage racks and the cask in the cask load pit." Grillo, Tr. at 2369-71. Defendant points out that "to move fuel assemblies from the spent fuel pool into the storage cask, either the storage cask would need to be raised or a longer [nozzleless handling tool would be] required." Grillo, Expert Report at 34. Plaintiffs chose to install a cask pedestal to remove the height difference and, according to defendant, realized "[o]ther operational benefits" as a result of installing the cask pedestal. *Id.* We have already determined that the uncertainty as to hypothetical DOE casks makes the modifications necessary in the but-for world uncertain. Defendant does not contest that the pedestal was necessary to transfer fuel "from the spent fuel pool into a cask located in the cask loading pit." *Id.*

Plaintiffs have met their burden as to causation. They have demonstrated that the work platform was built to specifically accommodate the "operations [which] occur [before and] after loading at the top of" the TN-32 casks. Wakeman, Tr. at 564-65. The cask pedestal was necessary to accommodate the height of the TN-32 cask. Plaintiffs should not be penalized because they chose the option that proved most beneficial to their plant. Plaintiffs also have proved that the vacuum drying support equipment was necessary to meet NRC requirements specific to the TN-32 cask. Demolition of cask area pumpdown equipment was necessary because the "TN-32 cask was twice as large" as the cask that had been contemplated when the equipment originally was installed. Wakeman, Tr. at 567-68. Even Mr. Grillo agreed at trial that the modifications were reasonable and that he would have "done the same thing." Grillo, Tr. at 2396. We conclude that plaintiffs have proven causation, foreseeability and reasonable certainty with respect to these costs. Accordingly, the damages award shall include all the costs associated with the North Anna modifications.

D. Millstone Plant Modifications

Defendant seeks to reduce the damages award for costs associated with the following modifications made at Millstone: work platform, stairs, and ladder relocation in the cask wash pit area, archway access into the cask wash pit area, piping to remove cask water, supply piping for required gases, installation of electric power and a computer connection. The parties make the same arguments regarding these modifications that they made with respect to the modifications at North Anna. Defendant again relies on Mr. Grillo's analysis as to a range of hypothetical DOE casks to demonstrate that these Millstone modifications would have been necessary absent DOE's breach. For the same reasons stated above as to the modifications at North Anna, we find that the uncertainty underlying Mr. Grillo's assumptions makes the conclusions as to modifications at Millstone equally uncertain.

At trial, plaintiffs demonstrated that plant modifications at Millstone were specifically made to accommodate the dry storage NUHOMS cask used at Millstone. The height of the platform installed in the cask pit "was based on the dimensions of [the NUHOMS] cask to allow – to basically place the top of the cask, when the worker's standing on that platform, that they have good access to the top area of the cask." Rutkoske, Tr. at 757. The opening in the platform in which the dry cask sits was specifically designed to provide room for the rigging used with that particular NUHOMS cask and "[n]ot all dry fuel storage casks would use that same rigging." *Id.* at 758. The welding system to seal the NUHOMS cask required 480-volt power. As we noted above, not all casks are welded; some are bolted shut. Casks provided by DOE may or may not require a welding system. To determine whether a vacuum drying system would have been necessary, we need to know what type of casks DOE would have provided. According to Mr. Grillo's report, a vacuum drying system would not have been necessary for lower capacity truck transportation casks or lower capacity rail casks, casks with a capacity for storing fewer fuel assemblies than the casks plaintiffs chose. We cannot accept that analysis, however, because we do not know the shape and dimensions of the casks DOE would have provided. Plaintiffs, on the other hand, have met their burden to demonstrate causation, foreseeability and reasonable certainty with respect to the vacuum drying system as well as the other modifications. The costs for the plant modifications at Millstone are included in the damages award.

E. Millstone Units 2 and 3 Crane Upgrades

Defendant seeks to reduce plaintiffs' damages for costs associated with upgrading the cranes at Millstone Units 2 and 3. Plaintiffs concede that, even assuming that DOE had performed on time, it would have been necessary either to perform a load drop analysis for the existing cranes at Millstone Units 2 and 3, or both units would have required upgraded cranes to satisfy NRC regulations contained in NUREG-0612. What we know is that plaintiffs were forced by nonperformance to make that decision earlier in 2001. Defendant concedes that the failure to begin pick up on time prompted the inter-unit transfer study. The result of that study was that the utility would have to move SNF from Unit 2, which would have lost storage capacity, to Unit 3, which still had space for storage. What became apparent was that the transfer meant that either the existing cranes would have to be subject to a load drop analysis to ensure safety in that transfer process, or each unit would have to be equipped with upgraded single failure-proof cranes.

The choice that the utility faced was therefore similar to the choice it would have faced if the government had performed. In June 2001, plaintiffs undertook a study, titled, "Millstone Spent Fuel Strategy," to compare and contrast different strategies for the storage problem at Millstone Unit 2. The study ultimately recommended beginning with an inter-unit transfer before immediately constructing a dry storage facility. A slide presentation, dated March 2002, lists as one of the benefits of an inter-unit transfer: "[c]ask [c]rane

[u]pgrades will be required for any fuel cask handling evolutions and [to] support normal operations." Millstone Power Station Inter-unit Transfer of SNF (Mar. 2002), DOM00015603. However, by August 2002 plaintiffs concluded that "other considerations . . . favor immediate dry storage" and decided against implementing the inter-unit transfer. Millstone Spent Fuel Strategy, Revision 1 (Aug. 2002), DOM00057728. Among the considerations listed to support this decision was that "[d]ry storage now for Unit 2 delays the need and cost to upgrade the Unit 3 cask crane for decades." *Id.* Nonetheless, in December 2003, an approval form for the crane upgrade project at Millstone Unit 3 was finalized. In March 2004, the dry storage option, construction of an ISFSI, was approved. In May 2004, a similar approval form was finalized for the crane upgrade project at Millstone Unit 2.

We know the outcome of the utilities' decision process: they elected to upgrade both cranes to single failure-proof status. We don't know for certain what plaintiffs would have done if the government had performed, although we know that one of the same two options required by NUREG-0612 would have been chosen. It is tempting simply to conclude that, because plaintiffs elected in fact to upgrade the cranes in 2004, they would have done the same thing in 1998 if DOE had performed. Plaintiffs urge us not to come to that conclusion, however, asserting it is more likely that the utilities would have opted for the load drop analysis. This matters because, according to plaintiffs, a drop load analysis may be cheaper. Defendant, however, contends that plaintiffs have not demonstrated that DOE's nonperformance caused plaintiffs to prefer upgrading the cranes instead of conducting a load drop analysis.

We agree with defendant. Plaintiffs have not carried their burden of proof as to causation. While the inter-unit transfer project may have initially provided an incentive to upgrade the cranes in 2001, the project was abandoned in 2002. One of the reasons stated for choosing to provide dry storage rather than implement the inter-unit transfer was that the upgrade to the Millstone Unit 3 crane was not required. Yet, plaintiffs submitted the final approval for upgrading the crane at Millstone Unit 3 in 2003 and for the crane at Millstone Unit 2 in 2004. At trial, testimony was offered to the effect that, even after plaintiffs decided to pursue dry storage, they pursued the inter-unit transfer as a backup plan and that plaintiffs were too far along in the contract for the crane upgrade to cancel it. There is, however, no documentary support for that assertion. The approval forms for the crane upgrades were finalized one to two years after plaintiffs decided not to pursue the inter-unit transfer. We also know that upgrading the cranes to single-failure proof status would make them useful for other purposes, i.e., for "any fuel cask handling evolutions and [to] support normal operations" and would also preclude the need to perform a load drop analysis in the future. Millstone Power Station Inter-unit Transfer of SNF (Mar. 2002), DOM00015603.

Plaintiffs, in short, have not demonstrated that the cost of upgrading the cranes should be associated exclusively with the inter-unit transfer. We find that the inter-unit transfer was not the but-for cause of upgrading the cranes and therefore reduce plaintiffs' total claim for damages by $4,322,705 for the Millstone Unit 2 crane upgrade and by $2,834,680 for the Millstone Unit 3 crane upgrade.

F. Loading Costs & Millstone Loading Preparations and Mobilization/Demobilization Costs

Defendant seeks to reduce the damages award for costs to load casks at Surry, North Anna, and Millstone and also for the labor costs associated with loading preparations and mobilizing, as well as demobilizing workers to load fuel onto the Millstone ISFSI.[14] Defendant argues that, by loading SNF into dry storage casks in the actual world, plaintiffs have now avoided the need for loading fuel into any cask that may be provided in the future by DOE.

This court has uniformly rejected defendant's proposed reduction for loading costs in previous spent fuel decisions because "these loading costs have merely been deferred" not avoided. *Carolina Power & Light Co.*, 82 Fed. Cl. at 52. *See also Sys. Fuels Inc.*, 79 Fed. Cl. at 70-71; *Sys. Fuels, Inc.*, 78 Fed. Cl.

[14]Defendant's expert witness, Mr. Grillo, opines that "[t]he effort required to load spent fuel storage casks and transportation casks are very similar" and consist of the same specific stages which include: "initial loading campaign preparations, mobilization of equipment for cask loadings, loading operations including fuel characterization and cask closure, transfer of loaded cask, and demobilization of equipment upon completion of loading campaign." Grillo, Expert Report at 38. The initial loading campaign stage refers to the plant specific procedures necessary to address all aspects of cask loading and handling. Once these procedures have been established, workers must be trained and qualified to perform them. Mobilization and demobilization stages require staging and testing ancillary equipment for cask loadings then removing this equipment from the plant.

769, 797 (2007); *N. States Power Co.*, 78 Fed. Cl. 449, 468-69 (2007); *Pac. Gas*, 73 Fed. Cl. at 416; *Sacramento Mun. Util. Dist. v. United States*, 70 Fed. Cl. 332, 372 (2006); *Tenn. Valley Auth.*, 69 Fed. Cl. at 542. Defendant has not provided us with any reason to deviate from the court's holdings. While it is true that the Standard Contract obligates plaintiffs to bear the cost of loading casks provided by DOE, plaintiffs remain obligated to pay for loading costs when DOE arrives to pick up plaintiffs' SNF in the future. Plaintiffs' mitigation merely creates temporary on-site storage. It is not substitute performance. Plaintiffs will remain obligated to pay costs for mobilizing workers to load casks onto the Millstone ISFSI in the future. They are not, however, obligated to pay these loading costs twice. *See Carolina Power & Light Co.*, 82 Fed. Cl. at 52.

Even if these loading costs were avoided and not deferred, defendant has failed to demonstrate what plaintiffs' loading costs would have been had DOE performed. While Mr. Grillo asserted that he could anticipate the parameters of the casks DOE will bring, he also acknowledged that DOE has not identified the type, size, or capacity of the cask that it would have used at plaintiffs' plants. Indeed, DOE could use technology developed in the future that does not involve casks to pick up plaintiffs' SNF. The uncertainty inherent in the type of cask DOE would have used as well as the method of collecting the SNF thwarts the requirement of reasonable certainty necessary for defendant's proposed reduction. *See Sys. Fuels, Inc.*, 79 Fed. Cl. at 71 ("Prior decisions have concluded that '[a]s matters now stand, any benefit inhering in [the utility] because of delayed loading costs would be entirely speculative. It is not possible to ascertain the method DOE will ultimately use for SNF acceptance.'") Accordingly, plaintiffs' damages award will include the actual costs incurred to load casks at Surry, North Anna, and Millstone and the costs associated with loading preparations and mobilizing workers to load casks onto the Millstone ISFSI.

G. Fuel Characterization Charges

Defendant seeks to reduce the damages award for costs associated with visually inspecting and recording the condition of fuel assemblies before putting them into dry storage in order to verify compliance with NRC criteria for each particular dry storage system at the North Anna, Surry, and Millstone plants. Defendant asserts that plaintiffs would have incurred these costs even if DOE had performed because the Standard Contract requires the utilities to characterize their fuel before loading it for delivery to DOE. Defendant also argues that plaintiffs would have been required to perform these inspections at

North Anna, irrespective of DOE's partial breach, to determine the root cause of corrosion on the fuel assemblies. Plaintiffs argue that these inspections were a prerequisite to loading fuel into the dry storage casks, and that they loaded this fuel into dry storage casks because DOE failed to perform. They note that after these assemblies are removed from dry storage for future delivery to DOE, plaintiffs must again pay for the fuel to be inspected before loading it into a DOE transportation cask. Plaintiffs acknowledge the corrosion problem at North Anna but contend that the need to place the fuel assemblies into dry storage, not the corrosion issue, necessitated the inspections.

We view the fuel characterization costs as conceptually similar to costs for loading fuel. These costs have not been avoided but merely have been deferred until delivery to DOE in the future. When DOE provides delivery, plaintiffs will incur these inspection costs again. Aside from the fuel characterization costs incurred at North Anna, defendant does not dispute that these fuel inspections were necessary before loading fuel into dry storage casks. As for the contested costs at North Anna, defendant has not demonstrated that these inspections were ultimately unnecessary before the fuel assemblies, which are susceptible to corrosion, were loaded into the dry storage casks. Defendant's expert includes a one paragraph summary in his report stating that the corrosion issue caused the need for the inspection and briefly testified to that effect, but he did not address whether these inspections would have been necessary absent the corrosion problem. Plaintiffs' witness Mr. Wakeman, however, acknowledged that he was aware of the corrosion before the inspections occurred and stated that special fuel inspections were necessary to put the fuel assemblies into the dry storage casks used at North Anna. Whether or not the fuel assemblies were susceptible to corrosion, they were subject to a fuel inspection before being loaded into dry storage, to assure compliance with NRC criteria. Accordingly, the fuel characterization charges are allowed.

H. Internal Labor

Defendant seeks to reduce the damages award for costs associated with internal labor. Defendant agrees that plaintiffs' use of internal labor was reasonably foreseeable and that most of plaintiffs' labor costs[15] were

[15]Defendant also contests a portion of the internal labor costs that it considers unsupported. We address below those challenged costs along with (continued...)

demonstrated with reasonable certainty. Defendant's primary challenge to these labor costs is that they are not recoverable because they are not incremental to the partial breach. Defendant suggests that plaintiffs simply absorbed the additional work and that total labor costs did not increase. Defendant is, however, willing to recognize labor costs for hourly employees and salaried employees who spent more than fifty percent of their hours on a mitigation project during any one year as "incremental to the breach." Johnson, Tr. at 2590-92. The rationale for this standard was that all hourly employees would not have been paid the hour that they spent working on mitigation work absent DOE's partial breach; thus, their labor is a "discrete incremental charge." Johnson, Tr. at 2590. Defendant reasons that salaried workers who spent less than fifty percent of their hours on mitigation work would have no effect on plaintiffs' lost opportunity costs. Defendant does not dispute the labor costs attributed to salaried employees who received overtime pay for mitigation work.

Defendant uses a threshold of 1000 hours to identify workers who spent less than a majority of their labor on mitigation projects. Under defendant's standard, plaintiffs would not be able to recover labor costs for employees like Mr. Rajinderbir S. Harnal who worked 125 hours on a mitigation project in 2001, 997 hours in 2002, and 701 hours in 2003. Plaintiffs would also be unable to recover labor costs for Mr. Whitaker, who testified at trial about his involvement in the Millstone project, because he worked only 387 hours in 2001 on mitigation projects, 737 hours in 2002, and 131 hours in 2003. While these employees have worked more than a total of 1000 hours on mitigation projects, neither of them spent 1000 hours on mitigation projects in one year.

We reject defendant's criticism. Plaintiffs may recover costs for the total hours its employees spent working on mitigation projects as long as plaintiffs prove that their employees in fact worked on mitigation projects during those hours. *See Carolina Power & Light Co.*, 82 Fed. Cl. at 47 ("Every hour that a[n] . . . employee spent on a breach-related project was an hour that the employee did not spend doing other productive work . . . ."); *Sys. Fuels, Inc.*, 79 Fed. Cl. at 67; *Sys. Fuels, Inc.*, 78 Fed. Cl. at 798; *S. Nuclear Operating Co.*, 77 Fed. Cl. at 442; *Pac. Gas*, 73 Fed. Cl. at 408 ("if a[n] . . . employee is required to perform labor on a project that he or she would have – absent DOE's breach of the Standard Contract . . . [then the utility] is entitled to damages (if foreseeability

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[15](...continued)
other costs that defendant argues are unsupported.

and certainty are proved) for such labor costs"); *Tenn. Valley Auth.*, 69 Fed. Cl. at 538-39. To establish labor costs, plaintiffs explained their procedures for recording labor through work breakdown structure numbers ("WBS") that "charge . . . salary time and expenses to certain projects." Brookmire, Tr. at 66-73. Plaintiffs provided their accounting records and time sheets for their employees who record their time on a weekly basis according to the projects they support. Plaintiffs have demonstrated the damages with reasonable certainty.

Like other courts in SNF cases, we also:

> are unable . . . to discern any principled distinction between the employee fully engaged in breach-related work and the employee whose involvement in such work may have been only limited. In either case, a cost was incurred that is properly chargeable to the activity benefitted–the development of a dry storage facility . . . . [I]t is quite appropriate to recognize as a cost of mitigation any diversion of labor that was applied to the accomplishment of that mitigation . . . . "[T]he test for recovery is a targeted one: whether use of the internal resources by [plaintiff] deprived it of the ability to employ those resources on other projects."

Carolina Power & Light Co., 82 Fed. Cl. at 47 (quoting *N. States Power Co.*, 78 Fed. Cl. at 468 (quoting *Tenn. Valley Auth.*, 69 Fed. Cl. at 539)). It makes no difference whether plaintiffs' employees spent one hour or 1000 hours on mitigation projects, that hour could have been spent on plaintiffs' other projects. Defendant has not produced any evidence demonstrating that these costs were unsupported or unreasonable. Accordingly, labor costs that have been demonstrated with reasonable certainty will be included in the damages award.

I. Overhead

Defendant seeks to reduce the damages award for costs associated with overhead. Defendant does not dispute that plaintiffs used warehouses and nuclear management services[16] to complete breach-related projects. Defendant

[16]Defendant contests $76,040 for project management costs at Surry calculated using the 2004 ACR or $3,822,196 for the same costs calculated (continued...)

argues, however, that no evidence has been presented that plaintiffs' overhead costs increased as a result of DOE's delay. Defendant contends that plaintiffs should not recover overhead costs because they are fixed and not incremental to the breach. Plaintiffs argue that overhead costs represent true costs incurred to conduct breach-related projects. As such, plaintiffs assert that it is irrelevant whether overhead costs "may not be seen to increase as a result of DOE's [partial] breach," (Pl.'s Post-Trial Br. at 35), because, if no overhead is allocated to breach-related projects, then plaintiffs' other projects would assume a disproportionate amount of these expenses.

Plaintiffs specifically seek overhead costs for material overhead or warehousing costs, for "station indirects," or employees at the station who provide overall support, and for executive services. Jenkins, Tr. at 1061. This court has previously held that overhead costs are recoverable as long as a utility can demonstrate that "overhead costs were incurred and are properly attributable to mitigation projects and activities." *Carolina Power & Light Co.*, 82 Fed. Cl. at 48; *see also Sys. Fuels Inc.*, 79 Fed. Cl. 63-64; *Tenn. Valley Auth.*, 69 Fed. Cl. at 542 (disallowing recovery for overhead costs because plaintiff failed to present evidence establishing the relationship or utility between the overhead and breach-related projects). Plaintiffs have demonstrated that the overhead costs are attributable to defendant's partial breach. For the material overhead, "the overheads are applied to a project based on the material that is issued from the warehouse to the project." Jenkins, Tr. at 1061. Plaintiffs calculate the ratio of the total warehousing costs to the total expected material issues for the year. When an employee "goes to the warehouse and receives material out of inventory, there's a corresponding percentage applied to that for the warehousing support costs." *Id.* at 1061-1062. With respect to overhead for station indirects, these employees do not necessarily work on a specific project but "coordinate activities with the day-to-day station maintenance, so that the capital construction activities don't interfere with station operations." *Id.* at 1062. Overhead costs for executive services include mostly labor costs, for

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[16](...continued)
using the 1991 ACR. The ACRs affect the number of casks that would have been loaded. These project management costs are essentially overhead management costs associated with the period of time in which casks were loaded at Surry. Thus, our analysis of internal labor costs will address these contested costs. Because we use the 1987 ACR to assess damages for claims, we find that plaintiffs are entitled to these overhead costs.

example, salaries of the corporate accounting group, executives, and corporate security. Plaintiffs have distributed costs for executive services to all projects relevant to this case in a given time period. The overheads applied to breach-related projects and were applied at the time the projects were being conducted.

Defendant does not dispute plaintiffs' method of calculation but argues that these overhead costs were not incremental to the breach. We reject this argument for the same reasons we rejected it with respect to internal labor costs. If overhead costs were not allowed, "[p]laintiffs' other projects would be more expensive than anticipated." *Carolina Power & Light Co.*, 82 Fed. Cl. at 48. Absent DOE's partial breach, plaintiffs could have allocated their resources to other projects. Accordingly, costs associated with overhead shall be included in the damages award.

J. Unsupported Labor and Other Costs

Defendant seeks to reduce the damages award by $6,916,370 for costs that it considers to be unsupported. Of this amount, $5,166,607 represents internal labor costs. Defendant argues that "plaintiffs failed to identify the name of the individual employee who performed the work, what specific tasks were being performed, how many employees were performing the work, or whether a particular employee spent all or some of his time working on a damages-related project." Def.'s Post-Trial Br. at 48.

Plaintiffs' witnesses testified to the general methods used to track costs for both labor and vendor costs. Costs are associated with specific activities through project numbers which are typically assigned by either the project controls group or finance group at the request of the project manager. The cost accounting system undergoes an ongoing, internal auditing process. Plaintiffs' financial statements also have been audited and deemed compliant with generally accepted accounting principles. Generally, vendor costs are tracked through a purchase order. Internal labor costs are captured through a timekeeping system that corresponds to specific projects. With respect to employee labor, Dominion's policy requires supervisors to review and approve employees' time sheets. Also, at each station and "even within . . . [the corporate engineering group], a project controls group [exists] . . . to review project cost[s]." Jenkins, Tr. at 975. These control groups and project managers review costs and are responsible for spotting and remedying any incorrect charges. To remedy incorrect charges, the project managers fill out a correction form for these incorrect charges and subsequently a simple debit-credit entry is made in the financial system.

Plaintiffs concede that their accounting records prior to July 1, 1998 are not as complete as subsequent records. Plaintiffs currently use a company-wide accounting program called the "Systems Applications and Products" ("SAP") to account for project costs. The Comprehensive Annual Financial Report ("CAFR") system and the Nuclear Fuel Accounting ("NFA") systems predated the SAP system, which was implemented on July 1, 1998. The NFA was a "subset of [plaintiffs'] prior financial system" that recorded costs associated with nuclear fuel projects. Jenkins, Tr. at 987. CAFR is a legacy system used to account for costs in capital projects. Costs prior to that time may be available in SAP but "were downloaded in mass . . . [and] were not available to the level of detail that is provided by SAP." Wakeman, Tr. at 499. Because costs from CAFR were transferred to SAP in mass, SAP only contains the total cost and not the details for the period prior to July 1, 1998.

Plaintiffs argue, however, that the only deficiency in the $2,845,617 of allegedly unsupported labor costs is that, unlike "supported" SAP internal labor, these costs are not tracked by employee name. The employee time accounting system and SAP did not interface completely. Hence, some detailed accounting information, like the employee's name, did not transfer into the SAP system. Plaintiffs argue that the earlier systems provide adequate data that provides "the month of the charge, the type of payroll charged, whether the charge was salaried (monthly) or hourly (bi-weekly or semi-monthly)." Pl.'s Post-Trial Br. at 41, n.35.

The accounting records in SAP that capture the uncontested internal labor costs provide the following information: the sub-project that the labor costs were charged to, the title or group that the employee was in when the time was charged, the hours charged to the project in a specific week, and whether the time was overtime. The accounting records in CAFR and NFA that contain the contested charges provide similar information but do not include the names of the employees or the number of employees performing a task, and plaintiffs were not able to present evidence of the specific tasks these employees performed.

Mr. Johnson, government's expert, prepared the report challenging certain internal labor costs as unsupported. With respect to labor, Mr. Johnson requested information from the payroll databases "that has the employee census information, that has hours, that has the rates, that has the amounts that are being included as a component of the damages claim." Johnson, Tr. at 2480. Mr. Johnson challenged two categories of internal labor costs, costs which were not incremental to the breach and costs which were unsupported. He characterized these costs as unsupported because he could not identify "employee head count or, in some cases . . . [employees'] hours." *Id.* at 2589. The accounting entries which Mr. Johnson gathered from plaintiffs' different accounting systems also did not "have information to permit an analysis of . . . what a person did and . . . the extent to which they did it." *Id*. at 2609. Mr. Johnson found that the majority of these labor costs were "bulk entries." *Id.* at 2619. He explained his reasoning for contesting labor costs as unsupported at trial:

> Well, if you don't know who did it and you don't know how many times they did it, I don't know what the [plaintiffs'] basis for including it to begin with is, other than it got in their accounting system, and I don't think that's a proper basis. Moreover, you can't subject it to any analysis, if you don't know who did it and you don't know how many of them were doing it. And I think that has some bearing on understanding what they were doing. If you don't know the who, how can you be satisfied with the what? And so it's not just–I know it's been characterized, well, it's just a missing name, it's not just a missing name. It's missing names, and it's missing, therefore, the ability to analyze and evaluate who they were and what they were doing. Suppose one of the missing names was somebody that clearly wasn't involved in any type of spent fuel activity, and it was just a miscoding? Nobody could tell me that's not the case because you don't know, you don't know who the person is. All you know is you've got it in your system, and not everything that got in your system is right, and not everything that got in your system should be accepted as right by the government.

Id. at 2682.

As we noted above, we reject defendant's argument that the internal labor costs must be incremental to the breach. Nevertheless, we agree that plaintiffs must establish that the internal labor costs were incurred to support breach-related projects. Absolute certainty is not required to recover damages. *See Energy Capital Corp.*, 302 F.3d at 1327; *Ind. Mich.,* 422 F.3d at 1373. Nevertheless, this court has previously denied internal labor costs when a plaintiff "did not provide detailed hours and amounts per employee in its ledger reports" and if the "proofs also [did] not indicate the actual services provided by most of the pertinent salaried staff . . . [or] the extent to which most of the employees were committed to the [breach-related] projects." *Tenn. Valley Auth.*, 69 Fed. Cl. at 540. For some of plaintiffs' costs, the details necessary to support the claimed charges do not exist, as became clear in Mr. Wakeman's testimony:

> Q: If you don't know exactly what tasks are being performed, and that means you don't know how many employees were performing this work, right?
>
> A: No. Again, I'm relying on their – on the supervisor for these people when they enter their time sheet they do it correctly.
>
> . . . .
>
> Q: If you don't know how many employees performed this work, that means you don't know whether the persons who did this work spent all of their time or a portion of their time working on that ISFSI project, right?
>
> A: That's correct.
>
> . . . .
>
> Q: And the quantity listed there I believe is for sixteen hours of time on July 22, 1998, right?
>
> A: Yes, for the week ending.
>
> Q: . . . . You don't know whether the service hours listed here are the only sixteen hours that that person performed work on the dry storage project, right?
>
> THE COURT: You don't know personally?
>
> THE WITNESS: This doesn't tell you how many people this might be. There were sixteen hours charged under that category that week.
>
> Q: So it doesn't tell you how many people were charged?

A: No.

Q: And it doesn't tell you what other projects that person might have been working on that week?

A: Right. . . .

Wakeman, Tr. 702-04.

The challenged accounting records here do not provide hours and amounts per employee or the tasks performed by these employees and hence do not establish the damages with reasonable certainty. *See Tenn. Valley Auth.*, 69 Fed. Cl. at 540. In the absence of accounting detail sufficient to support the audit, we might have accepted first hand testimony, but it was not offered. While we are sympathetic to plaintiffs' difficulties in its transition between accounting systems, they still bear the burden of establishing the contested costs with reasonable certainty. They have not met their burden with respect to $5,166,607 in internal labor costs.

Similar problems arose with respect to the $1,749,762 in non-labor costs that defendant views as unsupported. Defendant only challenges individual items that exceed $5000. It contends that these costs are unsupported because defendant either has been presented no invoice or purchase order for these costs or the invoice or purchase order that was provided lacked specificity. Defendant requested an invoice or purchase order "to determine that there was such a cost and there was such a vendor and, more importantly, to understand what the purpose was." Johnson, Tr. at 2479. In response, plaintiffs put together a chart itemizing all the challenged costs and indicating whether there exists proof in any of three forms to support the contested costs: an invoice, an entry in an accounting record, or trial testimony.

Ideally, a cost would be proven by an invoice, to demonstrate a charge and an accounting record to demonstrate payment. Defendant's audit demonstrated the overall reliability of plaintiffs' accounting system. In the absence of both forms of documentation, therefore, we are willing to accept testimony in combination with either form of documentation. Using this two-part verification method, we find that plaintiffs have demonstrated some of these costs with reasonable certainty. For example, Mr. Wakeman confirmed a contested charge of $7927, with a posting date of March 22, 2004, listed in the "Millstone Project Line Item Cost Report":

> That . . . is the charge from CSX Railroad that was for the cost to ship by rail from York, Pennsylvania to the Newport News docks for TN32-cask number 44. Now, if you look over to the left columns the date is 3/22/04 and the object number next to it is 288N44.2. The number 44 identifies the cost associated with cask number 44, and my records show that cask number 44 was shipped on February '04. So this is an invoice associated with that cask from CSX which is shown in the main column, freight charges from CSX for $7927. That was the standard fee that CSX charged us to move casks from York, Pennsylvania to Newport News for a whole series of casks.

Wakeman, Tr. 523-24. Defendant contested this particular charge because plaintiffs did not provide an invoice for the charge even though plaintiffs' company cost report included the charge. We accept, however, proof consisting of the business record and Mr. Wakeman's independent testimony.

Accordingly, plaintiffs' damages award shall not include the following cost items which plaintiff DNC has not demonstrated with reasonable certainty: $11,550 (Vendor Raytenco), $13,314 (Vendor Nortgese), $115,345 (Adj. Chgs.), $18,863 (Cl. Error Suspense); $12,480 (UVL Automated Transactions); $22,207 (Dist 10710 Payroll to W/O's). VEPCO, has not demonstrated the following cost items with reasonable certainty: $8224 for unsupported Surry SAP costs and $246,121 for PRO/AP Distribution. Damages award shall include the remaining $1,301,658 of the contested non-labor costs.

K. Allowance for Funds Used During Construction

Defendant seeks to exclude a category of costs we refer to as AFUDC. We denied defendant's motion for partial summary judgment on this issue without prejudice and address its arguments here. AFUDC refers to the financing costs[17] associated with plaintiffs' capital expenditures and is used for allocating Dominion's interest charges to its capital projects. Defendant argues that AFUDC is interest, which, under 28 U.S.C. § 2516(a), is unrecoverable against the United States unless specifically permitted by contract or by some other

[17]Plaintiffs record these financing costs in two different accounts: the AFUDC account for VEPCO and the "Capitalized Interest" account for DNC. Capitalized interest is conceptually similar to AFUDC. Jenkins, Tr. at 1080.

statute. *See Library of Congress v. Shaw*, 478 U.S. 310, 317 (1986). To support their claim, plaintiffs assert a distinction between interest *on* a claim, which is disallowed, and interest *as* a claim, which may be recoverable. *Tenn. Valley Auth.*, 69 Fed. Cl. at 541-42 (citing *Wickham Contracting Co. v. Fisher*, 12 F.3d 1574, 1582 (Fed. Cir. 1994)). Plaintiffs also assert that "[i]nclusion of AFUDC in a utility's capital costs is an industry-wide practice consistent with the requirements promulgated by the Federal Energy Regulatory Commission ("FERC")." *Id.* at 541 (citing 18 C.F.R. pt. 101 Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provisions of the Federal Power Act).

It is true that a party "may recover interest actually paid on funds borrowed because of the government's delay in payments and used on the delayed contract." *Wickham*, 12 F.3d at 1582. In *Wickham*, the court "allowed a contractor to recover from the government the interest it paid on the funds borrowed to finance a construction contract that had been delayed by the government's breach." *Sys. Fuels*, 79 Fed. Cl. at 70 (citing *Wickham*, 12 F.3d at 1582). The court held that, while 28 U.S.C. § 2516(a) "generally prohibits the award of interest against the federal government," this section "does not bar an interest award as part of an equitable adjustment under a fixed-price contract if the contractor has actually paid interest because of the government's delay in payment." *Wickham*, 12 F.3d at 1582-83 (quoting *Gevyn Constr. Corp. v. United States*, 827 F.2d 752, 754 (Fed. Cir. 1987)). To recover under *Wickham*, plaintiffs must demonstrate that "borrowed funds were used in connection with the . . . project." 12 F.3d at 1583.

In previous SNF cases, the court has held that generalized evidence of borrowed funds is insufficient proof to make interest recoverable. *Carolina Power & Light Co.*, 82 Fed. Cl. at 54 ("[p]laintiffs failed to provide any evidence tying any borrowed money to specific projects")*; Sys. Fuels, Inc.*, 79 Fed. Cl. at 70 (denying AFUDC recovery because plaintiff "has not shown that it borrowed money specifically to pay for the cost of the dry storage project"); *N. States Power Co.*, 78 Fed. Cl. at 471-72 (denying AFUDC recovery because no evidence of "borrowing specifically undertaken to address the capital required to fund its structure to finance capital improvements")*; S. Nuclear Operating Co.*, 77 Fed. Cl. at 449.

Plaintiffs here have not demonstrated a causal link between Dominion's borrowed funds and capital construction costs incurred as a result of defendant's breach. Plaintiffs' witness, Mr. Wesley Jenkins, Senior Control Specialist in

Dominion's New Plant Licensing Project group, testified that when Dominion borrows funds, it "looks at the needs of the entity as a whole . . . the capital structure of the entire entity, and will obtain whatever debt instruments are necessary for the entire entity, and [doesn't] necessarily look at individual projects." Jenkins, Tr. at 1058. Plaintiffs do not issue specific debt instruments to specific projects because the effect of one project on the borrowed funds "is probably negligible." *Id*. at 1079. For that reason, Mr. Jenkins was unable to verify that the total borrowed funds increased as a result of the projects in this claim. Plaintiffs, due to their business practice, were unable to present evidence that the borrowed funds were used specifically for projects associated with defendant's breach. Accordingly, the damages will not include the $2,398,425 associated with the AFUDC.

L. Pre-Acquisition Damages at Millstone

Dominion acquired Millstone Power Station from Connecticut Light and Power Company ("CL&P") in March 2001. Part of Dominion's claim consists of $12,066,611 in expenditures incurred by CL&P prior to that acquisition. Plaintiffs contend that these expenditures are fully recoverable because Dominion acquired, insofar as is relevant here, all assets associated with the power station from CL&P. Specifically included as assets were the contracts with DOE at issue here, and "any claims of CL&P . . . in connection with . . . DOE's defaults under the DOE Standard Contracts . . . ." Purchase and Sale Agreement for the Millstone Nuclear Power Station at 6. The assignment of contract rights and duties was specifically permitted in the NWPA, 42 U.S.C. § 10222(b)(3), and the standard contracts here permit assignment of the rights and duties of the Purchaser, provided that notice is given to DOE within ninety days of transfer.

Defendant does not dispute that the contract itself was properly assigned, but it argues that, as a matter of law, pre-acquisition claims could not be assigned, citing the Assignment of Claims Act, Pub. L. No. 97-258, § 1, 96 Stat. 976 (codified at 31 U.S.C. § 3727 (2000)). The relevant part of that section provides that "[a]n assignment may be made only after a claim is allowed, the amount of the claim is decided, and a warrant for payment of the claim has been issued." *Id.*

The assignment of contract rights in general is not a problem in this case. The NWPA permits such assignments and the contract between plaintiffs and CL&P specifically transfers the right to assert pre-existing breach of contract claims. Defendant asserts, instead, that neither the NWPA nor the contract between DOE and the utilities "contain a provision waiving the Government's sovereign immunity from claims stemming from work already accomplished . . . ." Def.'s Br., Mar. 17, 2008, at 10 (emphasis in original). What it contends, in other words, is that the court must find particularized language in the NWPA and the Standard Contract that permits the assignment of pre-existing claims. In the absence of such language, the attempted transfer of pre-existing claims would, according to the government, be invalidated by the general prohibition of the Assignment of Claims Act.

Although defendant concedes there is no Federal Circuit opinion directly on point, defendant suggests that *Ginsberg v. Austin,* 968 F.2d 1198 (Fed. Cir. 1992), is relevant. In that case, the court teaches that "the assignment of rights under a continuing contract does not imply an assignment of rights of action for previous breaches of contract . . . ." *Ginsberg,* 968 F.2d at 1201 (quoting 3 Samuel Williston, *A Treatise on the Law of Contracts* § 431 (3d ed. 1960)). *Ginsberg* involved a claim for back rent. *Id.* at 1199. Plaintiff Ginsberg assigned a lease with the General Services Administration ("GSA") to another entity, transferring all "right, title and interest" in the lease. *Id.* Ginsberg further "relinquishe[d] all rights under the lease agreement effective December [] 1986." *Id.* at 1200 (quoting from the assignment form). Ginsberg's claim involved rent accruing between December 1986 and February 1988, when GSA vacated the premises. *Id.* at 1199-1200. The Board of Contract Appeals denied the claim by Ginsberg on the understanding that the right to back rent conveyed to the new owner along with the assignment of the lease. *Id.* at 1199.

The Federal Circuit reversed. It examined state law decisions on the question of "whether rights to back rent are presumed transferred unless expressly reserved." *Id.* at 1200. It viewed the question as one controlled by state property law concepts, and more particularly, by the law controlling leaseholds. *Id.* at 1201-02. It discerned the common law to be that unpaid, but accrued, rents do not automatically transfer upon transfer of the real estate. *Id.* It also found support in state decisions in the area of contract rights. *Id.* The Federal Circuit stated:

> [U]nless an assignment specifically or impliedly designates them, accrued causes of action arising out of an assigned contract . . . do not pass under the assignment as incidental to the contract if they can be asserted by the assignor independently of his continued ownership of the contract and are not essential to a continued enforcement of the contract.

Id. at 1201 (quoting *Nat'l Reserve Co. of Am. v. Metropolitan Trust Co. of Cal.*, 17 Cal.2d 827, 112 P.2d 598, 602 (1941)). The court concluded that "Ginsberg cannot be held to have transferred his back rent claim, unless he expressly so stated." *Id.* at 1201.

While the *Ginsberg* decision is plainly relevant, we have misgivings about reading it as controlling here. First, the analysis is heavily couched in terms of the uniqueness of state property law, and specifically, the law surrounding leaseholds. Second, there was no statute involved analogous to the NWPA, which was adopted well after the Assignment of Claims Act. Finally, as plaintiffs point out, the court's analysis is predicated on the absence of contractual agreement to allow the transfer of claims. The quotation from *National Reserve Co.* in *Ginsberg* would seem to point toward allowing the pre-existing claims to be asserted here: the assignment between the utilities plainly did call for a transfer of claims. Unlike the facts in *Ginsberg*, in other words, the parties here did specifically deal with pre-existing claims. It is unnecessary to imply a transfer.

We also take note of the recent Federal Circuit opinion in *Delmarva Power & Light Co. v. United States*, No. 2008-5010, 2008 WL 4249795 (Fed. Cir. Sept. 18, 2008), decided after the close of post-trial briefing. *Delmarva* dealt with the question of whether the government may waive the prohibition against the assignment of claims, thus validating an assignment that would otherwise be prohibited. The claims at issue arose under the NWPA, although unlike the contract claims asserted here, they constituted taking claims under the Fifth Amendment. Also, the government there had executed a specific waiver of objection to assignment of the claims. Instead of addressing whether the NWPA itself constituted an exception to the Anti-Assignment Act, the court framed the question in terms of whether the waiver was effective. The court held that the government could, indeed, waive the prohibition of the assignment of claims. *Delmarva*, 2008 WL 4249795, at *4. Near the end of the opinion, however, the court suggests that the assignment otherwise would have been problematic, noting that, "except for the waiver, the assignment of the takings claims would violate the Anti-Assignment Act." *Id.*

This observation was unnecessary to the court's holding. The question of whether NWPA created an exception to the Assignment of Claims Act does not appear to have been raised and nowhere in the *Delmarva* opinion, nor in that case's trial court opinion, *Delmarva Power & Light Co. v. United States,* 79 Fed.

Cl. 205 (2007), did either court examine the possibility that the NWPA itself created an exception to the act. We therefore treat the observation that the assignment would have violated the Assignment of Claims Act as dicta.

More directly on point are two decisions of this court subsequent to *Ginsberg*, both of which examine the question in the context of these SNF cases. In *Rochester Gas and Electric Corp. v. United States*, 65 Fed. Cl. 431 (2005), the court concludes that the specific language of the NWPA permitting assignment of the standardized contracts for pick up of SNF trumps any limitation that otherwise might exist due to the Assignment of Claims Act. The decision relies on the common law principle that the right to assert pre-existing claims *can* be assigned, combined with the conclusion that the rights and duties under the contract embrace accrued causes of action. Because the NWPA permits the transfer of all rights, which include the right to assert a cause, and because the contract between the utilities specifically allowed the transfer, the Assignment of Claims Act is satisfied. To the same effect is *Nuclear Power v. United States*, 73 Fed. Cl. 236 (2006).

We discern no controlling precedent which necessitates adoption of the government's position. Our own view is consistent with that of *Rochester* and *Vermont Yankee*. The NWPA provides a specific statutory waiver of the Assignment of Claims Act; the standard contract permits the assignment of rights; the right to sue for pre-existing claims is a right within the meaning of the Standard Contract; and the assignment contract specifically transfers these rights. We therefore reject defendant's argument.

CONCLUSION

Based upon the foregoing, we award damages to VEPCO in the amount of $112,106,460.92 and to DNC in the amount of $42,689,970.00 through June 30, 2006, as more specifically detailed in Appendix A. The Clerk is directed to enter judgment for plaintiffs in these amounts. Costs are awarded to plaintiffs.

s/ Eric G. Bruggink
ERIC G. BRUGGINK
Judge

APPENDIX

VEPCO (North Anna & Surry)

Plaintiff's Claim for Damages	Reduction	Total
North Anna ISFSI $71,629,207	Under 1987 ACR rates $3,690,264.08	$67,938,942.92
Surry ISFSI $50,286,519	0	$50,286,519
Unsupported Internal Labor Costs	$5,166,607	-$5,166,607
Unsupported Costs	$254,345	-$254,345
AFUDC	$698,049	-$698,049
TOTAL		$112,106,460.92

DNC (Millstone)

Plaintiff's Claim for Damages	Reduction	Total
Millstone ISFSI $38,059,409	Unit 2 Crane Upgrade $4,322,705 Unit 3 Crane Upgrade $2,834,680	$30,902,024
Millstone Unit 3 Rack Project $12,803,274	0	$12,803,274
Millstone Inter-Unit Fuel Transfer $1,138,620	0	$1,138,620
Unsupported Costs	$193,759	-$193,759
AFUDC	$1,960,189	-$1,960,189
TOTAL		$42,689,970.00