Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

GENERAL COUNSEL

November 3, 2004

In reply refer to: LC-7

VIA FEDERAL EXPRESS

Ms. Annette Taylor
Public Utility Commission of Oregon
550 Capitol Street NE, Suite 215
Salem, Oregon 97301-2551

Re: In the Matter of Oregon Electric Company, LLC, et al, Application for Authorization to Acquire Portland General Electric Company – Docket UM-1121
Joint Request for Official Notice

Dear Ms. Taylor:

Enclosed for filing with the Commission in the above-referenced docket are an original and five copies of the "Joint Request for Official Notice of the Bonneville Power Administration and the Eugene Water & Electric Board" ("Request") as well as an "original" and five copies of the indicated attachments for which Official Notice is requested.

In addition, there is enclosed an extra copy of the Request, together with a stamped pre-addressed return envelope addressed to me. If you could please date stamp the "extra" copy of the Request, returning it to me in the enclosed envelope after accepting these documents for filing, it would be most appreciated.

Sincerely,

/s/ Geoffrey M. Kronick
Geoffrey M. Kronick
Of Attorneys for the Bonneville Power Administration

Enclosures

cc: via First Class Mail w/Request and Attachments (1 copy)
Official Service List in Docket UM-1121

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1121

In the Matter of	)	
	)	
OREGON ELECTRIC UTILITY COMPANY, LLC, et al.	)	Joint Request for Official Notice of the Bonneville Power Administration and the Eugene Water & Electric Board
	)	
Application for Authorization to Acquire Portland General Electric Company.	)	
	)	
	)	

Hon. Kathryn Logan, ALJ
Hon. Christina M. Smith, ALJ

I.

The Bonneville Power Administration ("BPA") and the Eugene Water & Electric Board, ("EWEB") parties to the instant proceeding, respectfully request the presiding Administrative Law Judge take Official Notice of the four documents (or portions thereof), which are enumerated and described below and which are appended hereto as Attachments A-D to this instant pleading.

II.

Oregon Administrative Rule 860-014-0050 provides that "(1) the Commission or Administrative Law Judge (ALJ) may take official notice of the following matters: (a) all matters of which the courts of the State of Oregon take judicial notice; (b) rules, regulations, administrative rulings and reports of the Commission and other governmental agencies; (c) orders of the Commission; (d) permits, certificates, and licenses issued by the Commission; (e) documents and records in the files of the Commission which have been

made part of the file in the regular course of performing the Commission's duties; (f) general, technical or scientific facts within the specialized knowledge of the agency; (g) the results of the Commission's or ALJ's own inspection of the physical conditions involved after notice to the parties; (2) the Commission or the ALJ shall notify the parties when official notice is taken. The notice may be given on the record during the hearing or in findings of fact in a proposed or final order. A party may object to the fact noticed within 15 days of that notification. The objecting party may explain or rebut the noticed fact."

III.

On October 26, 2004, the Presiding Administrative Law Judge issued a Post Hearing Report and Order noting that the evidentiary record in this proceeding was closed at the conclusion of the hearing. October 26, 2004, Order at 2. The Commission, however, distinguishes between record evidence filed or received at a hearing and evidence based on official notice which may be taken at any time during a proceeding. ("With a limited exception for evidence based upon official notice, the Commission's final decision must be based on the evidence in the administrative record received at the hearing.") 2001 WL 522181 (Or. P.U.C.) at *3, Re: Internal Operating Guidelines UM-1016, Order No. 01-253, March 26, 2001 (footnote omitted).

IV.

BPA and EWEB request Official Notice of the following documents:

1. Attachment A – Complaint Filed by Portland General Electric before the United States Court of Federal Claims (Docket 04-009C), January 6, 2004 in Portland General Electric et al v. United States of America

This 14-page document is a legal pleading that is subject to Official Notice under OAR 860-014-0050 (a) as a matter of which the courts of the State of Oregon take judicial notice. See Schmitz v. Yant, 409 P.2d 346, 242 Or. 308 (1965).

2. Attachment B – United States General Accounting Office Report to the Hon. Edward J. Markey, U.S. House of Representatives – "Nuclear Regulation" "NRC's Assurances of Decommissioning Funding During Utility Restructuring Could Be Improved" December 2001 – Report Number GAO-02-48

This is a 65-page report of a governmental agency, the United States General Accounting Office (recently renamed the United States General Accountability Office), and thus may be officially noticed by the presiding Administrative Law Judge or the Commission under OAR 860-014-0050(b).

3. Attachment C – Acceptance and Priority Ranking & Annual Capacity Report – U.S. Department of Energy – Office of Civilian Radioactive Waste Management – July 2004

This is a 74-page report of a governmental agency; the U.S. Department of Energy, which indicates the scheduling of acceptance of Spent Nuclear Fuel and/or High Level Radioactive Waste by the Department of Energy and includes such a schedule for Spent Nuclear Fuel from the Trojan Nuclear Plant. It may be officially noticed by the Administrative Law Jude or the Commission under OAR 860-014-0050(b).

4. Attachment D – Trojan Nuclear Plant – Decommissioning Plan – PGE/1061 – (January 26, 1995)

This is a document in excess of 200 pages and is the Decommissioning Plan submitted by Portland General Electric to this Commission, such that it is a document in the files of the Commission which have been made part of the file in Docket UE-88 during the regular course of performance of the Commission's duties and as part of the review leading to the Commission's Order No. 95-322 indicated above, such that it may be officially noticed by the Administrative Law Judge or the Commission pursuant to OAR 860-014-0050(e).[1]

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/ / /

[1] BPA and EWEB request Official Notice only of Section 5 of this lengthy document, approximately 20 pages of textual material and tables. As indicated in the index to this document attached here as part of Attachment D, Section 5 of this document pertains to "Decommissioning Cost Estimate and Funding Plan." Should the Presiding Administrative Law Judge or the Commission so request, BPA and EWEB will supply six additional copies of the entire Decommissioning Plan for use of the Commission. Should any party of record so request, BPA and EWEB will provide one complete copy of the entire Decommissioning Plan to any party of record who so requests for use of that party.

V.

WHEREFORE, BPA and EWEB request that the Presiding Administrative Law Judge issue an order indicating that Official Notice of the foregoing documents has been taken in this instant proceeding.

Respectfully submitted this 3rd day of November, 2004.

___/s/___Geoffrey M. Kronick_____

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BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1121

In the Matter of OREGON ELECTRIC UTILITY COMPANY, LLC, et al. Application for Authorization to Acquire Portland General Electric Company.	)	Joint Request for Official Notice of the Bonneville Power Administration and the Eugene Water & Electric Board

CERTIFICATE OF SERVICE

I, Geoffrey M. Kronick, caused the foregoing "Joint Request for Official Notice of the Bonneville Power Administration and the Eugene Water & Electric Board" to be filed with the Commission in this instant proceeding by causing an original and five true copies to be routed via Federal Express overnight delivery service to Commission's offices, c/o Ms. Annette Taylor, at 550 Capitol Street, N.E. Suite 215, Salem, Oregon 97301-2551; and a single true copy to be served upon the representatives of all parties indicated on the Official Service List compiled in this proceeding by causing such copies to be deposited, postage prepaid, in a receptacle maintained by the United States Postal Service for the receipt of mail, addressed to the following named individuals taken from the Commission's most recent service list indicated on the electronic web page for this docket.

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Dated this 3rd day of November 2004 at Portland, Oregon.

_____

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Attachment A

RECEIPT COPY

IN THE UNITED STATES COURT OF FEDERAL CLAIMS

PORTLAND GENERAL ELECTRIC COMPANY, an Oregon corporation,	)
THE CITY OF EUGENE, OREGON, acting by and through the EUGENE WATER AND ELECTRIC BOARD, a municipal utility corporation of the State of Oregon,	)
and	)
PACIFICORP, an Oregon corporation,	)
Plaintiffs,	)
v.	)
UNITED STATES OF AMERICA,	)
Defendant.	)

Civil Action No. 04-00 C

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COMPLAINT

Plaintiffs, Portland General Electric Company ("PGE"), the City of Eugene, Oregon, acting by and through the Eugene Water and Electric Board ("EWEB"), and PacifiCorp ("Pacific"), for their Complaint against Defendant, United States of America, state as follows:

PARTIES

1. Plaintiff PGE is an Oregon corporation with its registered office and principal place of business in Portland, Oregon. PGE owns 67.5 percent of and operated the nuclear generating plant known as the Trojan Nuclear Power Plant ("Trojan") near Rainier, Oregon. Trojan began commercial operation in 1975 and was formally shut down in January, 1993.

2. Plaintiff EWEB is an Oregon municipal utility corporation with its principal place of business in Eugene, Oregon. EWEB owns 30 percent of Trojan and has been responsible for

30 percent of all costs of operation of Trojan, and has reimbursed PGE for such costs pursuant to the Operating Agreement.

3. Plaintiff Pacific is an Oregon corporation with its registered office and principal place of business in Portland, Oregon. Pacific owns 2.5 percent of Trojan and has been responsible for 2.5 percent of all costs of operation of Trojan, and has reimbursed PGE for all costs pursuant to the Operating Agreement.

4. Since PGE, EWEB and Pacific have paid and are jointly responsible according to their respective ownership shares for all costs and expenses described herein, unless otherwise noted, they will be jointly referred to as the "Plaintiffs."

5. Defendant United States of America is a sovereign entity that is obligated to honor the terms of its contracts, and is subject to the requirements of applicable law, including the Fifth Amendment to the United States Constitution.

6. The United States Department of Energy ("DOE") is a department within the Executive Branch authorized to make contracts for the disposition of high level waste ("HLW") and spent nuclear fuel ("SNF") and to dispose of HLW/SNF.

JURISDICTION

7. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. 1491(a)(1).

NATURE OF THIS ACTION

8. This is an action for breach of contract.

SUMMARY OF PLAINTIFFS' CLAIMS

9. PGE operated a nuclear power plant for purposes of generating electricity from the beginning of Trojan's commercial operation in 1975, until its shut down and defueling in January, 1993.

10. On June 13, 1983, PGE, on behalf of itself, EWEB, and Pacific Power & Light (a predecessor-in-interest of Pacific), entered into a written contract with the Defendant known as the Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste, U.S. Department of Energy Contract No. DE-CR01-83NE4406, Audit # 3591 (the "Contract"), whereby the Plaintiffs agreed to purchase DOE's services for disposal of HLW/SNF produced at the Trojan facility. The Contract is attached as Exhibit 1 to this Complaint.

11. Under the Contract, Plaintiffs were required to make payments to Defendant in return for which the Defendant agreed to dispose of HLW/SNF beginning no later than January 31, 1998.

12. Plaintiffs timely made all payments required under the Contract, totaling approximately $104.9 million. Under the Contract, when PGE ceased operating Trojan in 1993, Plaintiffs' obligation to continue making payments to the Defendant for the removal of the HLW/SNF ceased. Thus, Plaintiffs have fulfilled all of their obligations under the Contract.

13. The Defendant failed to begin taking HLW/SNF by January 31, 1998, as required by the Contract, and announced that it will not begin to fulfill its contractual obligations until 2010, at the earliest.

14. The Defendant's actions amount to a breach of both the express terms of the Contract and the duty of good faith and fair dealing implied therein. Plaintiffs paid the specified fees for HLW/SNF removal, but Defendant has failed to remove the HLW/SNF. As a result Plaintiffs have incurred costs of constructing and operating alternative storage facilities.

15. Defendant has received approximately $104.9 million from Plaintiffs pursuant to the Contract. Notwithstanding its breach, Defendant has retained all of the monies it received for removal of Plaintiffs' HLW/SNF and earned interest thereon.

16. For relief, Plaintiffs seek damages to compensate them for breach of contract.

17. No administrative procedures apply to this case. *Yankee Atomic Electric Co. v. United States*, 42 Fed. Cl. 223 (1998), *aff'd* 225 F.2d 1336 (Fed. Cir. 00). As set forth in *Yankee Atomic*, the Contract is not subject to the Contract Disputes Act, 41U.S.C. §§601-612, *id.*, and the Contract itself preserves Plaintiffs' rights to all remedies available at law and to other remedies as provided for by the Contract.

STATEMENT OF FACTS

SNF/HLW and the NWPA

18. SNF/HLW is made up of toxic and radioactive substances and results from the use of nuclear reactors. SNF/HLW must be specially maintained in isolated disposal facilities.

19. Congress enacted the Nuclear Waste Policy Act ("NWPA") in 1982. The NWPA codified and specifically recognized the federal government's "responsibility to provide for the permanent disposal of high-level radioactive waste and such spent nuclear fuel as may be disposed of in order to protect the public health and safety and the environment...." 42 U.S.C. § 10131(a)(4).

20. The NWPA set out a process for storage and disposal of HLW/SNF. The NWPA authorized the Secretary of Energy to enter into contracts with owners and generators of HLW/SNF to dispose of HLW/SNF. Pursuant to section 302 of the NWPA, a standard contract (the "Standard Contract") for the disposal of HLW/SNF was developed. 10 C.F.R. § 961.11.

The Contract

21. On June 13, 1983, Plaintiffs entered into the Standard Contract with Defendant to remove HLW/SNF from Trojan. As set forth above, under the Contract, Plaintiffs were obligated to pay fees to Defendant for the removal of the HLW/SNF. Plaintiffs have fully

complied with that obligation and timely paid all fees due under the Contract. Specifically, Plaintiffs have paid approximately $104.9 million to Defendant under the Contract.

22. The Contract makes clear that "DOE is obligated and willing to provide such disposal services [for HLW/SNF] under the terms and conditions hereinafter set forth...." Exhibit 1, Preamble at 2.

23. Under the "Scope" of the Contract, DOE is specifically obligated to abide by a time schedule: "[t]he services to be provided by DOE under this contract shall begin, after commencement of facility operations, not later than January 31, 1998 and shall continue until such time as all SNF and/or HLW from the civilian nuclear power reactors ... has been disposed of." *Id.*, Article II at 6 (emphasis added).

24. Though disposal was generally to be prioritized by the age of the HLW/SNF, the Contract specifically provided that "[n]otwithstanding the age of the SNF and/or HLW, priority may be accorded any SNF and/or HLW removed from a civilian nuclear power reactor that has reached the end of its useful life or has been shut down permanently for whatever reason." Contract, Exhibit 1, Article VI.B.1(b) at 15. (Emphasis added.)

25. The Trojan reactor has been shut down since 1993. Thus, under this provision, Plaintiffs' HLW/SNF could, should, and would have been given priority ranking for disposal under the Contract.

26. The Contract also sets forth the HLW/SNF producer's responsibilities. *Id.*, Article IV.A at 6-8. In addition, the Contract sets forth specific fees and terms of payment. *Id.*, Article VIII at 17-23. Specifically, the Contract recognizes the "Effect of Payment." *Id.*, Article VIII.D at 22. In that regard, the Contract states: "[u]pon payment of all applicable fees,

interest and penalties on unpaid or underpaid amounts, the Purchaser shall have no further financial obligation to DOE for the disposal of the accepted SNF and/or HLW." *Id.*

The Government's Breach

27. The Defendant was obligated, under the Contract, to begin disposing of HLW/SNF by January 31, 1998. As set forth above, the Contract also recognized the propriety of a priority for HLW/SNF to be removed from shut down reactors like Trojan.

28. Despite the Defendant's unambiguous obligation to begin disposing of HLW/SNF by January 31, 1998, the Defendant has wholly failed to dispose of any HLW/SNF.

29. In the 21 years since the NWPA was enacted, DOE has wholly failed to implement the HLW/SNF program set forth in the NWPA and has failed to meet its obligation to dispose of Trojan's HLW/SNF as provided for in the Contract. Moreover, it has consistently disregarded the priority for shut down plants recognized in the Contract.

30. While the Contract sets forth specific methods for the establishment of delivery commitment schedules, Defendant instead instructed Plaintiffs to provide schedules in accordance with DOE's announced annual capacity for the program. That capacity was both increasingly and unrealistically restrictive and inconsistent with DOE's contractual obligation to dispose of Plaintiffs' HLW/SNF.

31. Nevertheless, Plaintiffs timely provided delivery commitment schedules pursuant to DOE's instructions. But for Defendant's wrongful instructions, Plaintiffs would not have submitted those schedules. The schedules that Plaintiffs were directed to submit were inconsistent with Defendant's contractual obligation to dispose of the HLW/SNF.

32. Plaintiffs have also submitted final delivery schedules for the disposal of Trojan's HLW/SNF in conformance with DOE's wrongful instructions and unrealistically restrictive annual capacity estimates for the HLW/SNF disposal program. Plaintiffs would not have

submitted such schedules but for DOE's wrongful instructions. While DOE's Contract with Plaintiffs requires that DOE approve or disapprove of the schedules submitted by Plaintiffs within 60 days of their submission, DOE has failed to do so.

33. At least as early as 1989, DOE announced that it would not open an HLW/SNF repository until 2010 at the earliest.

34. Defendant's failure to prepare HLW/SNF disposal facilities caused various states and utilities, including Plaintiffs, to doubt whether the Defendant would fulfill its contractual obligations under the standard contracts.

35. In 1993, various utilities and states wrote to DOE to demand assurances that it would honor its contractual obligations.

36. On April 28, 1995, DOE issued its "Final Interpretation of Nuclear Waste Acceptance Issues" ("Final Interpretation"). 60 Fed. Reg. 21,793 (1995). In the Final Interpretation, DOE insisted that it did not have an unconditional statutory or contractual obligation to accept HLW/SNF beginning on January 1, 1998, in the absence of repositories or interim storage facilities constructed under the NWPA.

37. In anticipation of DOE's failure to honor its contractual obligation to begin accepting HLW/SNF on January 1, 1998 -- which could, should, and would have entailed a priority for HLW/SNF from Trojan as a shut down plant -- and as a means of mitigating their damages from Defendant's breach, Plaintiffs decided to construct an Independent Spent Fuel Storage Installation ("ISFSI") rather than retain the SNF in its wet storage facility. The ISFSI is a dry storage facility utilizing concrete casks for containment. The ISFSI will reduce operation and maintenance costs related to the continued storage of SNF at Trojan by more than $8 million per year, as compared to wet storage. Had the Defendant adhered to the schedule set forth in the

Contract -- according priority to HLW/SNF from shut down plants -- Plaintiffs would not have constructed the ISFSI facility. However, Defendant's conduct -- including its failure even by 1993 to begin construction of the HLW/SNF storage facility and to announce a priority for HLW/SNF from shut down plants -- required that Plaintiffs construct the ISFSI as a means of reducing their ongoing storage costs and thus mitigating their damages.

38. Numerous states and nuclear facilities (not including Plaintiffs) filed a petition for review of DOE's Final Interpretation in the United States Court of Appeals for the District of Columbia Circuit.

39. The U.S. Court of Appeals for the District of Columbia Circuit ruled on that petition on July 23, 1996 in *Indiana Michigan Power Co. v. Department of Energy*, 88 F.3d 1272 (D.C. Cir. 1996). The Court noted that NWPA section 302(a)(5)(B) did not condition DOE's obligation to dispose of HLW/SNF on the commencement of the operation of a repository: "In (B), Congress imposed no such condition, but rather directed the beginning of the Secretary's duty as 'no later than January 31, 1998,' without qualification or condition. The only limitation placed on the Secretary's duties under (B) is that that duty is 'in return for the payment of fees established by this section.'" *Id.* at 1276. Thus, the D.C. Circuit made clear that payment of fees by the utilities was the only contractual precondition for DOE's obligation to dispose of the HLW/SNF by a date certain. *Id.*

40. In contravention of the Circuit Court's ruling in Indiana Michigan, DOE announced in December 1996 that it would not begin to dispose of HLW/SNF by the January 31, 1998 deadline. DOE suggested that this delay was "unavoidable" and thus might be excused under Article IX of the Standard Contract. DOE invited utilities to comment on the delay.

41. On January 31, 1997, a number of utilities (not including Plaintiffs) filed a petition for a writ of mandamus in the D.C. Circuit to compel DOE to comply with the D.C. Circuit's ruling in *Indiana Michigan* and to fulfill its unconditional obligations under the NWPA in the Standard Contract.

42. On June 3, 1997, DOE issued a letter responding to the comments submitted by utility signatories to the Standard Contract. In that letter, DOE stated that it had "preliminarily determined" that the delay in disposing of HLW/SNF was unavoidable. A June 3, 1997 contracting officer's preliminary determination to that effect was attached to the June 3 letter. That preliminary determination was entitled "Contracting Officer's Preliminary Determination That the Department of Energy's Delay in Beginning Spent Fuel Disposal Was Unavoidable." In this preliminary determination, DOE's purported difficulties in preparing permanent geological disposal sites to store HLW/SNF were described. DOE contended that the failure to construct those sites excused it from any obligation for a financial remedy to the signatories of the Standard Contract or from any purported delay, because the delay was unavoidable.

43. DOE's position as expressed in that June 3, 1997 letter and in the contracting officer's preliminary determination was rejected by the D.C. Circuit in *Northern States Power Co. v. United States*, 128 F.3d 754 (D.C. Cir. 1997). The *Northern States Power* opinion made clear that the D.C. Circuit would not permit DOE to "absolve itself from bearing the cost of its delay if the delay is caused by the Government's own acts." *Id.* at 760.

44. The Court ordered "DOE to proceed with contractual remedies in a manner consistent with NWPA's command that it undertake an unconditional obligation to begin disposal of the SNF by January 31, 1998. More specifically, we preclude DOE from concluding that its delay is unavoidable on the ground that it has not yet prepared a permanent repository or

that it has no authority to provide storage in the interim." *Id.* The Court specifically rejected DOE's argument that its performance of the contract was unavoidably delayed because it did not have an operational repository, as the exact same argument that the court had dismissed in *Indiana Michigan*. *Id.*

45. The holding by the D.C. Circuit in *Northern States Power* thus explicitly estops the Defendant from arguing that any liability it faces for breach of the Contract is excused by unavoidable delay or impossibility.

46. In an Order issued May 5, 1998, the D.C. Circuit reaffirmed its ruling in *Northern States Power*. *Northern States Power Co. v. United States*, 1998 U.S. App. LEXIS 12919 (D.C. Cir. May 5, 1998). While the D.C. Circuit refused to issue an Order compelling DOE to accept HLW/SNF, it reiterated that its decision in *Northern States Power* "barred" DOE from claiming that the Contract provided "only a contingent disposal obligation." *Id.* at *3.

47. On November 30, 1998, the Supreme Court declined to issue a writ of certiorari to review the D.C. Circuit's ruling. *Dept. of Energy v. Northern States Power, et al.*, 67 U.S.L.W. 3361 (1998); *see also Michigan, et al. v. Dept. of Energy, et al.*, 67 U.S.L.W. 3361 (1998). Thus, that ruling is now final.

48. Despite the rulings in *Indiana Michigan* and *Northern States Power*, the Defendant has wholly failed to honor its contractual obligation to accept HLW/SNF. Not only did the Defendant fail to do so by the contractual and statutory deadline of January 31, 1998, but to date, the Defendant has failed to dispose of any HLW/SNF. In fact, the Defendant has stated that it will not begin to dispose of HLW/SNF until 2010, at the earliest.

Status of Trojan's HLW/SNF

49. As Trojan was a closed facility, its HLW/SNF could, should, and would have received priority for disposal under the Contract. Now, instead of January 31, 1998, DOE has

stated that it would not begin to take HLW/SNF until 2010 at the earliest. In fact, under DOE's latest schedule, the last of Trojan's HLW/SNF would not be taken until 2039. Moreover, DOE's statement provides no guarantee that HLW/SNF would actually begin to be disposed of even in 2010 or that Trojan's HLW/SNF would be given priority.

50. Had disposal begun in January 1998 -- and shut down plants been given priority -- the last of Trojan's HLW/SNF would have been taken by 2002.

51. Due to the Defendant's statements and actions making clear that it would not remove or dispose of Trojan's HLW/SNF in a timely manner, Plaintiffs were forced to construct the ISFSI in order to avoid the high cost of continued wet storage of SNF and thus mitigate damages from Defendant's breach. The capital cost of constructing the ISFSI is approximately $88.1 million.

52. In addition, Plaintiffs face costs for the operation and maintenance of the ISFSI beginning in 2004 and continuing until DOE accepts the last of Trojan's HLW/SNF. These costs amount to approximately $4 million per year, adjusted as appropriate for inflation.

53. Building the ISFSI provided a less costly method for Plaintiffs to store SNF than wet storage, since operation and maintenance costs are less for the ISFSI dry storage facility. Thus, construction of the ISFSI mitigated the damages Plaintiffs would have incurred had Plaintiffs continued to store SNF in wet storage.

54. If Defendant continues to ignore its obligations under the Contract, and/or continues to demonstrate its intentions to refuse to dispose of the Trojan HLW/SNF, Plaintiffs reserve all rights to assert new and separate claims in the future founded upon those actions.

CLAIMS FOR RELIEF

Count I

Breach of Contract

55. Plaintiffs incorporate by reference the allegations of Paragraphs 1 through 54 above, as if stated herein.

56. The Contract created an unconditional obligation that upon payment by Plaintiffs of fees specified under the Contract, DOE would dispose of HLW/SNF beginning no later than January 31, 1998.

57. Defendant could, should, and would have accorded priority, in its disposal program for HLW/SNF from shut down plants.

58. DOE's failure to begin disposing of the HLW/SNF by January 31, 1998 and its statements that it would not begin to dispose of the HLW/SNF until 2010 at the earliest, and that it would not complete disposal of Trojan's HLW/SNF before 2039, are breaches by the Defendant of its unconditional express obligations under the Contract.

59. Those breaches entailed a failure to accord priority to the disposal of HLW/SNF from shut down plants.

60. As a direct and proximate result of the Defendant's breach of the Contract, Plaintiffs have been damaged. Plaintiffs have incurred and will incur additional costs associated with the construction, and continued operation and maintenance, of the ISFSI facilities. Moreover, Plaintiffs have been deprived and will be deprived of the use of the real property required for construction of the ISFSI facilities, and the use of all the real property comprising the Trojan site.

61. As a result, the Defendant is liable to Plaintiffs for damages for its breach of contract in the amount of at least $217 million.

Count II

Breach of Contract

(Breach of Implied Duty of Good Faith and Fair Dealing)

62. Plaintiffs incorporate by reference the allegations of Paragraphs 1 through 61 above, as if stated herein.

63. The Contract between Plaintiffs and DOE imposed an implied duty of good faith and fair dealing on DOE. *Inter alia*, that duty required DOE to accord priority to HLW/SNF from shut down plants such as Trojan.

64. DOE breached its duty of good faith and fair dealing by its failure to make progress on the disposal of HLW/SNF as provided in the Contract, its failure to begin disposing of the Trojan HLW/SNF by January 31, 1998, its statements that it would not begin to dispose of the HLW/SNF until 2010 at the earliest, and that it would not complete disposal of Trojan's HLW/SNF before 2039, and its failure to acknowledge a priority for disposal of HLW/SNF from shut down plants.

65. As a direct and proximate result of the breach of DOE's duty of good faith and fair dealing, Plaintiffs have been damaged. Plaintiffs have incurred and will continue to incur additional costs associated with the construction, and continued operation and maintenance, of the ISFSI facilities. In addition, Plaintiffs have been deprived and will be deprived of the use of the real property required for construction of the ISFSI facilities, and the use of all the real property comprising the Trojan site.

66. As a result, Defendant is liable to Plaintiffs for damages for its breach of the implied duty of good faith and fair dealing in the amount of at least $217 million.

PRAYER FOR RELIEF

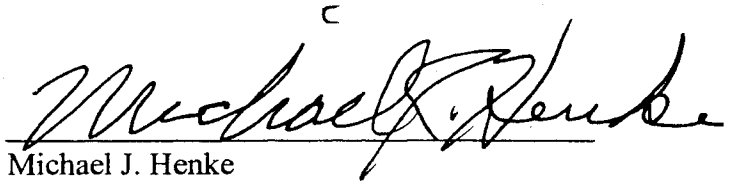
WHEREFORE, Plaintiffs demand the following relief against the United States:

A. Damages for the breach of contract in the amount of at least $217 million;

B. Any and all interest, costs, and attorneys' fees permitted by law; and

C. Any and all other relief, as this Court deems just and proper.

Respectfully submitted,



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Dated: January 6, 2004

Attachment B

United States General Accounting Office

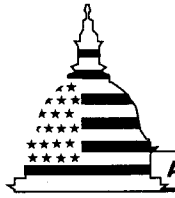
GAO

Report to the Honorable
Edward J. Markey,
House of Representatives

December 2001

NUCLEAR REGULATION

NRC's Assurances of Decommissioning Funding During Utility Restructuring Could Be Improved



G A O

Accountability * Integrity * Reliability

GAO-02-48

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Abbreviations

ALARA	as-low-as-reasonably-achievable
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
DOE	Department of Energy
EPA	Environmental Protection Agency
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
GAO	General Accounting Office
GTCC	Greater Than Class C (waste)
NRC	Nuclear Regulatory Commission
PECO	PECO Energy Company (formerly, Philadelphia Electric Company)
PSEG	Public Service Electric and Gas Company
PUC	Public Utility Commission

GAO
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, DC 20548

December 3, 2001

The Honorable Edward J. Markey
House of Representatives

Dear Mr. Markey:

This report responds to your request that we review how the Nuclear Regulatory Commission ensures, in a period of economic deregulation and restructuring of the electricity industry, that sufficient funds will be available to decommission nuclear power plants after the plants are permanently shut down.

Unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to the appropriate congressional committees; the Chairman, Nuclear Regulatory Commission; and the Director, Office of Management and Budget. We will also make copies available to others upon request.

Please contact me at (202) 512-3841 if you or your staff have any questions about this report. Key contributors to this report are listed in appendix II.

Sincerely yours,

Gary L. Jones

(Ms.) Gary L. Jones
Director, Natural Resources
and Environment

Executive Summary

The Nuclear Regulatory Commission (NRC) has licensed 125 commercial nuclear power plants to operate in the United States, each for a finite number of years. For safety reasons, after a licensee retires a plant, the licensee must eventually dismantle it. The spent (used) fuel is removed from the nuclear reactor and usually stored at the plant site until the fuel can be removed for disposal. The other radioactive wastes from dismantling the plant are shipped to one or more off-site disposal facilities. Upon completion of this process, called "decommissioning," the plant site can be reused for other purposes.

The costs of decommissioning, which vary according to the size of the plant and the level of contamination, generally fall within the range of $300 million to $400 million per plant. To ensure the availability of adequate funds to pay for this process, NRC requires its licensees to select a method or combination of methods for financing future decommissioning activities from among the acceptable methods specified in its regulations.

Traditionally, plant owners amass decommissioning funds through charges imbedded in predetermined electricity rates, which state utility commissions and/or the Federal Energy Regulatory Commission regulate. However, with the deregulation of the electric utility industry in many states, a competitive market instead of regulated rates now determines the price that some plant owners can charge for producing electricity. Consequently, these plant owners can no longer collect decommissioning funds through the traditional method.

Deregulation has led many states and their electric utilities to restructure much of their electricity industry to separate the producers of electricity from those who transmit and distribute (sell) electricity to customers. As part of this restructuring, the ownership and/or operation of plants has changed for more than half of the nuclear power plants in the United States. Since 1998, for example, utilities that own all or part of eight nuclear plants have contracted the operation of these plants to other companies. And other utilities have sold or are in the process of selling all or part of 15 plants. Finally, the reorganizations and mergers of electric utilities have resulted in the transfer of licenses for more than 30 plants to companies formed specifically to produce electricity. The number of these transfers highlights the importance of NRC's regulatory role in ensuring that new licensees are financially qualified to operate, maintain, and eventually decommission these plants. The transfers also underscore the need for consistent financial disclosure of decommissioning liabilities to

the potential investors in new companies formed, at least in part, to produce electricity from nuclear power plants.

Concerned about the adequacy of decommissioning funds, particularly in deregulated markets, Representative Edward Markey asked GAO to determine how (1) transfers of licenses to operate or own nuclear power plants have affected assurances that adequate funds will be available to operate and decommission these plants, (2) various site cleanup standards and proposed new decommissioning methods affect projected decommissioning costs, and (3) changes in financial reporting standards affect the disclosure and funding of decommissioning liabilities.

Background

Before transferring a license to a new plant owner, NRC requires the prospective owner to demonstrate that it has both the technical ability and financial backing to safely own and operate the plant. NRC also requires owners to demonstrate that they will accumulate a prescribed minimum amount of funds to pay for the eventual decommissioning of their plants. Owners must ensure that these funds will be available by choosing one or a combination of the following options:

- periodic deposits (at least annually) into a trust fund outside of the owner's control;
- prepayment of the entire estimated decommissioning liability into a trust fund outside of the owner's control;
- obtaining a surety bond, insurance, letter of credit, or line of credit payable to a trust established for decommissioning costs; or
- guaranteeing the payment of decommissioning costs, provided that the guarantor (usually an affiliate or parent company to the owner) passes specific financial tests.

Until recently, essentially all plant owners chose to accumulate decommissioning funds through periodic deposits. However, in September 1998, NRC amended its regulations to restrict the use of this option in deregulated markets. Under the amended regulations, owners may rely on periodic deposits only to the extent that those deposits are guaranteed through regulated rates charged to consumers. In conjunction, NRC has issued written procedures, called a "standard review plan", describing how its staff should determine the adequacy of a prospective owner's financial qualifications to operate its plant(s) and its proposed method(s) for assuring the availability of funds to eventually decommission the plant(s).

To estimate future decommissioning costs, plant owners may use a mathematical formula that is provided in NRC's regulations or a site-specific estimate, if the costs developed from it are higher. The formula assumes that plant sites will be cleaned up in compliance with NRC's standards. By the time that a plant is decommissioned, however, other cleanup standards could apply. For example, the Environmental Protection Agency (EPA) has more restrictive cleanup standards that could, in some circumstances, be applied to a nuclear power plant site, and some states are establishing cleanup standards for decommissioning nuclear power plants and/or other nuclear facilities.

Results in Brief

In most of the requests to transfer licenses to own or operate nuclear power plants that NRC has approved, the financial arrangements have either maintained or enhanced the assurance that adequate funds will be available to decommission those plants. Owners relying on outside companies to operate their plants have retained the responsibility for financing the future decommissioning of these plants and continue to collect funds for this purpose through their economically regulated sales of electricity. When new owners purchased all or parts of 15 plants from utility companies, the level of assurance was enhanced through the prepayment of the decommissioning trust funds and guarantees from affiliate or parent companies to pay any remaining decommissioning costs. However, when new owners proposed to continue relying on periodic deposits to external sinking funds, NRC's reviews were not always rigorous enough to ensure that decommissioning funds would be adequate. Moreover, NRC did not always adequately verify the new owners' financial qualifications to safely own and operate the plants. Accordingly, GAO is making a recommendation to ensure a more consistent review process for license transfer requests.

Varying cleanup standards and proposed new decommissioning methods introduce additional uncertainty about the costs of decommissioning nuclear power plants in the future. Plants decommissioned in compliance with NRC's requirements may, under certain conditions, also have to meet, at higher cost, more stringent EPA or state standards. New decommissioning methods being considered by NRC, which involve leaving more radioactive waste on-site, could reduce short-term decommissioning costs yet increase costs over the longer term. Moreover, they would raise significant technical and policy issues concerning the disposal of low-level radioactive waste at plant sites instead of in regulated disposal facilities. Adding to cost uncertainty, NRC allows plant owners to wait until 2 years before their license is terminated—relatively late in the

decommissioning process—to perform overall radiological assessments to determine whether any residual radiation anywhere at the site will need further clean-up in order to meet NRC's site release standards. Accordingly, GAO is recommending that NRC reconcile its proposed decommissioning methods with existing waste disposal regulations and policies and require licensees to assess their plant sites for contamination earlier in the decommissioning process.

Changes to the Financial Accounting Standards Board's financial reporting standard will require, for the first time, owners of facilities that require significant end-of-life cleanup expenditures—such as nuclear power plants—to consistently report estimated decommissioning costs as liabilities in their financial statements. When this standard takes effect in mid-2002, many companies that are licensed by NRC to own nuclear power plants will have to change their current financial-reporting practices, and the reporting of estimated decommissioning costs will become more uniform. However, the new accounting standard is not intended to, and will not, establish a legal requirement that these licensees set aside adequate funding for decommissioning costs.

Principal Findings

Effect of License Transfers on Decommissioning Funding

The level of assurance that adequate decommissioning funds will be available when licensees retire nuclear power plants has remained the same or increased for most of the license transfers that NRC has reviewed and approved. When plant owners contracted out the operation of their plants, NRC required the owners to continue collecting decommissioning funds through their regulated electricity rates, thus maintaining the previous level of assurance. When NRC reviewed and approved the sale of all or parts of 15 plants to new generating companies, the level of assurance was enhanced because the selling utilities generally prepaid the projected decommissioning funds. To the extent that a few decommissioning trust funds were not fully prepaid, either the selling utility or the new owners' affiliated or parent companies provided additional guarantees consistent with NRC's requirements.

In instances when new owners continued to rely on periodic deposits to the transferred trust funds, however, NRC's review process did not consistently result in the same level of assurance that decommissioning funds would be adequate when the owners' plants shut down. For

example, when a new company formed through a merger applied to transfer the licenses for the ownership of all or parts of 20 plants, including 4 retired plants, NRC did not verify whether there were contractual arrangements to transfer the decommissioning funds collected for the plants into the trust funds for those plants. Also, for the four plants that had permanently shut down, NRC did not request that the new owner (1) provide any more information on the status or plans for these prematurely shut down plants than it had for the 16 plants that were operating or (2) demonstrate how the owner planned to acquire the additional decommissioning funds as it had for another retired plant.

For the most part, NRC's reviews of new owners' financial qualifications have enhanced the level of assurance that they will safely own and operate their plants in a deregulated environment and not need to shut them down prematurely. However, NRC did not obtain the same degree of financial assurance in the case of one merger that created a new generating company that is now responsible for owning, operating, and decommissioning the largest fleet of nuclear plants in the United States. This new owner did not provide, and NRC did not request, guaranteed additional sources of revenue above the market sale of its electricity, as other new owners had. Moreover, NRC did not document its review of the financial information—including revenue projections, which were inaccurate—that the new owner submitted to justify its qualifications to safely own and operate 16 plants.

Effect of Regulatory Policies on Decommissioning Costs

Varying radiation cleanup standards and the possibility that NRC will approve alternative decommissioning methods are two of the most significant factors that add uncertainty to estimates of future decommissioning costs. Depending on future circumstances, for example, plants decommissioned according to NRC's radiation cleanup standards could also have to meet more stringent EPA or state standards, potentially increasing the cost of decommissioning. EPA has indicated that if NRC does not tighten its standards, EPA could reconsider its policy of exempting decommissioned nuclear plant sites from the stricter cleanup standards that EPA enforces under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (also known as CERCLA or Superfund). In addition, the states of Maine, Massachusetts, New York, and New Jersey have already adopted radiation cleanup standards stricter than NRC's, and more states may do so. These stricter standards will require plant owners to incur significant additional decommissioning costs; for example, officials from one plant estimate that

Maine's standard will add $25 million to $30 million to the decommissioning costs for that plant.

Alternative decommissioning methods under consideration for NRC's approval would have an unknown affect on overall decommissioning costs. Because the methods involve leaving more radioactive waste on-site—either buried as rubble or encased within the reactor containment structure—they would reduce the waste-disposal component of decommissioning costs. However, they could add considerably to long-term costs because of the need for extended institutional control of the sites. Moreover, these methods appear to conflict with NRC's technical requirements for licensing low-level radioactive waste disposal facilities. In addition, the proposed methods may run counter to the policy expressed in the Low-Level Radioactive Waste Policy Amendments Act, which encourages states to manage low-level radioactive wastes on a regional basis and to provide centralized disposal facilities.

Another potentially significant factor contributing to the uncertainty about decommissioning cost is the lack of information on the degree of contamination at some plant sites. NRC's decommissioning requirements allow plant owners to wait until 2 years before the proposed license termination date to perform an overall survey of their plant sites for radiation contamination. Postponing the survey until this late in the decommissioning process increases the risk that owners will incur unplanned cleanup expenses after significant portions of the available decommissioning funds have already been expended.

Disclosure of Liability for Decommissioning Costs

The Financial Accounting Standards Board has adopted a new financial reporting standard that, beginning in mid-2002, should result in more uniform reporting of decommissioning costs. Currently, companies disclose their liability for decommissioning costs using a number of different methods, making comparisons by investors difficult. Under the new standard, companies must report estimated decommissioning costs as liabilities in their financial statements, using a specified method to calculate the amount of the liability. However, the new standard applies not just to nuclear power plants but to other industries as well, and the method specified differs from the method that NRC requires for nuclear power plant licensees. The new standard will have no legal or regulatory affect on the actual accumulation of decommissioning funds and is not intended to do so.

Recommendations for Executive Action

To ensure that the decommissioning assurance methods and financial qualifications of all new plant owners are consistently verified, validated, and documented, GAO recommends that the Chairman, NRC, revise the Commission's standard review plan and related management controls for reviewing license transfers to include a checklist or step-by-step process for its staff, management, and prospective plant owners to follow.

GAO also recommends that the Chairman, NRC, amend the Commission's ongoing consideration of modifications to radiological criteria for terminating licenses and alternative decommissioning approaches to address

- how the burial or entombment of low-level radioactive waste at nuclear plant sites, leading to a potentially large number of contaminated sites scattered around the country, may affect the federal policy under the Low-Level Radioactive Waste Policy Act to manage radioactive waste on a regional basis, and
- concerns about whether these decommissioning approaches are technically compatible with provisions of the Low-Level Radioactive Waste Policy Act, the interstate compact agreements that implement the act, and NRC's technical regulations on licensing disposal facilities for low-level radioactive waste.

To reduce the likelihood that site contamination will go undetected until late in the cleanup process, GAO recommends that the Chairman, NRC, require licensees to survey their plant sites for radiation as soon as possible after the announcement of their intentions to permanently cease operations, rather than allowing them to wait until 2 years before decommissioning is supposed to be complete.

Agency Comments and GAO's Evaluation

GAO provided NRC with a draft of this report for review and comment. NRC said that GAO has provided constructive comments regarding documentation of the financial considerations associated with requests to transfer licenses for nuclear power plants. NRC also said it is concerned that GAO has not fully represented certain aspects of its review process for license transfers, nor entirely considered the various processes associated with the decommissioning of a nuclear plant. NRC provided specific comments on these matters, including reasons why, in some cases, it does not agree with GAO's recommendations. NRC's comments also, it said, supplied a more comprehensive perspective on our conclusions and recommendations. (NRC's comments are contained in app. I.)

Specifically, NRC disagreed that it should modify its review guidance to include a checklist or step-by-step process to be followed because many of the proposed license transfers are unique. GAO disagrees. Licensees have consistently used a few basic methods of providing decommissioning funding assurance. Revising the review guidance to ensure, on the basis of NRC's experiences to date, that each license transfer review is based on information that is consistent with other transfers that used similar methods of assurance could help NRC meet its goal of increasing its efficiency and effectiveness.

NRC also disagreed that it should address technical and policy issues associated with the potential on-site burial of radioactive waste from decommissioning nuclear plant sites because this waste would not be classified as low-level radioactive waste. GAO disagrees because it is difficult to discern why radioactive material buried on-site—material that has traditionally been shipped to disposal facilities designed and regulated for such purpose–does not merit the same protection as material sent to a low-level waste disposal site.

Finally, NRC disagreed that it should require licensees to make radiation surveys of their plant sites earlier because this proposed step would not add significant value to the decommissioning process. GAO disagrees, because plant employees most knowledgeable about historical plant operations and site conditions would more likely be available when a plant has been permanently shut down rather than later when decommissioning has been almost completed.

Chapter 1: Introduction

Nuclear power plants generate about 20 percent of electricity in the United States. At the time of this review, there were 103 of these plants in operation.[1] No new nuclear power plants have been ordered since 1978, however, and 22 plants that previously operated under licenses issued by the Nuclear Regulatory Commission (NRC) have been permanently shut down. The licenses for 45 additional plants will expire within the next 15 years. The owners of these plants, therefore, will have to choose whether to retire their plants or to seek license extensions from NRC for up to an additional 20 years.

Radioactive contamination lingers long after power plants are closed. To protect public health and safety, the amount of residual radioactivity present at the site of a retired nuclear power plant must be reduced through a process known as decommissioning. After the spent (used) fuel has been removed from the plant's reactor vessel, the plant must be dismantled and the radioactive wastes shipped to one or more disposal facilities for radioactive wastes.[2] The decommissioning process is still relatively new—3 of the 22 retired commercial nuclear power plants have been decommissioned, 6 other plants are being decommissioned, and 13 plants are awaiting decommissioning. The process is also costly. Experience to date shows that decommissioning costs anywhere from $300 million to $400 million or more, depending on factors, such as plant size, the extent of contamination, and waste disposal costs.

NRC and plant owners must balance public health and safety with the cost and technical logistics of the decommissioning process. Moreover, the relatively high cost of decommissioning a nuclear power plant makes the process an issue for economic regulators, such as the Federal Energy Regulatory Commission (FERC) and state public utility commissions (PUC's), and the electricity industry in the relatively new environment of deregulating and restructuring the electricity industry.

[1] These numbers do not include one plant—the Tennessee Valley Authority's Brown's Ferry Unit 1 plant—that is licensed to operate. That plant, however, has not operated since March 1985, has no fuel loaded, and cannot load fuel and restart without NRC's approval.

[2] The Department of Energy (DOE) is responsible for disposing of the spent fuel from commercial nuclear power plants in a geologic repository. Pending the approval and completion of the proposed Yucca Mountain repository project, owners of nuclear plants are storing their spent fuel at plant sites. NRC does not consider spent fuel storage and disposal costs as decommissioning costs.

Decommissioning Regulations Outline Technical Procedures

Before obtaining a license to operate a nuclear power plant, the licensee must agree with NRC to decommission the plant after the plant has been permanently shut down. NRC established its decommissioning requirements in regulations issued in 1988. Under these regulations, NRC expected that decommissioned sites, with rare exceptions, would reduce levels of radiation to allow the plant site to be released for unrestricted use once the license was terminated. Licensees had two decommissioning alternatives.[3] They could either begin major site decontamination and dismantling activities shortly after the termination of operations or maintain the plant and site in a safe condition up to several decades before dismantling the plant. Delaying full-scale decontamination and dismantling activities could be advantageous if (1) more time was needed to accrue decommissioning funds by continuing to collect funds from ratepayers after the plant has closed; (2) other units operating at the site would be disrupted unless all were decommissioned simultaneously at a future time; (3) a reduction in waste disposal volume, cost, or radiation exposure was possible because of a reduction in residual radiation over time; or (4) a licensed disposal facility for radioactive waste was unavailable. (Figure 1 shows ongoing decontamination and dismantling activities at one plant.)

[3] A third alternative—encasing radioactive wastes within the reactor building—was used by the DOE to decommission three of its small reactors. NRC, in promulgating its decommissioning regulations in 1988, opposed use of this decommissioning method for its licensees unless warranted to protect public health and safety. Since then, no licensee has proposed using this decommissioning method.

Figure 1: Ongoing Decommissioning Work Within the Containment Building at the Connecticut Yankee Atomic Power Company Haddam Neck Plant

Source: GAO.

When power operations at a nuclear power plant cease, the licensee must notify NRC, permanently remove the fuel from the reactor vessel, and confirm this action to NRC. Within 2 years, the licensee must provide a report to NRC addressing, among other things, decommissioning plans and the estimated costs of these activities. NRC then publishes a notice of receipt, makes the document available for public comment, and holds a public meeting in the vicinity of the plant to discuss decommissioning plans. The licensee may not perform any major decommissioning activities until 90 days after NRC receives the post-shutdown decommissioning activities report and the certifications of permanent cessation of operations and fuel removal. NRC currently requires that decommissioning be completed within 60 years unless public health and safety reasons require that an extension be granted.

Concurrent with plant decommissioning, a licensee must supply NRC a plan for terminating its license at least 2 years before the planned termination date. At the end of the license termination process, the licensee must conduct a final radiation survey to prove that the site meets radiological criteria for release and must include the survey with the plan. The licensee remains accountable to NRC until decommissioning has been completed and the license is terminated.

NRC's 1988 decommissioning regulations outlined several acceptable approaches for decommissioning nuclear power plants, but regulations did not establish acceptable residual radioactivity levels for the unrestricted release of decommissioned sites. In 1996, NRC published its final rule on the decommissioning of nuclear power plants. This final rule (1) redefined the decommissioning process; (2) defined terminology related to decommissioning; (3) required licensees to provide the NRC with early notification of planned decommissioning activities at their facilities; and (4) explicitly stated the applicability of certain NRC requirements that are specific for reactors that are permanently shut down. However, NRC did not amend its regulations to include radiological criteria for license termination until 1997. The final rule included radiological criteria for releasing decommissioned sites for both unrestricted and restricted future uses. For restricted future uses, licensees must provide safeguards to ensure that access to the site will be restricted until dose levels decay to the radiation level set for unrestricted site releases. The safeguards include requirements for physical barriers, security, monitoring, maintenance, financial assurance provisions, and other institutional controls to ensure that access to the site remains restricted for the entire internment period.

On the basis of its regulations restricting the dosages to members of the public under both the unrestricted and restricted release scenarios, NRC is also now considering two alternative decommissioning approaches. One approach, called rubblization, would permit licensees to demolish plant concrete that is contaminated with radioactivity into rubble and bury the rubble in the underground portion of the dismantled plant. The other approach, called entombment, would involve the permanent encasement of the radioactive contaminants from a partially dismantled plant within the remaining structure of the plant. NRC is also considering extending the timeframe for completing decommissioning from 60 to 100 years or more. As with other decommissioning alternatives, licensees selecting rubblization or entombment would be required to demonstrate compliance with NRC's regulations for license termination, including a demonstration that residual radiation doses at the site are as low as is reasonably achievable.

NRC has primary regulatory authority over nuclear power plant operations and decommissioning, but it is not the only entity that promulgates radiation protection standards. The Environmental Protection Agency (EPA) also issues radiation standards and administers the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), which governs cleanups of federal and non-federal facilities. EPA has authority to evaluate NRC-regulated sites once the sites are decommissioned. NRC and EPA have historically disagreed over radiation protection standards. Differences in legislative mandates, agency missions, and regulatory strategies contribute to this disagreement, which remains essentially unchanged today despite resolution efforts spanning a number of years. States also have authority to issue their own standards, which may be more stringent than either NRC's or EPA's. Consequently, whereas NRC may approve decommissioning plans and terminate the NRC operating license based on its standards, plant owners may still be subject to other federal and state standards once the NRC license is terminated.

Decommissioning Regulations Outline Financial Procedures

NRC has authority under the Atomic Energy Act of 1954, as amended, to require licensees to accumulate the funds necessary to decommission their nuclear power plants. Prior to 1988, NRC only required licensees to certify that sufficient funding would be available to decommission their plants when needed and did not require any specific financial provisions. On July 26, 1988, NRC strengthened its technical and financial requirements for decommissioning and offered several options for providing financial assurance. The options included:

- prepayment of the entire estimated decommissioning liability in cash or liquid assets into a separate, segregated account outside the licensee's control;
- external sinking funds segregated from other licensee assets and outside licensee control that are established and maintained by periodic funding;
- surety methods or insurance; or
- for federal licensees only, a statement of intent that decommissioning funds will be obtained when necessary.

Essentially, most if not all utilities eventually elected the option to establish external sinking funds (trust funds) to finance future decommissioning costs. Under this option, decommissioning funds are accumulated over the operational life of a nuclear power plant as part of the cost charged to customers for the electricity they use.

In establishing its regulations, NRC recognized that the external sinking fund option allowed the rate-setting authority of FERC and state public utility commissions to control the rate at which decommissioning funds could be accumulated. Given the additional uncertainty involved in estimating future decommissioning costs, NRC required only that licensees provide "reasonable assurance" that sufficient funds would be available to decommission their nuclear power plants when they are shut down. In 1998 , NRC also began requiring licensees to provide financial reports every 2 years on the status of their decommissioning funds. NRC provided licensees with a mathematical formula to initially determine and periodically adjust the estimated amounts required in the funds for radiological decontamination of their plant sites. Licensees may also base their decommissioning trust funds on site-specific estimates of decommissioning costs if these estimates exceed the amounts calculated using NRC's formula.

The length of time that a nuclear power plant remains in operation depends on several factors. NRC typically issues operating licenses for 40 years. Licensees with economically viable plants that still meet NRC's operational requirements may opt to extend operations rather than close their doors. On the other hand, licensees with financially marginal plants may decide to cease operations rather than shoulder large cost requirements for equipment upgrades or repairs, or to address NRC's concerns. An operational accident could also bring a premature end to operations, as could local public and political sentiment or NRC closure for safety reasons. As decommissioning funds are typically accumulated over the expected operational lifetime of the plant, plants that close prematurely may not have accumulated sufficient funds and may have to

defer the decommissioning process. Furthermore, where several units are situated at the same site, licensees may delay decommissioning work until all plants can be decommissioned at the same time.

Deregulation of Electric Utilities and Resultant Industry Restructuring

Historically, nuclear power plants were constructed and operated primarily by investor-owned utilities.[4] Beginning in the mid-1990s, however, many states began to deregulate the electricity industry and to mandate or encourage industry restructuring. Under deregulation, subject to federal oversight, the ownership and control of electricity generation was separated from the transmission and distribution functions to facilitate competition. Traditional utilities continue to serve the transmission and distribution functions, while new business entities—formed through operating arrangements, plant sales, corporate realignments, and mergers—often handle the electricity production function. In recent years, NRC has reviewed more than 60 license transfer requests. These transfer requests have affected about half the nuclear plants in the United States, and some licenses were transferred several times for multiple reasons.

[4] In addition, smaller investor-owned utilities, publicly-owned utilities, or cooperatives own or have owned a few entire plants or shares of some plants.

Figure 2: Map of Nuclear Power Plants in the United States and Status of Deregulation by State

Note: Includes Browns Ferry Unit 1, which has no fuel loaded and requires Commission approval to restart.

Source: Nuclear Regulatory Commission and Energy Information Administration Illustrations, as modified by GAO.

While the move to deregulate the electric industry has resulted in changes that affect the status of licensees in some states, many licensees today still remain investor-owned utilities that operate as state-regulated monopolies. NRC has provided its staff, managers, and licensees with guidance on how it will review requests to transfer licenses, including determining whether the new license holders would continue to operate under economic regulation or in an economically deregulated environment. This guidance

is in the form of a standard review plan on nuclear power plant licensees' financial qualifications to operate their plants and assurances that the licensees will provide adequate funds to decommission the plants. The review plan discusses each of the review procedures that the NRC staff should use, as appropriate, to determine the adequacy of a prospective licensee's financial qualifications and decommissioning funding method(s). For example, the review plan discusses how NRC's staff should evaluate external sinking fund trust documents and other decommissioning financial assurance mechanisms.

Objectives, Scope, and Methodology

Concerned about the adequacy of decommissioning funds, particularly in deregulated markets, Representative Edward Markey asked us to determine how (1) transfers of licenses to operate or own nuclear power plants affected the level of assurance that adequate funds will be available to operate and decommission these plants, (2) various site cleanup standards and proposed alternative decommissioning approaches affect projected decommissioning costs, and (3) proposed changes in financial reporting standards affect disclosure and funding of decommissioning liabilities.

To determine how license transfers for nuclear power plants affected NRC's level of assurance that adequate funds will be available to decommission these plants, we reviewed NRC's Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance, as well as related memoranda, regulations, policy statements, regulatory analyses, and regulatory guidance. We contacted NRC's Office of Inspector General to discuss the weaknesses it had reported in licensee's biennial reports to NRC regarding decommissioning fund balances. At NRC's headquarters in Rockville, Maryland, we met with officials from NRC's offices of Nuclear Reactor Regulation and Nuclear Material Safety and Safeguards to discuss decommissioning financial assurance issues regarding non-owner operating arrangements, nuclear plant sales, corporate reorganizations, and mergers. We also reviewed licensee information provided to NRC regarding these license transfers, and analyzed NRC's review and approval documents related to license transfer requests submitted for 9 non-owner operating arrangements, 19 sales, 3 corporate reorganizations, and one merger.

To determine how site cleanup standards and proposed alternative decommissioning approaches affect projected decommissioning costs, we obtained, from EPA and NRC, and reviewed memoranda, regulations and other documentation addressing decommissioning and radiation

protection standards. We reviewed published GAO reports that dealt with decommissioning financial assurance, nuclear waste disposal, radiation protection standards, and other related issues. We also reviewed a recent National Research Council report that questioned the reliability of long-term institutional management controls at nuclear waste sites. We also contacted EPA and NRC staff regarding efforts to resolve interagency disagreement over radiation protection standards and related issues, and met with staff from NRC's offices of Nuclear Reactor Regulation and Nuclear Material Safety and Safeguards to discuss issues regarding radiation protection standards, past decommissioning methods and experience, and proposed decommissioning alternatives and their potential impact on decommissioning cost. In addition, we reviewed the minutes from an August 1999 NRC public workshop dealing with decommissioning and proposed waste disposal options.

To acquire a first-hand perspective on decommissioning, we obtained and reviewed the license termination plans from and made visits to the Connecticut Yankee Atomic Power Company plant at Haddam, Connecticut, and the Maine Yankee Atomic Power Company plant at Wiscasset, Maine. At the Haddam plant, we met and discussed decommissioning issues with officials from the Connecticut Yankee Atomic Power Company, Bechtel Power Corporation (the decommissioning contractor), and the Connecticut Department of Environmental Protection. We also toured the Haddam Plant and observed ongoing decommissioning work within the reactor building (containment). In addition, we met with local members of the Citizens Awareness Network, a non-profit volunteer organization, to discuss issues and concerns regarding the decommissioning of the Haddam Plant. In Maine, we met with two state senators knowledgeable about the controversy over original decommissioning plans to rubblize the Maine Yankee site and the involvement of the state legislature in the Maine Yankee decommissioning. We also met with a member of Friends of the Coast—a local citizens' environmental organization. We contacted officials from the Maine Department of Environmental Protection and Department of Human Services by telephone and discussed Maine Yankee decommissioning issues. In Washington, D.C., we met with members of the Nuclear Energy Institute, Union of Concerned Scientists, Nuclear Information and Resource Service, and Public Citizen to discuss decommissioning issues. In addition, we attended the Fifth Biennial Industry Conference on Decommissioning held in October 2000 and a NRC public decommissioning workshop held in November 2000.

To determine how a recently adopted financial reporting standard will affect the disclosure and funding of decommissioning liabilities, we reviewed the annual reports and/or annual filings with the Securities and Exchange Commission (Forms 10 K) for 55 utility companies that own nuclear power plants. From those, we determined the methods currently used to account for decommissioning costs. We also reviewed FASB Exposure Draft No. 206-B entitled "Accounting for Obligations Associated with the Retirement of Long-Lived Assets," (adopted in June 2001 as FASB Statement No. 143) as well as selected responses of public accounting firms and utility companies to the Exposure Draft. From our review, we determined how the new standard would affect the financial statements of utility companies with nuclear power plants.

We performed our review between June 2000 and August 2001 in accordance with generally accepted government auditing standards.

Chapter 2: Most Restructuring License Transfers Have Maintained or Enhanced Assurance of Decommissioning Funding

As a result of restructuring in the electricity industry, NRC has approved requests to transfer the licenses to own or operate more than one-half of the nuclear power plants in the United States. Some license transfer requests involved a single owner of one or more plants transferring licenses to own or operate the plant(s) to one or more new owners or operators. Other requests involved transfers of licenses to own or operate one or more plants from multiple owners of these plants. For most of the requests that NRC reviewed to transfer licenses for one or more plants, the level of assurance that the plants' decommissioning funds will be adequate has been maintained or enhanced. For example, when plant owners requested that their operating licenses for eight plants be transferred to a contractor, NRC maintained the existing level of assurance by continuing to hold the plant owners responsible for collecting decommissioning funds. In addition, when NRC approved requests to transfer licenses related to the sale of 15 plants, decommissioning funding assurances were increased because the selling utilities prepaid all or most of the projected decommissioning costs, and either the sellers or the new owners provided additional financial guarantees for those projected costs that were not prepaid. However, when NRC approved requests to transfer licenses in which the new licensee intended to rely on periodic deposits into external sinking funds for decommissioning, it did not always obtain the same level of financial assurance as when plants were sold or their operations contracted out. Among other things, NRC approved two requests to transfer ownership of 25 plants without verifying that the new owners would have guaranteed access to the decommissioning charges that their affiliated utilities would collect.

NRC also requires prospective new owners of plants that will not be selling their electricity at regulated rates to demonstrate their financial qualifications to safely own and operate the nuclear power plants that they are acquiring. In almost all of its reviews of new owners' financial qualifications, NRC has required additional guarantees from parent or affiliated companies that the new owners would have sufficient revenue to cover the plants' operating costs. However, when reviewing one prospective owner's financial qualifications, NRC did not require additional guarantees and did not validate the information submitted by the new owner to demonstrate that the company was financially qualified to safely own and operate the largest fleet of nuclear plants in the United States.

Funding Assurance Is Maintained for License Transfers Related to Contracting Out Operations

The level of assurance that decommissioning funds will be adequate has been maintained in all license transfer approvals that allowed plant owners to contract out plant operations. For example, traditional electric utilities that own 17 nuclear power plants have used companies that specialize in the operation, maintenance, and decommissioning of nuclear power plants to help them operate or decommission their plants. The owners of fifteen of these plants had to get NRC's approval to transfer their operating licenses. For the other two plants, NRC decided that the proposed arrangements did not require transfers of operating licenses. (See table 1.) For all 15 operating license transfers, NRC continues to hold the owners responsible for accumulating decommissioning funds, and the owners continue to collect these funds through regulated electricity rates. Accordingly, these operating license transfers have not changed the level of decommissioning funding assurance for these plants.

Table 1: Nuclear Power Plants With Non-owner Operating Arrangements

Nuclear power plant	Operator's business arrangement with owner(s)	NRC operating license transfer required?
Duane Arnold Energy Center	Operating services agreement[a]	Yes
Kewaunee Nuclear Power Plant	Operating services agreement[a]	Yes
Monticello Nuclear Generating Plant	Operating services agreement[a]	Yes
Palisades Plant	Operating services agreement[a]	Yes
Point Beach Nuclear Plant, Unit 1	Operating services agreement[a]	Yes
Point Beach Nuclear Plant, Unit 2	Operating services agreement[a]	Yes
Prairie Island Nuclear Generating Plant, Unit 1	Operating services agreement[a]	Yes
Prairie Island Nuclear Generating Plant, Unit 2	Operating services agreement[a]	Yes
John M. Farley, Unit 1	Affiliated company[b]	Yes
John M. Farley, Unit 2	Affiliated company[b]	Yes
Edwin I Hatch, Unit 1	Affiliated company[b]	Yes
Edwin I Hatch, Unit 2	Affiliated company[b]	Yes
River Bend, Unit 1	Affiliated company[b]	Yes
Vogtle, Unit 1	Affiliated company[b]	Yes
Vogtle, Unit 2	Affiliated company[b]	Yes
Clinton Power Station	Management services agreement[c]	No
Maine Yankee Atomic Power Plant	Management services agreement[c]	No

[a]Operating licenses for eight plants were transferred to one company, Nuclear Management Company, which was formed by the plants' electric utility owners to provide operating and eventual decommissioning services for the plants. NRC approved the operating license transfers but continues to hold the utility-owners responsible for collecting decommissioning funds for the plants through their regulated electricity rates.

[b]Seven transfers of operating licenses resulted from corporate reorganizations or mergers in which an existing operations organization split off from an electric utility and formed a new affiliated company specializing in nuclear plant operations. The utility owners continue to collect decommissioning funds for the plants through their regulated electricity rates.

[c]In two cases, in which utility owners entered into management services agreements with outside companies to assist them with operating and decommissioning their plants, NRC did not require operating license transfers. In both cases, NRC determined that because the management services provided by the operating companies did not involve activities that would require a license, such as maintenance of safety-related equipment or the emergency preparedness program, and because the utility owners retained final decision-making authority, no transfer of operating authority had taken place that required NRC's approval. The utility owners continued to collect decommissioning funds through their regulated electricity rates.

Source: GAO's analysis of NRC data.

Prepayment and Company Guarantee Methods Have Enhanced Funding Assurances When Licenses Are Transferred

When NRC has approved license transfers for plants that chose the prepayment and guarantee methods, assurance of adequate decommissioning funding has been enhanced. To date, all the transfers that NRC has reviewed as a result of plant sales have chosen either total prepayment or a combination of these methods. For example, as a direct response to deregulation legislation in many Northeast, Mid-Atlantic, and Midwest states, NRC has approved the transfer of the ownership interests in 15 nuclear power plants from traditional electric utilities to newly formed generating companies. The utilities selling 13 of these plants proposed to transfer prepaid decommissioning trust funds to the generating companies. NRC concurred with these proposals and also imposed conditions on how the new owners must manage these funds to ensure that they are preserved and accumulate as projected in a market environment. For the other two plants, the selling utility—the Power Authority of the State of New York—chose to retain control of the prepaid decommissioning trust funds for its two plants and not transfer them to the new owners (Entergy Nuclear Indian Point 3 and Entergy Nuclear Fitzpatrick). Because the Power Authority would no longer be a licensed owner or operator of the two plants, NRC imposed additional conditions upon these license transfers, allowing NRC intercession to release funds for decommissioning if the Power Authority does not comply with its responsibility to do so.

In three transfers the accumulated trust funds did not cover small portions—less than 8 percent—of the projected decommissioning costs. In these cases, either the buyer's or the seller's parent or affiliated companies passed NRC's financial test and provided contractual guarantees that they would provide additional funds as needed. Consequently, NRC has assurances that all approved new plant owners will have adequate funds available to decommission their plants in a deregulated environment. Table 2 lists the 15 plant sales that NRC has approved, along with the projected amount of decommissioning funding needed and the amount available in the trust funds at the time of the sales.

Table 2: Decommissioning Funds Needed, Transferred, and Assurance Methods Used for Nuclear Power Plants Approved for Sale

Dollars in millions

Nuclear power plant	Percent sold	Projected funds needed	Funds approved to transfer	Decommissioning assurance method
Clinton Power Station	100.00	$347.880	$210.000	Prepayment + 2% interest[a]
James A Fitzpatrick	100.00	$358.000	$343.968[b]	Prepayment + 2% interest[a] + guarantee
Hope Creek	5.00	$18.014	$9.681	Prepayment + 2% interest[a]
Indian Point, Unit 3	100.00	$292.000	$315.225[b]	Prepayment + guarantee
Millstone, Unit 1[c]	100.00	$504.481	$293.712	Prepayment + guarantee + 2% interest[a]
Millstone, Unit 2	100.00	$298.630	$252.944	Prepayment + 2% interest[a]
Millstone, Unit 3	93.47	$316.728	$246.838	Prepayment + 2% interest[a]
Oyster Creek	100.00	$333.462	$400.000	Prepayment
Peach Bottom, Unit 2	15.02	$56.401	$44.775[d]	Prepayment + 2% interest[a] + guarantee
Peach Bottom, Unit 3	15.02	$56.401	$46.202[d]	Prepayment + 2% interest[a] + guarantee
Pilgrim	100.00	$327.000[e]	$396.000	Prepayment
Salem, Unit 1	14.82	$44.000	$36.837	Prepayment + 2% interest[a]
Salem, Unit 2	14.82	$44.000	$35.635	Prepayment + 2% interest[a]
Three Mile Island, Unit 1	100.00	$268.870	$303.000	Prepayment
Vermont Yankee	100.00	$328.300[f]	$280.000[f]	Prepayment + 2% interest[a]

[a]NRC requirements in 10 CFR 50.75(E)(1)(i) and (ii) for the prepayment and external sinking fund assurance methods, respectively, allow licensees to take credit for future earnings on their trust funds at a real rate of return (i.e., adjusted for inflation) of up to 2 percent per year. Licensees may claim higher rates if specifically authorized by their rate regulator.

[b]The seller does not plan to transfer these funds to the new owner and will instead retain the trusts after the plants are sold. The seller has provided a guarantee that the funds will remain available for decommissioning. In addition, the seller has agreed, as a condition of the trust agreements that, since it will no longer be licensed, NRC may intercede to release the funds, if needed.

[c]This plant, permanently shut down in July 1998, has been defueled and placed in a "Cold and Dark" state by the seller. These funds are based on a site-specific estimate and include the buyer's parent company guarantee of $25,423,666. The funds are intended to support annual monitoring costs of $2,947,285 during SAFSTOR and to accumulate until 2054, when final decommissioning is anticipated.

[d]These funds are the cumulative funds collected by 2 utilities with equal selling shares; however, one utility has collected less than half of this amount. Originally both utilities, as subsidiaries of a single holding company, were to complete their sales at the same time and their combined funds were sufficient for prepayment assurance. However, the utility with the larger accumulation of funds delayed its transfer awaiting approval from its state public utility commission. Because the utility with less accumulated funds consummated its sale first, the other affiliated utility has guaranteed to make up the difference up to 50 percent of their cumulative amount until it completes its divestiture.

[e]This amount is the NRC generic formula estimate. A site-specific site cost estimate placed costs between $396 million and $466 million. The seller agreed to transfer $396 million to the buyer's decommissioning trust account and to create a provisional trust account of $70 million to cover the potential taxes that might be due. Any funds left in the provisional trust account after taxes, as of December 31, 2002, will be deposited in the decommissioning trust account.

[f]These are the amounts NRC approved in 2000; however in January 2001, the Vermont Public Service Board nullified this sale and, in the hope of receiving a better offer, ordered that the plant be sold at auction. These amounts will most likely change when the sale is consummated.

Source: GAO's analysis of NRC data.

Funding Assurance Was Not Always Maintained in License Transfers That Continued to Rely on the External Sinking Fund Method

In approving license transfer requests that continued to rely on the external sinking fund method of decommissioning financial assurance, NRC's reviews did not consistently maintain the level of assurance that decommissioning funds would be adequate, as it had for license transfers that relied on prepayment or company guarantees. In most cases, the new owners, as a result of corporate reorganizations or mergers, are no longer considered traditional electric utilities that will collect decommissioning funds through predetermined rates, but instead are affiliated with electric utilities authorized by their state regulators to collect non-bypassable charges for decommissioning.[1] These affiliated utilities will not be licensed by NRC. While NRC's review plan does not explicitly describe procedures for its staff to follow in these situations, it does imply that the new owners should provide NRC with additional information regarding the calculation and collection of these charges and ways they will be deposited into their trust funds. NRC, however, did not consistently request this additional information, when owners did not provide it. Consequently, NRC was unable to consistently maintain assurance that these funds would accumulate adequately when new owners rely on the traditional external sinking fund assurance method in a deregulated environment.

NRC Did Not Always Verify That New Plant Owners Would Have Access to Collected Decommissioning Charges

Our review of NRC's approval of license transfers for 28 plants from 3 corporate reorganizations and one merger revealed that the new plant owners had varying degrees of access to the future decommissioning charges collected for their plants. Even though NRC's regulations allow non-bypassable charges as an acceptable accumulation mechanism for external sinking funds, it assumes that NRC licensees will either collect these charges or have direct access to them. NRC did not consistently assure that when unlicensed affiliated utilities collect the charges, they would deposit them into the new owners' decommissioning trust funds.

For 3 of the 28 plants—units 1, 2, and 3 of the Palo Verde nuclear power facility in Arizona—NRC placed conditions on its approval of the license

[1] Non-bypassable charges are charges imposed over an established period of time by a government authority (such as a public utility commission) that affected entities are required to pay to cover the costs associated with the decommissioning of a nuclear power plant. Such charges include, but are not limited to, wire charges, stranded cost charges, transition charges, exit fees, or other similar charges.

transfers that contractual arrangements for collection and deposit of earmarked funds into the new licensees' decommissioning trust funds be completed. The three units are jointly owned by several traditional electric utilities, including the Public Service Company of New Mexico and El Paso Electric Company of Texas. These two companies are reorganizing their corporate structures to comply with new requirements to supply energy in New Mexico under deregulation. In accordance with these deregulation efforts, the two companies requested that NRC transfer their respective ownership licenses in the Palo Verde plants to new generating companies formed out of their corporate reorganizations—Manzano Energy Corporation in New Mexico and MiraSol Generating Company in Texas. In effect, these new generating companies also will inherit the external sinking funds intended to cover their respective shares of responsibility to eventually decommission the Palo Verde units. However, these external sinking funds were not sufficient to qualify as prepayment of estimated decommissioning costs. Therefore, each company provided NRC with copies of contractual agreements requiring their affiliated utilities to:

- collect decommissioning funds through their charges for distributing electricity in their service areas (also known as non-bypassable wires charges) imposed by their respective state public utility commissions or other regulatory entities, and
- deposit the collected money into the new generating companies' decommissioning trust funds periodically.

NRC approved the license transfers subject to obtaining final copies of the agreements between the affiliated utilities and the new generating companies and schedules showing how the decommissioning charges approved by the New Mexico and Texas state public utility commissions would fund the total decommissioning costs.[2] In both cases, NRC assured that the decommissioning charges collected by their affiliated utilities would be deposited into the new companies' external sinking funds and that the states' public utility commissions were assuring that the charges collected would be sufficient to cover the total decommissioning costs.

However, NRC approved applications to transfer the licenses for the other 25 plants without verifying that the new owners would have the same degree of access to the decommissioning charges or that the states' public

[2] The New Mexico legislature has extended the implementation of deregulation in its state for 5 years, and as a result, these corporate reorganizations have been postponed.

utility commissions would ensure the collection of the total decommissioning costs. For example, the Public Service Electric and Gas Company's (PSEG) corporate reorganization involved decommissioning trust funds for 5 plants. The New Jersey Board of Public Utilities authorized PSEG to continue collecting decommissioning funds through its distribution rates, yet NRC approved the trust funds to be transferred to PSEG Nuclear, the newly-formed generating company. NRC did not question the access PSEG Nuclear had to the funds collected by PSEG, its affiliate utility. In addition, NRC did not require a copy of a contractual agreement between the affiliates that guaranteed periodic deposits to the new owner's decommissioning trust funds as it did for Manzano Energy and MiraSol Generating Company. In support of its approval for these transfers, NRC staff told us that they also used publicly available sources of information, such as state restructuring laws or public utility commission web sites, when new owners did not provide information with their applications. Unfortunately, the staff did not document the content or use of such information in the records of these license transfer approvals so we could not verify the adequacy of NRC's review. Also, in the case of the five plants, the New Jersey restructuring legislation had authorized these charges. After 4 years, the Board of Public Utilities planned annual reevaluations to determine whether the decommissioning funds were overfunded or underfunded and then to authorize further charges accordingly. NRC's records do not show that its staff evaluated how New Jersey's proposed charges would affect the accumulation of the total costs needed to decommission each individual plant, despite guidance in its review plan and previous instances when the prepayment and company guarantee methods had been used. Yet, NRC approved the transfers after assuring itself that, in the aggregate, the 5 plants would achieve the full funding of their required decommissioning costs by the time they cease operations.

More significantly, in the merger of two companies that involved 20 nuclear plants in Illinois, New Jersey and Pennsylvania, the existing and new companies involved in the merger did not provide, nor did NRC request, copies of contractual agreements documenting that monies to be collected from utility customers in the states would be deposited in the respective decommissioning trust funds for each of the 20 plants. In this restructuring transaction, Unicom (the parent company of the electric utility known as Commonwealth Edison Company) and PECO Energy Company merged to form a parent entity—Exelon Corporation—and several wholly-owned subsidiary companies, including Exelon Generation Company, Commonwealth Edison, and PECO. The generating subsidiary company became the legal owner of Exelon Corporation's electricity

generating assets. These assets included Commonwealth Edison's 10 operating nuclear power plants and 3 retired nuclear plants that have not yet been decommissioned. In addition, the assets included six operating and one retired nuclear power plant owned by PECO. The latter two subsidiary companies transmitted and distributed the electricity supplied by the generating subsidiary to electricity customers. As a part of this electricity restructuring, both Commonwealth Edison and PECO retained their responsibilities to collect charges from their customers for the future decommissioning of the 20 nuclear power plants now owned by Exelon Generation Company.

When Commonwealth Edison and PECO requested that NRC approve their proposed merger, the two utilities submitted similar, if not identical, statements that they would continue to collect decommissioning funds for their 20 nuclear power plants through their electricity distribution rates. The utilities added that they would also, as a matter of contract, transfer the funds collected to Exelon Generation Company—which would hold the operating licenses for the 20 plants—for deposit in each plant's respective decommissioning trust fund. However, unlike the license transfer cases involving the restructuring of Public Service Company of New Mexico and El Paso Electric, discussed above, Commonwealth Edison and PECO did not enclose copies of any intercompany agreements or rulings from their respective public utility commissions documenting these fund transfer arrangements. Furthermore, NRC neither requested either of the two utilities to submit such documentation nor, in the orders transferring the licenses for the 20 plants, did the NRC place any conditions that guaranteed that the utilities would collect and deposit decommissioning funds into the plants' trust funds held by Exelon Generation Company. Nevertheless, NRC's documents approving the Exelon merger state that Commonwealth Edison and PECO will collect the decommissioning costs through their distribution rates and then, as a matter of contract, pay these amounts to their affiliate, Exelon Generation Company, for deposit in the trust funds for each plant.

NRC's staff told us that they did not request documentation regarding Exelon Generation Company's access to the collected charges because this issue was covered by the deregulation legislation enacted in Illinois and Pennsylvania, copies of which they had obtained from publicly available sources. Conversely, because the implementation of the deregulation legislation in New Mexico and Texas had been delayed, the NRC staff needed to be sure that it received final copies of any agreements in the Palo Verde plants' transfers in order to assess their viability against any new legislative changes. However, neither Illinois' nor Pennsylvania's

deregulation legislation refers to an unregulated newly-formed company's access to the charges collected by regulated affiliated utilities. We did locate an inter-company agreement attached to Commonwealth Edison's public-utility commission submission for approval of the merger, providing evidence that such an agreement exists and that the Illinois public utility commission is overseeing this access issue. However, NRC had no record of this agreement or the Commonwealth Edison and PECO submissions to their respective state public utility commissions. Also, while NRC staff told us that they accepted the companies' application as sworn statements that contractual arrangements existed, they did not document the basis for this opinion in their evaluation of the license transfer.

Accumulation of Decommissioning Funds for Retired Plants Is Also a Concern

Concerns have also surfaced over whether the collection of utility surcharges is sufficient to cover total decommissioning costs when plants are prematurely shut down. NRC's review plan provides procedures for verifying the accuracy of annual deposits to such funds when plants are operating. However, when plants are prematurely shutdown, the plan does not provide staff procedures to follow, leaving them instead to determine how to review the funds on a case-by-case basis. NRC's approval documents state that the decommissioning funding mechanism for all 20 of Exelon Generation Company's plants—16 operating and 4 retired—is the regulated charge collected by its distributing utility affiliates and that the collecting utility will make deposits into the decommissioning trust funds over the generating life of each plant. If the plants no longer generate electricity, it is not clear from the information the utilities submitted or NRC's review plan just how the funds would be collected, much less (as discussed above) how the deposits would be made to the trust accounts of the closed plants. NRC staff subsequently told us that their review of the Illinois and Pennsylvania restructuring laws showed that they allow for the collection of non-bypassable charges for plants that are shutdown and that their evaluation report was in error on this point. However, the staff evaluation of this publicly available information is not documented in NRC's license transfer records for this merger.

In addition, NRC did not apply the same review standards when it approved the transfers for these four retired plants as it did for another retired plant,[3] Millstone 1, which was recently sold along with its sister

[3] The four retired plants are Dresden, Unit 1 and Zion, Units 1 and 2 in Illinois and Peach Bottom, Unit 1 in Pennsylvania.

plants that are currently operating. Dominion Resources, Inc., the new owners' parent company, showed NRC the expected annual accumulation of funds, forecast an expected shortfall of $26 million resulting from additional annual monitoring costs incurred while the plant awaits the retirement of its sister plants, and provided a company guarantee for this expected shortfall. In contrast, neither Commonwealth Edison nor PECO provided more detailed information for the 4 retired plants than they did for the 16 operating plants. The application documents that Commonwealth Edison and PECO provided and NRC's approval documents make it difficult to discern

- which phase of dismantlement these 4 plants are in;
- how much, if any, of the trust funds has been spent so far shutting down the plants;
- whether Exelon Generation Company will incur unanticipated long-term stewardship expenses as a result of having to monitor these plants (as was the case of the Millstone retired plant); or
- which costs in the site specific estimates of these retired plants might impact Exelon Generation Company's ability to effectively decommission the facilities or safely operate their collocated plants.

NRC staff told us that their regulations do not require this level of detail to review the status of decommissioning funds for retired plants; however, they could not document that these plants had been evaluated on a case-by-case basis as their review plan recommends. Despite these ambiguities, NRC concluded that Exelon Generation Company had provided adequate assurance, even though it continued to rely on the external sinking funds transferred from Commonwealth Edison and PECO, that it would, in a deregulated environment, accumulate sufficient funds to decommission almost one-fifth of the nuclear plant fleet of the United States.

NRC's Reviews of New Owners' Financial Qualifications Have Been Complete, With One Significant Exception

Although NRC generally followed the guidance contained in its review plan when reviewing the financial qualifications of prospective licensees, it did not follow this guidance when it reviewed the financial qualifications of Exelon Generation Company to own and operate the 20 nuclear power plants formerly owned by Commonwealth Edison and PECO.

NRC requires prospective new owners of plants that do not qualify for "electric utility" status—licensees that will not be selling their electricity at regulated rates—to demonstrate that they are financially qualified to safely own and operate the nuclear power plants that they are acquiring. To review this aspect of proposed license transfers, NRC's review plan

recommends that prospective new licensees demonstrate their financial qualifications to safely own and operate their nuclear power plants for the next 5-years by means of (1) contractual agreements with utilities that will purchase electric power from the licensee; (2) the sale of power from the licensee's non-nuclear generating capacity; (3) projections of market prices for the sale of power not covered by agreements; or (4) parent or affiliate company guarantees or lines of credit for contingency operating funds. NRC also compares a licensee's expected annual electricity production from its plants with past performance to determine the reasonableness of these projections. NRC uses this information to determine whether the prospective owners have demonstrated that they possess, or have reasonable assurance of obtaining, sufficient revenue to safely own and operate each plant.

For 19 sales, 2 reorganizations, and 1 merger—collectively involving transfers of licenses for almost 50 nuclear power plants—that we reviewed,[4] NRC found that the new licensees did not qualify for electric utility status.[5] Except for the merger, NRC received additional guarantees from parent or affiliated companies that the new owners would have sufficient revenue to cover the plants' operating costs. For example, the prospective new owners provided NRC additional assurance that they would produce enough revenue to cover the expected operating expenses of their plants through power purchase agreements, contingency funds, and lines of credit from affiliated or parent companies. In addition, one new generating company cited anticipated revenue from the sale of non-nuclear power that amounted to almost 75 percent of its total electricity production to supplement its ability to support its minority interest in 3 plants.

For each of the sales and reorganizations, the new owners provided some form of financial assurance for their ability to safely own and operate the plants they proposed to own in addition to the market sale of the electricity produced by the plants. NRC staff evaluated this information according to the guidance in its review plan. For the merger, however, the new owner did not submit and NRC did not request additional guarantees.

[4] The number of license transfers or transactions reviewed and plants affected are not equivalent. In many cases plant owners have reorganized, merged or sold their interests in the same plants and many plants have multiple owners.

[5] In one other reorganization, NRC found that the new licensee qualified as an electric utility.

In addition, NRC did not validate the information submitted by the new owner to demonstrate that the company was financially qualified to safely own and operate the largest fleet of nuclear plants in the United States.

When Unicom (Commonwealth Edison) and PECO merged into Exelon Corporation, the subsidiary Exelon Generation Company, which would hold the NRC operating licenses for the two companies' 16 operational and 4 retired nuclear power plants, did not meet NRC's definition of an electric utility. However, in their applications to NRC, Commonwealth Edison and PECO asked NRC to transfer their plants' licenses to Exelon Generation Company on essentially the same terms and conditions contained in their existing licenses—licenses which reflected that, as economically regulated utilities, Commonwealth Edison and PECO had guaranteed access to revenues to own and operate their nuclear plants. Commonwealth Edison and PECO addressed the issue of assurance that Exelon Generation Company would be financially qualified to own and operate their nuclear power plants by providing NRC with 5-year projections of expenses from the production and purchase of electricity and revenues from the market sale of this electric power. Among other things, this information included the estimated costs of:

- operating the new company's 16 operational nuclear power plants;[6]
- purchasing excess electric power from six nuclear power plants owned, or to be owned, by AmerGen Corporation. AmerGen, which was half-owned by PECO, was created to market electricity generated from power plants purchased and operated for that purpose. At that time, AmerGen owned three nuclear power plants and was attempting to purchase three other nuclear plants; and
- purchasing electricity from other suppliers for resale to Exelon customers, fuel costs, asset depreciation, and other administrative costs.

In addressing its potential revenue, Commonwealth Edison and PECO provided NRC with projections of revenues from, primarily, the sale of electricity produced by the 16 nuclear plants and the resale of the electricity purchased from AmerGen and other suppliers. Additional income, amounting to 6 percent of the total electric power to be sold, was

[6] Of these 16 plants, Commonwealth Edison and PECO owned majority interest and operated 14 plants. At two plants, Salem-Units 1 and 2, PECO owned a 42.59 percent interest and PSEG Nuclear operates the plants. Neither Commonwealth Edison nor PECO estimated annual electricity generation costs and revenue for individual plants.

derived from the market sale of 5,000 megawatts of power from non-nuclear plants.

Although Commonwealth Edison and PECO provided a financial projection to NRC in their license transfer applications, neither company provided, nor did NRC request, any additional support—power purchase agreements, contingency fund guarantees, or lines of credit—that would enable NRC to validate the Exelon Generation Company's financial qualifications to own and operate the largest fleet of nuclear plants in the United States. Also, Exelon did not provide, and NRC did not request, the 5-year projections of operating costs and estimated annual electricity generation for individual plants. For this reason, NRC could not, as its review plan recommends, compare plant-specific costs and production estimates to plants of similar size and type to confirm the reasonableness of the projections. Nonetheless, NRC concluded that Exelon's projected revenues, based solely on the market sale of electricity, would be sufficient to cover the costs associated with owning and operating 16 plants, even if it experienced simultaneous 6-month shutdowns of several of these nuclear plants.

Furthermore, NRC eventually transferred the licenses to Exelon Generation Company on the basis of projected financial information that both the affected companies and NRC knew to be inaccurate. When Commonwealth Edison and PECO updated their projected income statements for NRC in March 2000, they included income from three nuclear plants that AmerGen was attempting to purchase. However, there were no notes on this income statement to clarify that the statements included projected revenue from sales of electricity to be produced at nuclear plants that AmerGen did not yet own. (In contrast, Exelon Corporation did disclose this contingency in merger-related filings submitted to the Securities and Exchange Commission.) In June 2000, the merging utilities notified NRC that their March 2000 income statement was the most accurate. A month earlier, however, AmerGen had notified NRC that it had withdrawn its bid to purchase the two Nine Mile Point plants in New York. By December 2000 it was also apparent that AmerGen's bid to purchase the Vermont Yankee plant would not succeed. Therefore, AmerGen owned just 3 of the 6 plants Exelon Generation Company had included in its financial qualification statement. In January 2001—over 1 year after receiving the initial merger applications—NRC transferred Commonwealth Edison's and PECO's licenses to own and/or operate 20 nuclear power plants to Exelon Generation Company on the basis in part of projected financial information known to be inaccurate by the companies and NRC.

In defense of their review of the merger, NRC staff told us that their regulations only require that licensees demonstrate financial assurance through credible projections of 5 years of expenses and revenues. Also, because Exelon Generation Company was to be the licensee for all 16 operating plants, there was no compelling need to require plant specific information. The NRC staff maintain that they did perform an analysis of the impact of AmerGen's lost bids for the Nine Mile Point and Vermont Yankee plants and determined that there was no material impact on Exelon Generation Company's financial qualifications. Unfortunately, NRC did not document this evaluation in its review file and did not update the financial projections in their evaluation report to accommodate this analysis.

Conclusions

NRC's inconsistent review and documentation of license transfer requests creates the appearance of different requirements for different owners or different types of transfers. Good business practices suggest that NRC follow one review process with all of its licensees. While its standard review plan offers a sound basis for obtaining consistency, NRC is clearly not consistently achieving the desired results. One modification that could help NRC's staff and management maintain consistency in their reviews of license transfers is the use of detailed checklists or step-by-step processes delineated more precisely within its standard review plan.

Recommendation for Executive Action

To ensure that the decommissioning assurance methods and financial qualifications of all new nuclear plant owners are consistently verified, validated, and documented, we recommend that the Chairman, NRC, revise the Commission's standard review plan and related management controls for reviewing license transfers to include a checklist or step-by-step process for its staff, its management, and prospective owners to follow.

Agency Comments and Our Response

We provided NRC with a draft of this report for its review and comment. (See app. I for NRC's comments.) NRC disagreed with our recommendation. According to NRC, revising its review plan will not greatly enhance the effectiveness of its license transfer reviews because many of these transfers have been complex and unique. We disagree. When NRC drafted its review plan, it had no experience in regulating licensees that generate electricity in competitive markets. Since then, NRC has processed over 60 requests to transfer licenses. Although the details of each transfer request may have been unique, the affected

licensees have consistently used the same few basic methods permitted by NRC's regulations, such as prepayment and/or parent company guarantees, to provide NRC with assurance that decommissioning funding and financial qualifications are being met. However, NRC's reviews of these license transfer requests have been inconsistent. Therefore, revising the review plan to ensure, on the basis of NRC's experiences to date, that each decision to approve a license transfer is based on consistent supporting information could increase NRC's efficiency and effectiveness, thereby helping NRC to achieve one of its primary performance goals.[7]

NRC raised several issues regarding its reviews of the adequacy of decommissioning funding and the financial qualifications of new owners of plants. NRC said its reviews of the PSEG and Exelon license transfers were adequate and complete, led to the conclusion that there was reasonable assurance of decommissioning funding and, in the Exelon case, that the new owners were financially qualified. NRC acknowledged that it did not appropriately document some of these evaluations. However, NRC asserted that, by reviewing other, unspecified, sources of financial information and information on the appropriate state's non-bypassable charges requirements, it was able to obtain reasonable assurance of decommissioning funding and financial qualifications. We disagree, for reasons that go beyond the lack of review documentation. Specifically, NRC's staff could not, in response to our requests, identify the specific sources upon which they relied, but did not document, for other information. Furthermore, we independently reviewed the state laws on non-bypassable charges for decommissioning funding that NRC's staff had referred us to and found that, while these laws provided for utilities to collect these charges, the statutes were silent on the procedures for depositing the charges collected into the plants' decommissioning funds. These collection and transfer procedures were left to appropriate state public utility commissions and, in many cases, had not been determined

[7] NRC's four performance goals are to maintain safety, increase public confidence, reduce unnecessary regulatory burden, and enhance the effectiveness and efficiency of its activities and decisions.

when NRC conducted its license transfer reviews. Nevertheless, NRC did not require the prospective new plant owners to make binding commitments with affiliated utilities or other enforceable statements of assurance that the non-bypassable charges collected by these utilities from their electricity customers would be transferred to the appropriate decommissioning fund for the new owners' plants.

Chapter 3: Regulatory Policies Under Consideration May Affect Decommissioning Costs and Nuclear Waste Policies

Varying radiation cleanup standards, the possibility that NRC will approve alternative decommissioning methods, and incomplete historical plant contamination data confound a licensee's ability to estimate future decommissioning costs. Varying radiation cleanup standards create uncertainty because plants decommissioned to NRC's radiation cleanup standards may also have to meet more stringent EPA or state standards, thus increasing the costs of decommissioning. Alternative decommissioning methods under consideration for approval would add uncertainty because no reliable data exist on their overall costs; they could reduce short-term decommissioning costs but add considerably to long-term costs. Moreover, implementing these methods would raise significant technical and policy issues pertaining to the management and disposal of radioactive wastes. Furthermore, the lack of complete historical information regarding plant contamination can translate into an unexpected increase in site cleanup costs late in the decommissioning process.

Varying Cleanup Standards Create Cost Uncertainties

To terminate an operating license and to release a site for unrestricted use, an NRC licensee must decommission its plant so that the residual radiation remaining at the site after decommissioning has been reduced to levels that meet NRC's standard.[1] However, meeting NRC's radiation cleanup standard may not signal the end of the decommissioning costs, because either EPA or the host state could require additional cleanup activity to meet more stringent standards.

While NRC regulates the decommissioning of commercial nuclear facilities, EPA issues general standards for radiation protection and administers CERCLA, which governs the cleanup of contaminated facilities.[2] NRC and EPA have historically disagreed on how restrictive U.S. radiation protection standards should be, and in 1997, EPA's Administrator told NRC's Chairman that NRC's radiation cleanup standard should be tightened to 15 millirems per year. The Administrator also called for adding a separate standard limiting the concentration of radiation in

[1] Under regulations issued by NRC in 1997, decommissioned sites that are decontaminated to residual radiation levels of 25-millirems or less may be released for unrestricted future uses. Decommissioned sites with elevated residual radiation levels of up to 500-millirems may only be released for restricted use, with safeguards and institutional controls to prevent public exposure.

[2] NRC's regulatory authority derives from the Atomic Energy Act, while EPA's derives from Presidential Reorganization Plan No. 3 of 1970 and CERCLA.

groundwater to 4-millirems per year. [3] These limits would be consistent with EPA's standards for cleanup at Superfund sites. If NRC did not agree, the Administrator said, EPA would have to reconsider its policy of exempting the sites of facilities regulated by NRC from EPA's National Priorities List of Superfund sites. Such action could subject NRC-decommissioned and released sites to a second evaluation under EPA's Superfund standards. EPA could conduct these subsequent evaluations under its own authority or when asked to do so by other stakeholders. It has provided guidance to its regional offices on how to proceed in such instances. However, the agency believes that the vast majority of decommissioned nuclear power plants will meet Superfund protection standards and is not actively looking for NRC sites to evaluate. Nevertheless, failure to pass a Superfund evaluation could mean significant additional cleanup costs.

NRC, however, shows no sign of changing its standards. NRC disagrees with EPA's preferences and questions EPA's technical basis for proposing the extra groundwater protection. Differences in agency missions, legislative mandates, and regulatory strategies contribute to this disagreement, which, despite resolution efforts spanning a number of years, remains essentially unresolved.[4]

According to the NRC Chairman, the disagreement over acceptable radiation standards is eroding public confidence and is negatively affecting efforts to assure the public that decommissioning can be accomplished in a manner that protects public health, safety, and the environment. In fact, in part because of the uncertainty over the scientific basis supporting radiation protection standards and the dispute between EPA and NRC, several states have established, or are in the process of establishing, their own radiation protection standards. Because most of these proposed or

[3] EPA does not actually express radiation protection standards in millirems but uses a system of "slope factors" to assign risk limits to individual chemical and radioactive contaminant types alike. These limits equate to a risk threshold of 1 in 1,000,000 that an individual will develop cancer in a lifetime or, with regard to radiation, roughly to a 15-millirem–a-year all-pathway radiation dose limit and a separate four-millirem-a-year dose limit for groundwater.

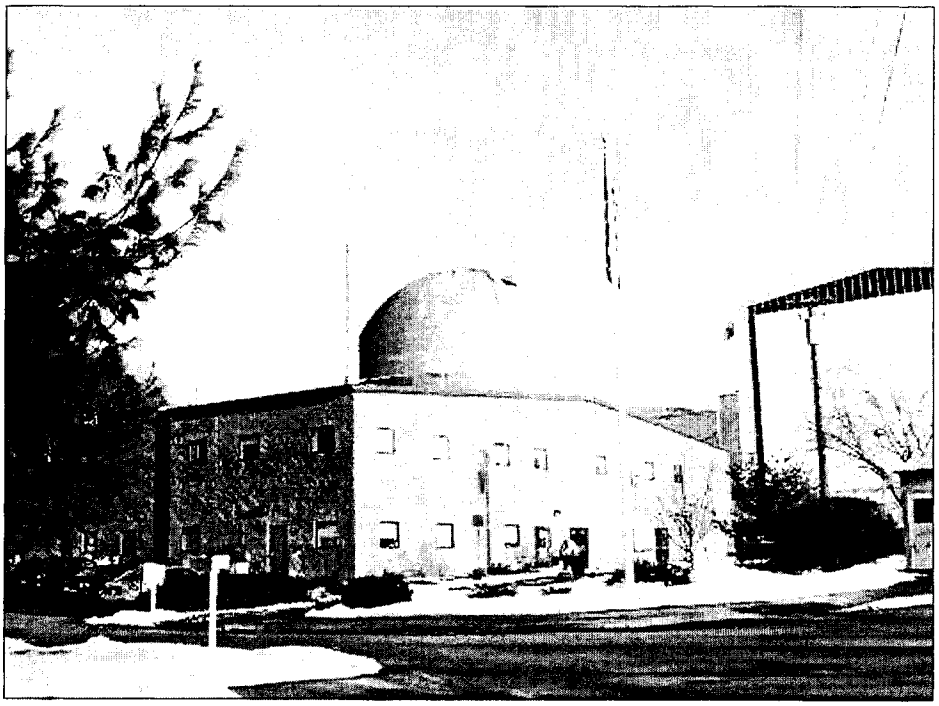
[4] *Radiation Standards: Scientific Basis Inconclusive, and EPA and NRC Disagreement Continues* (GAO/RCED-00-152, June 30, 2000); *Nuclear Regulation: Better Oversight Needed to Ensure Accumulation of Funds to Decommission Nuclear Power Plants* (GAO/RCED-99-75, May 3, 1999); and *Aging Nuclear Power Plants: Managing Plant Life and Decommissioning* (U.S. Congress, Office of Technology Assessment, OTA-E-575, Sept. 1993).

existing state standards are more stringent than either EPA's or NRC's standards, implementation of the states' standards could increase decommissioning costs.

For example, in April 2000, the state of Maine imposed a standard limiting the total effective annual dose from residual contamination at the Maine Yankee nuclear plant site to 10 millirems, with a separate 4-millirem dose standard for groundwater—which is below the dose allowed under either NRC's standard or EPA's preferred standard. Maine Yankee officials estimated that it would cost between $25 million and $30 million to ship and dispose of the waste materials that must be disposed of to meet the state's more restrictive standard.

Similarly, Massachusetts has set its own total effective annual dose equivalent standard of 10-millirem for decommissioned sites and New York has set a soil cleanup standard of 10-millirem for radioactive materials. New Jersey has set a 15-millirem residual radiation exposure standard, and the state of Connecticut is presently developing its own cleanup standards for commercial nuclear facilities. According to a state environmental department official, the new standard has not yet been officially approved, but will be the approximate equivalent of a 19-millirem dose limit, with a requirement to further reduce dose if it proves economically and environmentally feasible to do so. According to officials of the state and the Connecticut Yankee Power Company, the utility and the state are working together to ensure that the company will comply with the state's new standard, when issued, as well as NRC's and EPA's standards, in the decommissioning of the company's Haddam Neck nuclear power plant.

Figure 3: The Decommissioning Connecticut Yankee Haddam Neck Plant



Source: GAO.

Alternative Decommissioning Methods May Marginally Decrease Costs but Raise Significant Technical and Policy Issues

NRC is considering whether to authorize licensees to leave more radioactively-contaminated material at their plant sites when decommissioning nuclear power plants by either (1) reducing contaminated concrete to rubble and then burying the rubble on site or (2) removing the most radioactive plant wastes and entombing the residual radioactive materials inside the thick, reinforced concrete containment structure of retired plants. The rubblization and entombment methods could, if approved and implemented, decrease off-site waste disposal costs during the decommissioning of plants. However, short-term cost savings for some sites could be more than offset over the long-term because institutional control measures will be needed to prevent public access.

Short-Term Cost Savings Could Be Offset Over Time

According to the NRC Chairman, the low-level radioactive waste program in the United States is not working and the potential exists for the decommissioning process to be hampered at many sites unless alternative disposal options are pursued. States, the nuclear industry, and others have

voiced similar concerns. Therefore, within the limits of its regulatory authority, NRC is considering decommissioning methods such as rubblization and entombment that would allow the permanent burial or encasement of radioactive waste at nuclear plant sites.

NRC believes that it is technically possible to approve a license termination plan that includes rubblization, as long as the total effective annual dose of radiation that a person living at the site would receive did not exceed the Commission's standards. Rubblization will be technically possible, NRC believes, as long as licensees are able to successfully address related issues, such as access to, and digging at, the sites where rubblization has occurred and the potential for reuse of extracted materials that are contaminated with radioactive elements.

Rubblization represents a departure from NRC's past licensing practice, which emphasized shipping low-level radioactive wastes from decommissioning sites to disposal facilities. Although NRC has estimated that rubblization could save a licensee from $10 million to $16 million in waste disposal costs during decommissioning, its Advisory Committee on Nuclear Waste has concluded that technical factors, such as the depth of radioactive contamination and the volume of rubblized waste, could significantly diminish the potential cost savings. The Advisory Committee also believes that evaluating radioactive material content and doses from rubblization, both at the site and in local groundwater, may prove difficult and expensive. The Committee has cautioned that estimates of cost savings from rubblization could be offset if extensive decontamination, sampling, and analyses are needed. Therefore, the Committee has recommended that NRC establish a test case for study to identify possible problems and solutions related to rubblization.

In April 1997, NRC's commissioners also requested NRC staff to revisit the entombment method of decommissioning, the use of which the commission had discouraged a decade earlier, to determine whether that method serves as a viable alternative to completely dismantling nuclear plants. The Commission added that, if the staff concluded that entombment is not a viable decommissioning method, the staff should describe the technical requirements and regulatory actions necessary for entombment to become viable, including the resources involved, potential decommissioning cost savings, and vulnerabilities.

NRC had considered entombment as a decommissioning method in 1988 but generally opposed its use because, among other things, (1) the method would require expenditures for maintenance, security, and other long-term

institutional controls for at least 100 years that would about equal dismantlement costs and (2) regulatory changes occurring during the long entombment period might require additional costly decommissioning activity before entombed sites could be released for unrestricted use in the future. NRC determined that entombment would be acceptable only on a case-by-case basis when a licensee could demonstrate that (1) immediate or delayed dismantlement of its nuclear facility was infeasible, (2) radioactive decay would allow unrestricted release of a site in about 100 years, and (3) access to waste disposal facilities was not available. No licensee at any additional power reactors undergoing decommissioning has since proposed the entombment option.

On May 4, 1998, NRC's staff notified the Commission that, on the basis of its preliminary assessment of work performed for NRC by the Department of Energy's Pacific Northwest National Laboratory, consideration of entombment as a viable decommissioning method had merit. The Laboratory had estimated and compared decommissioning costs, radioactive waste disposal requirements, estimated radiation doses to persons, and institutional control requirements for the two decommissioning methods approved in 1988—immediate dismantlement and dismantlement after storage of 50 years or more—with two entombment variations. These entombment methods are immediate entombment of radioactive plant materials in the containment building and the storage of radioactive plant materials in the containment structure for over 100 years, followed by entombment.

Subsequently, on July 19, 1999, NRC's staff affirmed that entombment could be safe and viable, depending on specific site situations. NRC's staff said that entombment, when properly performed, should have little effect on health, safety, and the environment. In addition, the staff noted that the entombment of radioactive wastes within the containment building of a retired nuclear power plant could significantly reduce off-site waste disposal requirements and related costs—although cost reductions would be offset, to some degree, by the cost of maintaining and monitoring the entombed facility for 100 to 300 years.

The NRC staff's decision that entombment might reduce decommissioning costs is questionable. For instance, both plants that have already been decommissioned and plants in the process of decommissioning using the immediate decontamination and dismantlement option report higher costs than the figure used for this option in the Pacific Northwest National Laboratory analysis on which NRC's staff based its views. Furthermore, the minimum amounts required for this option (as determined by NRC's

own generic formula) are significantly greater than the figure used in the laboratory's analysis. The laboratory's analysis also showed that neither immediate nor delayed entombment offer significant projected cost savings unless one assumed that entombment would lead to a reduction in long-term site security and insurance costs. Moreover, the laboratory's analysis showed that, even when reduced security and insurance costs are assumed, placing a retired plant in storage for approximately 50 years and then dismantling the plant is the least costly decommissioning method.

The laboratory also used a 130-year institutional control period in its analysis of the entombment method of decommissioning. NRC, however, has stated that if radioactive wastes entombed in a former nuclear plant include long-lived waste varieties, then the necessary period of institutional control could be extended to 300 years. In such a case, the cost for the additional 170 years of monitoring and surveillance needed could make both entombment options significantly more costly than the immediate dismantling of a plant and off-site disposal of its radioactive wastes.

Also, although the laboratory's analysis did not include entombment of Greater-Than-Class-C (GTCC) waste, NRC is considering the possibility of authorizing licensees to entomb GTCC waste rather than disposing of it in a geologic repository. Current regulations specify that GTCC waste is not generally acceptable for near-surface disposal without special processing and design and the case-by-case approval of NRC. GTCC waste from decommissioning a nuclear power plant is essentially comprised of radioactive internal reactor parts, which, while less radioactive than high-level waste such as spent fuel, remain radioactive for many thousands of years. However, including GTCC within the entombment structure would extend the required period of institutional control and its associated expense to thousands of years. Furthermore, regardless of the time period in which institutional controls would be required, a licensee would need to establish a funding mechanism to provide sufficient financial assurance that essential institutional controls would be carried out for the required time period. In contrast to immediately dismantling a plant and removing essentially all radioactive materials from the plant site, entombment would essentially make a former plant site a restricted storage or disposal facility for low-level radioactive waste for more than 100 years, which could hamper commercial reuse or resale of the site for the entombment period.

Finally, questions remain regarding the financial provisions for remediation in the event of a failure at an entombed site. According to NRC's staff, "very expensive remedies" could be required if an

entombment configuration proved unable to adequately isolate radioactive contaminants over the 100-year or longer time period needed for radioactive decay. Given the length of time involved, states are concerned that they will have to pay remediation costs should an entombment fail.

Technical Issues Surround Alternative Decommissioning Methods

Aside from questionable cost benefits, rubblization and entombment raise a number of technical issues. For instance, NRC does not intend to require that sites where rubblized radioactive materials would be buried have protection equivalent to off-site disposal facilities for low-level radioactive waste. Disposal facilities for commercial low-level radioactive waste, which are licensed and regulated by NRC or by a state (under agreement with NRC), must be designed, constructed, and operated according to NRC's regulations (or compatible regulations issued by the host state). In addition, to obtain a license to build and operate a disposal facility, the prospective licensee must characterize the facility site and analyze how the facility will perform for thousands of years. However, according to NRC, a rubblized site is not comparable to a low-level radioactive waste disposal facility because

- the quantity, forms, and range of radioactive waste types buried at a nuclear plant site would be less,
- rubblization is a decommissioning action subject to the license termination rule rather than a radioactive waste disposal action subject to the licensing provisions of 10 CFR Part 61, and
- NRC's regulations for disposing of low-level radioactive waste apply only to facilities that dispose of waste from other sites and sources and not to sites where contaminated materials are to be rubblized and buried on-site.

Nevertheless, 10 CFR Part 61 does not differentiate between what does or does not qualify as a low-level waste disposal action or facility on the basis of the quantity, forms, or range of the low-level radioactive waste to be buried. Furthermore, NRC's view that rubblization does not constitute the creation of a low-level radioactive waste disposal site is not shared by EPA and at least three agreement states. When the Maine Yankee Power Company was considering rubblization as the decommissioning method for the Maine Yankee nuclear power plant, the state of Maine and EPA expressed concern that burying low-level radioactive waste at the plant site would be tantamount to creating an unlicensed low-level radioactive waste disposal facility. In fact, Maine's attorney general found that a strict application of Maine state law would have classified rubblization of the plant as such. Such classification would have, in turn, required state legislature and voter approval, licensing by NRC or the state, and eventual

state ownership of the plant site. Furthermore, when NRC sent a draft entombment rulemaking plan, an Advance Notice of Proposed Rulemaking (ANPR), and the PNNL entombment assessment to agreement states for comment on March 7, 2001, two out of the three agreement states that commented responded negatively.

New York, for example, opposed any new rulemaking that would allow low-level or GTCC waste to be entombed at reactor sites in the state. The state also contended that such an action would be contrary to the intent of the Nuclear Waste Policy Act and would adversely impact the financial viability of existing or planned low-level radioactive waste disposal facilities and state compacts. The state pointed out that data presented in the PNNL assessment (as discussed above) indicated that long term storage followed by dismantlement was preferable to entombment.

The state of Illinois also found entombment to be problematic as a decommissioning method, urged that NRC prohibit that approach, and said it would resist its implementation. The state found entombment to be inconsistent with the waste management policy established by Congress through the Low-Level Radioactive Waste Policy Act as amended. Regarding NRC's position that entombment is a decommissioning rather than a disposal action, the state said:

"It is beneath the NRC to engage in the semantical charade of denominating long-term isolation of reactor waste as anything other than disposal. The Agreement States' authority to license disposal of LLRW at reactor sites includes authority over entombment of LLRW. Any attempt by the NRC to repeal Agreement State authority under the pretext of merely licensing the decommissioning of commercial nuclear power reactors is virtually guaranteed to be vehemently [opposed] by Agreement States. If it is the NRC's objective to assert permanent federal control and responsibility over reactor sites, using those sites as a multitude of sacrifice areas throughout the United States, IDNS submits that NRC should make its proposal to Congress for a full and vigorous national debate."

Water intrusion is also a major concern for rubblized or entombed sites, and the fact that most nuclear power plants are situated in shallow water table or flood plain locations may limit the viability of these options. Furthermore, should NRC decide to allow GTCC waste in an entombment, integrity of the concrete configuration would have to be assured for many thousands of years. However, experts cannot guarantee or predict the integrity of concrete after 500 years.

Other technical concerns about rubblization include the potential for buried concrete to leach from rubblized sites, adversely affecting local

water quality; the propriety of diluting contaminated material by mixing the material with non-contaminated materials; and, how to demonstrate that the estimated radiation dose at a rubblized site has been reduced to a level "as low as reasonably achievable," as required by NRC.[5] As with any proposed decommissioning method, the licensee would have to address any relevant issues in the License Termination Plan, as well as demonstrate compliance with the License Termination Rule and requirements for the reduction of resulting residual radiation to levels that are as low as reasonably achievable. NRC is in the process of updating its generic environmental impact statement on radiological criteria for terminating nuclear facility licenses. The update will address, among other things, rubblization as a decommissioning method and may include issues such as the acceptability of mixing or diluting contaminated material, the environmental effects of leaving contaminated concrete at decommissioned sites, and the potential effects of widespread use of the rubblization method because of economic considerations. NRC intends to require an environmental review for each site that proposes rubblization. The new generic statement should be useful to NRC in reviewing the environmental effects of license termination plans based on rubblization.

NRC staff recognized in reaching their favorable conclusions on the viability of entombment in 1999, that statutory, regulatory, technical, and implementation issues, such as the appropriateness of relying on intruder barriers over a 1,000-year period, required further development. For example, the usefulness of the entombment decommissioning method could be limited by concerns over the reliability of long-term institutional controls. Such concerns are indirectly addressed in a recent National Academy of Sciences report on the long-term management of DOE's nuclear sites.[6] Many of the weaknesses addressed in the Academy's report may apply to the restricted release of NRC-licensed sites as well. For example, according to the Academy:

> The viability over time of land use restrictions is likely to be especially questionable in cases where contamination levels are not high enough to prohibit all public access but not

[5] NRC's "As-Low-As-Reasonably-Achievable (ALARA)" policy essentially requires licensees to reduce residual radiation at decommissioning below the level required for unrestricted release as long as it is economically and environmentally feasible to do so.

[6] *Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites* (National Research Council, Committee on the Remediation of Buried and Tank Wastes, International Standard Book Number 0-309-07186-0, Copyright 2000, National Academy Press).

low enough to permit unrestricted use. Often the real issue is not **whether** use restrictions will eventually fail, but when and what the **consequences** will be when they do. [Emphasis in original.]

EPA has also questioned the reliability of long-term institutional controls, stating that among other things, long-term governmental controls may not be enforced effectively because of political and fiscal constraints on a state or local government's exercise of its police power.

NRC's Chairman has acknowledged that the need for long-term institutional controls is a significant weakness in decommissioning methods, such as entombment, in that states or other governmental agencies may not be willing to accept the responsibility for such controls. And, according to NRC's staff, the viability of entombment as a decommissioning method hinges, in part, on the Commission's decision on whether barriers to intrusion in the absence of institutional controls would effectively keep exposure to affected persons beneath the Commission's dose limits.

The reliability of institutional controls over entombments that include GTCC waste would be even more questionable because of the extremely long post-closure monitoring and surveillance timeframes that would be required. In fact, in its August 1988 generic environmental impact statement on decommissioning nuclear facilities, NRC's staff concluded that the entombment method with GTCC waste included in the encasement was not viable because the security of the site could not be assured for thousands of years. In 1998, NRC also said that analyses would be required to demonstrate that a proposed entombment was unlikely to fail over the proposed entombment period. Such a requirement would be difficult to meet if GTCC waste were stored in the entombment because, experts say, projections on the integrity of concrete after 500 years are speculative. Finally, NRC's staff has determined that the Low-Level Radioactive Waste Policy Amendments Act of 1985 and NRC's regulations essentially require that the disposal of GTCC waste be licensed and that GTCC waste be placed in a geologic repository.[7]

[7] During a NRC entombment workshop held in December 1999, DOE panel members stated that entombing GTCC waste in a reactor containment building is possible under existing legislation and that such an alternative was preferable to disposing of this type of waste in a geologic repository. The Low-Level Radioactive Waste Policy Act makes DOE responsible for disposing of commercially generated GTCC wastes.

Over the 100 to 300 year entombment period, early license termination and potential property ownership changes could also complicate the issue of financial responsibility for the entombment failure and subsequent responses. States are concerned that they may be obligated to pay the potential remediation costs if they have to assume oversight responsibility for an entombment after NRC has terminated a plant's operating license. For this reason, state representatives have said that, at least until experience with entombment has been acquired, NRC should continue to maintain some type of licensing responsibility at entombment sites. Such a step, however, would be contrary to NRC's goal of terminating licenses upon plant entombment.

Alternative Decommissioning Methods Potentially Conflict With National Policy

On-site burial of rubblized low-level radioactive waste or the entombment of these wastes on-site may conflict with national policy on management and disposal of these wastes. The Low-Level Radioactive Waste Policy Act of 1980, as amended in 1985, established as federal policy that commercial low-level radioactive waste—except for GTCC waste—can be most safely and effectively managed by states on a regional basis. Through the act, the Congress encouraged states to form regional compacts to meet their collective disposal needs, minimize the number of new disposal sites, and more equitably distribute the responsibility for the management of low-level radioactive wastes among the states.

To encourage the formation of such regional compacts, congressionally approved compacts are allowed to prohibit the disposal of wastes generated outside their respective regions. To date, 44 states have entered into 10 compacts. However, despite some 20 years of effort and the expenditure of about $600 million, no new regional disposal facilities have been provided as a result of the act, and no state or compact is currently trying to identify a site for a disposal facility. [8]

Commercial generators of low-level radioactive waste, including licensees that are, or soon will be, decommissioning their nuclear power plants, currently have access to off-site disposal facilities for this waste. Of the three currently operating disposal facilities for commercial low-level radioactive waste, the Barnwell, South Carolina facility is both available to

[8] For a fuller discussion of states' implementation of the Low-Level Radioactive Waste Policy Act, see *Low-Level Radioactive Wastes: States Are Not Developing Disposal Facilities* (GAO/RCED-99-238, Sept. 17, 1999).

generators in all states and licensed to accept all classes of waste for which states must provide disposal. However, whether such access will continue, and at what cost, is uncertain. Access to the Barnwell facility is to be phased out for most generators by mid-2008. Another facility—Envirocare of Utah—which is located west of Salt Lake City, Utah, is available to generators in all states outside the Northwest Interstate Compact region but is licensed to accept only the least radioactive class of such wastes. In July 2001, the operator of this facility obtained a license amendment from the state of Utah to dispose of the more radioactive classes of low-level radioactive waste. However, the facility must also obtain the approval of the state's governor and legislature for such disposal. The company has announced that, at this time, it will not pursue such approvals because of controversy over an unrelated proposal to develop a storage facility for spent fuel from commercial nuclear power plants.

Unless Envirocare obtains the required governmental approvals in Utah and expands its existing disposal facility, and absent any new initiative by a compact of states to develop other disposal capacity, by mid-2008 waste generators in 36 states, Puerto Rico and the District of Columbia, will have no access to a disposal facility for wastes that are not already approved for disposal at the Envirocare facility.

The potential lack of access to disposal facilities prompted NRC and the nuclear industry to explore the rubblization and entombment decommissioning methods. Concerns have been voiced, however, that rubblization and/or entombment could adversely affect disposal costs and/or the profitability and economic well-being of the existing disposal facilities, while making it economically infeasible for a compact to develop new disposal facilities. Thus, the two decommissioning methods appear to run counter to the existing national policy of encouraging states to manage disposal of low-level radioactive wastes on a regional basis.

Moreover, the rubblization and/or entombment decommissioning methods may also contravene some state-compact agreement provisions. As discussed earlier, for example, if rubblization of the Maine Yankee plant had occurred, the state could have determined that the rubblized site was a disposal facility for low-level radioactive waste. In such a case, according to Maine's attorney general, the state could have been in violation of the Texas Low-Level Radioactive Waste Disposal Compact, of which Maine is a member, because the compact terms make Texas—not Maine—responsible for developing the compact's disposal capacity for low-level radioactive waste generated within Maine, Texas, and Vermont.

Site Contamination Can Go Undetected Until Late in Cleanup Process

Site characterization is an essential step in the decommissioning process,[9] but NRC does not stipulate when site characterization must be done. The sole time constraint is that a site-characterization must accompany NRC licensee's license termination plan and that the license termination plan must be submitted to NRC at least 2 years before the requested termination date of the license. If site characterization work does not begin until the latter stages of decommissioning and survey work uncovers unexpected contamination, instances can occur where the balance remaining in the decommissioning trust fund may not be enough to cover the unplanned additional cleanup work required.

NRC requires licensees to document occurrences and locations of spills, leaks, and other events that may occur at the plant and result in site contamination. This documentation, combined with the institutional knowledge of plant employees, provides the basis for a plant's historical site assessment and characterization plans. Historical site assessment and characterization are essential to ensure and demonstrate that all impacted areas at the site have been identified and cleaned up to meet the appropriate dose level required for license termination.

In cases where nuclear power plants were operating before NRC imposed record keeping requirements for burials, spills, and so forth, or if required record-keeping was less than meticulous, the institutional knowledge of plant employees becomes an invaluable tool for disclosing incidents and locating where contamination might be present. However, once a plant announces its plans to decommission, employees are often let go or leave to take other jobs, diminishing the institutional knowledge. In situations where plants close and are placed in safe storage for a number of years before final decommissioning work begins, institutional knowledge may be all but lost. As a result, although surveys take place throughout the decommissioning process, some instances of contamination may not be discovered until comprehensive site characterization work begins.

For instance, one small nuclear plant—Saxton in Pennsylvania—was built on the site of an old steam generating plant. The nuclear reactor was purposely built on this site to utilize an existing turbine and associated equipment from the steam plant. The nuclear reactor was shut down in

[9] Site characterization entails radiological surveys of site grounds and facilities to insure that residual radiation at the site is in compliance with the appropriate NRC-prescribed dose limits for license termination and site release.

1972. In 1975 the steam plant was demolished and the basement was backfilled with demolition debris. The nuclear facility was maintained in a monitored condition, and full-scale decommissioning work did not begin until May 1998, 26 years after the plant was permanently shut down.

After initial site characterization and submission of the License Termination Plan in early 1999, unexpected additional contamination was discovered that required complete removal of all concrete in the containment structure and excavation, characterization, and remediation of the old steam plant basement. The estimated cost for this work exceeded the balance remaining in the decommissioning trust fund, forcing the owners to pay for it out of their general operating funds.

An NRC official told us that the plant owners are committed to doing a quality decommissioning job and that many of the problems found have been identified as a result of their diligence in approaching the decommissioning task. Nevertheless, historical site assessment efforts might have been easier to perform and more input from plant employees might have been obtained had initial site characterization work begun closer to plant shutdown and unexpected contamination problems been discovered sooner. Because the licensee was initially able to collect decommissioning costs from the ratepayers after the plant shut down, ratepayer contributions to the decommissioning fund might have been increased, or decontamination and dismantlement could have been delayed to allow for decommissioning fund investment income to grow to meet additional decommissioning costs before the principal was spent.

Conclusions

The actual cost incurred to decommission a nuclear power plant site is affected by many factors, some of which lie beyond a licensee's control. One of these factors is uncertainty over the application of radiation protection standards. Though NRC's licensees accumulate funds to decommission their plants to NRC's standard, once the time to decommission a plant arrives, a licensee may find that it must also meet a more stringent EPA or state standard at higher than anticipated cost. Another factor is whether, in the future, licensees will have access to affordable disposal capacity for the low-level radioactive waste generated in the decommissioning process. Licensees' and NRC's interest in rubblization and entombment, as alternative approaches for decommissioning, attempts to address this uncertainty, but in turn raises equally important technical and policy issues pertaining to on- and off-site disposal of low-level radioactive wastes and the proliferation of radioactive waste disposal sites around the country. Also, the potential

short-term cost savings from these methods may be more than offset if safeguards and institutional controls are required to ensure the safety of rubblized or entombed sites over the longer term. And the principal advantage of rubblization and entombment appears to be the disposal of radioactive waste at nuclear plant sites, which may not comport with current federal policy encouraging states, by means of congressionally-approved compacts, to be responsible for this function. Leaving low-level radioactive wastes buried or entombed at nuclear plant sites would make it more difficult for the existing low-level radioactive waste disposal program to succeed economically, thereby undermining the objectives of the Low-Level Radioactive Waste Policy Act, as amended.

There is, however, a way to alleviate some cost uncertainty in the decommissioning process without major technical and policy ramifications. Licensees could conduct historical site assessments/characterization surveys soon after the decision is made to permanently cease operations. Such early characterization would minimize the chances of the discovery of contamination problems late in the decommissioning process, when most or all of the funds have been spent. It would also provide licensees more time to adjust the accumulation of decommissioning funds accordingly.

Recommendations for Executive Action

We recommend that the Chairman, NRC, in the Commission's ongoing consideration of modifications to radiological criteria for terminating licenses and alternative decommissioning approaches, address

- how the burial or entombment of low-level radioactive waste at nuclear plant sites, leading to a potentially large number of contaminated sites scattered around the country, affects the federal policy under the Low-Level Radioactive Waste Policy Act to manage radioactive waste on a regional basis; and
- concerns about whether these decommissioning approaches are technically compatible with provisions of the Low-Level Radioactive Waste Policy Act, the interstate compact agreements that implement the act, and NRC's technical regulations on licensing disposal facilities for low-level radioactive waste.

To reduce the likelihood that site contamination will go undetected until late in the cleanup process, we recommend that the Chairman, NRC, require licensees to survey their plant sites for radiation immediately following the announcement of intentions to permanently cease

operations, rather than allowing them to wait until 2 years before decommissioning is supposed to be complete.

Agency Comments and Our Response

NRC stated that it intends to consider our recommendations, as they pertain to the entombment alternative, during its ongoing rulemaking proceeding on that option. NRC added that it will obtain input from stakeholders on addressing the technical and policy concerns associated with the entombment decommissioning approach.

NRC disagreed with our recommendations as they pertain to rubblization. The burial of radioactive rubble at the site of a former nuclear plant, NRC said, would be subject to its license termination rules and not its regulations governing the development and operation of facilities for disposing of low-level radioactive wastes. We, however, like EPA and the State of Maine, find it difficult to discern why radioactive material buried on-site—material that has traditionally been shipped to disposal facilities designed and regulated for such purpose–does not merit the same protection as material sent to a low-level waste disposal site.

NRC also disagreed with our recommendation to require earlier characterization of sites where plants are to be decommissioned because earlier characterization, in its view, will not add significant value to the decommissioning process. We disagree. There is always the chance that contamination exists at a plant site that has not been documented. Although there is no guarantee that early historical site assessment and characterization work would identify all such instances, the chances of doing so would be enhanced by the availability of plant employees knowledgeable about past plant operations and site conditions. Delaying this work until essentially the end of the decommissioning process—after many employees who are familiar with a plant's operational history are gone—decreases the available institutional knowledge. Such delay also limits the ability of the licensee to acquire more decommissioning funds if necessary to cover increased decontamination expenses.

Chapter 4: New Accounting Standard Improves Financial Reporting but Cannot Ensure Adequate Decommissioning Funding

Recent changes to financial reporting standards for asset retirement obligations, established by the Financial Accounting Standards Board in June 2001, will require owners of nuclear power plants, among other affected industries, to report estimated decommissioning costs as liabilities in their financial statements. When implemented, the new standard will improve consistency in plant owners' reporting of these costs, which previous accounting practices allowed to be reported in a variety of ways. However, as an accounting standard it cannot guarantee that licensees have the funds available for decommissioning.

The estimation of decommissioning costs for nuclear regulatory purposes is an uncertain process, influenced by such matters as applicable cleanup standards and the selection of a decommissioning method. Moreover, liability amounts that companies owning nuclear power plants disclose in their financial statements may differ from the amounts determined under NRC's regulatory requirements. The new accounting standard, for example, will require public utilities and electricity generating companies to measure the liability of decommissioning costs using the "fair value" method.[1] In contrast, NRC requires licensees to estimate the cost of decommissioning their plants using a generic formula that takes into account the electrical output of the plants and derives from technical analysis of previous decommissioning activities. Alternatively, NRC allows licensees to base decommissioning costs on site-specific cost estimates if these estimates exceed the amounts calculated under the minimum funding requirements prescribed by NRC.

Finally, the new accounting standard cannot ensure that funds will be available at the time of decommissioning. Accounting standards are concerned with how financial events and obligations are reported; they do not ensure that resources will be available to pay for future needs, including decommissioning costs.

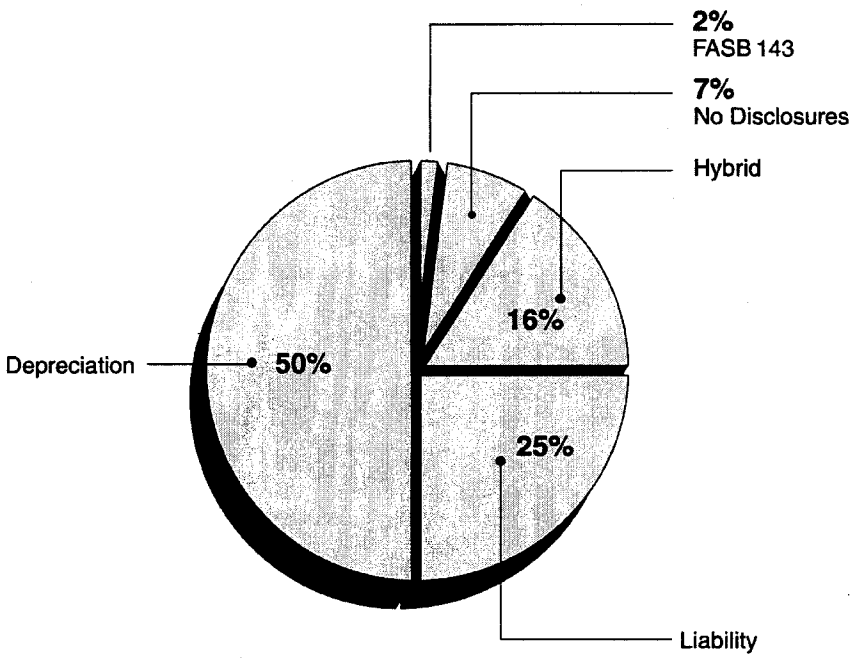
[1] Fair value is the amount that an entity would be required to pay in an active market to settle the asset retirement obligation in a current transaction in circumstances other than a forced or liquidation settlement.

New Accounting Standard Will Improve Consistency of Reporting

Utility companies have used a variety of methods to report estimated costs of decommissioning nuclear power plants. Implementation of the new standard in mid-2002 will improve consistency in plant owners' reporting of these costs.

On the basis of our review of the 1999 annual financial reports of 55 utility companies, we determined that about 75 percent of the companies have used one of two methods—the depreciation method or the liability method—to account for their decommissioning costs. The remaining companies used either a hybrid method (16 percent); or the method included in the new accounting standard (2 percent). (See fig. 4.) We were unable to determine the method used by 7 percent of the utility companies because of insufficient disclosures in the financial statements.

Figure 4: Methods Currently Used to Account for Decommissioning Costs



Source: GAO analysis.

Utility companies most frequently accounted for nuclear decommissioning costs as a component of depreciation expense. Using this method, an expense is reported each year for a portion of the amounts collected from customers in utility rates; however, instead of recording a liability, the reported amount for the plant asset is reduced by the amount of the

expense. This method could ultimately result in a negative book value for the plant asset.

Using the liability method, an expense is reported each year for a portion of the amounts collected from customers in utility rates, with an equal amount added to a liability. The "bottom-line" (net income), as well as net assets, remains the same under both methods.

A comparison of the depreciation and liability methods to the new accounting standard shows that only the new standard requires the total estimated liability to be reported at plant startup, as well as a corresponding plant asset. (See table 3.)

Table 3: Comparison of Methods to Report Decommissioning Liability

Reporting approach	Depreciation method	Liability method	New standard
Full liability reported at inception	No	No	Yes
Liability gradually reported in an increasing amount	No	Yes	No
Plant asset cost amount includes the estimated decommissioning liability	No	No	Yes

Source: GAO analysis.

In February 2000, the Financial Accounting Standards Board (FASB) issued for comment an exposure draft entitled Accounting for Obligations Associated with the Retirement of Long-Lived Assets, which discussed nuclear plant decommissioning, among other types of asset retirement obligations. After obtaining and considering public comments, in June 2001 the Board unanimously voted to issue the standard in final form, effective for fiscal years beginning after June 15, 2002. Under this new standard (Statement of Financial Accounting Standards No. 143, Accounting for Asset Retirement Obligations), the fair value of the decommissioning costs is capitalized as part of the cost of the nuclear plant and an equal amount is recorded as a liability on the balance sheet.

In addition to requiring utility companies to recognize the full estimated cost of decommissioning at plant start-up, the new accounting standard also requires additional disclosures to investors, including:

- a general description of the plant retirement obligation (the liability);
- the fair value of assets, if any, dedicated to satisfy the liability; and
- an explanation of any significant changes in the liability.

New Accounting Standard Does Not Ensure Adequate Funding for Decommissioning Costs

The new accounting standard will not ensure that owners of nuclear power plants accumulate adequate funding for decommissioning costs. The Financial Accounting Standards Board is responsible for establishing standards of financial reporting, but not for ensuring that funding for liabilities reported under those standards will be available. The latter responsibility remains with NRC as a part of its regulation of nuclear power under the Atomic Energy Act of 1954, as amended, and other legislation.

Agency Comments

NRC stated that it neither supports nor opposes the new accounting standard. NRC added that the accounting standard and NRC's biennial financial reporting requirements were developed by distinct organizations for different purposes. Finally, NRC said it understands that the purpose of the Financial Accounting Standards Board's standard is to ensure the consistency of financial reporting. The standard is not, NRC added, meant to duplicate NRC's responsibility of assuring the availability of adequate decommissioning funds.

Appendix I: Comments From the Nuclear Regulatory Commission

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 2, 2001

Ms. Gary L. Jones, Director
Natural Resources and Environment
United States General Accounting Office
Washington, D.C. 20548

Dear Ms. Jones:

I am responding to your October 1, 2001 request that the U.S. Nuclear Regulatory Commission (NRC) provide comments on the draft General Accounting Office (GAO) report to the Honorable Edward J. Markey, House of Representatives, entitled "Nuclear Regulation - NRC's Assurances of Decommissioning Funding During Utility Restructuring Could be Improved."

The NRC provided the GAO with comments on the statement of facts associated with this report during an exit meeting with GAO staff on September 7, 2001. We are pleased that GAO incorporated many of the NRC's comments from the exit meeting in the October 1, 2001, draft report. GAO determined that most restructuring license transfers have maintained or enhanced assurance of decommissioning funding, and GAO also has provided constructive comments regarding documentation of the financial considerations associated with power reactor license transfer requests.

However, we continue to be concerned that GAO has not fully represented certain aspects of the NRC's license transfer review process, nor entirely considered the various processes associated with the decommissioning of a power reactor facility. The enclosed comments are intended to provide a more comprehensive perspective related to the conclusions and recommendations contained in GAO's draft report.

Sincerely,

William D. Travers
Executive Director for Operations

Enclosures: As stated

NRC COMMENTS ON DRAFT GENERAL ACCOUNTING OFFICE (GAO) REPORT TO THE HONORABLE EDWARD J. MARKEY, HOUSE OF REPRESENTATIVES, "NUCLEAR REGULATION - NRC'S ASSURANCES OF DECOMMISSIONING FUNDING DURING UTILITY RESTRUCTURING COULD BE IMPROVED"

1. GAO begins Chapter 2 of the draft report by stating (p. 20) that "for most of the requests that NRC reviewed to transfer licenses for one or more plants, the level of assurance that the plants' decommissioning funds will be adequate has been maintained or enhanced." However, GAO then cites two specific license transfer reviews that caused it concern, and GAO concludes Chapter 2 by stating (p. 33) that "NRC's inconsistent review and documentation of license transfer requests creates the appearance of different requirements for different owners or different types of transfers." Based on this conclusion, GAO recommends that NRC revise its standard review plan (NUREG-1577, Revision 1, "Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance," hereinafter referred to as the SRP) and related controls for reviewing license transfers to include a checklist for NRC staff to follow.

   NRC conducted two separate detailed financial reviews. The cited reviews concerned the corporate reorganization of Public Service Electric and Gas Company (PSEG) and the formation of Exelon Corporation (Exelon) through a merger between Unicom and PECO Energy Company.

   NRC believes that the actual decommissioning fund assurance (DFA) reviews associated with the PSEG and Exelon license transfers were adequate and that reasonable assurance of decommissioning funding was ascertained. In accordance

-1- Enclosure

NRC staff verified that adequate decommissioning funding would be maintained by reviewing other sources of financial information in addition to the application materials, including publicly available information concerning the appropriate State's non-bypassable charge requirements. In the PSEG review, NRC specifically documented a detailed and thorough evaluation of applicable State law pertaining to DFA, which, in conjunction with NRC license conditions required by the PSEG order, provides reasonable assurance of decommissioning funding for PSEG's plants. NRC staff also followed the SRP guidance regarding adequate review of applicable State legislation pertaining to DFA in the Exelon review to ensure conformance with applicable NRC regulations and to obtain reasonable assurance of decommissioning funding. NRC, however, agrees with GAO that the DFA aspect of the Exelon review was not appropriately documented.

With respect to financial qualifications reviews, GAO concludes (p. 30-31) that NRC's review of Exelon's financial qualifications for operating a large fleet of nuclear reactors was not complete and not conducted in accordance with the SRP guidance. Again, the NRC believes that this conclusion is a reflection of a lack of documentation, rather than any substantive deficiency in the actual review. NRC staff followed the SRP guidance by evaluating the appropriate information needed to obtain reasonable assurance of Exelon's financial qualifications to own and operate its reactors safely. NRC acknowledges, however, that some of the factors associated with the Exelon review were not appropriately documented, such as the NRC staff's finding that certain changes in financial projections would not have had a material effect on NRC's determination of Exelon's financial qualifications.

2 Enclosure

Regarding GAO's recommendation for developing a license transfer review checklist (p. 33), NRC does not believe that a checklist will greatly enhance the effectiveness of license transfer reviews because many of the reviews that have been performed over the last few years have been very complex and, in many aspects, unique. GAO's assessments of the PSEG and Exelon reviews appear to be based largely on the lack of adequate documentation supporting the decision-making logic provided in the SRP. Therefore, NRC believes that appropriate documentation of the logic supporting each license transfer review will help to further demonstrate the adequacy and effectiveness of each review. The NRC will seek to ensure proper documentation is maintained to address GAO's concern of the appearance of different requirements.

2. In Chapter 3 of the draft report, GAO concludes (p. 50) that the proposed alternative approaches for decommissioning (i.e., entombment and rubblization) raise equally important policy and technical issues. GAO also recommends (p. 50) that NRC require site radiation surveys to be performed immediately after a licensee announces its intention to permanently cease operations to minimize the chances of the discovery of contamination problems late in the decommissioning process.

NRC agrees that the issues raised in the draft report are important. Although NRC has previously identified DECON and SAFSTOR as the preferred alternatives, NRC is evaluating whether ENTOMB, under certain circumstances, may be an allowable alternative. NRC intends, during the ongoing entombment rulemaking effort documented in SECY-01-0099, to consider GAO's recommendation and obtain stakeholder input for addressing the technical and policy concerns associated with the

entombment alternative approach. Regarding rubblization, NRC considers the rubblization process to be subject to the license termination rules of 10 CFR Parts 20, and 50, instead of the low-level waste requirements of 10 CFR Part 61 because the intent is not to create a low-level waste disposal site.

NRC believes that GAO's site survey recommendation would not add significant value to current decommissioning practices. Under current regulations, a licensee may begin substantial decommissioning activities, such as removing and dismantling various facility systems and structures, prior to site characterization. An immediate site characterization survey performed prior to these decommissioning activities, as recommended by GAO, would not necessarily identify all potential areas of radioactive contamination because there may be sources of radioactivity that cannot be identified or adequately assessed until many of the facility systems and structures are dismantled and removed. Therefore, GAO's recommendation may not necessarily be cost effective, because additional site characterization surveys may need to be performed in order to thoroughly understand the contamination remaining after the removal and dismantlement of facility systems and structures.

3. In Chapter 4, GAO (p. 53-54) states that the new accounting standard set forth in June 2001 by the Financial Accounting Standards Board (FASB) will improve the consistency of reporting estimated decommissioning costs in financial statements, but will not ensure that licensees will have adequate funds for decommissioning. The NRC neither supports nor opposes the new FASB standard. The NRC notes that, at one point, it intended to adopt the FASB standard for reporting decommissioning costs as a way to

obtain additional information on the status of decommissioning funds, but that the FASB standard was delayed for several years. In September 1999, the NRC promulgated additional reporting requirements for the status of decommissioning funding, obviating NRC's need for the new FASB standard. The new FASB standard and the NRC's decommissioning funding status reports were developed by two distinct organizations for different purposes. The NRC agrees with GAO's statement that NRC, not FASB, is responsible for ensuring that NRC licensees will have adequate funds for decommissioning, and understands that the purpose of the FASB standard is to ensure the consistency of financial reporting and is not meant to provide a means of assuring the availability of adequate decommissioning funds.

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

Dwayne E. Weigel (202) 512-6876

Acknowledgments

In addition, Michael J. Rahl, Carolyn K. McGowan, John Fretwell, Peggy Smith, Cynthia Norris, Doreen S. Feldman, and Barbara Timmerman made key contributions to this report.

Related GAO Products

Radiation Standards: Scientific Basis Inconclusive, and EPA and NRC Disagreement Continues (GAO/RCED-00-152, June 30, 2000).

Low-Level Radioactive Wastes: States Are Not Developing Disposal Facilities (GAO/RCED-99-238, Sept. 17, 1999).

Nuclear Regulation: Better Oversight Needed to Ensure Accumulation of Funds to Decommission Nuclear Power Plants (GAO/RCED-99-75, May *3, 1999).*

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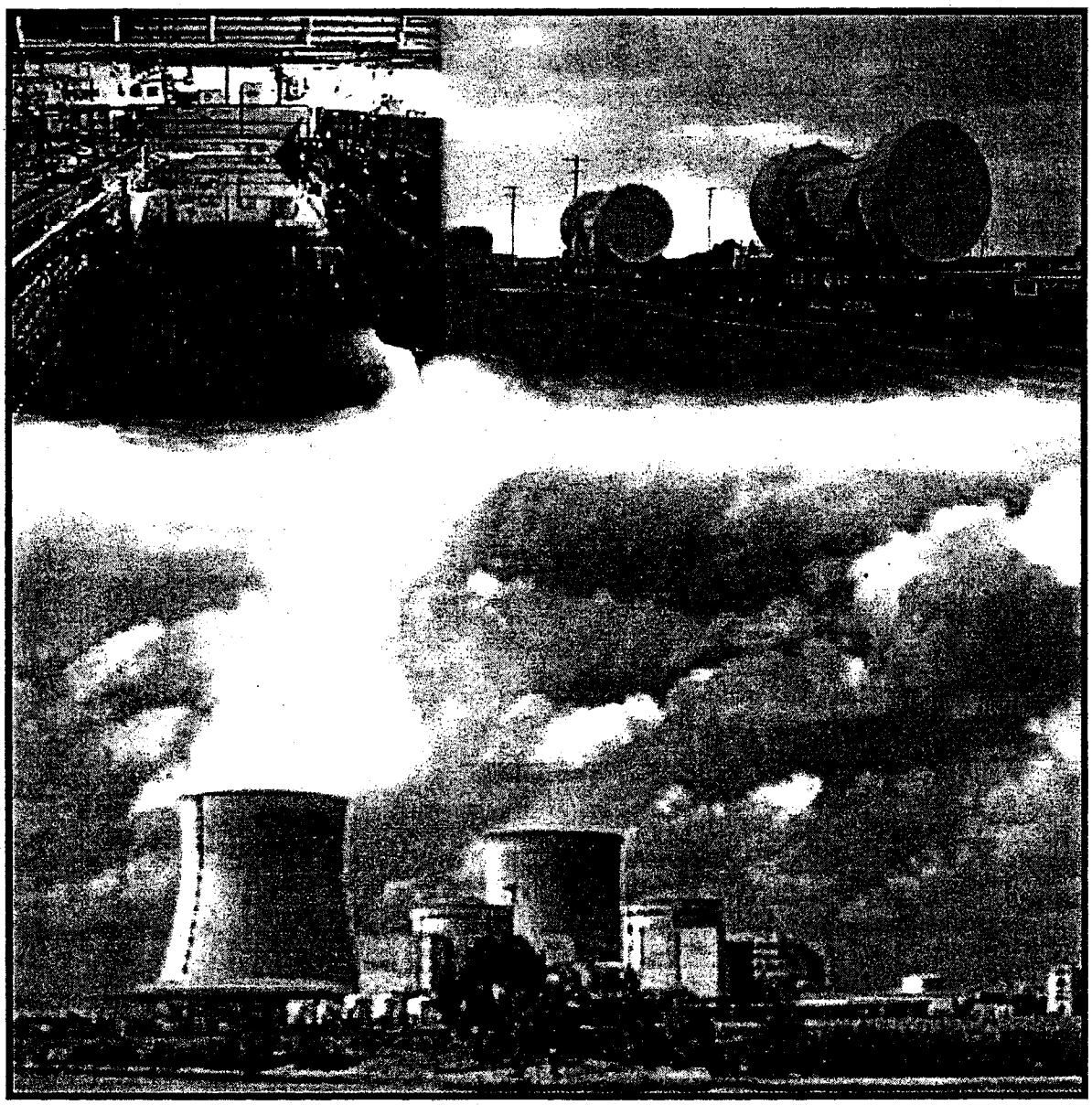
Attachment C

Acceptance Priority Ranking & Annual Capacity Report



U.S. Department of Energy

Office of Civilian Radioactive Waste Management

July 2004

ACCEPTANCE PRIORITY RANKING

&

ANNUAL CAPACITY REPORT

U.S. DEPARTMENT OF ENERGY
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
WASHINGTON, DC 20585

JULY 2004

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ACCEPTANCE PRIORITY RANKING
&
ANNUAL CAPACITY REPORT

1.0 INTRODUCTION

The Nuclear Waste Policy Act of 1982, as amended (the Act)[1], assigns the Federal Government the responsibility for the disposal of spent nuclear fuel and high-level waste. Section 302(a) of the Act authorizes the Secretary to enter into contracts* with the owners and generators** of commercial spent nuclear fuel and/or high-level waste. *The Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste*[2] (Standard Contract) established the contractual mechanism for the Department's acceptance and disposal of spent nuclear fuel and high-level waste. It includes the requirements and operational responsibilities of the parties to the Standard Contract in the areas of administrative matters, fees, terms of payment, waste acceptance criteria, and waste acceptance procedures. The Standard Contract provides for the acquisition of title to the spent nuclear fuel and/or high-level waste by the Department, its transportation to Federal facilities, and its subsequent disposal.

The Standard Contract requires the Department to issue an annual Acceptance Priority Ranking (APR) report and an Annual Capacity Report (ACR). The APR establishes the order in which the Department allocates the projected acceptance capacity for commercial spent nuclear fuel. The ACR applies projected nominal acceptance rates for the system to the APR, resulting in individual allocations for the owners and generators expressed in metric tons of uranium (MTU). These capacity allocations form the basis for the Purchasers' submittal of Delivery Commitment Schedules (DCS). As specified in the Standard Contract, the ACR is for planning purposes only and, thus, is not contractually binding on either DOE or the Purchasers.

1.1 BASIS FOR THE ACCEPTANCE PRIORITY RANKING

As required by the Standard Contract, the APR is based on the date the spent nuclear fuel was permanently discharged, with the oldest spent nuclear fuel, on an industry-wide basis, given the highest priority. The phrase "date the spent nuclear fuel was permanently discharged" means the date the reactor went subcritical for the purpose of permanently discharging the spent nuclear fuel, as reported to the Department by the Purchasers on the Nuclear Fuel Data Survey Form, RW-859. The APR is the basis for allocating projected spent nuclear fuel (SNF) acceptance capacity in the ACR. The 2004 APR listing is based on SNF discharges through December 31, 2002. The APR listing has been included as Appendix A.

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* Individual contracts are based upon the Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (10 CFR Part 961).

** Owners and generators of spent nuclear fuel and high-level waste who have entered into contracts with the Department and/or have paid fees for purchase of disposal services are referred to as "Purchasers." In identifying the Purchasers listed in this report, the Department has relied upon written notices received pursuant to Article XII and XIV of the Purchasers' disposal contracts. In the event that any Purchaser believes that the listed designation is inappropriate, the Purchaser should contact the Department.

Future discharges will be added to the priority ranking based on their date of permanent discharge. If SNF currently designated as temporarily discharged is redesignated as permanently discharged (without subsequent irradiation), the date of redesignation will become the ranking date, instead of the date of actual discharge. Reinserted assemblies, previously designated as permanently discharged, will be removed from the priority ranking.

1.2 BASIS FOR THE ANNUAL CAPACITY REPORT

The ACR (see Appendix B) applies a 10-year projected nominal waste acceptance rate to the APR, resulting in individual capacity allocations. The projected nominal acceptance rate is based on the assumption of SNF acceptance beginning in 2010 at the Yucca Mountain Geologic Repository. These projected nominal waste acceptance rates are presented in Table 1.

Table 1. Projected Nominal Waste Acceptance Rates for Spent Nuclear Fuel

Year	SNF (MTU)
2010	400
2011	600
2012	1,200
2013	2,000
2014	3,000
2015	3,000
2016	3,000
2017	3,000
2018	3,000
2019	3,000

The Department will further define and specify the system operating and waste acceptance parameters as the Program progresses, and inform the Purchasers accordingly. Until the SNF is accepted by the Department, Section 111 (a)(5) of the Act assigns the waste owners and generators the primary responsibility to provide for, and pay the costs of, interim storage.

The Tables in Appendix B list the Purchasers' annual allocations for each of the first 10 years*** of projected CRWMS operation. Table 2 presents a summary of all Purchasers' annual allocations based on the nominal waste acceptance rates for the 10-year period covered by this report.

*** The term "year," when used in reference to capacity allocation in this report, means the calendar year, beginning January 1 and ending December 31.

TABLE 2. SUMMARY OF PURCHASERS' ANNUAL ALLOCATIONS (MTU)[a]

PURCHASER	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL
Aerotest Operations, Inc.	-	-	-	-	-	-	-	-	-	-	-
Alabama Power Company	-	-	-	-	45.6	119.3	73.4	77.8	60.2	89.9	466.2
Ameren UE	-	-	-	-	-	-	38.7	44.3	38.0	30.3	151.3
AmerGen Energy Company, LLC	31.1	43.0	46.8	114.4	51.7	36.4	-	67.0	88.6	107.4	586.4
a Public Service Company	-	-	-	-	-	-	-	66.5	69.4	66.2	202.1
nore Gas & Electric Co.	-	-	-	82.6	107.5	89.6	93.8	62.0	64.2	-	499.7
BWXT	-	-	0.1	0.1	-	0.1	0.1	-	0.1	-	0.1[b]
Carolina Power & Light Company	-	69.7	48.0	50.5	145.8	118.3	116.0	87.3	87.4	94.8	817.8
Cleveland Electric Illuminating Co.	-	-	-	-	-	-	-	-	22.6	76.7	99.4
Connecticut Yankee Atomic Power Co.	65.5	22.5	41.6	21.9	42.1	42.1	44.5	21.8	21.0	-	323.1
Consumers Power Co.	-	2.5	87.4	31.1	32.9	59.9	24.8	3.1	25.9	32.0	299.6
Dairyland Power Cooperative	0.8	6.0	3.0	3.9	4.9	5.7	6.1	7.8	-	-	38.1
Detroit Edison Company	-	-	-	-	-	-	-	-	19.1	-	19.1
Dominion Nuclear Connecticut, Inc.	5.5	40.7	52.5	41.9	113.8	93.3	103.6	123.7	103.9	71.2	750.1
Dow Chemical	-	-	-	-	-	-	-	-	-	-	-
Duke Power Company	-	24.9	48.2	176.4	124.2	162.3	200.0	318.5	234.6	246.3	1,535.5
Energy Northwest	-	-	-	-	-	-	10.8	29.4	52.5	37.9	130.7
Entergy Arkansas, Inc.	-	-	-	51.5	76.6	83.3	60.6	76.8	28.2	87.6	464.6
Entergy Gulf States, Inc.	-	-	-	-	-	-	-	30.5	41.1	32.9	104.5
Entergy Louisiana, Inc.	-	-	-	-	-	-	-	38.6	31.8	70.8	141.1
Entergy Nuclear FitzPatrick, LLC	-	-	-	51.4	30.0	71.8	34.4	35.8	33.6	27.3	284.2
Entergy Nuclear Generation Company	-	3.9	25.5	82.6	17.1	83.9	-	34.2	-	-	247.2
Entergy Nuclear Indian Point 2, LLC	3.0	27.7	32.8	27.1	52.8	33.8	63.5	31.1	33.0	25.8	330.6
Entergy Nuclear Indian Point 3, LLC	-	-	-	29.3	34.7	34.7	33.0	36.1	28.4	33.8	229.9
Entergy Nuclear Vermont Yankee, LLC	-	72.9	-	40.2	50.7	41.5	41.3	24.9	25.0	23.6	320.0
Exelon Generation Company, LLC	21.1	60.5	251.2	466.7	488.3	451.7	419.8	375.2	523.9	433.6	3,491.9
Florida Power & Light Co.	-	20.9	59.6	78.7	169.3	112.4	141.8	117.1	86.9	122.2	908.9
Florida Power Corporation	-	-	-	0.9	46.4	58.3	30.1	41.3	-	33.8	210.8
FPL Energy Seabrook, LLC	-	-	-	-	-	-	-	-	-	-	-
G.E. Uranium Management Corporation	145.2	-	-	-	-	-	-	-	-	-	145.2
General Atomics	0.1	0.1	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1[b]
General Electric Company	0.3	-	-	-	-	-	-	-	-	-	0.3
a Power Company	-	-	-	5.2	91.6	105.3	103.2	116.3	103.3	117.3	642.2
Michigan Power Co.	-	-	-	57.8	132.6	120.2	119.3	35.7	65.7	71.5	602.9
terstate Power & Light	-	-	15.4	36.4	32.0	23.6	22.0	23.4	21.9	19.1	193.9
Kansas Gas & Electric Company	-	-	-	-	-	-	-	27.7	33.7	35.3	96.7
Maine Yankee Atomic Power Company	-	26.4	57.9	78.0	52.5	30.0	54.8	24.5	20.8	27.4	372.3
Nebraska Public Power District	-	-	23.6	13.8	80.9	41.9	21.2	37.3	32.2	30.9	281.7
Nine Mile Point Nuclear Power Station, LLC	9.4	49.0	38.9	30.8	68.1	-	74.8	31.1	-	36.3	338.4
Northern States Power Co.	-	26.2	99.6	65.2	111.4	143.1	58.9	92.6	52.3	38.4	687.6
Omaha Public Power District	-	-	22.3	35.4	14.8	21.9	32.3	16.4	15.2	13.1	171.4
Pacific Gas & Electric Company	7.3	6.0	15.9	-	-	-	-	47.5	65.3	110.2	252.1
Pennsylvania Power & Light Co.	-	-	-	-	-	-	89.6	103.5	121.2	78.9	393.2
Pennsylvania Power Company	-	-	-	-	6.0	48.7	35.2	63.6	56.3	31.8	241.6
Portland General Electric Company	-	-	-	0.5	40.5	34.9	42.2	54.2	48.8	49.0	270.0
PSEG Nuclear LLC	-	-	-	-	46.9	72.6	64.6	133.0	96.0	133.8	547.0
Rochester Gas and Electric Company	32.0	4.6	24.4	32.3	35.8	12.7	35.1	23.5	12.8	23.6	236.9
Sacramento Municipal Utility District	-	-	-	35.3	49.2	32.0	30.1	-	82.0	-	228.6
South Carolina Electric & Gas Company	-	-	-	-	-	-	50.4	27.6	28.0	31.9	137.9
South Texas Project NOC	-	-	-	-	-	-	-	-	9.8	50.4	60.2
Southern California Edison Co.	35.6	20.5	38.6	19.2	19.3	-	73.9	118.7	112.7	60.5	498.9
Systems Energy Resources, Inc.	-	-	-	-	-	-	-	101.5	50.4	50.2	202.1
Tennessee Valley Authority	-	-	-	64.2	297.8	236.0	277.0	-	33.1	60.3	968.4
Texas Utilities Generating Company	-	-	-	-	-	-	-	-	-	-	-
Toledo Edison Co.	-	-	-	-	-	65.2	30.6	-	30.5	28.1	154.3
U.S. DOE	22.9	6.8	7.8	7.3	89.5	88.0	0.1	0.1	15.7	-	237.8[b]
Virginia Electric and Power Co.	-	8.2	113.3	54.7	105.5	133.0	151.3	86.0	108.6	85.9	846.4
Wisconsin Electric Power Company	16.3	43.1	32.6	64.2	50.2	57.0	29.9	53.7	37.8	37.7	422.5
Wisconsin Public Service Corporation	-	-	4.4	33.8	35.1	25.9	49.8	23.1	17.1	26.5	215.7
Yankee Atomic Electric Company	9.9	10.1	9.7	18.1	8.5	9.4	17.7	8.3	9.2	8.4	109.2
NOMINAL TOTAL	400	600	1,200	2,000	3,000	3,000	3,000	3,000	3,000	3,000	22,200

a erences in Purchaser allocations for individual years in Annual Capacity Report may differ from the Acceptance Priority Ranking due to rounding.

b These totals are not the sum of the annual allocations because the actual annual values are much less than .1 MTU.

1.3 SUBMITTAL OF COMMENTS ON THIS REPORT

Written comments are requested, especially from the Purchasers, on the content and format of this report. Comments received on previous reports were used to identify issues that needed to be addressed by the Department and the Purchasers in the implementation of the Standard Contract provisions. Comments on this report should be addressed to:

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REFERENCES

[1]"Nuclear Waste Policy Act of 1982," Public Law 97-425 (January 7, 1983) and the "Nuclear Waste Policy Amendments Act of 1987," Title V, Subtitle A, Public Law 100-203 (December 22, 1987).

[2]U.S. Department of Energy, "Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste," Code of Federal Regulations, Title 10, Part 961, 2004.

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

In accordance with the Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (10 CFR Part 961) (Standard Contract), an Acceptance Priority Ranking (APR) listing has been generated based on information as reported to the Department by the Purchasers on the Nuclear Fuel Data Survey Form, RW-859. The 2004 APR listing is based on SNF discharges through December 31, 2002.

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type	Ranking Date	# of ASMB	MTU	Total MTU
General Atomics	General Atomics	RCH	67 11 30	1	0.1	0.1
General Atomics	General Atomics	RCH	67 12 31	7	0.1	0.1
U.S. DOE	Big Rock Point	BWR	68 06 21	5	0.7	0.7
General Atomics	General Atomics	RCH	68 10 31	1	0.1	0.7
U.S. DOE	Big Rock Point	BWR	69 04 18	1	0.1	0.7
*Exelon Generation Company, LLC	Dresden 1	BWR	69 09 06	94	9.6	10.3
U.S. DOE	La Crosse	BWR	69 10 14	1	0.2	10.4
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	70 04 17	51	21.5	31.8
G.E. Uranium Mgmt. Corp.	Dresden 2	BWR	70 06 05	29	5.6	37.4
Southern California Edison Co.	San Onofre 1	PWR	70 10 02	48	17.6	55.0
U.S. DOE	Ginna	PWR	71 02 04	12	4.6	59.5
U.S. DOE	Big Rock Point	BWR	71 02 12	5	0.7	60.2
G.E. Uranium Mgmt. Corp.	Dresden 2	BWR	71 02 26	215	41.6	101.8
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	71 04 16	52	22.0	123.7
General Atomics	General Atomics	RCH	71 05 31	8	0.1	123.7
Pacific Gas & Electric Company	Humboldt Bay	BWR	71 06 05	40	3.1	126.7
General Atomics	General Atomics	RCH	71 06 30	1	0.1	126.7
*Exelon Generation Company, LLC	Dresden 1	BWR	71 09 10	112	11.5	138.2
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	71 09 18	17	3.3	141.5
AmerGen Energy Company, LLC	Oyster Creek	BWR	71 09 18	24	4.7	146.1
Southern California Edison Co.	San Onofre 1	PWR	71 12 25	49	18.0	164.1
Yankee Atomic Electric Company	Yankee Rowe	PWR	72 02 12	36	9.9	174.0
G.E. Uranium Mgmt. Corp.	Dresden 2	BWR	72 02 19	509	98.1	272.1
U.S. DOE	Big Rock Point	BWR	72 03 18	36	4.9	276.9
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	72 04 02	31	6.1	282.9
*Rochester Gas and Electric Company	Ginna	PWR	72 04 14	33	13.0	295.9
DOE	Ginna	PWR	72 04 14	28	10.8	306.6
AmerGen Energy Company, LLC	Oyster Creek	BWR	72 05 01	136	26.5	333.1
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	72 06 10	53	22.2	355.2
Dairyland Power Cooperative	La Crosse	BWR	72 08 19	6	0.8	355.9
Pacific Gas & Electric Company	Humboldt Bay	BWR	72 08 25	55	4.2	360.1
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	72 09 01	28	5.5	365.5
Wisconsin Electric Power Company	Point Beach 1	PWR	72 09 30	41	16.3	381.8
U.S. DOE	Point Beach 1	PWR	72 09 30	3	1.2	383.0
*Rochester Gas and Electric Company	Ginna	PWR	72 10 06	48	19.1	402.1
General Atomics	General Atomics	RCH	72 11 30	1	0.1	402.1
General Electric Company	various	various	72 12 01	0	0.3	402.4
Entergy Nuclear Indian Point 2, LLC	Indian Point 1	PWR	72 12 29	40	7.8	410.1
U.S. DOE	Big Rock Point	BWR	73 03 02	25	3.5	413.5
*Exelon Generation Company, LLC	Dresden 3	BWR	73 03 03	51	9.9	423.4
Northern States Power Co.	Monticello	BWR	73 03 03	13	2.6	425.9
Carolina Power & Light Company	Robinson 2	PWR	73 03 16	53	24.2	450.1
Dairyland Power Cooperative	La Crosse	BWR	73 03 30	26	3.2	453.2
AmerGen Energy Company, LLC	Oyster Creek	BWR	73 04 13	148	28.9	482.1
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	73 04 14	104	20.3	502.3
Southern California Edison Co.	San Onofre 1	PWR	73 06 02	57	20.5	522.7
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	73 07 08	55	22.5	545.2
Pacific Gas & Electric Company	Humboldt Bay	BWR	73 08 31	51	3.9	549.1
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	73 09 29	50	9.5	558.6
*Exelon Generation Company, LLC	Dresden 1	BWR	73 10 08	52	5.4	563.9
Dairyland Power Cooperative	La Crosse	BWR	73 11 03	24	2.9	566.8

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
General Atomics	General Atomics	RCH	73 11 30	2	0.1	566.8
Entergy Nuclear Generation Company	Pilgrim 1	BWR	73 12 29	20	3.9	570.7
General Atomics	General Atomics	RCH	73 12 31	2	0.1	570.7
*Rochester Gas and Electric Company	Ginna	PWR	74 01 01	12	4.6	575.3
*Exelon Generation Company, LLC	Dresden 3	BWR	74 03 11	44	8.6	583.8
Northern States Power Co.	Monticello	BWR	74 03 15	122	23.7	607.5
U.S. DOE	Big Rock Point	BWR	74 03 23	13	1.8	609.2
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	74 03 31	148	28.8	638.0
*Exelon Generation Company, LLC	Quad Cities 1	BWR	74 03 31	32	6.2	644.1
Wisconsin Electric Power Company	Point Beach 1	PWR	74 04 06	74	28.7	672.8
U.S. DOE	Point Beach 1	PWR	74 04 06	3	1.2	673.9
AmerGen Energy Company, LLC	Oyster Creek	BWR	74 04 13	72	14.1	688.0
Carolina Power & Light Company	Robinson 2	PWR	74 05 04	103	45.5	733.5
U.S. DOE	Robinson 2	PWR	74 05 04	1	0.5	733.9
Yankee Atomic Electric Company	Yankee Rowe	PWR	74 05 11	37	10.1	744.0
*Consumers Power Co.	Big Rock Point	BWR	74 06 02	18	2.5	746.4
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	74 06 29	72	26.4	772.7
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	74 08 30	208	40.7	813.4
*Exelon Generation Company, LLC	Dresden 1	BWR	74 09 01	37	3.8	817.2
Florida Power & Light Co.	Turkey Point 3	PWR	74 10 04	46	20.9	838.0
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	74 10 13	328	63.4	901.3
Wisconsin Electric Power Company	Point Beach 2	PWR	74 10 16	36	14.4	915.7
Duke Power Company	Oconee 1	PWR	74 10 19	53	24.9	940.5
Virginia Electric and Power Co.	Surry 1	PWR	74 10 24	18	8.2	948.7
Pacific Gas & Electric Company	Humboldt Bay	BWR	74 10 31	27	2.1	950.7
Entergy Nuclear Indian Point 2, LLC	Indian Point 1	PWR	74 10 31	120	22.9	973.5
Exelon Generation Company, LLC	Dresden 2	BWR	74 11 02	156	30.0	1,003.5
Exelon Generation Company, LLC	Quad Cities 2	BWR	74 12 21	85	16.5	1,019.9
*Exelon Generation Company, LLC	Quad Cities 1	BWR	75 01 09	1	0.2	1,020.1
Northern States Power Co.	Monticello	BWR	75 01 10	81	15.7	1,035.8
Omaha Public Power District	Fort Calhoun	PWR	75 02 08	25	9.4	1,045.1
*Rochester Gas and Electric Company	Ginna	PWR	75 03 10	25	9.9	1,055.0
Southern California Edison Co.	San Onofre 1	PWR	75 03 14	53	19.3	1,074.3
AmerGen Energy Company, LLC	Oyster Creek	BWR	75 03 29	112	22.0	1,096.2
Florida Power & Light Co.	Turkey Point 4	PWR	75 03 29	44	20.0	1,116.1
*Exelon Generation Company, LLC	Dresden 3	BWR	75 04 16	141	27.4	1,143.5
Virginia Electric and Power Co.	Surry 2	PWR	75 04 26	26	11.9	1,155.3
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	75 05 02	152	57.9	1,213.2
Dairyland Power Cooperative	La Crosse	BWR	75 05 09	25	3.0	1,216.2
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	75 05 17	48	19.8	1,236.0
U.S. DOE	Haddam Neck	PWR	75 05 17	1	0.5	1,236.4
Pacific Gas & Electric Company	Humboldt Bay	BWR	75 05 31	33	2.6	1,238.9
Interstate Power & Light	Duane Arnold	BWR	75 06 06	2	0.4	1,239.2
*Exelon Generation Company, LLC	Dresden 1	BWR	75 09 01	64	6.6	1,245.8
U.S. DOE	Dresden 1	BWR	75 09 01	2	0.3	1,246.0
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	75 09 12	144	28.2	1,274.2
Northern States Power Co.	Monticello	BWR	75 09 12	268	51.9	1,326.0
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	75 09 14	200	38.9	1,364.8
Virginia Electric and Power Co.	Surry 1	PWR	75 09 26	73	33.0	1,397.8
*Exelon Generation Company, LLC	Quad Cities 2	BWR	75 10 03	94	18.3	1,416.1
Yankee Atomic Electric Company	Yankee Rowe	PWR	75 10 18	40	9.7	1,425.7

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
...ida Power & Light Co.	Turkey Point 3	PWR	75 10 26	32	14.4	1,440.1
U.S. DOE	Turkey Point 3	PWR	75 10 26	5	2.3	1,442.3
Carolina Power & Light Company	Robinson 2	PWR	75 10 31	52	23.6	1,465.9
Wisconsin Electric Power Company	Point Beach 1	PWR	75 11 16	16	6.4	1,472.3
*Consumers Power Co.	Palisades	PWR	75 12 20	205	84.4	1,556.6
AmerGen Energy Company, LLC	Oyster Creek	BWR	75 12 27	56	11.0	1,567.6
*Exelon Generation Company, LLC	Quad Cities 1	BWR	76 01 03	156	30.2	1,597.7
Entergy Nuclear Generation Company	Pilgrim 1	BWR	76 01 27	132	25.5	1,623.1
*Rochester Gas and Electric Company	Ginna	PWR	76 01 29	37	14.6	1,637.6
*Consumers Power Co.	Big Rock Point	BWR	76 01 31	22	3.0	1,640.6
Duke Power Company	Oconee 1	PWR	76 02 08	60	28.2	1,668.8
BWXT	Oconee 1	PWR	76 02 08	0	0.1	1,668.8
Interstate Power & Light	Duane Arnold	BWR	76 02 13	80	15.1	1,683.8
Wisconsin Public Service Corporation	Kewaunee	PWR	76 02 14	11	4.4	1,688.1
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	76 02 20	30	14.0	1,702.1
Wisconsin Electric Power Company	Point Beach 2	PWR	76 02 26	34	13.4	1,715.5
Northern States Power Co.	Prairie Island 1	PWR	76 03 05	40	16.0	1,731.4
*Exelon Generation Company, LLC	Zion 1	PWR	76 03 05	49	22.3	1,753.7
*Exelon Generation Company, LLC	Dresden 2	BWR	76 03 14	156	30.0	1,783.7
Carolina Power & Light Company	Brunswick 2	BWR	76 03 19	4	0.8	1,784.4
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	76 03 27	186	36.3	1,820.7
U.S. DOE	Peach Bottom 2	BWR	76 03 27	2	0.4	1,821.1
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	76 03 30	72	32.8	1,853.8
Duke Power Company	Oconee 2	PWR	76 04 07	42	19.5	1,873.3
Florida Power & Light Co.	Turkey Point 4	PWR	76 04 18	6	2.8	1,876.0
...inia Electric and Power Co.	Surry 2	PWR	76 04 22	64	28.7	1,904.6
...OE	Surry 2	PWR	76 04 22	10	4.5	1,909.1
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	76 05 18	53	21.8	1,930.9
Pacific Gas & Electric Company	Humboldt Bay	BWR	76 07 03	184	13.3	1,944.1
*Exelon Generation Company, LLC	Quad Cities 2	BWR	76 09 10	164	31.8	1,975.9
Duke Power Company	Oconee 3	PWR	76 09 18	1	0.5	1,976.3
Nebraska Public Power District	Cooper	BWR	76 09 19	120	23.6	1,999.9
*Exelon Generation Company, LLC	Dresden 3	BWR	76 09 19	148	28.7	2,028.5
Southern California Edison Co.	San Onofre 1	PWR	76 09 30	53	19.3	2,047.7
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	76 10 01	124	24.3	2,072.0
Wisconsin Electric Power Company	Point Beach 1	PWR	76 10 01	32	12.9	2,084.8
Omaha Public Power District	Fort Calhoun	PWR	76 10 02	36	12.9	2,097.6
Virginia Electric and Power Co.	Surry 1	PWR	76 10 17	89	39.9	2,137.4
Northern States Power Co.	Prairie Island 2	PWR	76 10 22	40	16.1	2,153.4
Carolina Power & Light Company	Robinson 2	PWR	76 10 30	52	23.7	2,177.1
Florida Power & Light Co.	Turkey Point 3	PWR	76 11 15	57	25.3	2,202.3
*Indiana Michigan Power Co.	Cook 1	PWR	76 12 24	63	28.6	2,230.8
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	76 12 24	188	35.9	2,266.7
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	77 01 01	32	12.6	2,279.2
*Exelon Generation Company, LLC	Zion 2	PWR	77 01 07	42	19.1	2,298.3
Wisconsin Public Service Corporation	Kewaunee	PWR	77 01 17	45	17.7	2,315.9
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	77 01 27	50	23.3	2,339.1
Wisconsin Electric Power Company	Point Beach 2	PWR	77 03 03	37	14.3	2,353.4
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	77 03 05	160	30.8	2,384.1
Interstate Power & Light	Duane Arnold	BWR	77 03 12	74	13.9	2,398.0
Georgia Power Company	Hatch 1	BWR	77 03 12	4	0.8	2,398.7

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
Northern States Power Co.	Prairie Island 1	PWR	77 03 18	35	13.9	2,412.6
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	77 03 18	53	24.6	2,437.1
*Exelon Generation Company, LLC	Quad Cities 1	BWR	77 03 20	183	35.6	2,472.7
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	77 04 09	70	27.3	2,500.0
*Rochester Gas and Electric Company	Ginna	PWR	77 04 15	41	16.1	2,516.0
AmerGen Energy Company, LLC	Oyster Creek	BWR	77 04 23	128	24.9	2,540.8
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	77 04 27	172	32.3	2,573.0
BWXT	Oconee 1	PWR	77 05 08	0	0.1	2,573.0
Florida Power & Light Co.	Turkey Point 4	PWR	77 05 09	34	15.2	2,588.2
Dairyland Power Cooperative	La Crosse	BWR	77 05 11	32	3.9	2,592.1
Duke Power Company	Oconee 2	PWR	77 05 28	73	33.9	2,625.9
BWXT	Oconee 2	PWR	77 05 28	0	0.1	2,625.9
Yankee Atomic Electric Company	Yankee Rowe	PWR	77 06 04	36	8.7	2,634.6
*Exelon Generation Company, LLC	Dresden 1	BWR	77 06 15	66	6.9	2,641.4
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	77 06 21	132	25.9	2,667.2
*Consumers Power Co.	Big Rock Point	BWR	77 07 23	20	2.7	2,669.9
Duke Power Company	Oconee 1	PWR	77 08 05	60	28.1	2,697.9
BWXT	Oconee 1	PWR	77 08 05	0	0.1	2,697.9
Entergy Nuclear Generation Company	Pilgrim 1	BWR	77 08 06	428	82.6	2,780.5
Sacramento Municipal Utility District	Rancho Seco	PWR	77 08 20	20	9.3	2,789.8
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	77 08 21	112	20.6	2,810.4
*Exelon Generation Company, LLC	Zion 1	PWR	77 09 09	64	29.1	2,839.5
Carolina Power & Light Company	Brunswick 2	BWR	77 09 10	140	26.3	2,865.7
*Exelon Generation Company, LLC	Dresden 2	BWR	77 09 10	196	37.7	2,903.4
Northern States Power Co.	Monticello	BWR	77 09 10	20	3.8	2,907.2
Virginia Electric and Power Co.	Surry 2	PWR	77 09 10	79	35.6	2,942.7
U.S. DOE	Surry 2	PWR	77 09 10	2	1.0	2,943.6
Tennessee Valley Authority	Browns Ferry 1	BWR	77 09 13	168	32.9	2,976.4
Nebraska Public Power District	Cooper	BWR	77 09 19	12	2.4	2,978.8
Omaha Public Power District	Fort Calhoun	PWR	77 09 30	52	19.0	2,997.7
Wisconsin Electric Power Company	Point Beach 1	PWR	77 10 04	48	19.2	3,016.8
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	77 10 15	53	21.9	3,038.6
Duke Power Company	Oconee 3	PWR	77 10 21	61	28.3	3,066.8
Northern States Power Co.	Prairie Island 2	PWR	77 11 11	35	14.1	3,080.8
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	77 11 20	45	17.9	3,098.6
Florida Power & Light Co.	Turkey Point 3	PWR	77 11 24	27	12.3	3,110.8
U.S. DOE	Turkey Point 3	PWR	77 11 24	13	6.0	3,116.8
General Atomics	General Atomics	RCH	77 11 30	1	0.1	3,116.8
*Consumers Power Co.	Palisades	PWR	78 01 06	68	27.4	3,144.1
*Exelon Generation Company, LLC	Quad Cities 2	BWR	78 01 14	180	34.9	3,178.9
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	78 01 23	112	41.5	3,220.4
Carolina Power & Light Company	Robinson 2	PWR	78 01 27	53	24.2	3,244.5
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	78 02 02	61	28.2	3,272.7
*Exelon Generation Company, LLC	Zion 2	PWR	78 02 04	64	28.7	3,301.3
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	78 02 13	60	27.1	3,328.3
Florida Power Corporation	Crystal River 3	PWR	78 03 03	2	1.0	3,329.3
Georgia Power Company	Hatch 1	BWR	78 03 03	24	4.5	3,333.8
*Exelon Generation Company, LLC	Dresden 3	BWR	78 03 04	176	34.1	3,367.8
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	78 03 10	124	24.1	3,391.9
Tennessee Valley Authority	Browns Ferry 2	BWR	78 03 18	132	25.9	3,417.7
Interstate Power & Light	Duane Arnold	BWR	78 03 18	116	21.8	3,439.5

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Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	78 03 18	73	33.9	3,473.4
Portland General Electric Company	Trojan	PWR	78 03 18	1	0.5	3,473.8
Wisconsin Electric Power Company	Point Beach 2	PWR	78 03 22	44	17.7	3,491.4
*Rochester Gas and Electric Company	Ginna	PWR	78 03 25	41	16.2	3,507.5
Northern States Power Co.	Prairie Island 1	PWR	78 03 27	41	16.2	3,523.7
Florida Power & Light Co.	Saint Lucie 1	PWR	78 03 28	52	20.7	3,544.3
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	78 04 01	252	47.7	3,592.0
Nebraska Public Power District	Cooper	BWR	78 04 02	60	11.5	3,603.4
*Indiana Michigan Power Co.	Cook 1	PWR	78 04 06	64	29.2	3,632.5
Wisconsin Public Service Corporation	Kewaunee	PWR	78 04 21	41	16.1	3,648.5
Virginia Electric and Power Co.	Surry 1	PWR	78 04 22	42	19.2	3,667.7
U.S. DOE	Surry 1	PWR	78 04 22	1	0.5	3,668.1
General Atomics	General Atomics	RCH	78 04 30	1	0.1	3,668.1
Duke Power Company	Oconee 3	PWR	78 06 06	65	30.2	3,698.3
*Entergy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	78 06 07	64	29.3	3,727.5
Interstate Power & Light	Duane Arnold	BWR	78 06 17	4	0.8	3,728.3
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	78 07 14	133	50.7	3,778.9
Florida Power & Light Co.	Turkey Point 4	PWR	78 08 13	60	27.2	3,806.0
Duke Power Company	Oconee 1	PWR	78 09 02	56	26.0	3,832.0
U.S. DOE	Oconee 1	PWR	78 09 02	0	0.1	3,832.0
Tennessee Valley Authority	Browns Ferry 3	BWR	78 09 08	3	0.6	3,832.6
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	78 09 09	260	48.8	3,881.3
*Exelon Generation Company, LLC	Zion 1	PWR	78 09 14	65	29.6	3,910.8
Southern California Edison Co.	San Onofre 1	PWR	78 09 15	52	19.2	3,930.0
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	78 09 16	72	28.5	3,958.5
AmerGen Energy Company, LLC	Oyster Creek	BWR	78 09 16	168	31.1	3,989.5
Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	78 09 16	106	19.6	4,009.1
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	78 09 17	136	25.5	4,034.6
Wisconsin Electric Power Company	Point Beach 1	PWR	78 09 20	33	13.3	4,047.8
Northern States Power Co.	Monticello	BWR	78 10 14	8	1.5	4,049.3
Omaha Public Power District	Fort Calhoun	PWR	78 10 15	44	16.4	4,065.6
Yankee Atomic Electric Company	Yankee Rowe	PWR	78 10 21	40	9.4	4,075.0
*Exelon Generation Company, LLC	Dresden 1	BWR	78 10 31	464	47.1	4,122.1
Duke Power Company	Oconee 2	PWR	78 11 04	65	30.2	4,152.2
Sacramento Municipal Utility District	Rancho Seco	PWR	78 11 14	56	26.0	4,178.1
Tennessee Valley Authority	Browns Ferry 1	BWR	78 11 26	26	5.0	4,183.0
Northern States Power Co.	Prairie Island 2	PWR	78 11 27	40	16.1	4,199.1
Florida Power & Light Co.	Turkey Point 3	PWR	79 01 01	30	13.7	4,212.8
Carolina Power & Light Company	Brunswick 1	BWR	79 01 12	39	7.3	4,220.0
*Exelon Generation Company, LLC	Quad Cities 1	BWR	79 01 18	193	37.3	4,257.3
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	79 01 27	49	20.2	4,277.5
U.S. DOE	Fort St. Vrain	HTG	79 02 01	246	3.0	4,280.5
*Consumers Power Co.	Big Rock Point	BWR	79 02 02	26	3.5	4,284.0
Virginia Electric and Power Co.	Surry 2	PWR	79 02 04	44	20.2	4,304.1
U.S. DOE	Surry 2	PWR	79 02 04	8	3.7	4,307.8
*Rochester Gas and Electric Company	Ginna	PWR	79 02 10	40	15.7	4,323.5
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	79 02 17	52	24.2	4,347.6
Carolina Power & Light Company	Brunswick 2	BWR	79 03 02	132	24.8	4,372.4
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	79 03 03	168	31.2	4,403.5
Alabama Power Company	Farley 1	PWR	79 03 08	46	21.2	4,424.6
*Exelon Generation Company, LLC	Zion 2	PWR	79 03 09	69	31.2	4,455.7

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Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	79 03 10	72	26.6	4,482.3
Exelon Generation Company, LLC	Dresden 2	BWR	79 03 17	158	30.4	4,512.6
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	79 03 17	43	7.9	4,520.5
Wisconsin Electric Power Company	Point Beach 2	PWR	79 03 22	29	11.7	4,532.1
Dairyland Power Cooperative	La Crosse	BWR	79 03 25	28	3.4	4,535.5
U.S. DOE	Three Mile Island 2	PWR	79 03 28	177	82.5	4,618.0
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	79 03 30	65	30.2	4,648.1
Florida Power & Light Co.	Saint Lucie 1	PWR	79 03 31	68	25.3	4,673.4
PSEG Nuclear LLC	Salem 1	PWR	79 04 03	38	17.5	4,690.9
Florida Power & Light Co.	Turkey Point 4	PWR	79 04 04	65	29.2	4,720.0
*Indiana Michigan Power Co.	Cook 1	PWR	79 04 06	65	29.4	4,749.4
Nebraska Public Power District	Cooper	BWR	79 04 07	164	31.2	4,780.6
Carolina Power & Light Company	Robinson 2	PWR	79 04 11	48	20.6	4,801.2
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	79 04 21	72	28.5	4,829.6
Georgia Power Company	Hatch 1	BWR	79 04 22	188	35.3	4,864.8
Florida Power Corporation	Crystal River 3	PWR	79 04 23	56	26.0	4,890.8
Tennessee Valley Authority	Browns Ferry 2	BWR	79 04 27	156	29.5	4,920.3
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	79 04 28	148	28.1	4,948.4
Duke Power Company	Oconee 3	PWR	79 04 28	65	30.1	4,978.4
Northern States Power Co.	Prairie Island 1	PWR	79 04 30	41	16.5	4,994.8
Wisconsin Public Service Corporation	Kewaunee	PWR	79 05 26	13	5.3	5,000.0
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	79 06 16	63	28.3	5,028.3
Tennessee Valley Authority	Browns Ferry 3	BWR	79 08 24	97	18.2	5,046.4
*Consumers Power Co.	Palisades	PWR	79 09 08	68	26.5	5,072.9
*Entergy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	79 09 14	76	34.7	5,107.6
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	79 09 14	272	51.7	5,159.2
Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	79 09 22	139	25.7	5,184.9
Virginia Electric and Power Co.	North Anna 1	PWR	79 09 25	51	23.4	5,208.3
Wisconsin Electric Power Company	Point Beach 1	PWR	79 10 05	24	9.7	5,217.9
*Exelon Generation Company, LLC	Zion 1	PWR	79 10 06	70	32.0	5,249.8
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	79 10 13	64	23.7	5,273.5
*Indiana Michigan Power Co.	Cook 2	PWR	79 10 19	71	32.7	5,306.1
Duke Power Company	Oconee 1	PWR	79 11 21	67	31.2	5,337.2
U.S. DOE	Oconee 1	PWR	79 11 21	0	0.1	5,337.2
*Exelon Generation Company, LLC	Quad Cities 2	BWR	79 11 25	180	35.0	5,372.1
Pennsylvania Power Company	Beaver Valley 1	PWR	79 11 30	13	6.0	5,378.1
Florida Power & Light Co.	Turkey Point 3	PWR	79 12 01	37	17.0	5,395.0
Northern States Power Co.	Prairie Island 2	PWR	80 01 02	40	16.2	5,411.1
Tennessee Valley Authority	Browns Ferry 1	BWR	80 01 03	362	68.0	5,479.0
AmerGen Energy Company, LLC	Oyster Creek	BWR	80 01 05	153	27.6	5,506.6
Entergy Nuclear Generation Company	Pilgrim 1	BWR	80 01 05	92	17.0	5,523.6
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	80 01 11	73	26.3	5,549.8
Sacramento Municipal Utility District	Rancho Seco	PWR	80 01 14	65	30.2	5,579.9
Omaha Public Power District	Fort Calhoun	PWR	80 01 18	40	14.8	5,594.7
*Exelon Generation Company, LLC	Dresden 3	BWR	80 02 02	200	38.5	5,633.2
Interstate Power & Light	Duane Arnold	BWR	80 02 09	88	16.6	5,649.7
Northern States Power Co.	Monticello	BWR	80 02 22	148	27.3	5,676.9
Florida Power Corporation	Crystal River 3	PWR	80 02 26	44	20.5	5,697.3
Carolina Power & Light Company	Brunswick 2	BWR	80 03 01	132	24.8	5,722.1
Nebraska Public Power District	Cooper	BWR	80 03 01	152	28.7	5,750.7
Duke Power Company	Oconee 2	PWR	80 03 04	68	31.6	5,782.3

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Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
.da Power & Light Co.	Saint Lucie 1	PWR	80 03 15	88	33.1	5,815.3
Exelon Generation Company, LLC	Peach Bottom 2	BWR	80 03 21	276	51.3	5,866.6
*Rochester Gas and Electric Company	Ginna	PWR	80 03 29	36	14.2	5,880.8
Southern California Edison Co.	San Onofre 1	PWR	80 04 08	52	19.3	5,900.0
Wisconsin Electric Power Company	Point Beach 2	PWR	80 04 11	32	12.9	5,912.8
Portland General Electric Company	Trojan	PWR	80 04 11	53	24.4	5,937.2
*Exelon Generation Company, LLC	Zion 2	PWR	80 05 02	59	27.0	5,964.1
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	80 05 03	53	21.9	5,985.9
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	80 05 05	160	30.0	6,015.9
Wisconsin Public Service Corporation	Kewaunee	PWR	80 05 09	33	13.3	6,029.1
Carolina Power & Light Company	Brunswick 1	BWR	80 05 26	245	45.7	6,074.8
*Indiana Michigan Power Co.	Cook 1	PWR	80 05 30	66	28.4	6,103.1
General Atomics	General Atomics	MSC	80 06 30	0	0.1	6,103.1
Carolina Power & Light Company	Robinson 2	PWR	80 08 08	53	22.7	6,125.8
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	80 08 16	73	28.0	6,153.8
Northern States Power Co.	Prairie Island 1	PWR	80 08 31	40	16.0	6,169.7
*Exelon Generation Company, LLC	Quad Cities 1	BWR	80 08 31	224	42.4	6,212.1
Tennessee Valley Authority	Browns Ferry 2	BWR	80 09 05	352	66.0	6,278.0
Virginia Electric and Power Co.	Surry 1	PWR	80 09 14	72	32.9	6,310.9
PSEG Nuclear LLC	Salem 1	PWR	80 09 19	64	29.5	6,340.4
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	80 09 26	92	17.0	6,357.3
General Atomics	General Atomics	RCH	80 09 30	4	0.1	6,357.3
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	80 10 04	168	31.2	6,388.4
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	80 10 17	54	24.5	6,412.8
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	80 10 18	70	27.2	6,439.9
U S DOE	Calvert Cliffs 1	PWR	80 10 18	1	0.4	6,440.3
.umers Power Co.	Big Rock Point	BWR	80 10 31	22	2.9	6,443.2
Georgia Power Company	Hatch 2	BWR	80 11 01	76	14.0	6,457.1
Alabama Power Company	Farley 1	PWR	80 11 07	53	24.4	6,481.5
Florida Power & Light Co.	Turkey Point 4	PWR	80 11 08	36	16.5	6,498.0
Dairyland Power Cooperative	La Crosse	BWR	80 11 09	12	1.5	6,499.4
Tennessee Valley Authority	Browns Ferry 3	BWR	80 11 23	376	70.3	6,569.7
Wisconsin Electric Power Company	Point Beach 1	PWR	80 11 26	8	3.3	6,572.9
Duke Power Company	Oconee 3	PWR	80 12 05	68	31.6	6,604.4
Virginia Electric and Power Co.	North Anna 1	PWR	80 12 28	63	29.0	6,633.4
General Atomics	General Atomics	RCH	80 12 31	1	0.1	6,633.4
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	81 01 02	69	31.5	6,664.9
*Exelon Generation Company, LLC	Dresden 2	BWR	81 01 03	226	42.2	6,707.1
*Exelon Generation Company, LLC	Zion 1	PWR	81 01 14	64	29.4	6,736.4
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	81 01 18	73	28.2	6,764.5
Sacramento Municipal Utility District	Rancho Seco	PWR	81 01 31	41	19.0	6,783.4
Northern States Power Co.	Prairie Island 2	PWR	81 02 21	41	16.5	6,799.9
Georgia Power Company	Hatch 1	BWR	81 02 27	228	42.5	6,842.3
Florida Power & Light Co.	Turkey Point 3	PWR	81 02 28	78	35.7	6,878.0
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	81 03 06	216	40.6	6,918.5
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	81 03 07	200	36.9	6,955.3
*Indiana Michigan Power Co.	Cook 2	PWR	81 03 13	92	42.3	6,997.6
Interstate Power & Light	Duane Arnold	BWR	81 03 21	84	15.5	7,013.1
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	81 03 28	35	15.0	7,028.0
Tennessee Valley Authority	Browns Ferry 1	BWR	81 04 11	245	45.9	7,073.9
Wisconsin Electric Power Company	Point Beach 2	PWR	81 04 17	32	12.9	7,086.7

APPENDIX A

2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
nester Gas and Electric Company	Ginna	PWR	81 04 18	15	5.9	7,092.6
isconsin Public Service Corporation	Kewaunee	PWR	81 04 20	41	16.5	7,109.0
Northern States Power Co.	Monticello	BWR	81 04 20	104	19.2	7,128.2
Nebraska Public Power District	Cooper	BWR	81 04 21	112	21.0	7,149.1
Portland General Electric Company	Trojan	PWR	81 05 01	35	16.1	7,165.2
Yankee Atomic Electric Company	Yankee Rowe	PWR	81 05 02	36	8.5	7,173.7
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	81 05 08	73	28.2	7,201.9
U.S. DOE	Fort St. Vrain	HTG	81 05 13	240	2.9	7,204.7
*Indiana Michigan Power Co.	Cook 1	PWR	81 05 29	64	27.5	7,232.2
Duke Power Company	Oconee 1	PWR	81 06 26	69	32.0	7,264.1
General Atomics	General Atomics	RCH	81 07 31	6	0.1	7,264.1
Florida Power & Light Co.	Saint Lucie 1	PWR	81 08 11	64	24.9	7,288.9
*Consumers Power Co.	Palisades	PWR	81 08 29	68	28.1	7,317.0
*Exelon Generation Company, LLC	Quad Cities 2	BWR	81 09 07	200	37.3	7,354.2
Alabama Power Company	Farley 1	PWR	81 09 10	28	12.9	7,367.1
*Exelon Generation Company, LLC	Zion 2	PWR	81 09 11	64	29.3	7,396.3
Omaha Public Power District	Fort Calhoun	PWR	81 09 18	40	14.6	7,410.9
Northern States Power Co.	Prairie Island 1	PWR	81 09 19	40	16.1	7,426.9
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	81 09 26	53	21.9	7,448.8
Entergy Nuclear Generation Company	Pilgrim 1	BWR	81 09 26	232	42.7	7,491.4
Florida Power Corporation	Crystal River 3	PWR	81 09 28	65	30.2	7,521.6
Wisconsin Electric Power Company	Point Beach 1	PWR	81 10 08	25	10.1	7,531.6
U.S. DOE	Point Beach 1	PWR	81 10 08	3	1.3	7,532.9
Georgia Power Company	Hatch 1	BWR	81 10 09	32	5.8	7,538.6
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	81 10 16	120	22.2	7,560.7
Florida Power & Light Co.	Turkey Point 4	PWR	81 10 19	28	12.9	7,573.6
ssee Valley Authority	Browns Ferry 3	BWR	81 10 30	280	52.4	7,625.9
ergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	81 10 31	188	35.1	7,661.0
Virginia Electric and Power Co.	Surry 2	PWR	81 11 07	13	6.0	7,666.9
U.S. DOE	Surry 2	PWR	81 11 07	40	18.4	7,685.2
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	81 12 05	73	28.4	7,713.6
Pennsylvania Power Company	Beaver Valley 1	PWR	81 12 25	53	24.4	7,737.9
Duke Power Company	Oconee 2	PWR	81 12 29	71	33.0	7,770.8
PSEG Nuclear LLC	Salem 1	PWR	82 01 01	56	25.8	7,796.6
*Exelon Generation Company, LLC	Dresden 3	BWR	82 01 02	188	34.7	7,831.2
*Rochester Gas and Electric Company	Ginna	PWR	82 01 25	18	6.8	7,837.9
General Atomics	General Atomics	RCH	82 01 31	1	0.1	7,837.9
*Consumers Power Co.	Big Rock Point	BWR	82 02 05	22	2.8	7,840.7
*Exelon Generation Company, LLC	Zion 1	PWR	82 02 13	52	23.8	7,864.5
Georgia Power Company	Hatch 2	BWR	82 02 19	52	9.5	7,873.9
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	82 02 19	276	50.8	7,924.6
Carolina Power & Light Company	Robinson 2	PWR	82 02 28	46	19.8	7,944.3
Virginia Electric and Power Co.	North Anna 2	PWR	82 03 07	54	24.8	7,969.1
*Toledo Edison Co.	Davis-Besse	PWR	82 03 13	53	25.1	7,994.1
*Entergy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	82 03 24	76	34.7	8,028.8
Portland General Electric Company	Trojan	PWR	82 03 26	37	17.0	8,045.8
Wisconsin Public Service Corporation	Kewaunee	PWR	82 04 09	37	14.5	8,060.3
Dairyland Power Cooperative	La Crosse	BWR	82 04 09	30	3.3	8,063.6
Wisconsin Electric Power Company	Point Beach 2	PWR	82 04 16	29	11.7	8,075.2
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	82 04 17	76	29.6	8,104.8
U.S. DOE	Calvert Cliffs 1	PWR	82 04 17	1	0.4	8,105.1

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
[illegible]lina Power & Light Company	Brunswick 2	BWR	82 04 23	159	29.8	8,134.9
Duke Power Company	Oconee 3	PWR	82 04 24	72	33.4	8,168.3
Virginia Electric and Power Co.	North Anna 1	PWR	82 05 17	53	24.4	8,192.7
Nebraska Public Power District	Cooper	BWR	82 05 21	110	20.5	8,213.2
U.S. DOE	Cooper	BWR	82 05 21	2	0.4	8,213.6
Northern States Power Co.	Prairie Island 2	PWR	82 06 12	39	15.7	8,229.2
*Indiana Michigan Power Co.	Cook 1	PWR	82 07 03	64	27.4	8,256.6
Tennessee Valley Authority	Browns Ferry 2	BWR	82 07 30	196	36.4	8,293.0
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	82 08 20	60	24.3	8,317.3
General Atomics	General Atomics	RCH	82 08 31	3	0.1	8,317.3
Northern States Power Co.	Monticello	BWR	82 09 01	168	31.0	8,348.2
*Exelon Generation Company, LLC	Quad Cities 1	BWR	82 09 06	224	41.3	8,389.5
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	82 09 11	192	35.4	8,424.8
Tennessee Valley Authority	Sequoyah 1	PWR	82 09 11	68	31.3	8,456.1
Yankee Atomic Electric Company	Yankee Rowe	PWR	82 09 11	40	9.4	8,465.4
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	82 09 18	75	33.9	8,499.2
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	82 09 24	73	28.2	8,527.3
Georgia Power Company	Hatch 1	BWR	82 10 09	104	19.2	8,546.5
Florida Power & Light Co.	Turkey Point 4	PWR	82 10 09	42	19.3	8,565.8
PSEG Nuclear LLC	Salem 1	PWR	82 10 15	34	15.7	8,581.4
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	82 10 16	53	20.6	8,602.0
Alabama Power Company	Farley 2	PWR	82 10 22	52	23.8	8,625.8
Wisconsin Electric Power Company	Point Beach 1	PWR	82 10 22	20	8.1	8,633.9
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	82 11 08	69	32.1	8,665.9
Northern States Power Co.	Prairie Island 1	PWR	82 11 15	41	15.6	8,681.5
*Indiana Michigan Power Co.	Cook 2	PWR	82 11 20	81	37.3	8,718.7
[illegible]a Public Power District	Fort Calhoun	PWR	82 12 03	20	7.3	8,725.9
Carolina Power & Light Company	Brunswick 1	BWR	82 12 10	228	42.6	8,768.5
*Exelon Generation Company, LLC	Dresden 2	BWR	83 01 08	224	41.4	8,809.8
Alabama Power Company	Farley 1	PWR	83 01 14	66	30.3	8,840.1
PSEG Nuclear LLC	Salem 2	PWR	83 01 21	68	31.3	8,871.3
Portland General Electric Company	Trojan	PWR	83 01 21	39	18.0	8,889.2
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	83 01 22	49	20.3	8,909.5
Virginia Electric and Power Co.	Surry 1	PWR	83 02 07	62	28.4	8,937.8
Interstate Power & Light	Duane Arnold	BWR	83 02 11	128	23.6	8,961.4
AmerGen Energy Company, LLC	Oyster Creek	BWR	83 02 12	207	36.5	8,997.8
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	83 02 14	284	52.1	9,049.9
Sacramento Municipal Utility District	Rancho Seco	PWR	83 02 17	69	32.0	9,081.8
*Exelon Generation Company, LLC	Zion 2	PWR	83 02 24	56	25.6	9,107.4
Florida Power & Light Co.	Saint Lucie 1	PWR	83 02 26	87	33.2	9,140.5
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	83 03 04	106	19.4	9,159.9
Wisconsin Public Service Corporation	Kewaunee	PWR	83 03 17	29	11.5	9,171.4
Florida Power Corporation	Crystal River 3	PWR	83 03 19	60	28.2	9,199.5
Wisconsin Electric Power Company	Point Beach 2	PWR	83 03 25	26	10.4	9,209.9
*Rochester Gas and Electric Company	Ginna	PWR	83 03 26	16	6.0	9,215.9
Virginia Electric and Power Co.	North Anna 2	PWR	83 04 02	55	25.4	9,241.2
Georgia Power Company	Hatch 2	BWR	83 04 04	56	10.3	9,251.4
Florida Power & Light Co.	Turkey Point 3	PWR	83 04 06	49	22.4	9,273.8
U.S. DOE	multiple	MSC	83 04 07	n/a	58.5	9,332.3
Tennessee Valley Authority	Browns Ferry 1	BWR	83 04 16	267	49.1	9,381.3
Nebraska Public Power District	Cooper	BWR	83 04 30	116	21.5	9,402.7

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2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser[2]	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
Consumers Power Co.	Big Rock Point	BWR	83 05 13	22	2.9	9,405.6
Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	83 05 28	76	29.7	9,435.2
Duke Power Company	Oconee 1	PWR	83 06 01	65	30.2	9,465.3
BWXT	Oconee 1	PWR	83 06 01	0	0.1	9,465.3
U.S. DOE	Oconee 1	PWR	83 06 01	0	0.1	9,465.3
Pennsylvania Power Company	Beaver Valley 1	PWR	83 06 10	53	24.4	9,489.6
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	83 06 23	200	36.7	9,526.3
Virginia Electric and Power Co.	Surry 2	PWR	83 06 30	53	24.3	9,550.6
U.S. DOE	Surry 2	PWR	83 06 30	8	3.7	9,554.2
*Indiana Michigan Power Co.	Cook 1	PWR	83 07 16	66	28.3	9,582.4
Tennessee Valley Authority	Sequoyah 2	PWR	83 07 19	68	31.2	9,613.6
*Toledo Edison Co.	Davis-Besse	PWR	83 07 25	85	40.2	9,653.8
*Consumers Power Co.	Palisades	PWR	83 08 12	68	26.4	9,680.1
Northern States Power Co.	Prairie Island 2	PWR	83 08 28	41	15.6	9,695.7
General Atomics	General Atomics	RCH	83 08 31	2	0.1	9,695.7
*Exelon Generation Company, LLC	Quad Cities 2	BWR	83 09 04	228	42.1	9,737.7
Tennessee Valley Authority	Browns Ferry 3	BWR	83 09 07	196	36.0	9,773.6
*Exelon Generation Company, LLC	Zion 1	PWR	83 09 07	73	33.4	9,807.0
Duke Power Company	Oconee 2	PWR	83 09 14	73	34.0	9,840.9
BWXT	Oconee 2	PWR	83 09 14	0	0.1	9,840.9
Alabama Power Company	Farley 2	PWR	83 09 16	64	29.4	9,870.3
*Exelon Generation Company, LLC	Dresden 3	BWR	83 09 30	220	40.5	9,910.7
Wisconsin Electric Power Company	Point Beach 1	PWR	83 09 30	42	16.9	9,927.6
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	83 10 01	104	39.6	9,967.1
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	83 10 05	66	27.0	9,994.1
Georgia Power Company	Hatch 1	BWR	83 11 05	146	26.8	10,020.9
and Power Cooperative	La Crosse	BWR	83 11 05	22	2.4	10,023.3
Northern States Power Co.	Prairie Island 1	PWR	83 12 01	41	15.6	10,038.9
Entergy Nuclear Generation Company	Pilgrim 1	BWR	83 12 10	224	41.3	10,080.1
Georgia Power Company	Hatch 2	BWR	84 01 13	184	33.9	10,113.9
U.S. DOE	Fort St. Vrain	HTG	84 01 20	240	2.8	10,116.6
Carolina Power & Light Company	Robinson 2	PWR	84 01 26	61	26.3	10,142.9
Northern States Power Co.	Monticello	BWR	84 02 03	188	33.9	10,176.7
Alabama Power Company	Farley 1	PWR	84 02 10	77	35.3	10,212.0
Tennessee Valley Authority	Sequoyah 1	PWR	84 02 20	72	33.1	10,245.0
Duke Power Company	McGuire 1	PWR	84 02 24	38	17.5	10,262.5
PSEG Nuclear LLC	Salem 1	PWR	84 02 24	73	33.4	10,295.9
Omaha Public Power District	Fort Calhoun	PWR	84 03 02	26	9.4	10,305.3
*Rochester Gas and Electric Company	Ginna	PWR	84 03 03	29	10.9	10,316.1
*Exelon Generation Company, LLC	Quad Cities 1	BWR	84 03 06	196	35.4	10,351.4
*Indiana Michigan Power Co.	Cook 2	PWR	84 03 08	91	41.8	10,393.2
Duke Power Company	Oconee 3	PWR	84 03 08	52	24.2	10,417.3
Florida Power & Light Co.	Turkey Point 4	PWR	84 03 08	54	24.8	10,442.0
Carolina Power & Light Company	Brunswick 2	BWR	84 03 11	185	34.4	10,476.4
Wisconsin Public Service Corporation	Kewaunee	PWR	84 03 16	49	18.9	10,495.2
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	84 03 17	216	39.3	10,534.5
*Exelon Generation Company, LLC	Zion 2	PWR	84 03 27	68	31.2	10,565.6
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	84 03 31	73	27.5	10,593.0
Yankee Atomic Electric Company	Yankee Rowe	PWR	84 03 31	36	8.5	10,601.4
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	84 04 14	200	35.8	10,637.2
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	84 04 21	101	37.8	10,674.9

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
[illegible]and General Electric Company	Trojan	PWR	84 04 27	52	23.9	10,698.8
Exelon Generation Company, LLC	Peach Bottom 2	BWR	84 04 28	292	53.4	10,752.1
Virginia Electric and Power Co.	North Anna 1	PWR	84 05 12	65	29.9	10,781.9
*Consumers Power Co.	Big Rock Point	BWR	84 05 31	16	2.1	10,784.0
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	84 06 02	72	32.5	10,816.5
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	84 06 15	106	19.4	10,835.8
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	84 08 01	53	21.9	10,857.6
Virginia Electric and Power Co.	North Anna 2	PWR	84 08 02	58	26.7	10,884.2
Northern States Power Co.	Prairie Island 2	PWR	84 09 03	41	15.5	10,899.7
*Toledo Edison Co.	Davis-Besse	PWR	84 09 11	65	30.6	10,930.3
Tennessee Valley Authority	Browns Ferry 2	BWR	84 09 15	603	110.4	11,040.6
Nebraska Public Power District	Cooper	BWR	84 09 15	116	21.3	11,061.8
Virginia Electric and Power Co.	Surry 1	PWR	84 09 26	72	32.9	11,094.7
Wisconsin Electric Power Company	Point Beach 2	PWR	84 09 28	22	8.9	11,103.5
Tennessee Valley Authority	Sequoyah 2	PWR	84 09 28	68	31.3	11,134.8
South Carolina Electric & Gas Company	Summer	PWR	84 09 28	44	20.2	11,154.9
Georgia Power Company	Hatch 1	BWR	84 09 29	237	43.8	11,198.7
General Atomics	General Atomics	RCH	84 09 30	1	0.1	11,198.7
PSEG Nuclear LLC	Salem 2	PWR	84 10 04	68	31.3	11,229.9
*Exelon Generation Company, LLC	Dresden 2	BWR	84 10 05	196	35.6	11,265.5
Duke Power Company	Oconee 1	PWR	84 10 05	64	29.7	11,295.1
U.S. DOE	Oconee 1	PWR	84 10 05	0	0.1	11,295.1
Pennsylvania Power Company	Beaver Valley 1	PWR	84 10 11	77	35.3	11,330.3
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	84 10 12	68	31.6	11,361.9
Florida Power & Light Co.	Saint Lucie 2	PWR	84 10 12	80	31.0	11,392.8
Southern California Edison Co.	San Onofre 2	PWR	84 10 21	64	27.4	11,420.2
[illegible]al Atomics	General Atomics	RCH	84 11 30	2	0.1	11,420.2
Alabama Power Company	Farley 2	PWR	85 01 05	71	32.6	11,452.7
Northern States Power Co.	Prairie Island 1	PWR	85 01 11	5	1.9	11,454.6
Duke Power Company	McGuire 2	PWR	85 01 25	39	18.0	11,472.6
*Exelon Generation Company, LLC	Zion 1	PWR	85 01 30	73	33.3	11,505.9
Interstate Power & Light	Duane Arnold	BWR	85 02 01	120	22.1	11,527.9
Wisconsin Public Service Corporation	Kewaunee	PWR	85 02 08	45	17.1	11,544.9
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	85 02 09	192	35.3	11,580.2
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	85 02 14	188	34.5	11,614.6
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	85 02 16	80	32.3	11,646.9
Duke Power Company	Oconee 2	PWR	85 02 21	68	31.6	11,678.4
BWXT	Oconee 2	PWR	85 02 21	0	0.1	11,678.4
Florida Power Corporation	Crystal River 3	PWR	85 03 08	65	30.2	11,708.5
Dairyland Power Cooperative	La Crosse	BWR	85 03 11	28	3.1	11,711.5
Sacramento Municipal Utility District	Rancho Seco	PWR	85 03 15	65	30.2	11,741.6
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	85 03 16	68	29.1	11,770.7
*Exelon Generation Company, LLC	Quad Cities 2	BWR	85 03 17	176	32.0	11,802.6
Tennessee Valley Authority	Browns Ferry 1	BWR	85 03 19	420	76.7	11,879.3
*Rochester Gas and Electric Company	Ginna	PWR	85 03 20	32	12.0	11,891.3
Virginia Electric and Power Co.	Surry 2	PWR	85 03 20	54	24.8	11,916.0
Carolina Power & Light Company	Brunswick 1	BWR	85 03 29	184	33.9	11,949.8
Florida Power & Light Co.	Turkey Point 3	PWR	85 03 30	57	26.1	11,975.9
BWXT	Quad Cities 2	BWR	85 03 31	0	0.1	11,975.9
Georgia Power Company	Hatch 2	BWR	85 04 05	181	33.3	12,009.2
Wisconsin Electric Power Company	Point Beach 1	PWR	85 04 05	31	12.5	12,021.6

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Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
[illegible]more Gas & Electric Co.	Calvert Cliffs 1	PWR	85 04 06	76	29.3	12,050.9
[illegible]ndiana Michigan Power Co.	Cook 1	PWR	85 04 06	94	40.2	12,091.0
Alabama Power Company	Farley 1	PWR	85 04 06	62	28.5	12,119.5
Duke Power Company	McGuire 1	PWR	85 04 19	69	31.7	12,151.2
Portland General Electric Company	Trojan	PWR	85 05 02	40	18.4	12,169.6
*Entergy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	85 06 07	72	33.0	12,202.5
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	85 07 14	284	51.8	12,254.3
General Atomics	General Atomics	RCH	85 07 31	2	0.1	12,254.3
Duke Power Company	Oconee 3	PWR	85 08 07	52	24.1	12,278.3
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	85 08 17	73	27.4	12,305.7
Tennessee Valley Authority	Sequoyah 1	PWR	85 08 26	56	25.7	12,331.4
General Atomics	General Atomics	RCH	85 08 31	1	0.1	12,331.4
Northern States Power Co.	Prairie Island 2	PWR	85 09 05	53	19.4	12,350.7
*Exelon Generation Company, LLC	Zion 2	PWR	85 09 05	76	34.8	12,385.5
*Consumers Power Co.	Big Rock Point	BWR	85 09 06	20	2.6	12,388.1
Southern California Edison Co.	San Onofre 3	PWR	85 09 14	64	27.4	12,415.4
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	85 09 20	120	22.0	12,437.3
Omaha Public Power District	Fort Calhoun	PWR	85 09 28	64	22.9	12,460.2
Wisconsin Electric Power Company	Point Beach 2	PWR	85 10 04	22	8.7	12,468.9
South Carolina Electric & Gas Company	Summer	PWR	85 10 05	66	30.3	12,499.2
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	85 10 18	69	26.9	12,526.0
*Exelon Generation Company, LLC	La Salle County 1	BWR	85 10 18	232	42.6	12,568.5
Yankee Atomic Electric Company	Yankee Rowe	PWR	85 10 19	40	9.4	12,577.9
Florida Power & Light Co.	Saint Lucie 1	PWR	85 10 20	85	32.2	12,610.0
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	85 10 26	200	35.7	12,645.6
*Exelon Generation Company, LLC	Dresden 3	BWR	85 10 28	176	32.0	12,677.6
[illegible]a Electric and Power Co.	North Anna 1	PWR	85 11 04	42	19.3	12,696.9
Southern California Edison Co.	San Onofre 1	PWR	85 11 21	52	19.3	12,716.2
Georgia Power Company	Hatch 1	BWR	85 11 27	141	26.2	12,742.3
Carolina Power & Light Company	Brunswick 2	BWR	85 11 29	148	27.1	12,769.4
*Consumers Power Co.	Palisades	PWR	85 11 30	52	20.3	12,789.6
General Atomics	General Atomics	RCH	85 12 31	2	0.1	12,789.6
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	86 01 03	56	22.8	12,812.3
*Exelon Generation Company, LLC	Quad Cities 1	BWR	86 01 06	216	38.3	12,850.6
Florida Power & Light Co.	Turkey Point 4	PWR	86 01 10	61	27.9	12,878.4
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	86 01 13	68	31.1	12,909.5
Carolina Power & Light Company	Robinson 2	PWR	86 01 31	48	20.8	12,930.2
*Rochester Gas and Electric Company	Ginna	PWR	86 02 07	33	12.4	12,942.5
Duke Power Company	Oconee 1	PWR	86 02 13	51	23.7	12,966.1
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	86 02 15	296	54.4	13,020.4
Virginia Electric and Power Co.	North Anna 2	PWR	86 02 20	39	18.0	13,038.4
Ameren UE	Callaway	PWR	86 02 28	84	38.7	13,077.1
*Indiana Michigan Power Co.	Cook 2	PWR	86 02 28	89	37.4	13,114.4
Wisconsin Public Service Corporation	Kewaunee	PWR	86 02 28	37	14.1	13,128.4
Northern States Power Co.	Prairie Island 1	PWR	86 03 04	61	22.3	13,150.7
Dairyland Power Cooperative	La Crosse	BWR	86 03 07	28	3.1	13,153.7
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	86 03 08	200	35.5	13,189.2
Energy Northwest	Columbia	BWR	86 03 14	96	17.6	13,206.8
Duke Power Company	McGuire 2	PWR	86 03 14	69	31.7	13,238.4
Southern California Edison Co.	San Onofre 2	PWR	86 03 15	89	35.5	13,273.9
PSEG Nuclear LLC	Salem 1	PWR	86 03 21	69	31.7	13,305.5

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
General Atomics	General Atomics	RCH	86 03 31	1	0.1	13,305.5
Alabama Power Company	Farley 2	PWR	86 04 04	64	29.4	13,334.9
Florida Power & Light Co.	Saint Lucie 2	PWR	86 04 05	84	30.6	13,365.4
Portland General Electric Company	Trojan	PWR	86 04 09	61	28.1	13,393.4
AmerGen Energy Company, LLC	Oyster Creek	BWR	86 04 11	184	32.3	13,425.6
Wisconsin Electric Power Company	Point Beach 1	PWR	86 04 11	34	13.7	13,439.2
Northern States Power Co.	Monticello	BWR	86 04 30	120	21.6	13,460.8
Virginia Electric and Power Co.	Surry 1	PWR	86 05 10	58	26.6	13,487.3
Duke Power Company	McGuire 1	PWR	86 05 16	75	34.5	13,521.8
Pennsylvania Power Company	Beaver Valley 1	PWR	86 05 17	65	29.9	13,551.6
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	86 06 13	60	25.7	13,577.2
Entergy Nuclear Generation Company	Pilgrim 1	BWR	86 07 25	192	34.3	13,611.5
Duke Power Company	Catawba 1	PWR	86 08 08	64	27.2	13,638.6
Pennsylvania Power & Light Co.	Susquehanna 2	BWR	86 08 09	324	59.6	13,698.1
Duke Power Company	Oconee 2	PWR	86 08 16	60	27.9	13,725.9
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	86 08 29	66	30.5	13,756.3
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	86 09 04	64	29.6	13,785.9
*Exelon Generation Company, LLC	Zion 1	PWR	86 09 04	60	27.5	13,813.4
U.S. DOE	Arkansas Nuclear One 1	PWR	86 09 04	0	0.1	13,813.4
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	86 09 05	264	48.6	13,862.0
Georgia Power Company	Hatch 2	BWR	86 09 18	155	28.5	13,890.4
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	86 09 20	57	23.2	13,913.5
Wisconsin Electric Power Company	Point Beach 2	PWR	86 09 27	29	11.7	13,925.2
PSEG Nuclear LLC	Salem 2	PWR	86 10 02	57	26.2	13,951.3
Alabama Power Company	Farley 1	PWR	86 10 03	59	27.2	13,978.5
Nebraska Public Power District	Cooper	BWR	86 10 04	152	27.8	14,006.3
Virginia Electric and Power Co.	Surry 2	PWR	86 10 04	25	11.5	14,017.7
Exelon Generation Company, LLC	Quad Cities 2	BWR	86 10 11	152	26.9	14,044.6
Kansas Gas & Electric Company	Wolf Creek	PWR	86 10 16	8	3.7	14,048.3
Northern States Power Co.	Prairie Island 2	PWR	86 10 22	40	14.8	14,063.0
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	86 10 25	76	29.0	14,092.0
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	86 10 31	75	34.8	14,126.8
Entergy Louisiana, Inc.	Waterford 3	PWR	86 11 26	92	38.6	14,165.4
*Exelon Generation Company, LLC	Dresden 2	BWR	86 11 29	172	30.5	14,195.8
Duke Power Company	Oconee 3	PWR	86 12 17	60	27.8	14,223.6
*Consumers Power Co.	Big Rock Point	BWR	87 01 02	24	3.1	14,226.7
Southern California Edison Co.	San Onofre 3	PWR	87 01 02	89	35.4	14,262.1
*Exelon Generation Company, LLC	La Salle County 2	BWR	87 01 03	224	41.0	14,303.1
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	87 01 16	196	35.8	14,338.8
Florida Power & Light Co.	Saint Lucie 1	PWR	87 02 07	84	31.3	14,370.1
*Rochester Gas and Electric Company	Ginna	PWR	87 02 13	32	12.0	14,382.1
Carolina Power & Light Company	Brunswick 1	BWR	87 02 14	176	32.3	14,414.3
*Exelon Generation Company, LLC	Byron 1	PWR	87 02 14	88	37.4	14,451.6
Wisconsin Public Service Corporation	Kewaunee	PWR	87 02 24	29	11.0	14,462.6
Omaha Public Power District	Fort Calhoun	PWR	87 03 01	46	16.5	14,479.0
South Carolina Electric & Gas Company	Summer	PWR	87 03 06	60	27.7	14,506.7
Interstate Power & Light	Duane Arnold	BWR	87 03 12	128	23.4	14,530.1
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	87 03 13	86	33.0	14,563.0
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	87 03 13	272	49.7	14,612.7
Florida Power & Light Co.	Turkey Point 3	PWR	87 03 15	61	28.0	14,640.7
*Exelon Generation Company, LLC	Zion 2	PWR	87 03 25	80	36.7	14,677.3

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

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Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
[illegible]ne Yankee Atomic Power Company	Maine Yankee	PWR	87 03 28	67	24.5	14,701.8
Carolina Power & Light Company	Robinson 2	PWR	87 03 28	50	21.6	14,723.3
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	87 03 31	192	35.1	14,758.3
Portland General Electric Company	Trojan	PWR	87 04 01	57	26.2	14,784.5
*Entergy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	87 04 02	79	36.1	14,820.6
Pacific Gas & Electric Company	Diablo Canyon 2	PWR	87 04 03	37	17.1	14,837.6
Wisconsin Electric Power Company	Point Beach 1	PWR	87 04 03	37	14.9	14,852.5
Northern States Power Co.	Prairie Island 1	PWR	87 04 08	41	15.0	14,867.4
Energy Northwest	Columbia	BWR	87 04 10	124	22.7	14,890.1
Virginia Electric and Power Co.	North Anna 1	PWR	87 04 19	47	21.7	14,911.8
Georgia Power Company	Hatch 1	BWR	87 04 22	272	49.8	14,961.5
Dairyland Power Cooperative	La Crosse	BWR	87 04 30	72	7.9	14,969.4
Duke Power Company	McGuire 2	PWR	87 05 01	74	34.1	15,003.4
Yankee Atomic Electric Company	Yankee Rowe	PWR	87 05 02	36	8.3	15,011.7
*Exelon Generation Company, LLC	Limerick 1	BWR	87 05 15	100	18.6	15,030.3
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	87 06 05	196	34.7	15,065.0
*Indiana Michigan Power Co.	Cook 1	PWR	87 06 27	80	35.8	15,100.7
General Atomics	General Atomics	RCH	87 06 30	1	0.1	15,100.7
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	87 07 18	53	21.9	15,122.5
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	87 08 07	136	24.9	15,147.4
Virginia Electric and Power Co.	North Anna 2	PWR	87 08 24	57	26.4	15,173.7
Southern California Edison Co.	San Onofre 2	PWR	87 08 29	113	47.9	15,221.6
Duke Power Company	Oconee 1	PWR	87 09 02	56	25.9	15,247.4
Duke Power Company	McGuire 1	PWR	87 09 04	72	31.0	15,278.4
Ameren UE	Callaway	PWR	87 09 11	96	44.3	15,322.7
*Exelon Generation Company, LLC	Quad Cities 1	BWR	87 09 12	200	35.5	15,358.1
[illegible]lvania Power & Light Co.	Susquehanna 1	BWR	87 09 12	240	44.1	15,402.1
Entergy Gulf States, Inc.	River Bend	BWR	87 09 14	164	30.5	15,432.6
Florida Power Corporation	Crystal River 3	PWR	87 09 18	89	41.3	15,473.9
Kansas Gas & Electric Company	Wolf Creek	PWR	87 09 27	52	24.0	15,497.9
Arizona Public Service Company	Palo Verde 1	PWR	87 10 02	73	31.1	15,529.0
Wisconsin Electric Power Company	Point Beach 2	PWR	87 10 02	35	13.6	15,542.5
PSEG Nuclear LLC	Salem 1	PWR	87 10 02	70	32.3	15,574.8
Duke Power Company	Catawba 1	PWR	87 10 03	65	27.6	15,602.3
Alabama Power Company	Farley 2	PWR	87 10 03	46	21.3	15,623.5
Florida Power & Light Co.	Saint Lucie 2	PWR	87 10 03	72	27.4	15,650.9
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	87 10 05	68	31.1	15,682.0
Northern States Power Co.	Monticello	BWR	87 10 21	136	24.5	15,706.4
*Dominion Nuclear Connecticut, Inc.	Millstone 3	PWR	87 10 31	75	34.7	15,741.0
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	87 11 07	288	53.0	15,793.9
Pennsylvania Power Company	Beaver Valley 1	PWR	87 12 11	73	33.8	15,827.6
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	87 12 19	176	31.2	15,858.7
Duke Power Company	Catawba 2	PWR	87 12 23	64	27.2	15,885.9
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	87 12 31	77	31.3	15,917.2
Carolina Power & Light Company	Brunswick 2	BWR	88 01 01	183	33.5	15,950.7
Northern States Power Co.	Prairie Island 2	PWR	88 01 06	48	17.0	15,967.6
Georgia Power Company	Hatch 2	BWR	88 01 13	208	38.2	16,005.7
Duke Power Company	Oconee 2	PWR	88 02 02	52	24.1	16,029.8
*Rochester Gas and Electric Company	Ginna	PWR	88 02 05	33	11.7	16,041.4
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	88 02 12	51	21.6	16,063.0
PSEG Nuclear LLC	Hope Creek	BWR	88 02 14	232	43.0	16,106.0

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2004 ACCEPTANCE PRIORITY RANKING

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Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
[illegible]ona Public Service Company	Palo Verde 2	PWR	88 02 20	84	35.5	16,141.4
Exelon Generation Company, LLC	Zion 1	PWR	88 02 24	80	36.9	16,178.3
Wisconsin Public Service Corporation	Kewaunee	PWR	88 03 02	32	12.2	16,190.4
Nebraska Public Power District	Cooper	BWR	88 03 05	124	22.7	16,213.1
Pennsylvania Power & Light Co.	Susquehanna 2	BWR	88 03 05	232	42.6	16,255.6
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	88 03 06	68	31.3	16,286.9
*Toledo Edison Co.	Davis-Besse	PWR	88 03 11	65	30.5	16,317.4
*Exelon Generation Company, LLC	La Salle County 1	BWR	88 03 13	224	41.1	16,358.4
Alabama Power Company	Farley 1	PWR	88 03 26	73	33.7	16,392.1
*Exelon Generation Company, LLC	Dresden 3	BWR	88 03 27	168	29.7	16,421.7
Entergy Louisiana, Inc.	Waterford 3	PWR	88 04 01	80	31.8	16,453.5
*Consumers Power Co.	Big Rock Point	BWR	88 04 08	20	2.7	16,456.1
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	88 04 08	93	36.2	16,492.2
Wisconsin Electric Power Company	Point Beach 1	PWR	88 04 08	33	13.0	16,505.1
Virginia Electric and Power Co.	Surry 1	PWR	88 04 09	52	23.9	16,529.0
*Exelon Generation Company, LLC	Quad Cities 2	BWR	88 04 10	164	29.1	16,558.0
Portland General Electric Company	Trojan	PWR	88 04 13	49	22.6	16,580.6
*Indiana Michigan Power Co.	Cook 2	PWR	88 04 23	72	29.0	16,609.5
Energy Northwest	Columbia	BWR	88 04 30	151	27.6	16,637.1
General Atomics	General Atomics	MSC	88 04 30	0	0.1	16,637.1
Southern California Edison Co.	San Onofre 3	PWR	88 04 30	113	47.8	16,684.9
Duke Power Company	McGuire 2	PWR	88 05 27	69	29.7	16,714.5
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	88 06 17	58	26.9	16,741.4
General Atomics	General Atomics	RCH	88 06 30	5	0.1	16,741.4
Florida Power & Light Co.	Saint Lucie 1	PWR	88 07 11	83	30.9	16,772.2
Carolina Power & Light Company	Harris	PWR	88 07 30	4	1.9	16,774.1
[illegible]umers Power Co.	Palisades	PWR	88 08 08	52	20.5	16,794.5
Duke Power Company	Oconee 3	PWR	88 08 10	88	40.8	16,835.3
Northern States Power Co.	Prairie Island 1	PWR	88 08 24	37	13.6	16,848.8
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	88 08 27	184	33.6	16,882.4
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	88 08 28	61	28.3	16,910.6
PSEG Nuclear LLC	Salem 2	PWR	88 08 31	81	37.3	16,947.9
*Exelon Generation Company, LLC	Byron 1	PWR	88 09 03	76	32.3	16,980.1
Virginia Electric and Power Co.	Surry 2	PWR	88 09 10	69	31.7	17,011.7
South Carolina Electric & Gas Company	Summer	PWR	88 09 16	61	28.0	17,039.7
Pacific Gas & Electric Company	Diablo Canyon 2	PWR	88 09 17	74	34.1	17,073.7
Florida Power & Light Co.	Turkey Point 4	PWR	88 09 20	53	24.3	17,098.0
Omaha Public Power District	Fort Calhoun	PWR	88 09 27	44	15.3	17,113.2
Georgia Power Company	Hatch 1	BWR	88 09 28	150	27.6	17,140.7
Interstate Power & Light	Duane Arnold	BWR	88 09 29	120	22.0	17,162.7
AmerGen Energy Company, LLC	Oyster Creek	BWR	88 09 30	176	30.9	17,193.5
Kansas Gas & Electric Company	Wolf Creek	PWR	88 10 07	73	33.8	17,227.2
Wisconsin Electric Power Company	Point Beach 2	PWR	88 10 08	34	12.6	17,239.8
Georgia Power Company	Vogtle 1	PWR	88 10 08	67	31.2	17,270.9
Duke Power Company	McGuire 1	PWR	88 10 12	77	32.7	17,303.6
*Exelon Generation Company, LLC	Zion 2	PWR	88 10 12	68	31.3	17,334.8
*Exelon Generation Company, LLC	La Salle County 2	BWR	88 10 14	236	43.2	17,377.9
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	88 10 15	57	20.9	17,398.8
*Exelon Generation Company, LLC	Dresden 2	BWR	88 10 30	200	35.2	17,433.9
Carolina Power & Light Company	Brunswick 1	BWR	88 11 10	184	33.7	17,467.6
Carolina Power & Light Company	Robinson 2	PWR	88 11 11	49	21.1	17,488.6

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2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
Yankee Atomic Electric Company	Yankee Rowe	PWR	88 11 12	40	9.2	17,497.8
Duke Power Company	Catawba 1	PWR	88 11 24	61	25.9	17,523.6
Southern California Edison Co.	San Onofre 1	PWR	88 11 27	52	19.3	17,542.8
General Atomics	General Atomics	RCH	88 11 30	1	0.1	17,542.8
General Atomics	General Atomics	RCH	88 12 31	1	0.1	17,542.8
AmerGen Energy Company, LLC	Clinton	BWR	89 01 02	168	31.0	17,573.8
BWXT	Oconee 1	PWR	89 01 03	0	0.1	17,573.8
Duke Power Company	Oconee 1	PWR	89 01 03	53	24.6	17,598.3
*Exelon Generation Company, LLC	Byron 2	PWR	89 01 07	88	37.6	17,635.8
*Exelon Generation Company, LLC	Limerick 1	BWR	89 01 11	636	117.4	17,753.2
Tennessee Valley Authority	Sequoyah 2	PWR	89 01 18	72	33.1	17,786.3
Florida Power & Light Co.	Saint Lucie 2	PWR	89 02 01	84	31.8	17,818.1
*Entergy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	89 02 04	62	28.5	17,846.5
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	89 02 04	73	29.9	17,876.3
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	89 02 11	136	25.1	17,901.3
Wisconsin Public Service Corporation	Kewaunee	PWR	89 02 20	45	17.1	17,918.4
Virginia Electric and Power Co.	North Anna 2	PWR	89 02 20	61	28.2	17,946.5
Cleveland Electric Illuminating Co.	Perry 1	BWR	89 02 22	123	22.7	17,969.2
Virginia Electric and Power Co.	North Anna 1	PWR	89 02 25	54	24.9	17,994.1
Arizona Public Service Company	Palo Verde 1	PWR	89 03 05	100	39.9	18,033.9
Arizona Public Service Company	Palo Verde 3	PWR	89 03 08	69	29.6	18,063.5
Duke Power Company	Catawba 2	PWR	89 03 10	71	30.3	18,093.7
Entergy Gulf States, Inc.	River Bend	BWR	89 03 15	222	41.2	18,134.8
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	89 03 17	72	28.1	18,162.8
*Rochester Gas and Electric Company	Ginna	PWR	89 03 17	36	12.9	18,175.7
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	89 03 17	276	50.5	18,226.1
Pennsylvania Power Company	Beaver Valley 2	PWR	89 03 18	53	24.5	18,250.5
Indiana Michigan Power Co.	Cook 1	PWR	89 03 18	80	36.8	18,287.3
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	89 03 18	72	33.1	18,320.3
Portland General Electric Company	Trojan	PWR	89 03 19	57	26.3	18,346.6
PSEG Nuclear LLC	Salem 1	PWR	89 03 23	65	30.2	18,376.7
Alabama Power Company	Farley 2	PWR	89 03 24	57	26.6	18,403.3
Northern States Power Co.	Prairie Island 2	PWR	89 03 29	44	16.1	18,419.3
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	89 03 29	228	40.5	18,459.7
Ameren UE	Callaway	PWR	89 03 31	88	38.1	18,497.8
Wisconsin Electric Power Company	Point Beach 1	PWR	89 04 02	33	12.4	18,510.1
Nebraska Public Power District	Cooper	BWR	89 04 07	104	19.1	18,529.1
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	89 04 07	196	34.9	18,564.0
Energy Northwest	Columbia	BWR	89 04 29	137	25.0	18,589.0
*Dominion Nuclear Connecticut, Inc.	Millstone 3	PWR	89 05 11	85	39.3	18,628.3
Duke Power Company	Oconee 2	PWR	89 05 20	43	20.0	18,648.2
Sacramento Municipal Utility District	Rancho Seco	PWR	89 06 07	177	82.1	18,730.2
*Consumers Power Co.	Big Rock Point	BWR	89 06 09	22	2.9	18,733.1
General Atomics	General Atomics	RCH	89 06 30	4	0.1	18,733.1
Duke Power Company	McGuire 2	PWR	89 07 05	73	31.1	18,764.1
General Atomics	General Atomics	RCH	89 07 31	2	0.1	18,764.1
South Texas Project NOC	South Texas 1	PWR	89 08 05	18	9.8	18,773.9
Northern States Power Co.	Monticello	BWR	89 08 19	128	22.7	18,796.6
U.S. DOE	Fort St. Vrain	HTG	89 08 29	18	0.2	18,796.8
U.S. DOE	Fort St. Vrain	HTG	89 08 29	1464	15.5	18,812.2
Pennsylvania Power Company	Beaver Valley 1	PWR	89 09 01	69	32.0	18,844.2

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Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
Exelon Generation Company, LLC	Braidwood 1	PWR	89 09 02	88	37.6	18,881.7
Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	89 09 02	54	21.1	18,902.8
Southern California Edison Co.	San Onofre 2	PWR	89 09 02	109	45.7	18,948.4
Detroit Edison Company	Enrico Fermi 2	BWR	89 09 04	104	19.2	18,967.6
Georgia Power Company	Hatch 2	BWR	89 09 04	242	44.6	19,012.1
*Exelon Generation Company, LLC	Zion 1	PWR	89 09 07	76	35.0	19,047.1
Carolina Power & Light Company	Brunswick 2	BWR	89 09 08	168	30.9	19,078.0
*Exelon Generation Company, LLC	Quad Cities 1	BWR	89 09 10	132	23.5	19,101.5
Pennsylvania Power & Light Co.	Susquehanna 2	BWR	89 09 12	209	38.3	19,139.7
*Exelon Generation Company, LLC	La Salle County 1	BWR	89 09 15	172	31.5	19,171.2
PSEG Nuclear LLC	Hope Creek	BWR	89 09 16	264	48.8	19,220.0
Alabama Power Company	Farley 1	PWR	89 09 22	74	34.3	19,254.3
Wisconsin Electric Power Company	Point Beach 2	PWR	89 09 23	32	11.7	19,265.9
Entergy Louisiana, Inc.	Waterford 3	PWR	89 09 23	85	35.7	19,301.6
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	89 09 25	81	33.3	19,334.8
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	89 10 07	65	30.1	19,364.9
Carolina Power & Light Company	Harris	PWR	89 10 09	46	21.3	19,386.1
Duke Power Company	Oconee 3	PWR	89 11 08	56	26.0	19,412.0
*Exelon Generation Company, LLC	Dresden 3	BWR	89 12 03	136	23.6	19,435.6
General Atomics	General Atomics	RCH	89 12 31	1	0.1	19,435.6
Northern States Power Co.	Prairie Island 1	PWR	90 01 03	54	19.5	19,455.1
*Exelon Generation Company, LLC	Byron 1	PWR	90 01 05	88	37.5	19,492.5
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	90 01 05	91	42.3	19,534.7
Duke Power Company	McGuire 1	PWR	90 01 08	70	29.8	19,564.5
Florida Power & Light Co.	Saint Lucie 1	PWR	90 01 22	101	37.8	19,602.2
*Toledo Edison Co.	Davis-Besse	PWR	90 01 26	60	28.1	19,630.3
Power Company	Catawba 1	PWR	90 01 27	69	29.4	19,659.7
Florida Power & Light Co.	Turkey Point 3	PWR	90 02 03	56	25.8	19,685.4
*Exelon Generation Company, LLC	Quad Cities 2	BWR	90 02 04	168	29.8	19,715.2
Omaha Public Power District	Fort Calhoun	PWR	90 02 17	37	13.1	19,728.3
Georgia Power Company	Hatch 1	BWR	90 02 17	180	33.2	19,761.5
Arizona Public Service Company	Palo Verde 2	PWR	90 02 22	97	38.8	19,800.2
Georgia Power Company	Vogtle 1	PWR	90 02 23	75	34.9	19,835.0
*Exelon Generation Company, LLC	Zion 2	PWR	90 03 01	72	33.2	19,868.1
Wisconsin Public Service Corporation	Kewaunee	PWR	90 03 02	33	12.5	19,880.6
Nebraska Public Power District	Cooper	BWR	90 03 03	168	30.9	19,911.5
Pacific Gas & Electric Company	Diablo Canyon 2	PWR	90 03 03	84	38.9	19,950.3
Kansas Gas & Electric Company	Wolf Creek	PWR	90 03 09	76	35.3	19,985.6
Florida Power Corporation	Crystal River 3	PWR	90 03 14	73	33.9	20,019.5
*Exelon Generation Company, LLC	Braidwood 2	PWR	90 03 16	84	35.7	20,055.1
*Exelon Generation Company, LLC	La Salle County 2	BWR	90 03 17	216	39.5	20,094.6
Tennessee Valley Authority	Sequoyah 1	PWR	90 03 17	54	24.9	20,119.4
Portland General Electric Company	Trojan	PWR	90 03 19	53	24.5	20,143.9
*Rochester Gas and Electric Company	Ginna	PWR	90 03 23	37	13.3	20,157.1
South Carolina Electric & Gas Company	Summer	PWR	90 03 23	69	32.0	20,189.0
South Texas Project NOC	South Texas 1	PWR	90 03 29	40	21.8	20,210.8
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	90 03 31	148	27.4	20,238.1
Wisconsin Electric Power Company	Point Beach 1	PWR	90 03 31	38	14.0	20,252.0
PSEG Nuclear LLC	Salem 2	PWR	90 03 31	75	34.8	20,286.7
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	90 04 07	73	27.4	20,314.1
Southern California Edison Co.	San Onofre 3	PWR	90 04 14	109	45.7	20,359.7

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type	Ranking Date	# of ASMB	MTU	Total MTU
rgy Northwest	Columbia	BWR	90 04 21	208	38.0	20,397.7
Duke Power Company	Oconee 1	PWR	90 04 26	52	24.2	20,421.8
Duke Power Company	Catawba 2	PWR	90 06 09	69	29.3	20,451.1
Yankee Atomic Electric Company	Yankee Rowe	PWR	90 06 23	37	8.5	20,459.5
Interstate Power & Light	Duane Arnold	BWR	90 06 28	104	19.1	20,478.6
*Indiana Michigan Power Co.	Cook 2	PWR	90 06 30	85	34.3	20,512.8
Southern California Edison Co.	San Onofre 1	PWR	90 06 30	40	14.9	20,527.6
General Atomics	General Atomics	RCH	90 07 31	4	0.1	20,527.6
Virginia Electric and Power Co.	North Anna 2	PWR	90 08 21	63	29.3	20,556.8
*Exelon Generation Company, LLC	Byron 2	PWR	90 09 01	79	33.7	20,590.5
Duke Power Company	McGuire 2	PWR	90 09 01	76	32.3	20,622.8
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	90 09 01	129	23.6	20,646.4
Pennsylvania Power Company	Beaver Valley 2	PWR	90 09 03	69	31.8	20,678.1
Cleveland Electric Illuminating Co.	Perry 1	BWR	90 09 03	416	76.8	20,754.8
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 2	BWR	90 09 05	196	36.3	20,791.1
*Exelon Generation Company, LLC	Limerick 1	BWR	90 09 07	164	30.4	20,821.4
Carolina Power & Light Company	Robinson 2	PWR	90 09 08	37	16.1	20,837.5
Tennessee Valley Authority	Sequoyah 2	PWR	90 09 08	77	35.5	20,873.0
Northern States Power Co.	Prairie Island 2	PWR	90 09 10	53	19.0	20,891.9
Duke Power Company	Oconee 2	PWR	90 09 12	48	22.3	20,914.2
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	90 09 12	220	38.8	20,952.9
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	90 09 14	85	34.7	20,987.6
Georgia Power Company	Vogtle 2	PWR	90 09 14	36	16.7	21,004.3
*Entergy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	90 09 15	73	33.8	21,038.0
*Consumers Power Co.	Palisades	PWR	90 09 15	75	29.4	21,067.4
*Consumers Power Co.	Big Rock Point	BWR	90 09 21	20	2.7	21,070.0
en UE	Callaway	PWR	90 09 21	71	30.3	21,100.3
Exelon Generation Company, LLC	Dresden 2	BWR	90 09 23	168	29.1	21,129.4
Carolina Power & Light Company	Brunswick 1	BWR	90 09 26	159	29.3	21,158.6
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	90 09 29	284	50.2	21,208.8
Entergy Gulf States, Inc.	River Bend	BWR	90 09 29	178	33.0	21,241.7
South Texas Project NOC	South Texas 2	PWR	90 09 29	1	0.6	21,242.3
Florida Power & Light Co.	Saint Lucie 2	PWR	90 09 30	76	29.3	21,271.5
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	90 10 01	57	26.5	21,298.0
Wisconsin Electric Power Company	Point Beach 2	PWR	90 10 06	33	12.2	21,310.1
Virginia Electric and Power Co.	Surry 1	PWR	90 10 06	55	25.3	21,335.4
Alabama Power Company	Farley 2	PWR	90 10 13	57	26.5	21,361.8
AmerGen Energy Company, LLC	Clinton	BWR	90 10 14	216	39.7	21,401.5
*Indiana Michigan Power Co.	Cook 1	PWR	90 10 20	81	37.4	21,438.8
*Exelon Generation Company, LLC	Quad Cities 1	BWR	90 11 12	144	25.7	21,464.4
South Texas Project NOC	South Texas 1	PWR	90 11 24	52	28.2	21,492.6
Florida Power & Light Co.	Turkey Point 4	PWR	90 11 24	64	29.5	21,522.0
*Exelon Generation Company, LLC	Braidwood 1	PWR	90 12 30	60	25.6	21,547.5
PSEG Nuclear LLC	Hope Creek	BWR	91 01 01	264	48.8	21,596.2
Virginia Electric and Power Co.	North Anna 1	PWR	91 01 12	68	31.5	21,627.7
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	91 01 12	160	29.3	21,656.9
General Atomics	General Atomics	RCH	91 01 31	1	0.1	21,656.9
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	91 02 01	89	41.3	21,698.2
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	91 02 01	56	25.8	21,724.0
*Dominion Nuclear Connecticut, Inc.	Millstone 3	PWR	91 02 02	79	36.6	21,760.5
PSEG Nuclear LLC	Salem 1	PWR	91 02 09	65	30.2	21,790.7

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LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type	Ranking Date	# of ASMB	MTU	Total MTU
Power Company	Oconee 3	PWR	91 02 13	52	24.1	21,814.8
*Exelon Generation Company, LLC	La Salle County 1	BWR	91 02 16	192	35.3	21,850.0
AmerGen Energy Company, LLC	Oyster Creek	BWR	91 02 16	144	25.5	21,875.4
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	91 02 22	68	28.0	21,903.3
Portland General Electric Company	Trojan	PWR	91 03 04	53	24.6	21,927.9
Alabama Power Company	Farley 1	PWR	91 03 08	63	29.3	21,957.1
Wisconsin Public Service Corporation	Kewaunee	PWR	91 03 09	37	14.1	21,971.1
Pennsylvania Power & Light Co.	Susquehanna 2	BWR	91 03 09	231	40.1	22,011.2
Entergy Louisiana, Inc.	Waterford 3	PWR	91 03 15	85	35.2	22,046.3
Carolina Power & Light Company	Harris	PWR	91 03 16	61	28.2	22,074.5
Arizona Public Service Company	Palo Verde 3	PWR	91 03 16	69	27.5	22,102.0
Duke Power Company	Catawba 1	PWR	91 03 20	69	29.3	22,131.2
Georgia Power Company	Hatch 2	BWR	91 03 20	176	32.6	22,163.8
*Rochester Gas and Electric Company	Ginna	PWR	91 03 22	29	10.4	22,174.1
*Exelon Generation Company, LLC	Limerick 2	BWR	91 03 22	224	41.8	22,215.9
Detroit Edison Company	Enrico Fermi 2	BWR	91 03 30	68	12.5	22,228.4
Virginia Electric and Power Co.	Surry 2	PWR	91 03 30	81	37.3	22,265.6
Northern States Power Co.	Monticello	BWR	91 03 31	136	24.3	22,289.8
Wisconsin Electric Power Company	Point Beach 1	PWR	91 04 05	29	10.9	22,300.6
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	91 04 07	188	33.5	22,334.1
Pennsylvania Power Company	Beaver Valley 1	PWR	91 04 12	45	21.0	22,355.0
Energy Northwest	Columbia	BWR	91 04 13	120	21.2	22,376.1
General Atomics	General Atomics	RCH	91 04 30	1	0.1	22,376.1
Entergy Nuclear Generation Company	Pilgrim 1	BWR	91 05 04	168	29.8	22,405.9
Northern States Power Co.	Prairie Island 1	PWR	91 06 05	49	17.6	22,423.5
FPL Energy Seabrook, LLC	Seabrook	PWR	91 07 26	48	22.2	22,445.6
Power Company	Oconee 1	PWR	91 08 01	64	29.7	22,475.3
Southern California Edison Co.	San Onofre 2	PWR	91 08 17	109	44.3	22,519.5
*Toledo Edison Co.	Davis-Besse	PWR	91 08 31	57	26.7	22,546.1
Pacific Gas & Electric Company	Diablo Canyon 2	PWR	91 08 31	113	52.4	22,598.5
*Exelon Generation Company, LLC	Byron 1	PWR	91 09 06	88	37.4	22,635.8
*Exelon Generation Company, LLC	Dresden 3	BWR	91 09 08	216	37.4	22,673.2
Carolina Power & Light Company	Brunswick 2	BWR	91 09 11	148	27.4	22,700.5
*Exelon Generation Company, LLC	Braidwood 2	PWR	91 09 13	84	35.7	22,736.2
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	91 09 14	256	46.8	22,782.9
South Texas Project NOC	South Texas 2	PWR	91 09 14	72	38.9	22,821.7
Georgia Power Company	Vogtle 1	PWR	91 09 15	64	29.7	22,851.4
Georgia Power Company	Hatch 1	BWR	91 09 18	164	30.4	22,881.8
Duke Power Company	McGuire 1	PWR	91 09 20	62	26.5	22,908.2
South Carolina Electric & Gas Company	Summer	PWR	91 09 20	72	31.8	22,940.0
Kansas Gas & Electric Company	Wolf Creek	PWR	91 09 20	104	48.3	22,988.2
Wisconsin Electric Power Company	Point Beach 2	PWR	91 09 27	29	10.7	22,998.9
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	91 09 27	81	37.6	23,036.4
Yankee Atomic Electric Company	Yankee Rowe	PWR	91 10 01	75	17.2	23,053.6
Texas Utilities Generating Company	Comanche Peak 1	PWR	91 10 03	53	24.4	23,077.9
Nebraska Public Power District	Cooper	BWR	91 10 04	164	30.3	23,108.2
Tennessee Valley Authority	Sequoyah 1	PWR	91 10 05	69	32.0	23,140.1
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	91 10 17	53	21.9	23,161.9
Arizona Public Service Company	Palo Verde 2	PWR	91 10 17	105	43.2	23,205.0
Duke Power Company	Catawba 2	PWR	91 10 18	76	32.3	23,237.3
Florida Power & Light Co.	Saint Lucie 1	PWR	91 10 18	84	31.4	23,268.6

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2004 ACCEPTANCE PRIORITY RANKING

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Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
PSEG Nuclear LLC	Salem 2	PWR	91 11 09	66	30.7	23,299.2
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	91 11 27	152	27.2	23,326.3
*Consumers Power Co.	Big Rock Point	BWR	91 11 29	20	2.7	23,329.0
Tennessee Valley Authority[7]	Browns Ferry 3	BWR	91 12 31	25	4.6	23,333.6
Yankee Atomic Electric Company[8]	Yankee Rowe	PWR	91 12 31	4	1.0	23,334.5
*Exelon Generation Company, LLC	Quad Cities 2	BWR	92 01 01	152	27.1	23,361.5
*Exelon Generation Company, LLC	La Salle County 2	BWR	92 01 04	224	41.4	23,402.8
Duke Power Company	McGuire 2	PWR	92 01 09	75	31.9	23,434.7
Duke Power Company	Oconee 2	PWR	92 01 09	73	33.9	23,468.5
Southern California Edison Co.	San Onofre 3	PWR	92 01 24	109	44.2	23,512.7
Omaha Public Power District	Fort Calhoun	PWR	92 02 01	33	11.9	23,524.6
*Consumers Power Co.	Palisades	PWR	92 02 06	76	29.9	23,554.5
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	92 02 14	57	21.7	23,576.1
Arizona Public Service Company	Palo Verde 1	PWR	92 02 15	78	32.6	23,608.7
Northern States Power Co.	Prairie Island 2	PWR	92 02 18	53	19.1	23,627.8
*Indiana Michigan Power Co.	Cook 2	PWR	92 02 22	76	30.7	23,658.4
Virginia Electric and Power Co.	North Anna 2	PWR	92 02 26	74	34.3	23,692.6
Interstate Power & Light	Duane Arnold	BWR	92 02 27	104	18.7	23,711.3
*Exelon Generation Company, LLC	Zion 1	PWR	92 02 27	76	35.1	23,746.3
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	92 02 28	61	28.3	23,774.5
*Exelon Generation Company, LLC	Byron 2	PWR	92 02 28	89	37.9	23,812.4
AmerGen Energy Company, LLC	Clinton	BWR	92 02 29	184	33.8	23,846.2
Virginia Electric and Power Co.	Surry 1	PWR	92 02 29	64	29.5	23,875.6
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	92 02 29	128	23.6	23,899.1
gy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	92 03 01	79	36.5	23,935.5
Mile Point Nuclear Power Station, LLC	Nine Mile Point 2	BWR	92 03 04	184	34.0	23,969.5
Alabama Power Company	Farley 2	PWR	92 03 06	52	24.2	23,993.7
Wisconsin Public Service Corporation	Kewaunee	PWR	92 03 06	45	17.1	24,010.7
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	92 03 07	228	39.7	24,050.4
Georgia Power Company	Vogtle 2	PWR	92 03 11	81	37.6	24,088.0
Entergy Gulf States, Inc.	River Bend	BWR	92 03 12	199	36.9	24,124.8
Pennsylvania Power Company	Beaver Valley 2	PWR	92 03 13	65	30.0	24,154.8
Tennessee Valley Authority	Sequoyah 2	PWR	92 03 13	89	41.3	24,196.0
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	92 03 19	78	30.4	24,226.3
Ameren UE	Callaway	PWR	92 03 20	101	42.9	24,269.2
*Exelon Generation Company, LLC	Limerick 1	BWR	92 03 20	94	17.5	24,286.7
Cleveland Electric Illuminating Co.	Perry 1	BWR	92 03 21	199	36.7	24,323.4
*Rochester Gas and Electric Company	Ginna	PWR	92 03 27	37	13.1	24,336.4
Carolina Power & Light Company	Robinson 2	PWR	92 03 27	40	17.1	24,353.5
PSEG Nuclear LLC	Salem 1	PWR	92 04 03	88	40.7	24,394.2
Wisconsin Electric Power Company	Point Beach 1	PWR	92 04 10	29	10.5	24,404.6
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	92 04 17	272	47.9	24,452.5
Energy Northwest	Columbia	BWR	92 04 18	76	13.8	24,466.2
Florida Power & Light Co.	Saint Lucie 2	PWR	92 04 20	68	25.8	24,492.0
Carolina Power & Light Company	Brunswick 1	BWR	92 04 21	124	23.0	24,514.9
Florida Power Corporation	Crystal River 3	PWR	92 04 30	77	35.7	24,550.6
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	92 05 30	73	29.8	24,580.3
*Indiana Michigan Power Co.	Cook 1	PWR	92 06 22	79	36.4	24,616.7
Duke Power Company	Catawba 1	PWR	92 07 10	79	33.7	24,650.3
Duke Power Company	Oconee 3	PWR	92 07 21	56	26.0	24,676.2
a Power & Light Co.	Turkey Point 3	PWR	92 08 24	57	26.2	24,702.4

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Purchaser	Fuel Originator	Type[2]	Ranking Date	# of ASMB[4]	MTU	Total MTU[5]
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	92 09 05	73	29.8	24,732.1
*Exelon Generation Company, LLC	Braidwood 1	PWR	92 09 05	84	35.8	24,767.8
FPL Energy Seabrook, LLC	Seabrook	PWR	92 09 07	76	35.3	24,803.1
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	92 09 12	88	39.3	24,842.4
Detroit Edison Company	Enrico Fermi 2	BWR	92 09 12	316	58.0	24,900.4
Carolina Power & Light Company	Harris	PWR	92 09 12	64	29.0	24,929.3
PSEG Nuclear LLC	Hope Creek	BWR	92 09 12	248	46.1	24,975.4
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	92 09 12	268	49.1	25,024.4
Pennsylvania Power & Light Co.	Susquehanna 2	BWR	92 09 12	240	41.6	25,065.9
Georgia Power Company	Hatch 2	BWR	92 09 16	172	31.9	25,097.8
Entergy Louisiana, Inc.	Waterford 3	PWR	92 09 18	85	34.9	25,132.6
Arizona Public Service Company	Palo Verde 3	PWR	92 09 19	101	41.3	25,173.9
South Texas Project NOC	South Texas 1	PWR	92 09 19	54	29.3	25,203.1
*Exelon Generation Company, LLC	Quad Cities 1	BWR	92 09 20	152	27.2	25,230.2
Alabama Power Company	Farley 1	PWR	92 09 25	54	25.1	25,255.3
Wisconsin Electric Power Company	Point Beach 2	PWR	92 09 25	29	10.5	25,265.7
*Exelon Generation Company, LLC	La Salle County 1	BWR	92 10 03	200	37.0	25,302.6
Northern States Power Co.	Prairie Island 1	PWR	92 10 22	53	19.0	25,321.6
Texas Utilities Generating Company	Comanche Peak 1	PWR	92 10 23	61	28.1	25,349.7
Portland General Electric Company	Trojan	PWR	92 11 09	193	88.9	25,438.5
*Exelon Generation Company, LLC	Zion 2	PWR	92 11 12	84	38.7	25,477.1
AmerGen Energy Company, LLC	Oyster Creek	BWR	92 11 28	168	29.6	25,506.7
Southern California Edison Co.	San Onofre 1	PWR	92 11 30	157	58.5	25,565.1
Duke Power Company	Oconee 1	PWR	92 12 03	56	25.9	25,591.0
[illegible]a Electric and Power Co.	North Anna 1	PWR	93 01 04	68	31.5	25,622.5
[illegible]n Generation Company, LLC	Dresden 2	BWR	93 01 17	208	36.0	25,658.4
*Exelon Generation Company, LLC	Limerick 2	BWR	93 01 22	430	80.0	25,738.3
Northern States Power Co.	Monticello	BWR	93 01 28	128	22.8	25,761.1
Tennessee Valley Authority	Browns Ferry 2	BWR	93 01 29	217	39.7	25,800.7
Duke Power Company	Catawba 2	PWR	93 01 29	76	32.3	25,833.0
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	93 01 30	87	40.2	25,873.1
South Texas Project NOC	South Texas 2	PWR	93 02 03	72	39.0	25,912.1
*Exelon Generation Company, LLC	Byron 1	PWR	93 02 05	82	34.9	25,946.9
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	93 02 19	89	33.6	25,980.4
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	93 02 19	192	34.1	26,014.4
*Toledo Edison Co.	Davis-Besse	PWR	93 03 01	61	28.6	26,043.0
Georgia Power Company	Hatch 2	BWR	93 03 04	4	0.8	26,043.7
Kansas Gas & Electric Company	Wolf Creek	PWR	93 03 04	68	31.6	26,075.2
*Exelon Generation Company, LLC	Braidwood 2	PWR	93 03 05	84	35.7	26,110.9
Nebraska Public Power District	Cooper	BWR	93 03 05	184	34.2	26,145.1
Wisconsin Public Service Corporation	Kewaunee	PWR	93 03 05	45	17.1	26,162.1
Pacific Gas & Electric Company	Diablo Canyon 2	PWR	93 03 06	88	38.5	26,200.5
*Exelon Generation Company, LLC	Quad Cities 2	BWR	93 03 06	144	25.8	26,226.3
South Carolina Electric & Gas Company	Summer	PWR	93 03 06	68	28.9	26,255.2
Virginia Electric and Power Co.	Surry 2	PWR	93 03 06	69	31.7	26,286.8
*Rochester Gas and Electric Company	Ginna	PWR	93 03 12	29	10.3	26,297.1
Duke Power Company	McGuire 1	PWR	93 03 12	81	34.5	26,331.5
Georgia Power Company	Vogtle 1	PWR	93 03 12	93	43.2	26,374.6
Arizona Public Service Company	Palo Verde 2	PWR	93 03 14	97	39.8	26,414.4
Georgia Power Company	Hatch 1	BWR	93 03 16	54	10.0	26,424.3
[illegible] Nuclear LLC	Salem 2	PWR	93 03 16	41	19.0	26,443.2

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Purchaser	Fuel Originator	Type	Ranking Date[3]	# of ASMB[4]	MTU	Total MTU[5]
Pennsylvania Power Company	Beaver Valley 1	PWR	93 03 26	61	28.3	26,471.5
Wisconsin Electric Power Company	Point Beach 1	PWR	93 03 27	29	10.5	26,482.0
Florida Power & Light Co.	Saint Lucie 1	PWR	93 03 27	84	31.3	26,513.2
Entergy Nuclear Generation Company	Pilgrim 1	BWR	93 04 03	140	24.9	26,538.0
Tennessee Valley Authority	Sequoyah 1	PWR	93 04 08	71	32.9	26,570.9
Florida Power & Light Co.	Turkey Point 4	PWR	93 04 10	52	23.9	26,594.8
Duke Power Company	Oconee 2	PWR	93 04 29	60	27.9	26,622.6
Energy Northwest	Columbia	BWR	93 05 01	128	22.6	26,645.1
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	93 05 15	53	21.9	26,667.0
*Consumers Power Co.	Palisades	PWR	93 06 04	60	24.0	26,690.9
Southern California Edison Co.	San Onofre 2	PWR	93 06 05	108	43.9	26,734.7
*Consumers Power Co.	Big Rock Point	BWR	93 06 26	22	3.0	26,737.6
Duke Power Company	McGuire 2	PWR	93 07 01	77	32.8	26,770.4
Interstate Power & Light	Duane Arnold	BWR	93 07 29	128	22.9	26,793.2
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	93 07 30	77	29.5	26,822.7
*Dominion Nuclear Connecticut, Inc.	Millstone 3	PWR	93 07 31	68	31.5	26,854.2
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	93 08 28	128	22.8	26,876.9
*Exelon Generation Company, LLC	Byron 2	PWR	93 09 03	88	37.4	26,914.3
*Exelon Generation Company, LLC	La Salle County 2	BWR	93 09 04	232	43.1	26,957.3
Arizona Public Service Company	Palo Verde 1	PWR	93 09 04	81	33.4	26,990.7
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	93 09 07	59	27.4	27,018.1
Virginia Electric and Power Co.	North Anna 2	PWR	93 09 07	87	40.4	27,058.4
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	93 09 10	65	30.2	27,088.5
Georgia Power Company	Vogtle 2	PWR	93 09 10	73	34.0	27,122.4
[illegible]na Power & Light Company	Robinson 2	PWR	93 09 11	52	20.9	27,143.3
[illegible]sylvania Power Company	Beaver Valley 2	PWR	93 09 17	71	32.9	27,176.2
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	93 09 17	256	47.1	27,223.3
Alabama Power Company	Farley 2	PWR	93 09 24	36	16.7	27,239.9
AmerGen Energy Company, LLC	Clinton	BWR	93 09 25	156	28.9	27,268.8
Omaha Public Power District	Fort Calhoun	PWR	93 09 25	25	9.0	27,277.7
Wisconsin Electric Power Company	Point Beach 2	PWR	93 09 25	28	10.1	27,287.8
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	93 09 25	224	38.8	27,326.6
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	93 09 28	276	48.6	27,375.2
Ameren UE	Callaway	PWR	93 10 01	106	45.1	27,420.2
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 2	BWR	93 10 01	228	42.1	27,462.3
PSEG Nuclear LLC	Salem 1	PWR	93 10 02	62	28.8	27,491.0
Texas Utilities Generating Company	Comanche Peak 1	PWR	93 10 06	88	40.5	27,531.5
Southern California Edison Co.	San Onofre 3	PWR	93 10 10	108	43.7	27,575.2
*Exelon Generation Company, LLC	Zion 1	PWR	93 10 21	76	35.0	27,610.2
Duke Power Company	Catawba 1	PWR	93 10 29	77	34.0	27,644.1
Northern States Power Co.	Prairie Island 2	PWR	93 10 29	43	15.4	27,659.5
Detroit Edison Company	Enrico Fermi 2	BWR	93 12 25	280	50.5	27,709.9
Duke Power Company	Oconee 3	PWR	93 12 28	60	27.9	27,737.8
Tennessee Valley Authority[9]	Browns Ferry 1	BWR	93 12 31	92	16.9	27,754.6
Northern States Power Co.[10]	Prairie Island 2	PWR	93 12 31	1	0.4	27,755.0
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	94 01 15	188	33.4	27,788.3
Virginia Electric and Power Co.	Surry 1	PWR	94 01 22	57	26.4	27,814.6
*Exelon Generation Company, LLC	Limerick 1	BWR	94 02 04	340	61.3	27,875.9
Cleveland Electric Illuminating Co.	Perry 1	BWR	94 02 05	234	43.3	27,919.1
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	94 02 09	80	30.0	27,949.1
[illegible]a Michigan Power Co.	Cook 1	PWR	94 02 12	80	36.9	27,985.9

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

...chaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
Florida Power & Light Co.	Saint Lucie 2	PWR	94 02 15	80	30.3	28,016.2
*Exelon Generation Company, LLC	La Salle County 1	BWR	94 02 18	208	38.4	28,054.5
*Exelon Generation Company, LLC	Braidwood 1	PWR	94 03 04	92	39.1	28,093.6
Alabama Power Company	Farley 1	PWR	94 03 04	61	28.3	28,121.9
*Rochester Gas and Electric Company	Ginna	PWR	94 03 04	26	9.2	28,131.0
Entergy Louisiana, Inc.	Waterford 3	PWR	94 03 04	93	38.1	28,169.0
PSEG Nuclear LLC	Hope Creek	BWR	94 03 05	232	43.1	28,212.1
*Exelon Generation Company, LLC	Dresden 3	BWR	94 03 10	180	30.5	28,242.6
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	94 03 11	73	29.8	28,272.4
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	94 03 12	88	37.5	28,309.8
*Exelon Generation Company, LLC	Quad Cities 1	BWR	94 03 13	144	25.5	28,335.2
Pennsylvania Power & Light Co.	Susquehanna 2	BWR	94 03 14	244	42.3	28,377.4
Georgia Power Company	Hatch 2	BWR	94 03 16	309	56.6	28,434.0
Carolina Power & Light Company	Harris	PWR	94 03 19	61	26.1	28,460.1
Arizona Public Service Company	Palo Verde 3	PWR	94 03 19	124	51.8	28,511.8
Carolina Power & Light Company	Brunswick 2	BWR	94 03 26	152	27.6	28,539.3
Wisconsin Public Service Corporation	Kewaunee	PWR	94 04 02	37	14.1	28,553.4
Wisconsin Electric Power Company	Point Beach 1	PWR	94 04 02	29	10.5	28,563.8
Florida Power & Light Co.	Turkey Point 3	PWR	94 04 04	52	24.0	28,587.8
Florida Power Corporation	Crystal River 3	PWR	94 04 07	59	27.4	28,615.1
FPL Energy Seabrook, LLC	Seabrook	PWR	94 04 09	72	33.5	28,648.6
Entergy Gulf States, Inc.	River Bend	BWR	94 04 15	192	34.4	28,682.9
Energy Northwest	Columbia	BWR	94 04 26	156	27.5	28,710.3
Duke Power Company	Oconee 1	PWR	94 04 28	59	27.4	28,737.7
...Power Company	Catawba 2	PWR	94 04 29	88	37.4	28,775.0
...ern States Power Co.	Prairie Island 1	PWR	94 05 08	41	14.7	28,789.7
Tennessee Valley Authority	Sequoyah 2	PWR	94 07 04	86	39.9	28,829.6
Duke Power Company	McGuire 1	PWR	94 08 19	64	27.5	28,857.0
*Indiana Michigan Power Co.	Cook 2	PWR	94 09 06	75	31.0	28,887.9
*Exelon Generation Company, LLC	Byron 1	PWR	94 09 08	92	39.1	28,927.0
Virginia Electric and Power Co.	North Anna 1	PWR	94 09 09	73	33.9	28,960.8
South Carolina Electric & Gas Company	Summer	PWR	94 09 09	64	26.9	28,987.7
AmerGen Energy Company, LLC	Oyster Creek	BWR	94 09 10	172	29.6	29,017.2
Georgia Power Company	Vogtle 1	PWR	94 09 11	93	41.0	29,058.2
Northern States Power Co.	Monticello	BWR	94 09 15	112	19.4	29,077.5
Kansas Gas & Electric Company	Wolf Creek	PWR	94 09 16	80	37.1	29,114.6
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	94 09 17	271	48.5	29,163.0
Georgia Power Company	Hatch 1	BWR	94 09 21	175	31.5	29,194.5
Pacific Gas & Electric Company	Diablo Canyon 2	PWR	94 09 24	88	37.4	29,231.9
Wisconsin Electric Power Company	Point Beach 2	PWR	94 09 24	29	10.4	29,242.3
*Consumers Power Co.	Big Rock Point	BWR	94 10 01	20	2.7	29,244.9
Tennessee Valley Authority	Browns Ferry 2	BWR	94 10 01	244	44.7	29,289.6
*Toledo Edison Co.	Davis-Besse	PWR	94 10 01	63	29.5	29,319.1
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	94 10 01	78	30.0	29,349.0
Florida Power & Light Co.	Turkey Point 4	PWR	94 10 02	51	23.6	29,372.6
Duke Power Company	Oconee 2	PWR	94 10 06	60	27.9	29,400.4
Texas Utilities Generating Company	Comanche Peak 2	PWR	94 10 07	83	35.6	29,435.9
*Exelon Generation Company, LLC	Braidwood 2	PWR	94 10 08	72	30.6	29,466.5
PSEG Nuclear LLC	Salem 2	PWR	94 10 13	84	38.9	29,505.4
Florida Power & Light Co.	Saint Lucie 1	PWR	94 10 26	84	32.2	29,537.6
...Power Company	McGuire 2	PWR	94 11 24	75	32.8	29,570.4

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...rchaser	Fuel Originator	Type	Ranking Date	# of ASMB	MTU	Total MTU
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	94 11 30	204	36.8	29,607.1
Pennsylvania Power Company	Beaver Valley 1	PWR	95 01 03	73	33.9	29,641.0
*Exelon Generation Company, LLC	Zion 2	PWR	95 01 06	88	40.7	29,681.6
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	95 01 14	81	31.2	29,712.8
*Exelon Generation Company, LLC	Limerick 2	BWR	95 01 27	356	65.4	29,778.1
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	95 01 28	53	21.9	29,800.0
Virginia Electric and Power Co.	Surry 2	PWR	95 02 03	69	31.9	29,831.8
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	95 02 04	89	41.0	29,872.8
Arizona Public Service Company	Palo Verde 2	PWR	95 02 05	61	25.2	29,898.0
*Exelon Generation Company, LLC	Byron 2	PWR	95 02 10	88	37.4	29,935.4
Duke Power Company	Catawba 1	PWR	95 02 10	63	28.5	29,963.8
Southern California Edison Co.	San Onofre 2	PWR	95 02 11	108	44.0	30,007.8
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	95 02 14	61	28.3	30,036.1
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	95 02 15	200	35.5	30,071.6
*Exelon Generation Company, LLC	La Salle County 2	BWR	95 02 18	176	32.1	30,103.6
Omaha Public Power District	Fort Calhoun	PWR	95 02 20	28	10.0	30,113.5
Interstate Power & Light	Duane Arnold	BWR	95 02 23	128	22.8	30,136.3
Georgia Power Company	Vogtle 2	PWR	95 02 26	112	49.1	30,185.3
Texas Utilities Generating Company	Comanche Peak 1	PWR	95 03 04	97	44.9	30,230.1
South Texas Project NOC	South Texas 1	PWR	95 03 04	61	33.1	30,263.2
*Exelon Generation Company, LLC	Quad Cities 2	BWR	95 03 05	144	25.6	30,288.7
Alabama Power Company	Farley 2	PWR	95 03 11	97	42.9	30,331.6
Wisconsin Electric Power Company	Point Beach 1	PWR	95 03 11	32	11.5	30,343.0
AmerGen Energy Company, LLC	Clinton	BWR	95 03 12	220	40.9	30,383.9
...rgy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	95 03 17	120	21.4	30,405.3
...nore Gas & Electric Co.	Calvert Cliffs 2	PWR	95 03 18	97	37.2	30,442.4
Pennsylvania Power Company	Beaver Valley 2	PWR	95 03 24	69	32.0	30,474.4
Ameren UE	Callaway	PWR	95 03 24	97	41.3	30,515.7
Virginia Electric and Power Co.	North Anna 2	PWR	95 03 25	73	33.9	30,549.5
Entergy Nuclear Generation Company	Pilgrim 1	BWR	95 03 25	136	24.2	30,573.7
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	95 03 25	192	33.3	30,606.9
*Rochester Gas and Electric Company	Ginna	PWR	95 03 26	37	13.1	30,620.0
Carolina Power & Light Company	Brunswick 1	BWR	95 04 01	156	28.5	30,648.4
Wisconsin Public Service Corporation	Kewaunee	PWR	95 04 01	49	18.7	30,667.0
Arizona Public Service Company	Palo Verde 1	PWR	95 04 01	96	39.2	30,706.2
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 2	BWR	95 04 08	280	50.7	30,756.8
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	95 04 14	288	50.9	30,807.7
*Dominion Nuclear Connecticut, Inc.	Millstone 3	PWR	95 04 14	109	50.5	30,858.2
Energy Northwest	Columbia	BWR	95 04 22	152	26.8	30,884.9
Carolina Power & Light Company	Robinson 2	PWR	95 04 28	57	24.7	30,909.6
Northern States Power Co.	Prairie Island 2	PWR	95 05 12	49	17.6	30,927.1
PSEG Nuclear LLC	Salem 1	PWR	95 05 17	42	19.5	30,946.6
*Consumers Power Co.	Palisades	PWR	95 05 22	48	19.4	30,966.0
*Exelon Generation Company, LLC	Dresden 2	BWR	95 06 04	232	39.0	31,004.9
Duke Power Company	Oconee 3	PWR	95 06 06	51	23.7	31,028.6
PSEG Nuclear LLC	Salem 2	PWR	95 06 07	24	11.2	31,039.7
*Indiana Michigan Power Co.	Cook 1	PWR	95 07 14	84	38.8	31,078.4
Southern California Edison Co.	San Onofre 3	PWR	95 07 22	99	40.0	31,118.4
Carolina Power & Light Company	Harris	PWR	95 09 01	85	36.5	31,154.8
Florida Power & Light Co.	Turkey Point 3	PWR	95 09 04	60	27.7	31,182.4
...ia Electric and Power Co.	Surry 1	PWR	95 09 08	77	35.6	31,218.0

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LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	95 09 08	86	39.5	31,257.4
Tennessee Valley Authority	Sequoyah 1	PWR	95 09 09	85	39.4	31,296.7
*Exelon Generation Company, LLC	Zion 1	PWR	95 09 09	72	33.2	31,329.9
Pennsylvania Power & Light Co.	Susquehanna 2	BWR	95 09 13	212	36.8	31,366.6
Alabama Power Company	Farley 1	PWR	95 09 16	64	28.9	31,395.4
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	95 09 22	83	34.0	31,429.4
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	95 09 22	284	51.0	31,480.3
Entergy Louisiana, Inc.	Waterford 3	PWR	95 09 22	96	39.3	31,519.5
Georgia Power Company	Hatch 2	BWR	95 09 23	189	34.5	31,554.0
*Exelon Generation Company, LLC	Braidwood 1	PWR	95 09 30	63	26.8	31,580.8
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	95 09 30	79	33.6	31,614.4
Duke Power Company	Catawba 2	PWR	95 10 06	72	32.0	31,646.3
Wisconsin Electric Power Company	Point Beach 2	PWR	95 10 07	32	11.5	31,657.7
South Texas Project NOC	South Texas 2	PWR	95 10 07	60	32.5	31,690.2
Florida Power & Light Co.	Saint Lucie 2	PWR	95 10 09	84	31.8	31,721.9
Nebraska Public Power District	Cooper	BWR	95 10 14	148	26.7	31,748.5
Arizona Public Service Company	Palo Verde 3	PWR	95 10 14	91	37.0	31,785.4
Duke Power Company	Oconee 1	PWR	95 11 02	61	28.3	31,813.7
FPL Energy Seabrook, LLC	Seabrook	PWR	95 11 03	69	32.0	31,845.6
*Dominion Nuclear Connecticut, Inc.	Millstone 1	BWR	95 11 04	580	100.8	31,946.4
PSEG Nuclear LLC	Hope Creek	BWR	95 11 10	232	41.3	31,987.7
Duke Power Company	McGuire 1	PWR	95 12 14	80	36.5	32,024.1
Tennessee Valley Authority [11]	Browns Ferry 1	BWR	95 12 31	4	0.8	32,024.8
Tennessee Valley Authority [12]	Browns Ferry 3	BWR	95 12 31	58	10.7	32,035.5
y Gulf States, Inc.	River Bend	BWR	96 01 04	148	26.4	32,061.8
sumers Power Co.	Big Rock Point	BWR	96 01 05	22	3.0	32,064.7
Northern States Power Co.	Prairie Island 1	PWR	96 01 05	49	17.6	32,082.2
*Exelon Generation Company, LLC	La Salle County 1	BWR	96 01 25	248	44.1	32,126.3
Cleveland Electric Illuminating Co.	Perry 1	BWR	96 01 27	280	51.6	32,177.8
Carolina Power & Light Company	Brunswick 2	BWR	96 02 02	201	35.9	32,213.6
*Exelon Generation Company, LLC	Limerick 1	BWR	96 02 02	292	51.7	32,265.2
Kansas Gas & Electric Company	Wolf Creek	PWR	96 02 03	113	52.4	32,317.6
*Exelon Generation Company, LLC	Quad Cities 1	BWR	96 02 10	232	40.1	32,357.6
Virginia Electric and Power Co.	North Anna 1	PWR	96 02 11	73	33.9	32,391.5
Florida Power Corporation	Crystal River 3	PWR	96 02 16	73	33.9	32,425.4
Texas Utilities Generating Company	Comanche Peak 2	PWR	96 02 23	96	41.2	32,466.5
Energy Northwest	Columbia	BWR	96 03 02	104	18.4	32,484.8
Georgia Power Company	Vogtle 1	PWR	96 03 03	104	44.6	32,529.4
Florida Power & Light Co.	Turkey Point 4	PWR	96 03 04	64	29.6	32,558.9
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	96 03 15	81	30.5	32,589.3
*Exelon Generation Company, LLC	Braidwood 2	PWR	96 03 16	84	35.8	32,625.1
Arizona Public Service Company	Palo Verde 2	PWR	96 03 16	100	41.9	32,666.9
Pennsylvania Power Company	Beaver Valley 1	PWR	96 03 22	73	33.9	32,700.8
Tennessee Valley Authority	Browns Ferry 2	BWR	96 03 23	240	44.2	32,745.0
*Indiana Michigan Power Co.	Cook 2	PWR	96 03 23	82	34.9	32,779.8
Georgia Power Company	Hatch 1	BWR	96 03 23	191	34.1	32,813.8
Duke Power Company	Oconee 2	PWR	96 03 28	60	27.9	32,841.6
Wisconsin Electric Power Company	Point Beach 1	PWR	96 03 30	32	11.5	32,853.1
*Rochester Gas and Electric Company	Ginna	PWR	96 04 01	41	14.5	32,867.5
*Exelon Generation Company, LLC	Byron 1	PWR	96 04 05	76	32.3	32,899.8
Power Company	McGuire 2	PWR	96 04 05	77	35.2	32,934.9

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Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
Pacific Gas & Electric Company	Diablo Canyon 2	PWR	96 04 06	81	34.4	32,969.3
*Toledo Edison Co.	Davis-Besse	PWR	96 04 08	76	35.6	33,004.9
Northern States Power Co.	Monticello	BWR	96 04 10	144	24.9	33,029.7
South Carolina Electric & Gas Company	Summer	PWR	96 04 14	68	28.4	33,058.0
Tennessee Valley Authority	Sequoyah 2	PWR	96 04 20	73	33.9	33,091.9
Florida Power & Light Co.	Saint Lucie 1	PWR	96 04 29	81	32.2	33,124.0
Virginia Electric and Power Co.	Surry 2	PWR	96 05 03	57	26.3	33,150.3
South Texas Project NOC	South Texas 1	PWR	96 05 18	61	33.0	33,183.2
Duke Power Company	Catawba 1	PWR	96 06 12	63	28.8	33,212.0
*Connecticut Yankee Atomic Power Co.	Haddam Neck	PWR	96 07 22	157	58.5	33,270.4
*Exelon Generation Company, LLC	Byron 2	PWR	96 08 08	68	28.9	33,299.3
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	96 08 24	120	21.4	33,320.6
Pennsylvania Power Company	Beaver Valley 2	PWR	96 08 30	62	28.8	33,349.4
AmerGen Energy Company, LLC	Oyster Creek	BWR	96 09 04	188	32.5	33,381.8
AmerGen Energy Company, LLC	Clinton	BWR	96 09 06	180	33.2	33,415.0
Carolina Power & Light Company	Robinson 2	PWR	96 09 07	57	24.9	33,439.8
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	96 09 07	240	41.6	33,481.4
Virginia Electric and Power Co.	North Anna 2	PWR	96 09 08	65	30.2	33,511.5
Georgia Power Company	Vogtle 2	PWR	96 09 08	85	37.1	33,548.5
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	96 09 13	284	49.9	33,598.4
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	96 09 14	63	28.8	33,627.2
*Exelon Generation Company, LLC	Zion 2	PWR	96 09 19	193	89.0	33,716.1
*Exelon Generation Company, LLC	La Salle County 2	BWR	96 09 20	256	45.5	33,761.6
Arizona Public Service Company	Palo Verde 1	PWR	96 09 21	118	48.9	33,810.4
[illegible]it Edison Company	Enrico Fermi 2	BWR	96 09 27	306	55.1	33,865.4
Mile Point Nuclear Power Station, LLC	Nine Mile Point 2	BWR	96 09 28	240	43.0	33,908.4
Wisconsin Public Service Corporation	Kewaunee	PWR	96 09 29	45	17.1	33,925.4
Omaha Public Power District	Fort Calhoun	PWR	96 10 04	52	19.5	33,944.9
Duke Power Company	Oconee 3	PWR	96 10 04	69	32.0	33,976.9
Carolina Power & Light Company	Brunswick 1	BWR	96 10 05	198	35.2	34,012.1
Texas Utilities Generating Company	Comanche Peak 1	PWR	96 10 05	85	35.2	34,047.2
Wisconsin Electric Power Company	Point Beach 2	PWR	96 10 05	20	7.2	34,054.3
Interstate Power & Light	Duane Arnold	BWR	96 10 11	120	21.4	34,075.7
Ameren UE	Callaway	PWR	96 10 12	89	37.8	34,113.4
Alabama Power Company	Farley 2	PWR	96 10 12	93	40.9	34,154.2
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	96 10 19	264	46.5	34,200.7
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	96 10 26	192	34.2	34,234.8
*Consumers Power Co.	Palisades	PWR	96 11 01	60	24.3	34,259.1
Southern California Edison Co.	San Onofre 2	PWR	96 11 30	100	40.5	34,299.6
*Maine Yankee Atomic Power Company	Maine Yankee	PWR	96 12 06	217	83.1	34,382.6
Northern States Power Co.	Prairie Island 2	PWR	97 01 24	48	17.2	34,399.8
*Exelon Generation Company, LLC	Limerick 2	BWR	97 01 26	332	57.5	34,457.3
South Texas Project NOC	South Texas 2	PWR	97 02 08	97	52.5	34,509.7
Duke Power Company	McGuire 1	PWR	97 02 14	68	31.0	34,540.7
Entergy Nuclear Generation Company	Pilgrim 1	BWR	97 02 15	206	36.5	34,577.1
*Exelon Generation Company, LLC	Zion 1	PWR	97 02 21	193	89.0	34,666.0
Tennessee Valley Authority	Browns Ferry 3	BWR	97 02 22	202	37.0	34,703.0
Arizona Public Service Company	Palo Verde 3	PWR	97 02 22	101	42.5	34,745.4
*Exelon Generation Company, LLC	Quad Cities 2	BWR	97 02 28	215	37.2	34,782.6
*Indiana Michigan Power Co.	Cook 1	PWR	97 03 01	84	38.8	34,821.3
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	97 03 03	188	32.4	34,853.6

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Purchaser	Fuel Originator	Type[2]	Ranking Date	# of ASMB[3]	MTU	Total MTU[4]
Florida Power & Light Co.	Turkey Point 3	PWR	97 03 03	59	27.3	34,880.9
Virginia Electric and Power Co.	Surry 1	PWR	97 03 07	61	28.1	34,908.9
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	97 03 14	97	36.4	34,945.3
Alabama Power Company	Farley 1	PWR	97 03 15	65	27.7	34,973.0
Georgia Power Company	Hatch 2	BWR	97 03 15	180	32.1	35,005.0
Pennsylvania Power & Light Co.	Susquehanna 2	BWR	97 03 15	312	54.1	35,059.0
Duke Power Company	Catawba 2	PWR	97 03 21	70	31.8	35,090.8
Tennessee Valley Authority	Sequoyah 1	PWR	97 03 22	109	50.2	35,140.9
Energy Northwest	Columbia	BWR	97 03 27	112	19.1	35,160.0
*Exelon Generation Company, LLC	Braidwood 1	PWR	97 03 29	57	24.2	35,184.2
Nebraska Public Power District	Cooper	BWR	97 03 29	168	30.0	35,214.1
*Exelon Generation Company, LLC	Dresden 3	BWR	97 03 29	232	39.0	35,253.0
Carolina Power & Light Company	Harris	PWR	97 04 05	61	27.4	35,280.4
Southern California Edison Co.	San Onofre 3	PWR	97 04 12	109	44.4	35,324.7
Entergy Louisiana, Inc.	Waterford 3	PWR	97 04 12	84	34.2	35,358.9
Florida Power & Light Co.	Saint Lucie 2	PWR	97 04 14	62	23.6	35,382.4
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	97 04 19	88	37.5	35,419.9
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	97 05 01	81	37.4	35,457.2
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	97 05 09	77	31.8	35,489.0
FPL Energy Seabrook, LLC	Seabrook	PWR	97 05 09	77	35.7	35,524.6
Virginia Electric and Power Co.	North Anna 1	PWR	97 05 11	58	26.9	35,551.5
*Entergy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	97 05 16	89	41.0	35,592.5
*Consumers Power Co.	Big Rock Point	BWR	97 08 30	84	11.1	35,603.6
Arizona Public Service Company	Palo Verde 2	PWR	97 09 05	88	37.0	35,640.5
Gen Energy Company, LLC	Three Mile Island 1	PWR	97 09 05	77	35.8	35,676.2
essee Valley Authority	Watts Bar	PWR	97 09 06	70	32.2	35,708.3
Georgia Power Company	Vogtle 1	PWR	97 09 07	101	43.8	35,752.1
Florida Power & Light Co.	Turkey Point 4	PWR	97 09 08	56	25.9	35,777.9
*Indiana Michigan Power Co.	Cook 1	PWR	97 09 09	48	22.2	35,800.0
*Indiana Michigan Power Co.	Cook 2	PWR	97 09 09	56	23.9	35,823.8
PSEG Nuclear LLC	Hope Creek	BWR	97 09 12	236	41.8	35,865.6
Cleveland Electric Illuminating Co.	Perry 1	BWR	97 09 12	252	45.0	35,910.6
Entergy Gulf States, Inc.	River Bend	BWR	97 09 12	204	36.3	35,946.8
Carolina Power & Light Company	Brunswick 2	BWR	97 09 13	184	32.7	35,979.5
South Texas Project NOC	South Texas 1	PWR	97 09 13	85	46.0	36,025.4
Duke Power Company	Oconee 1	PWR	97 09 18	52	24.1	36,049.5
*Exelon Generation Company, LLC	Braidwood 2	PWR	97 09 27	81	34.5	36,083.9
Tennessee Valley Authority	Browns Ferry 2	BWR	97 09 27	256	47.0	36,130.9
*Exelon Generation Company, LLC	Quad Cities 2	BWR	97 09 27	1	0.2	36,131.0
Pennsylvania Power Company	Beaver Valley 1	PWR	97 09 28	83	38.5	36,169.5
Detroit Edison Company	Enrico Fermi 2	BWR	97 10 03	2	0.4	36,169.8
Duke Power Company	McGuire 2	PWR	97 10 03	62	28.3	36,198.0
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	97 10 03	292	51.4	36,249.4
South Carolina Electric & Gas Company	Summer	PWR	97 10 03	52	21.8	36,271.1
Kansas Gas & Electric Company	Wolf Creek	PWR	97 10 04	89	41.2	36,312.3
Tennessee Valley Authority	Sequoyah 2	PWR	97 10 05	84	39.0	36,351.2
Virginia Electric and Power Co.	Surry 2	PWR	97 10 06	53	24.5	36,375.6
Georgia Power Company	Hatch 1	BWR	97 10 11	189	33.7	36,409.3
Northern States Power Co.	Prairie Island 1	PWR	97 10 18	45	16.0	36,425.2
*Rochester Gas and Electric Company	Ginna	PWR	97 10 20	41	14.5	36,439.7
da Power & Light Co.	Saint Lucie 1	PWR	97 10 20	61	24.3	36,463.9

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
Texas Utilities Generating Company	Comanche Peak 2	PWR	97 10 25	77	32.8	36,496.7
Carolina Power & Light Company	Brunswick 1	BWR	97 11 06	2	0.4	36,497.0
*Exelon Generation Company, LLC	Byron 1	PWR	97 11 07	77	32.8	36,529.8
Duke Power Company	Catawba 1	PWR	97 11 28	81	37.0	36,566.7
Pacific Gas & Electric Company	Diablo Canyon 2	PWR	98 02 14	69	29.4	36,596.0
Wisconsin Electric Power Company	Point Beach 1	PWR	98 02 14	45	16.2	36,612.2
*Exelon Generation Company, LLC	Dresden 2	BWR	98 03 07	168	28.3	36,640.4
Carolina Power & Light Company	Robinson 2	PWR	98 03 07	44	19.2	36,659.5
Georgia Power Company	Vogtle 2	PWR	98 03 08	89	37.9	36,697.4
Duke Power Company	Oconee 2	PWR	98 03 14	56	26.0	36,723.3
Arizona Public Service Company	Palo Verde 1	PWR	98 03 14	99	42.2	36,765.5
Northern States Power Co.	Monticello	BWR	98 03 20	128	22.1	36,787.5
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	98 03 20	112	19.9	36,807.4
Texas Utilities Generating Company	Comanche Peak 1	PWR	98 03 21	89	36.3	36,843.6
Alabama Power Company	Farley 2	PWR	98 03 27	66	29.1	36,872.7
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	98 03 28	56	26.0	36,898.6
Omaha Public Power District	Fort Calhoun	PWR	98 03 31	49	18.4	36,916.9
Ameren UE	Callaway	PWR	98 04 03	97	40.5	36,957.4
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	98 04 03	93	36.0	36,993.3
Interstate Power & Light	Duane Arnold	BWR	98 04 03	120	21.4	37,014.6
*Exelon Generation Company, LLC	Limerick 1	BWR	98 04 04	358	62.2	37,076.8
Virginia Electric and Power Co.	North Anna 2	PWR	98 04 05	72	33.4	37,110.1
Tennessee Valley Authority	Browns Ferry 3	BWR	98 04 07	59	10.8	37,120.9
*Toledo Edison Co.	Davis-Besse	PWR	98 04 10	78	36.6	37,157.4
[illegible]n Generation Company, LLC	Byron 2	PWR	98 04 11	85	36.2	37,193.6
[illegible]ns Energy Resources, Inc.	Grand Gulf 1	BWR	98 04 11	276	48.6	37,242.1
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	98 04 14	324	56.2	37,298.3
Energy Northwest	Columbia	BWR	98 04 18	132	22.2	37,320.4
Carolina Power & Light Company	Brunswick 1	BWR	98 04 25	196	34.8	37,355.1
*Consumers Power Co.	Palisades	PWR	98 04 25	60	24.3	37,379.4
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 2	BWR	98 05 02	272	46.8	37,426.2
Duke Power Company	McGuire 1	PWR	98 05 29	69	31.5	37,457.6
Detroit Edison Company	Enrico Fermi 2	BWR	98 09 04	220	39.1	37,496.6
*Exelon Generation Company, LLC	Braidwood 1	PWR	98 09 05	85	36.2	37,532.8
Duke Power Company	Catawba 2	PWR	98 09 05	84	38.2	37,570.9
Georgia Power Company	Hatch 2	BWR	98 09 05	192	34.2	37,605.1
Tennessee Valley Authority	Sequoyah 1	PWR	98 09 09	70	32.5	37,637.6
Virginia Electric and Power Co.	North Anna 1	PWR	98 09 13	53	24.6	37,662.1
Arizona Public Service Company	Palo Verde 3	PWR	98 09 19	107	46.9	37,709.0
Tennessee Valley Authority	Browns Ferry 3	BWR	98 09 20	292	53.5	37,762.4
Florida Power & Light Co.	Turkey Point 3	PWR	98 09 21	40	18.5	37,780.9
AmerGen Energy Company, LLC	Oyster Creek	BWR	98 09 26	184	31.6	37,812.4
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	98 09 30	292	49.7	37,862.1
Nebraska Public Power District	Cooper	BWR	98 10 03	152	27.0	37,889.1
South Texas Project NOC	South Texas 2	PWR	98 10 03	73	39.5	37,928.5
Duke Power Company	Oconee 3	PWR	98 10 08	60	27.9	37,956.4
Alabama Power Company	Farley 1	PWR	98 10 16	64	27.2	37,983.6
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	98 10 16	190	32.4	38,016.0
Wisconsin Public Service Corporation	Kewaunee	PWR	98 10 16	45	17.1	38,033.1
Virginia Electric and Power Co.	Surry 1	PWR	98 10 19	45	20.8	38,053.8
[illegible]na Power & Light Company	Harris	PWR	98 10 24	61	27.8	38,081.6

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
*Exelon Generation Company, LLC	Quad Cities 1	BWR	98 11 07	200	34.6	38,116.1
Northern States Power Co.	Prairie Island 2	PWR	98 11 09	45	16.0	38,132.1
Florida Power & Light Co.	Saint Lucie 2	PWR	98 11 09	65	25.0	38,157.0
Wisconsin Electric Power Company	Point Beach 2	PWR	98 12 05	53	19.0	38,176.0
Pennsylvania Power Company [14]	Beaver Valley 1	PWR	98 12 31	4	1.9	38,177.8
Carolina Power & Light Company [17]	Brunswick 1	BWR	98 12 31	1	0.2	38,178.0
*Toledo Edison Co. [19]	Davis-Besse	PWR	98 12 31	2	1.0	38,178.9
*Maine Yankee Atomic Power Company [15]	Maine Yankee	PWR	98 12 31	13	4.9	38,183.8
Virginia Electric and Power Co. [22]	North Anna 1	PWR	98 12 31	6	2.8	38,186.5
*Consumers Power Co. [18]	Palisades	PWR	98 12 31	1	0.4	38,186.9
Arizona Public Service Company [16]	Palo Verde 3	PWR	98 12 31	1	0.4	38,187.3
PSEG Nuclear LLC [20]	Salem 1	PWR	98 12 31	23	10.8	38,198.0
PSEG Nuclear LLC [21]	Salem 2	PWR	98 12 31	15	7.0	38,205.0
Virginia Electric and Power Co. [13]	Surry 1	PWR	98 12 31	3	1.4	38,206.4
Southern California Edison Co.	San Onofre 2	PWR	99 01 02	100	40.8	38,247.1
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	99 01 09	81	33.1	38,280.2
*Exelon Generation Company, LLC	Dresden 3	BWR	99 01 30	176	29.7	38,309.8
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	99 02 07	80	34.1	38,343.8
PSEG Nuclear LLC	Hope Creek	BWR	99 02 13	196	34.8	38,378.6
Entergy Louisiana, Inc.	Waterford 3	PWR	99 02 19	91	37.4	38,415.9
Pennsylvania Power Company	Beaver Valley 2	PWR	99 02 26	65	30.2	38,446.1
Georgia Power Company	Vogtle 1	PWR	99 02 27	105	45.1	38,491.1
Tennessee Valley Authority	Watts Bar	PWR	99 02 27	65	29.9	38,521.0
[illegible]ester Gas and Electric Company	Ginna	PWR	99 03 01	36	12.7	38,533.6
[illegible]rgia Power Company	Hatch 1	BWR	99 03 01	192	34.1	38,567.7
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	99 03 12	101	39.3	38,606.9
Duke Power Company	McGuire 2	PWR	99 03 12	76	34.7	38,641.6
Pennsylvania Power & Light Co.	Susquehanna 2	BWR	99 03 12	281	48.5	38,690.0
Florida Power & Light Co.	Turkey Point 4	PWR	99 03 15	57	26.4	38,716.4
Texas Utilities Generating Company	Comanche Peak 2	PWR	99 03 20	89	36.6	38,752.9
*Exelon Generation Company, LLC	Byron 1	PWR	99 03 27	68	28.9	38,781.8
Arizona Public Service Company	Palo Verde 2	PWR	99 03 27	94	41.2	38,823.0
Cleveland Electric Illuminating Co.	Perry 1	BWR	99 03 27	280	49.6	38,872.5
Southern California Edison Co.	San Onofre 3	PWR	99 03 27	98	40.2	38,912.7
FPL Energy Seabrook, LLC	Seabrook	PWR	99 03 27	85	39.0	38,951.7
South Texas Project NOC	South Texas 1	PWR	99 03 27	89	48.2	38,999.8
PSEG Nuclear LLC	Salem 2	PWR	99 04 02	71	33.0	39,032.8
Entergy Gulf States, Inc.	River Bend	BWR	99 04 03	388	67.4	39,100.1
South Carolina Electric & Gas Company	Summer	PWR	99 04 03	65	27.2	39,127.2
Kansas Gas & Electric Company	Wolf Creek	PWR	99 04 03	85	39.4	39,166.6
Tennessee Valley Authority	Browns Ferry 2	BWR	99 04 11	300	54.5	39,221.0
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	99 04 11	176	29.8	39,250.8
*Exelon Generation Company, LLC	Limerick 2	BWR	99 04 16	655	113.6	39,364.3
Carolina Power & Light Company	Brunswick 2	BWR	99 04 17	200	35.4	39,399.7
Northern States Power Co.	Prairie Island 1	PWR	99 04 17	49	17.2	39,416.9
Tennessee Valley Authority	Sequoyah 2	PWR	99 04 18	109	50.6	39,467.4
Virginia Electric and Power Co.	Surry 2	PWR	99 04 18	41	19.0	39,486.3
Duke Power Company	Catawba 1	PWR	99 04 22	72	32.8	39,519.1
*Exelon Generation Company, LLC	Braidwood 2	PWR	99 04 24	80	34.0	39,553.1
[illegible]nion Nuclear Connecticut, Inc.	Millstone 3	PWR	99 05 01	63	28.9	39,581.9

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
Entergy Nuclear Generation Company	Pilgrim 1	BWR	99 05 08	160	27.6	39,609.4
Duke Power Company	Oconee 1	PWR	99 05 20	68	32.0	39,641.3
*Entergy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	99 09 10	72	33.2	39,674.5
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	99 09 10	68	31.6	39,706.0
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	99 09 11	62	28.8	39,734.8
Virginia Electric and Power Co.	North Anna 2	PWR	99 09 12	73	33.9	39,768.6
Florida Power & Light Co.	Saint Lucie 1	PWR	99 09 13	73	29.0	39,797.5
Duke Power Company	McGuire 1	PWR	99 09 17	73	33.3	39,830.8
PSEG Nuclear LLC	Salem 1	PWR	99 09 17	85	39.4	39,870.2
Energy Northwest	Columbia	BWR	99 09 18	248	41.6	39,911.8
Texas Utilities Generating Company	Comanche Peak 1	PWR	99 09 25	89	36.3	39,948.1
Carolina Power & Light Company	Robinson 2	PWR	99 09 25	60	26.1	39,974.1
Pacific Gas & Electric Company	Diablo Canyon 2	PWR	99 09 26	101	43.0	40,017.0
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	99 09 29	273	46.3	40,063.3
Florida Power Corporation	Crystal River 3	PWR	99 10 01	79	36.7	40,099.9
*Exelon Generation Company, LLC	Dresden 2	BWR	99 10 01	248	41.8	40,141.7
Omaha Public Power District	Fort Calhoun	PWR	99 10 01	45	15.9	40,157.5
Ameren UE	Callaway	PWR	99 10 02	96	40.0	40,197.4
Arizona Public Service Company	Palo Verde 1	PWR	99 10 02	101	44.3	40,241.7
Georgia Power Company	Vogtle 2	PWR	99 10 03	81	34.5	40,276.1
South Texas Project NOC	South Texas 2	PWR	99 10 13	93	50.3	40,326.3
*Consumers Power Co.	Palisades	PWR	99 10 15	64	25.9	40,352.2
Alabama Power Company	Farley 2	PWR	99 10 16	61	26.0	40,378.2
Wisconsin Electric Power Company	Point Beach 1	PWR	99 10 16	40	14.4	40,392.5
[illegible]ate Power & Light	Duane Arnold	BWR	99 10 22	128	22.9	40,415.3
[illegible]on Generation Company, LLC	Byron 2	PWR	99 10 23	76	32.4	40,447.6
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	99 10 23	228	40.1	40,487.7
*Exelon Generation Company, LLC	La Salle County 1	BWR	99 10 23	372	66.1	40,553.8
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	99 10 29	85	15.2	40,568.9
Duke Power Company	Oconee 2	PWR	99 11 04	62	29.0	40,597.9
Northern States Power Co.	Monticello	BWR	00 01 06	145	25.0	40,622.8
*Exelon Generation Company, LLC	Quad Cities 2	BWR	00 01 21	240	41.5	40,664.2
Pennsylvania Power Company	Beaver Valley 1	PWR	00 02 15	70	32.5	40,696.7
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	00 02 15	69	31.5	40,728.2
Tennessee Valley Authority	Sequoyah 1	PWR	00 02 22	84	38.6	40,766.7
Carolina Power & Light Company	Brunswick 1	BWR	00 02 26	220	38.8	40,805.4
Florida Power & Light Co.	Turkey Point 3	PWR	00 02 28	69	31.9	40,837.2
South Texas Project NOC	South Texas 1	PWR	00 03 01	86	46.6	40,883.7
Alabama Power Company	Farley 1	PWR	00 03 03	53	22.6	40,906.3
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 2	BWR	00 03 03	248	42.3	40,948.6
Nebraska Public Power District	Cooper	BWR	00 03 04	136	24.2	40,972.7
Georgia Power Company	Hatch 2	BWR	00 03 04	192	34.2	41,006.9
Entergy Gulf States, Inc.	River Bend	BWR	00 03 04	253	43.4	41,050.2
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	00 03 10	100	39.1	41,089.2
Duke Power Company	Catawba 2	PWR	00 03 11	73	33.3	41,122.5
Virginia Electric and Power Co.	North Anna 1	PWR	00 03 12	85	39.5	41,161.9
*Exelon Generation Company, LLC	Braidwood 1	PWR	00 03 18	108	45.5	41,207.4
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	00 03 18	256	44.2	41,251.5
Arizona Public Service Company	Palo Verde 3	PWR	00 03 30	84	36.9	41,288.3
*Exelon Generation Company, LLC	Limerick 1	BWR	00 03 31	72	12.4	41,300.7
[illegible]o Edison Co.	Davis-Besse	PWR	00 04 01	78	36.5	41,337.2

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Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
Detroit Edison Company	Enrico Fermi 2	BWR	00 04 01	208	35.5	41,372.6
Duke Power Company	Oconee 3	PWR	00 04 13	60	29.2	41,401.8
Carolina Power & Light Company	Harris	PWR	00 04 14	65	29.7	41,431.4
Tennessee Valley Authority	Browns Ferry 3	BWR	00 04 15	288	51.6	41,482.9
Virginia Electric and Power Co.	Surry 1	PWR	00 04 16	53	24.5	41,507.4
Florida Power & Light Co.	Saint Lucie 2	PWR	00 04 17	77	30.2	41,537.5
PSEG Nuclear LLC	Hope Creek	BWR	00 04 21	232	41.3	41,578.8
Wisconsin Public Service Corporation	Kewaunee	PWR	00 04 21	41	15.9	41,594.6
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	00 04 21	77	29.3	41,623.9
Northern States Power Co.	Prairie Island 2	PWR	00 04 28	48	16.8	41,640.7
Duke Power Company	McGuire 2	PWR	00 09 01	85	38.8	41,679.5
Tennessee Valley Authority	Watts Bar	PWR	00 09 10	69	31.9	41,711.3
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	00 09 15	69	29.2	41,740.5
*Exelon Generation Company, LLC	Dresden 3	BWR	00 09 15	240	40.5	41,780.9
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	00 09 15	299	50.8	41,831.7
Georgia Power Company	Vogtle 1	PWR	00 09 16	97	41.5	41,873.1
*Rochester Gas and Electric Company	Ginna	PWR	00 09 18	57	20.0	41,893.0
Pennsylvania Power Company	Beaver Valley 2	PWR	00 09 23	61	28.3	41,921.3
*Exelon Generation Company, LLC	Byron 1	PWR	00 09 23	101	42.4	41,963.6
Florida Power & Light Co.	Turkey Point 4	PWR	00 09 25	56	25.9	41,989.5
Georgia Power Company	Hatch 1	BWR	00 09 29	184	32.9	42,022.3
Kansas Gas & Electric Company	Wolf Creek	PWR	00 09 29	89	40.7	42,062.9
Texas Utilities Generating Company	Comanche Peak 2	PWR	00 09 30	93	38.0	42,100.9
Virginia Electric and Power Co.	Surry 2	PWR	00 10 01	64	29.6	42,130.4
[illegible]a Public Service Company	Palo Verde 2	PWR	00 10 04	113	49.5	42,179.9
[illegible] Nuclear LLC	Salem 2	PWR	00 10 05	85	39.4	42,219.2
South Carolina Electric & Gas Company	Summer	PWR	00 10 06	66	27.6	42,246.8
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	00 10 07	198	34.0	42,280.7
Southern California Edison Co.	San Onofre 2	PWR	00 10 07	92	39.9	42,320.6
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	00 10 08	89	37.2	42,357.7
AmerGen Energy Company, LLC	Oyster Creek	BWR	00 10 13	184	31.5	42,389.2
Entergy Louisiana, Inc.	Waterford 3	PWR	00 10 13	77	32.3	42,421.5
Duke Power Company	Catawba 1	PWR	00 10 14	80	36.6	42,458.0
AmerGen Energy Company, LLC	Clinton	BWR	00 10 14	188	33.9	42,491.9
Wisconsin Electric Power Company	Point Beach 2	PWR	00 10 14	40	14.4	42,506.2
*Exelon Generation Company, LLC	Quad Cities 1	BWR	00 10 14	235	40.6	42,546.8
FPL Energy Seabrook, LLC	Seabrook	PWR	00 10 20	104	47.6	42,594.4
*Exelon Generation Company, LLC	Braidwood 2	PWR	00 10 21	73	30.6	42,624.9
Tennessee Valley Authority	Sequoyah 2	PWR	00 10 22	77	35.3	42,660.1
*Exelon Generation Company, LLC	La Salle County 2	BWR	00 11 10	343	61.1	42,721.2
Duke Power Company	Oconee 1	PWR	00 11 23	60	28.8	42,750.0
Southern California Edison Co.	San Onofre 3	PWR	01 01 02	101	43.7	42,793.6
Northern States Power Co.	Prairie Island 1	PWR	01 01 19	49	17.3	42,810.9
*Dominion Nuclear Connecticut, Inc.	Millstone 3	PWR	01 02 03	58	26.4	42,837.2
Cleveland Electric Illuminating Co.	Perry 1	BWR	01 02 16	304	53.1	42,890.3
Carolina Power & Light Company	Brunswick 2	BWR	01 02 23	218	37.5	42,927.8
Alabama Power Company	Farley 2	PWR	01 02 24	56	23.8	42,951.5
Nebraska Public Power District	Cooper	BWR	01 03 03	1	0.2	42,951.7
South Texas Project NOC	South Texas 2	PWR	01 03 07	86	46.5	42,998.2
Duke Power Company	McGuire 1	PWR	01 03 09	85	38.8	43,037.0
[illegible]sylvania Power & Light Co.	Susquehanna 2	BWR	01 03 10	299	52.2	43,089.1

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type	Ranking Date	# of ASMB[4]	MTU[5]	Total MTU[6]
Virginia Electric and Power Co.	North Anna 2	PWR	01 03 11	133	61.7	43,150.8
Omaha Public Power District	Fort Calhoun	PWR	01 03 15	93	34.7	43,185.5
Baltimore Gas & Electric Co.	Calvert Cliffs 2	PWR	01 03 16	94	36.7	43,222.1
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	01 03 17	57	26.4	43,248.5
Tennessee Valley Authority	Browns Ferry 2	BWR	01 03 18	199	34.3	43,282.7
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 1	BWR	01 03 18	148	25.1	43,307.8
*Consumers Power Co.	Palisades	PWR	01 03 30	56	22.8	43,330.5
Arizona Public Service Company	Palo Verde 1	PWR	01 03 31	97	42.4	43,372.9
Florida Power & Light Co.	Saint Lucie 1	PWR	01 04 02	97	38.5	43,411.4
*Exelon Generation Company, LLC	Limerick 2	BWR	01 04 04	269	46.1	43,457.4
PSEG Nuclear LLC	Salem 1	PWR	01 04 05	85	39.4	43,496.8
Wisconsin Electric Power Company	Point Beach 1	PWR	01 04 06	37	13.2	43,510.0
*Exelon Generation Company, LLC	Byron 2	PWR	01 04 07	85	35.6	43,545.6
Ameren UE	Callaway	PWR	01 04 07	97	40.4	43,585.9
Carolina Power & Light Company	Robinson 2	PWR	01 04 07	56	24.4	43,610.2
Georgia Power Company	Vogtle 2	PWR	01 04 07	81	34.4	43,644.6
Interstate Power & Light	Duane Arnold	BWR	01 04 12	136	24.3	43,668.9
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	01 04 14	204	35.0	43,703.8
Entergy Nuclear Generation Company	Pilgrim 1	BWR	01 04 21	144	24.3	43,728.0
Texas Utilities Generating Company	Comanche Peak 1	PWR	01 04 24	93	38.1	43,766.0
Duke Power Company	Oconee 2	PWR	01 04 26	61	29.5	43,795.5
*Entergy Nuclear Indian Point 3, LLC	Indian Point 3	PWR	01 04 27	89	40.6	43,836.0
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	01 04 27	59	10.6	43,846.5
Pacific Gas & Electric Company	Diablo Canyon 2	PWR	01 04 28	93	39.0	43,885.5
[illegible]y Northwest	Columbia	BWR	01 05 19	300	51.4	43,936.8
[illegible]sylvania Power Company	Beaver Valley 1	PWR	01 09 01	61	28.3	43,965.1
Virginia Electric and Power Co.	North Anna 1	PWR	01 09 09	67	31.2	43,996.2
*Exelon Generation Company, LLC	Peach Bottom 3	BWR	01 09 14	284	48.4	44,044.6
Duke Power Company	Catawba 2	PWR	01 09 15	93	42.6	44,087.1
Georgia Power Company	Hatch 2	BWR	01 09 15	184	31.7	44,118.7
*Exelon Generation Company, LLC	Braidwood 1	PWR	01 09 22	89	37.3	44,156.0
Carolina Power & Light Company	Harris	PWR	01 09 22	69	31.6	44,187.5
Wisconsin Public Service Corporation	Kewaunee	PWR	01 09 23	40	15.6	44,203.1
Entergy Gulf States, Inc.	River Bend	BWR	01 09 23	200	35.1	44,238.1
Florida Power Corporation	Crystal River 3	PWR	01 09 29	77	35.7	44,273.8
Arizona Public Service Company	Palo Verde 3	PWR	01 09 29	104	45.5	44,319.2
Florida Power & Light Co.	Turkey Point 3	PWR	01 09 29	56	25.9	44,345.1
South Texas Project NOC	South Texas 1	PWR	01 10 03	81	43.9	44,388.9
Alabama Power Company	Farley 1	PWR	01 10 06	88	37.4	44,426.2
AmerGen Energy Company, LLC	Three Mile Island 1	PWR	01 10 09	85	39.5	44,465.6
PSEG Nuclear LLC	Hope Creek	BWR	01 10 10	240	42.9	44,508.4
Virginia Electric and Power Co.	Surry 1	PWR	01 10 14	61	28.2	44,536.5
*Exelon Generation Company, LLC	Dresden 2	BWR	01 10 20	280	47.1	44,583.6
Tennessee Valley Authority	Sequoyah 1	PWR	01 10 21	77	35.2	44,618.7
Detroit Edison Company	Enrico Fermi 2	BWR	01 10 27	204	34.7	44,653.3
Nebraska Public Power District	Cooper	BWR	01 11 03	128	22.8	44,676.1
Northern States Power Co.	Monticello	BWR	01 11 03	103	17.6	44,693.6
Duke Power Company	Oconee 3	PWR	01 11 10	55	26.8	44,720.4
Florida Power & Light Co.	Saint Lucie 2	PWR	01 11 26	77	30.1	44,750.5
*Exelon Generation Company, LLC	Quad Cities 1	BWR	02 01 09	1	0.2	44,750.6
*[illegible]on Generation Company, LLC	La Salle County 1	BWR	02 01 10	343	61.0	44,811.6

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

...rchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU[5]	Total MTU[6]
*Indiana Michigan Power Co.	Cook 2	PWR	02 01 19	90	38.3	44,849.9
Northern States Power Co.	Prairie Island 2	PWR	02 02 02	64	22.6	44,872.4
Pennsylvania Power Company	Beaver Valley 2	PWR	02 02 04	65	30.1	44,902.5
*Exelon Generation Company, LLC	Quad Cities 2	BWR	02 02 12	268	46.4	44,948.8
Baltimore Gas & Electric Co.	Calvert Cliffs 1	PWR	02 02 15	97	38.0	44,986.7
*Toledo Edison Co.	Davis-Besse	PWR	02 02 16	78	36.6	45,023.2
*Dominion Nuclear Connecticut, Inc.	Millstone 2	PWR	02 02 16	81	31.1	45,054.3
Duke Power Company	McGuire 2	PWR	02 02 22	93	42.6	45,096.8
Tennessee Valley Authority	Watts Bar	PWR	02 02 24	93	42.8	45,139.5
Carolina Power & Light Company	Brunswick 1	BWR	02 03 01	245	42.1	45,181.5
Pennsylvania Power & Light Co.	Susquehanna 1	BWR	02 03 02	316	55.1	45,236.5
*Exelon Generation Company, LLC	Limerick 1	BWR	02 03 04	279	48.7	45,285.2
Georgia Power Company	Vogtle 1	PWR	02 03 06	101	42.8	45,328.0
*Exelon Generation Company, LLC	Byron 1	PWR	02 03 12	96	40.3	45,368.2
*Nine Mile Point Nuclear Power Station, LLC	Nine Mile Point 2	BWR	02 03 16	284	48.3	45,416.4
Arizona Public Service Company	Palo Verde 2	PWR	02 03 16	109	47.8	45,464.2
*Rochester Gas and Electric Company	Ginna	PWR	02 03 18	40	13.9	45,478.1
Entergy Louisiana, Inc.	Waterford 3	PWR	02 03 22	92	39.4	45,517.4
Georgia Power Company	Hatch 1	BWR	02 03 23	224	38.6	45,555.9
Duke Power Company	Oconee 1	PWR	02 03 23	60	29.3	45,585.1
Florida Power & Light Co.	Turkey Point 4	PWR	02 03 23	56	25.8	45,610.9
Kansas Gas & Electric Company	Wolf Creek	PWR	02 03 23	88	40.1	45,650.9
Virginia Electric and Power Co.	Surry 2	PWR	02 03 24	69	31.9	45,682.8
Tennessee Valley Authority	Browns Ferry 3	BWR	02 03 26	284	48.7	45,731.4
... Utilities Generating Company	Comanche Peak 2	PWR	02 03 30	91	37.2	45,768.6
...Gen Energy Company, LLC	Clinton	BWR	02 04 02	268	47.8	45,816.3
PSEG Nuclear LLC	Salem 2	PWR	02 04 04	77	35.4	45,851.7
*Entergy Arkansas, Inc.	Arkansas Nuclear One 2	PWR	02 04 12	81	34.8	45,886.4
Wisconsin Electric Power Company	Point Beach 2	PWR	02 04 12	36	12.8	45,899.2
Tennessee Valley Authority	Sequoyah 2	PWR	02 04 14	81	36.9	45,936.1
Carolina Power & Light Company	Brunswick 2	BWR	02 04 19	2	0.4	45,936.4
South Carolina Electric & Gas Company	Summer	PWR	02 04 19	57	23.8	45,960.2
*Exelon Generation Company, LLC	Braidwood 2	PWR	02 04 20	117	49.0	46,009.1
Tennessee Valley Authority	Browns Ferry 2	BWR	02 04 23	7	1.2	46,010.3
Duke Power Company	Catawba 1	PWR	02 04 27	101	46.2	46,056.5
Pacific Gas & Electric Company	Diablo Canyon 1	PWR	02 04 30	108	45.2	46,101.6
*Indiana Michigan Power Co.	Cook 1	PWR	02 05 03	76	35.1	46,136.7
Omaha Public Power District	Fort Calhoun	PWR	02 05 03	40	15.0	46,151.6
FPL Energy Seabrook, LLC	Seabrook	PWR	02 05 04	93	42.3	46,193.9
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	02 05 11	44	7.6	46,201.5
*Exelon Generation Company, LLC	La Salle County 1	BWR	02 05 18	3	0.6	46,202.0
Southern California Edison Co.	San Onofre 2	PWR	02 05 20	104	45.5	46,247.5
*Dominion Nuclear Connecticut, Inc.	Millstone 3	PWR	02 09 07	117	53.3	46,300.7
*Exelon Generation Company, LLC	Peach Bottom 2	BWR	02 09 10	284	48.6	46,349.3
Systems Energy Resources, Inc.	Grand Gulf 1	BWR	02 09 13	240	40.8	46,390.0
Duke Power Company	McGuire 1	PWR	02 09 13	89	40.8	46,430.7
Alabama Power Company	Farley 2	PWR	02 09 14	89	37.7	46,468.4
Wisconsin Electric Power Company	Point Beach 1	PWR	02 09 14	40	14.1	46,482.5
*Exelon Generation Company, LLC	Byron 2	PWR	02 09 16	108	45.2	46,527.6
Carolina Power & Light Company	Brunswick 1	BWR	02 09 21	3	0.6	46,528.1
... Utilities Generating Company	Comanche Peak 1	PWR	02 09 28	89	36.3	46,564.4

APPENDIX A
2004 ACCEPTANCE PRIORITY RANKING

LISTING OF SPENT FUEL BY DATE OF PERMANENT DISCHARGE[1]

Purchaser	Fuel Originator	Type[2]	Ranking Date[3]	# of ASMB[4]	MTU	Total MTU[5]
Arizona Public Service Company	Palo Verde 1	PWR	02 09 28	105	45.9	46,610.3
Florida Power & Light Co.	Saint Lucie 1	PWR	02 09 30	93	36.9	46,647.1
South Texas Project NOC	South Texas 2	PWR	02 10 02	73	39.2	46,686.2
*Entergy Arkansas, Inc.	Arkansas Nuclear One 1	PWR	02 10 04	60	27.9	46,714.1
AmerGen Energy Company, LLC	Oyster Creek	BWR	02 10 04	196	33.7	46,747.7
*Entergy Nuclear Vermont Yankee, LLC	Vermont Yankee	BWR	02 10 05	152	26.7	46,774.4
Georgia Power Company	Vogtle 2	PWR	02 10 05	101	42.8	46,817.1
Entergy Nuclear FitzPatrick, LLC	Fitzpatrick	BWR	02 10 07	196	35.3	46,852.4
*Exelon Generation Company, LLC	Dresden 3	BWR	02 10 08	284	48.0	46,900.4
PSEG Nuclear LLC	Salem 1	PWR	02 10 10	73	33.6	46,933.9
Duke Power Company	Oconee 2	PWR	02 10 12	61	29.8	46,963.6
Carolina Power & Light Company	Robinson 2	PWR	02 10 12	77	32.0	46,995.6
Tennessee Valley Authority	Browns Ferry 2	BWR	02 10 19	50	8.6	47,004.2
Ameren UE	Callaway	PWR	02 10 23	96	40.1	47,044.2
Entergy Nuclear Indian Point 2, LLC	Indian Point 2	PWR	02 10 25	92	41.6	47,085.7
*Exelon Generation Company, LLC	La Salle County 2	BWR	02 10 25	5	0.9	47,086.6
*Exelon Generation Company, LLC	Quad Cities 1	BWR	02 11 05	296	51.1	47,137.7
Northern States Power Co.	Prairie Island 1	PWR	02 11 16	57	20.1	47,157.7
Florida Power Corporation [23]	Crystal River 3	PWR	02 12 31	5	2.4	47,160.0
*Entergy Nuclear Indian Point 3, LLC [24]	Indian Point 3	PWR	02 12 31	2	1.0	47,160.9
AmerGen Energy Company, LLC [25]	Three Mile Island 1	PWR	02 12 31	4	1.9	47,162.8

* Final Delivery Schedule approval and waste acceptance will be contingent upon these Purchasers meeting their one-time fee obligations.

1 The 2004 APR does not include 0.059 MTU of waste originally shipped to GE Vallecitos that has been moved to INEL.

; = Boiling Water Reactor; PWR = Pressurized Water Reactor; RCH = Research Reactor; HTG = High Temperature Gas Reactor; MSC = ...cellaneous.

3 Ranking Date is the date of permanent discharge, or appending SNF that was not previously identified according to the date it is first reported.

4 ASMB = Assemblies.

5 Numbers have been rounded up to the nearest tenth.

6 Cumulative totals rounded up to the nearest tenth.

7 Although this SNF was discharged in 1985, it was reported to DOE in 1991 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1991 for inclusion in the APR.

8 Although this SNF was discharged in 1990, it was reported to DOE in 1991 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1991 for inclusion in the APR.

9 Although this SNF was discharged in 1985, it was reported to DOE in 1993 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1993 for inclusion in the APR.

10 Although this SNF was discharged in 1986, it was reported to DOE in 1993 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1993 for inclusion in the APR.

11 Although this SNF was discharged in 1985, it was reported to DOE in 1995 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1995 for inclusion in the APR.

12 Although this SNF was discharged in 1985, it was reported to DOE in 1995 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1995 for inclusion in the APR.

13 Although this SNF was discharged in 1983 or 1986, it was reported to DOE in 1998 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1998 for inclusion in the APR.

14 Although this SNF was discharged in 1986, it was reported to DOE in 1998 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1998 for inclusion in the APR.

15 Although this SNF was discharged in 1987, 1988 or 1992, it was reported to DOE in 1998 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1998 for inclusion in the APR.

16 Although this SNF was discharged in 1989, it was reported to DOE in 1998 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1998 for inclusion in the APR.

17 Although this SNF was discharged in 1990, it was reported to DOE in 1998 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1998 for inclusion in the APR.

...ough this SNF was discharged in 1990, it was reported to DOE in 1998 as being permanently discharged. As such, it has been assigned a ...ng date of December 31, 1998 for inclusion in the APR.

19 Although this SNF was discharged in 1991, it was reported to DOE in 1998 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1998 for inclusion in the APR.

20 Although this SNF was discharged in 1991 or 1992, it was reported to DOE in 1998 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1998 for inclusion in the APR.

21 Although this SNF was discharged in 1991 or 1993, it was reported to DOE in 1998 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1998 for inclusion in the APR.

22 Although this SNF was discharged in 1993, it was reported to DOE in 1998 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 1998 for inclusion in the APR.

23 Although this SNF was discharged in 1981 or 1983, it was reported to DOE in 2002 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 2002 for inclusion in the APR.

24 Although this SNF was discharged in 1990, it was reported to DOE in 2002 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 2002 for inclusion in the APR.

25 Although this SNF was discharged in 1991, it was reported to DOE in 2002 as being permanently discharged. As such, it has been assigned a ranking date of December 31, 2002 for inclusion in the APR.

APPENDIX B

ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS FOR THE DISPOSAL OF SPENT NUCLEAR FUEL

Tables B.1 through B.10 present the listing of Purchasers' allocations in each of the first 10 years of projected CRWMS operations. An allocation is a portion of the nominal acceptance capacity (measured in MTU) in a particular year for an individual Purchaser. The number of assemblies that was the basis for each allocation is also included. To determine which Purchasers receive allocations for each year, the MTU equivalents of the SNF that the Purchaser permanently discharged, as contained in the 2004 APR (see Appendix A), were summed until the projected nominal capacity for each year was approximated. In some cases, it was necessary to divide discharged SNF with the same date of discharge if inclusion of the entire discharge would cause the total amount allocated in a given year to be significantly different from the nominal acceptance rate. In these cases, the remaining assemblies in the discharge were used as part of the Purchasers' allocation for the following year.

TABLE B.1
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2010

	ASSEMBLIES		MTU		
HASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
AmerGen Energy Company, LLC	160		31.1		
Oyster Creek		160		31.1	BWR
Connecticut Yankee Atomic Power Co.	156		65.5		
Haddam Neck		156		65.5	PWR
Dairyland Power Cooperative	6		0.8		
La Crosse		6		0.8	BWR
Dominion Nuclear Connecticut, Inc.	28		5.5		
Millstone 1		28		5.5	BWR
Entergy Nuclear Indian Point 2, LLC	15		3.0		
Indian Point 1		15		3.0	PWR
Exelon Generation Company, LLC	206		21.1		
Dresden 1		206		21.1	BWR
G.E. Uranium Management Corp.	753		145.2		
Dresden 2		753		145.2	BWR
General Atomics	19		0.1		
General Atomics		19		0.1	RCH
al Electric Company	0		0.3		
various		0		0.3	
Nine Mile Point Nuclear Power Station, LLC	48		9.4		
Nine Mile Point 1		48		9.4	BWR
Pacific Gas & Electric Company	95		7.3		
Humboldt Bay		95		7.3	BWR
Rochester Gas and Electric Company	81		32.0		
Ginna		81		32.0	PWR
Southern California Edison Co.	97		35.6		
San Onofre 1		97		35.6	PWR
U.S. DOE	91		22.9		
Big Rock Point		47		6.4	BWR
Ginna		40		15.3	PWR
La Crosse		1		0.1	BWR
Point Beach 1		3		1.2	PWR
Wisconsin Electric Power Company	41		16.3		
Point Beach 1		41		16.3	PWR
Yankee Atomic Electric Company	36		9.9		
Yankee Rowe		36		9.9	PWR

TABLE B.1
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2010

HASER / FUEL ORIGINATOR	ASSEMBLIES		MTU		FUEL TYPE**
	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	
TOTAL SNF	1832	1832	406.0	406.1	
NO. OF PURCHASERS	16				
NO. OF FUEL ORIGINATORS	16				
NO. OF PWR ASSEMBLIES	469				
NO. OF BWR ASSEMBLIES	1344				
NO. OF RCH ASSEMBLIES	19				
NO. OF HTG ASSEMBLIES	0				

* The sum of the allocations in the MTU Originator column may not match the total in the MTU Purchaser column due to independent rounding. In such cases, DCS review and approval will be based on the value in the MTU Purchaser column.
** BWR=Boiling Water Reactor; PWR=Pressurized Water Reactor; HTG=High Temperature Gas Reactor; RCH=Research Reactor

TABLE B.2
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2011

	ASSEMBLIES		MTU		
HASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
AmerGen Energy Company, LLC	220		43.0		
Oyster Creek		220		43.0	BWR
Carolina Power & Light Company	156		69.7		
Robinson 2		156		69.7	PWR
Connecticut Yankee Atomic Power Co.	55		22.5		
Haddam Neck		55		22.5	PWR
Consumers Power Co.	18		2.5		
Big Rock Point		18		2.5	BWR
Dairyland Power Cooperative	50		6.0		
La Crosse		50		6.0	BWR
Dominion Nuclear Connecticut, Inc.	208		40.7		
Millstone 1		208		40.7	BWR
Duke Power Company	53		24.9		
Oconee 1		53		24.9	PWR
Entergy Nuclear Generation Company	20		3.9		
Pilgrim		20		3.9	BWR
y Nuclear Indian Point 2, LLC	145		27.7		
Indian Point 1		145		27.7	PWR
Entergy Nuclear Vermont Yankee, LLC	378		72.9		
Vermont Yankee		378		72.9	BWR
Exelon Generation Company, LLC	355		60.5		
Dresden 1		89		9.2	BWR
Dresden 2		139		26.8	BWR
Dresden 3		95		18.5	BWR
Quad Cities 1		32		6.2	BWR
Florida Power & Light Co.	46		20.9		
Turkey Point 3		46		20.9	PWR
General Atomics	4		0.1		
General Atomics		4		0.1	RCH
Maine Yankee Atomic Power Company	72		26.4		
Maine Yankee		72		26.4	PWR
Nine Mile Point Nuclear Power Station, LLC	252		49.0		
Nine Mile Point 1		252		49.0	BWR
Northern States Power Co.	135		26.2		
Monticello		135		26.2	BWR

TABLE B.2
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2011

	ASSEMBLIES		MTU		
CHASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Pacific Gas & Electric Company	78		6.0		
Humboldt Bay		78		6.0	BWR
Rochester Gas and Electric Company	12		4.6		
Ginna		12		4.6	PWR
Southern California Edison Co.	57		20.5		
San Onofre 1		57		20.5	PWR
U.S. DOE	42		6.8		
Big Rock Point		38		5.2	BWR
Point Beach 1		3		1.2	PWR
Robinson 2		1		0.4	PWR
Virginia Electric and Power Co.	18		8.2		
Surry 1		18		8.2	PWR
Wisconsin Electric Power Company	110		43.1		
Point Beach 1		74		28.7	PWR
Point Beach 2		36		14.4	PWR
Yankee Atomic Electric Company	37		10.1		
Yankee Rowe		37		10.1	PWR
TOTAL SNF	2521	2521	596.2	596.4	

NO. OF PURCHASERS	23
NO. OF FUEL ORIGINATORS	26
NO. OF PWR ASSEMBLIES	765
NO. OF BWR ASSEMBLIES	1752
NO. OF RCH ASSEMBLIES	4
NO. OF HTG ASSEMBLIES	0

* The sum of the allocations in the MTU Originator column may not match the total in the MTU Purchaser column due to independent rounding. In such cases, DCS review and approval will be based on the value in the MTU Purchaser column.

** BWR=Boiling Water Reactor; PWR=Pressurized Water Reactor; HTG=High Temperature Gas Reactor; RCH=Research Reactor

TABLE B.3
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2012

	ASSEMBLIES		MTU		
CHASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
AmerGen Energy Company, LLC	198		46.8		
Oyster Creek		168		32.9	BWR
Three Mile Island 1		30		14.0	PWR
BWXT	0		0.1		
Oconee 1		0		0.1	PWR
Carolina Power & Light Company	108		48.0		
Brunswick 2		4		0.7	BWR
Robinson 2		104		47.3	PWR
Connecticut Yankee Atomic Power Co.	101		41.6		
Haddam Neck		101		41.6	PWR
Consumers Power Co.	227		87.4		
Big Rock Point		22		3.0	BWR
Palisades		205		84.4	PWR
Dairyland Power Cooperative	25		3.0		
La Crosse		25		3.0	BWR
Dominion Nuclear Connecticut, Inc.	268		52.5		
Millstone 1		268		52.5	BWR
Power Company	103		48.1		
Oconee 1		60		28.2	PWR
Oconee 2		42		19.5	PWR
Oconee 3		1		0.5	PWR
Entergy Nuclear Generation Company	132		25.5		
Pilgrim		132		25.5	BWR
Entergy Nuclear Indian Point 2, LLC	72		32.8		
Indian Point 2		72		32.8	PWR
Exelon Generation Company, LLC	1261		251.2		
Dresden 1		64		6.6	BWR
Dresden 2		173		33.3	BWR
Dresden 3		289		56.1	BWR
Peach Bottom 2		186		36.3	BWR
Quad Cities 1		157		30.4	BWR
Quad Cities 2		343		66.4	BWR
Zion 1		49		22.3	PWR
Florida Power & Light Co.	133		59.6		
Turkey Point 3		83		36.9	PWR
Turkey Point 4		50		22.6	PWR
Interstate Power & Light	82		15.4		
Duane Arnold		82		15.4	BWR

TABLE B.3
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2012

	ASSEMBLIES		MTU		
PURCHASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Maine Yankee Atomic Power Company	152		57.9		
Maine Yankee		152		57.9	PWR
Nebraska Public Power District	120		23.6		
Cooper		120		23.6	BWR
Nine Mile Point Nuclear Power Station, LLC	200		38.9		
Nine Mile Point 1		200		38.9	BWR
Northern States Power Co.	429		99.6		
Monticello		349		67.6	BWR
Prairie Island 1		40		16.0	PWR
Prairie Island 2		40		16.0	PWR
Omaha Public Power District	61		22.3		
Fort Calhoun		61		22.3	PWR
Pacific Gas & Electric Company	217		15.9		
Humboldt Bay		217		15.9	BWR
Rochester Gas and Electric Company	62		24.4		
Ginna		62		24.4	PWR
Southern California Edison Co.	106		38.6		
San Onofre 1		106		38.6	PWR
U.S. DOE	20		7.8		
Dresden 1		2		0.3	BWR
Haddam Neck		1		0.5	PWR
Peach Bottom 2		2		0.4	BWR
Surry 2		10		4.5	PWR
Turkey Point 3		5		2.3	PWR
Virginia Electric and Power Co.	252		113.3		
Surry 1		162		72.9	PWR
Surry 2		90		40.6	PWR
Wisconsin Electric Power Company	82		32.6		
Point Beach 1		48		19.2	PWR
Point Beach 2		34		13.4	PWR
Wisconsin Public Service Corporation	11		4.4		
Kewaunee		11		4.4	PWR
Yankee Atomic Electric Company	40		9.7		
Yankee Rowe		40		9.7	PWR
TOTAL SNF	4462	4462	1201.0	1201.7	

TABLE B.3
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2012

HASER / FUEL ORIGINATOR	ASSEMBLIES PURCHASER	ASSEMBLIES ORIGINATOR	MTU PURCHASER*	MTU ORIGINATOR*	FUEL TYPE**
NO. OF PURCHASERS	26				
NO. OF FUEL ORIGINATORS	40				
NO. OF PWR ASSEMBLIES	1659				
NO. OF BWR ASSEMBLIES	2803				
NO. OF RCH ASSEMBLIES	0				
NO. OF HTG ASSEMBLIES	0				

The sum of the allocations in the MTU Originator column may not match the total in the MTU Purchaser column due to ndependent rounding. In such cases, DCS review and approval will be based on the value in the MTU Purchaser column.
** BWR=Boiling Water Reactor; PWR=Pressurized Water Reactor; HTG=High Temperature Gas Reactor; RCH=Research Reactor

TABLE B.4
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2013

	ASSEMBLIES		MTU		
HASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
AmerGen Energy Company, LLC	422		114.4		
Oyster Creek		296		55.9	BWR
Three Mile Island 1		126		58.5	PWR
Baltimore Gas & Electric Co.	216		82.6		
Calvert Cliffs 1		144		54.0	PWR
Calvert Cliffs 2		72		28.5	PWR
BWXT	0		0.1		
Oconee 1		0		0.1	PWR
Oconee 2		0		0.1	PWR
Progress Energy Carolinas, Inc.	193		50.5		
Brunswick 2		140		26.3	BWR
Robinson 2		53		24.2	PWR
Connecticut Yankee Atomic Power Co.	53		21.9		
Haddam Neck		53		21.9	PWR
Consumers Power Co.	88		30.0		
Big Rock Point		20		2.7	BWR
Palisades		68		27.4	PWR
Dairyland Power Cooperative	32		3.9		
Crosse		32		3.9	BWR
Dominion Nuclear Connecticut, Inc.	169		41.9		
Millstone 1		124		24.1	BWR
Millstone 2		45		17.8	PWR
Duke Power Company	380		176.4		
Oconee 1		116		54.1	PWR
Oconee 2		138		64.1	PWR
Oconee 3		126		58.4	PWR
Entergy Arkansas, Inc.	111		51.5		
Arkansas Nuclear One 1		111		51.5	PWR
Entergy Nuclear FitzPatrick, LLC	268		51.4		
Fitzpatrick		268		51.4	BWR
Entergy Nuclear Generation Company	428		82.6		
Pilgrim		428		82.6	BWR
Entergy Nuclear Indian Point 2, LLC	60		27.1		
Indian Point 2		60		27.1	PWR
Entergy Nuclear Indian Point 3, LLC	64		29.3		
Indian Point 3		64		29.3	PWR

TABLE B.4
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2013

HASER / FUEL ORIGINATOR	ASSEMBLIES PURCHASER	ASSEMBLIES ORIGINATOR	MTU PURCHASER*	MTU ORIGINATOR*	FUEL TYPE**
Entergy Nuclear Vermont Yankee, LLC	218		40.2		
Vermont Yankee		218		40.2	BWR
Exelon Generation Company, LLC	2372		466.7		
Dresden 1		530		53.8	BWR
Dresden 2		196		37.7	BWR
Dresden 3		176		34.1	BWR
Peach Bottom 2		432		80.9	BWR
Peach Bottom 3		440		83.5	BWR
Quad Cities 1		183		35.6	BWR
Quad Cities 2		180		34.8	BWR
Zion 1		129		58.6	PWR
Zion 2		106		47.7	PWR
Florida Power & Light Co.	181		78.7		
Saint Lucie 1		52		20.6	PWR
Turkey Point 3		35		15.8	PWR
Turkey Point 4		94		42.3	PWR
Florida Power Corporation	2		0.9		
Crystal River 3		2		0.9	PWR
General Atomics	2		0.1		
General Atomics		2		0.1	RCH
Georgia Power Company	28		5.2		
Hatch 1		28		5.2	BWR
Indiana Michigan Power Co.	127		57.8		
Cook 1		127		57.8	PWR
Interstate Power & Light	194		36.4		
Duane Arnold		194		36.4	BWR
Maine Yankee Atomic Power Company	203		78.0		
Maine Yankee		203		78.0	PWR
Nebraska Public Power District	72		13.8		
Cooper		72		13.8	BWR
Nine Mile Point Nuclear Power Station, LLC	160		30.8		
Nine Mile Point 1		160		30.8	BWR
Northern States Power Co.	179		65.2		
Monticello		28		5.2	BWR
Prairie Island 1		76		29.9	PWR
Prairie Island 2		75		30.1	PWR
Omaha Public Power District	96		35.4		
Fort Calhoun		96		35.4	PWR

TABLE B.4
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2013

CHASER / FUEL ORIGINATOR	ASSEMBLIES PURCHASER	ASSEMBLIES ORIGINATOR	MTU PURCHASER*	MTU ORIGINATOR*	FUEL TYPE**
Portland General Electric Company	1		0.5		
Trojan		1		0.5	PWR
Rochester Gas and Electric Company	82		32.3		
Ginna		82		32.3	PWR
Sacramento Municipal Utility District	76		35.3		
Rancho Seco		76		35.3	PWR
Southern California Edison Co.	52		19.2		
San Onofre 1		52		19.2	PWR
Tennessee Valley Authority	329		64.2		
Browns Ferry 1		194		37.9	BWR
Browns Ferry 2		132		25.9	BWR
Browns Ferry 3		3		0.6	BWR
U.S. DOE	16		7.3		
Oconee 1		0		0.1	PWR
Surry 1		1		0.5	PWR
Surry 2		2		0.9	PWR
Turkey Point 3		13		5.9	PWR
Virginia Electric and Power Co.	121		54.7		
Surry 1		42		19.2	PWR
Surry 2		79		35.5	PWR
Wisconsin Electric Power Company	162		64.2		
Point Beach 1		81		32.3	PWR
Point Beach 2		81		31.9	PWR
Wisconsin Public Service Corporation	86		33.8		
Kewaunee		86		33.8	PWR
Yankee Atomic Electric Company	76		18.1		
Yankee Rowe		76		18.1	PWR
TOTAL SNF	7319	7319	2002.4	2002.8	

NO. OF PURCHASERS	37
NO. OF FUEL ORIGINATORS	58
NO. OF PWR ASSEMBLIES	2843
NO. OF BWR ASSEMBLIES	4474
NO. OF RCH ASSEMBLIES	2
NO. OF HTG ASSEMBLIES	0

um of the allocations in the MTU Originator column may not match the total in the MTU Purchaser column due to

TABLE B.4
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2013

	ASSEMBLIES		MTU		
HASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**

ndependent rounding. In such cases, DCS review and approval will be based on the value in the MTU Purchaser column.

** BWR=Boiling Water Reactor; PWR=Pressurized Water Reactor; HTG=High Temperature Gas Reactor; RCH=Research Reactor

TABLE B.5
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2014

CHASER / FUEL ORIGINATOR	ASSEMBLIES		MTU		FUEL
	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	TYPE**
Alabama Power Company	99		45.6		
Farley 1		99		45.6	PWR
AmerGen Energy Company, LLC	205		51.7		
Oyster Creek		153		27.6	BWR
Three Mile Island 1		52		24.1	PWR
Baltimore Gas & Electric Co.	279		107.5		
Calvert Cliffs 1		142		55.7	PWR
Calvert Cliffs 2		137		51.9	PWR
Carolina Power & Light Company	649		145.8		
Brunswick 1		284		53.0	BWR
Brunswick 2		264		49.5	BWR
Robinson 2		101		43.3	PWR
Connecticut Yankee Atomic Power Co.	102		42.1		
Haddam Neck		102		42.1	PWR
Consumers Power Co.	116		32.9		
Big Rock Point		48		6.4	BWR
Palisades		68		26.5	PWR
Dairyland Power Cooperative	40		4.9		
La Crosse		40		4.9	BWR
Dominion Nuclear Connecticut, Inc.	461		113.8		
Millstone 1		316		59.3	BWR
Millstone 2		145		54.6	PWR
Duke Power Company	268		124.2		
Oconee 1		67		31.1	PWR
Oconee 2		68		31.5	PWR
Oconee 3		133		61.5	PWR
Entergy Arkansas, Inc.	169		76.6		
Arkansas Nuclear One 1		134		61.7	PWR
Arkansas Nuclear One 2		35		15.0	PWR
Entergy Nuclear FitzPatrick, LLC	160		30.0		
Fitzpatrick		160		30.0	BWR
Entergy Nuclear Generation Company	92		17.1		
Pilgrim		92		17.1	BWR
Entergy Nuclear Indian Point 2, LLC	117		52.8		
Indian Point 2		117		52.8	PWR
Entergy Nuclear Indian Point 3, LLC	76		34.7		
Indian Point 3		76		34.7	PWR

TABLE B.5
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2014

›HASER / FUEL ORIGINATOR	ASSEMBLIES PURCHASER	ASSEMBLIES ORIGINATOR	MTU PURCHASER*	MTU ORIGINATOR*	FUEL TYPE**
Entergy Nuclear Vermont Yankee, LLC	274		50.7		
Vermont Yankee		274		50.7	BWR
Exelon Generation Company, LLC	2207		488.3		
Dresden 2		384		72.5	BWR
Dresden 3		200		38.5	BWR
Peach Bottom 2		276		51.3	BWR
Peach Bottom 3		488		92.2	BWR
Quad Cities 1		417		79.6	BWR
Quad Cities 2		180		34.9	BWR
Zion 1		134		61.2	PWR
Zion 2		128		58.0	PWR
Florida Power & Light Co.	400		169.3		
Saint Lucie 1		156		58.4	PWR
Turkey Point 3		143		65.4	PWR
Turkey Point 4		101		45.6	PWR
Florida Power Corporation	100		46.4		
Crystal River 3		100		46.4	PWR
General Atomics	5		0.1		
General Atomics		5		0.1	RCH
ia Power Company	492		91.6		
Hatch 1		416		77.7	BWR
Hatch 2		76		14.0	BWR
Indiana Michigan Power Co.	294		132.6		
Cook 1		131		57.7	PWR
Cook 2		163		74.9	PWR
Interstate Power & Light	172		32.0		
Duane Arnold		172		32.0	BWR
Maine Yankee Atomic Power Company	141		52.5		
Maine Yankee		141		52.5	PWR
Nebraska Public Power District	428		80.9		
Cooper		428		80.9	BWR
Nine Mile Point Nuclear Power Station, LLC	368		68.1		
Nine Mile Point 1		368		68.1	BWR
Northern States Power Co.	414		111.4		
Monticello		252		46.4	BWR
Prairie Island 1		81		32.4	PWR
Prairie Island 2		81		32.6	PWR
Omaha Public Power District	40		14.8		
·t Calhoun		40		14.8	PWR

TABLE B.5
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2014

	ASSEMBLIES		MTU		
,HASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Pennsylvania Power Company	13		6.0		
Beaver Valley 1		13		6.0	PWR
Portland General Electric Company	88		40.5		
Trojan		88		40.5	PWR
PSEG Nuclear LLC	102		46.9		
Salem 1		102		46.9	PWR
Rochester Gas and Electric Company	91		35.8		
Ginna		91		35.8	PWR
Sacramento Municipal Utility District	106		49.2		
Rancho Seco		106		49.2	PWR
Southern California Edison Co.	52		19.3		
San Onofre 1		52		19.3	PWR
Tennessee Valley Authority	1588		297.6		
Browns Ferry 1		607		113.9	BWR
Browns Ferry 2		508		95.5	BWR
Browns Ferry 3		473		88.5	BWR
DE	432		89.5		
Calvert Cliffs 1		1		0.4	PWR
Fort St. Vrain		246		3.0	HTG
Oconee 1		0		0.1	PWR
Surry 2		8		3.7	PWR
Three Mile Island 2		177		82.6	PWR
Virginia Electric and Power Co.	230		105.5		
North Anna 1		114		52.4	PWR
Surry 1		72		32.9	PWR
Surry 2		44		20.2	PWR
Wisconsin Electric Power Company	125		50.2		
Point Beach 1		32		12.8	PWR
Point Beach 2		93		37.3	PWR
Wisconsin Public Service Corporation	87		35.1		
Kewaunee		87		35.1	PWR
Yankee Atomic Electric Company	36		8.5		
Yankee Rowe		36		8.5	PWR
TOTAL SNF	11118	11118	3002.5	3003.3	

TABLE B.5
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2014

	ASSEMBLIES		MTU		
CHASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
NO. OF PURCHASERS	39				
NO. OF FUEL ORIGINATORS	67				
NO. OF PWR ASSEMBLIES	3991				
NO. OF BWR ASSEMBLIES	6876				
NO. OF RCH ASSEMBLIES	5				
NO. OF HTG ASSEMBLIES	246				

* The sum of the allocations in the MTU Originator column may not match the total in the MTU Purchaser column due to independent rounding. In such cases, DCS review and approval will be based on the value in the MTU Purchaser column.

** BWR=Boiling Water Reactor; PWR=Pressurized Water Reactor; HTG=High Temperature Gas Reactor; RCH=Research Reactor

TABLE B.6
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2015

PURCHASER / FUEL ORIGINATOR	ASSEMBLIES		MTU		FUEL
	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	TYPE**
Alabama Power Company	260		119.3		
Farley 1		144		66.1	PWR
Farley 2		116		53.2	PWR
AmerGen Energy Company, LLC	207		36.4		
Oyster Creek		207		36.4	BWR
Baltimore Gas & Electric Co.	233		89.6		
Calvert Cliffs 1		180		69.0	PWR
Calvert Cliffs 2		53		20.6	PWR
BWXT	0		0.1		
Oconee 1		0		0.1	PWR
Oconee 2		0		0.1	PWR
Carolina Power & Light Company	494		118.3		
Brunswick 1		228		42.5	BWR
Brunswick 2		159		29.8	BWR
Robinson 2		107		46.0	PWR
Connecticut Yankee Atomic Power Co.	102		42.1		
Haddam Neck		102		42.1	PWR
Consumers Power Co.	180		59.9		
Big Rock Point		44		5.6	BWR
Palisades		136		54.4	PWR
Dairyland Power Cooperative	52		5.7		
La Crosse		52		5.7	BWR
Dominion Nuclear Connecticut, Inc.	341		93.3		
Millstone 1		192		35.4	BWR
Millstone 2		149		58.0	PWR
Duke Power Company	350		162.3		
Oconee 1		134		62.1	PWR
Oconee 2		144		66.8	PWR
Oconee 3		72		33.4	PWR
Entergy Arkansas, Inc.	195		83.3		
Arkansas Nuclear One 1		69		32.1	PWR
Arkansas Nuclear One 2		126		51.3	PWR
Entergy Nuclear FitzPatrick, LLC	388		71.8		
Fitzpatrick		388		71.8	BWR
Entergy Nuclear Generation Company	456		83.9		
Pilgrim		456		83.9	BWR
Entergy Nuclear Indian Point 2, LLC	75		33.8		
Indian Point 2		75		33.8	PWR

TABLE B.6
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2015

	ASSEMBLIES		MTU		
HASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Entergy Nuclear Indian Point 3, LLC	76		34.7		
Indian Point 3		76		34.7	PWR
Entergy Nuclear Vermont Yankee, LLC	226		41.5		
Vermont Yankee		226		41.5	BWR
Exelon Generation Company, LLC	2089		451.7		
Dresden 2		224		41.3	BWR
Dresden 3		408		75.1	BWR
Peach Bottom 2		276		50.7	BWR
Peach Bottom 3		284		52.0	BWR
Quad Cities 1		224		41.3	BWR
Quad Cities 2		428		79.3	BWR
Zion 1		125		57.2	PWR
Zion 2		120		54.8	PWR
Florida Power & Light Co.	270		112.4		
Saint Lucie 1		151		57.9	PWR
Turkey Point 3		49		22.4	PWR
Turkey Point 4		70		32.1	PWR
Florida Power Corporation	125		58.3		
Crystal River 3		125		58.3	PWR
General Atomics	12		0.1		
General Atomics		12		0.1	RCH
Georgia Power Company	574		105.3		
Hatch 1		282		51.8	BWR
Hatch 2		292		53.5	BWR
Indiana Michigan Power Co.	275		120.2		
Cook 1		194		83.0	PWR
Cook 2		81		37.2	PWR
Interstate Power & Light	128		23.6		
Duane Arnold		128		23.6	BWR
Maine Yankee Atomic Power Company	78		30.0		
Maine Yankee		78		30.0	PWR
Nebraska Public Power District	226		41.9		
Cooper		226		41.9	BWR
Northern States Power Co.	558		143.1		
Monticello		356		64.7	BWR
Prairie Island 1		122		47.1	PWR
Prairie Island 2		80		31.2	PWR

TABLE B.6
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2015

	ASSEMBLIES		MTU		
PURCHASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Omaha Public Power District	60		21.9		
Fort Calhoun		60		21.9	PWR
Pennsylvania Power Company	106		48.7		
Beaver Valley 1		106		48.7	PWR
Portland General Electric Company	76		34.9		
Trojan		76		34.9	PWR
PSEG Nuclear LLC	158		72.6		
Salem 1		90		41.4	PWR
Salem 2		68		31.2	PWR
Rochester Gas and Electric Company	34		12.7		
Ginna		34		12.7	PWR
Sacramento Municipal Utility District	69		32.0		
Rancho Seco		69		32.0	PWR
Tennessee Valley Authority	1075		236.0		
Browns Ferry 1		267		49.0	BWR
Browns Ferry 2		196		36.4	BWR
Browns Ferry 3		476		88.2	BWR
Sequoyah 1		68		31.2	PWR
Sequoyah 2		68		31.2	PWR
Toledo Edison Co.	138		65.2		
Davis-Besse		138		65.2	PWR
U.S. DOE	534		88.0		
Calvert Cliffs 1		1		0.4	PWR
Cooper		2		0.4	BWR
Fort St. Vrain		480		5.6	HTG
multiple		0		58.4	
Oconee 1		0		0.1	PWR
Point Beach 1		3		1.2	PWR
Surry 2		48		22.0	PWR
Virginia Electric and Power Co.	290		133.0		
North Anna 1		53		24.4	PWR
North Anna 2		109		50.1	PWR
Surry 1		62		28.3	PWR
Surry 2		66		30.2	PWR
Wisconsin Electric Power Company	142		57.0		
Point Beach 1		87		35.0	PWR
Point Beach 2		55		22.1	PWR
Wisconsin Public Service Corporation	66		25.9		
Kewaunee		66		25.9	PWR

TABLE B.6
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2015

	ASSEMBLIES		MTU		
CHASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Yankee Atomic Electric Company	40		9.4		
Yankee Rowe		40		9.4	PWR
TOTAL SNF	10758	10758	2999.9	3000.4	
NO. OF PURCHASERS	39				
NO. OF FUEL ORIGINATORS	69				
NO. OF PWR ASSEMBLIES	4245				
NO. OF BWR ASSEMBLIES	6021				
NO. OF RCH ASSEMBLIES	12				
NO. OF HTG ASSEMBLIES	480				

* The sum of the allocations in the MTU Originator column may not match the total in the MTU Purchaser column due to independent rounding. In such cases, DCS review and approval will be based on the value in the MTU Purchaser column.

** BWR=Boiling Water Reactor; PWR=Pressurized Water Reactor; HTG=High Temperature Gas Reactor; RCH=Research Reactor

TABLE B.7
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2016

	ASSEMBLIES		MTU		
PURCHASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Alabama Power Company	160		73.4		
Farley 1		89		40.9	PWR
Farley 2		71		32.6	PWR
Ameren UE	84		38.7		
Callaway		84		38.7	PWR
Baltimore Gas & Electric Co.	246		93.8		
Calvert Cliffs 1		76		29.3	PWR
Calvert Cliffs 2		170		64.6	PWR
BWXT	0		0.1		
Oconee 2		0		0.1	PWR
Quad Cities 2		0		0.1	BWR
Carolina Power & Light Company	565		116.0		
Brunswick 1		184		33.8	BWR
Brunswick 2		333		61.4	BWR
Robinson 2		48		20.7	PWR
Connecticut Yankee Atomic Power Co.	109		44.5		
Haddam Neck		109		44.5	PWR
Consumers Power Co.	88		24.8		
Big Rock Point		36		4.6	BWR
Palisades		52		20.2	PWR
Dairyland Power Cooperative	56		6.1		
La Crosse		56		6.1	BWR
Dominion Nuclear Connecticut, Inc.	480		103.6		
Millstone 1		400		71.4	BWR
Millstone 2		80		32.3	PWR
Duke Power Company	433		200.0		
McGuire 1		107		49.1	PWR
McGuire 2		39		18.0	PWR
Oconee 1		115		53.2	PWR
Oconee 2		68		31.5	PWR
Oconee 3		104		48.2	PWR
Energy Northwest	59		10.8		
Columbia		59		10.8	BWR
Entergy Arkansas, Inc.	136		60.6		
Arkansas Nuclear One 1		68		31.5	PWR
Arkansas Nuclear One 2		68		29.0	PWR
Entergy Nuclear FitzPatrick, LLC	188		34.4		
Fitzpatrick		188		34.4	BWR

TABLE B.7
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2016

CHASER / FUEL ORIGINATOR	ASSEMBLIES		MTU		FUEL
	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	TYPE**
Entergy Nuclear Indian Point 2, LLC	140		63.5		
Indian Point 2		140		63.5	PWR
Entergy Nuclear Indian Point 3, LLC	72		33.0		
Indian Point 3		72		33.0	PWR
Entergy Nuclear Vermont Yankee, LLC	226		41.3		
Vermont Yankee		226		41.3	BWR
Exelon Generation Company, LLC	1985		419.8		
Dresden 2		196		35.6	BWR
Dresden 3		176		32.0	BWR
La Salle County 1		232		42.5	BWR
Peach Bottom 2		292		53.3	BWR
Peach Bottom 3		284		51.7	BWR
Quad Cities 1		412		73.6	BWR
Quad Cities 2		176		31.9	BWR
Zion 1		73		33.3	PWR
Zion 2		144		65.9	PWR
Florida Power & Light Co.	337		141.8		
Saint Lucie 1		85		32.2	PWR
Saint Lucie 2		80		31.0	PWR
Turkey Point 3		57		26.1	PWR
rkey Point 4		115		52.6	PWR
Florida Power Corporation	65		30.1		
Crystal River 3		65		30.1	PWR
General Atomics	8		0.1		
General Atomics		8		0.1	RCH
Georgia Power Company	559		103.2		
Hatch 1		378		69.9	BWR
Hatch 2		181		33.2	BWR
Indiana Michigan Power Co.	274		119.3		
Cook 1		94		40.2	PWR
Cook 2		180		79.2	PWR
Interstate Power & Light	120		22.0		
Duane Arnold		120		22.0	BWR
Maine Yankee Atomic Power Company	146		54.8		
Maine Yankee		146		54.8	PWR
Nebraska Public Power District	116		21.2		
Cooper		116		21.2	BWR

TABLE B.7
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2016

	ASSEMBLIES		MTU		
⌐HASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Nine Mile Point Nuclear Power Station, LLC	416		74.8		
Nine Mile Point 1		416		74.8	BWR
Northern States Power Co.	160		58.9		
Prairie Island 1		66		24.1	PWR
Prairie Island 2		94		34.8	PWR
Omaha Public Power District	90		32.3		
Fort Calhoun		90		32.3	PWR
Pennsylvania Power & Light Co.	488		89.6		
Susquehanna 1		488		89.6	BWR
Pennsylvania Power Company	77		35.2		
Beaver Valley 1		77		35.2	PWR
Portland General Electric Company	92		42.2		
Trojan		92		42.2	PWR
PSEG Nuclear LLC	141		64.6		
Salem 1		73		33.4	PWR
Salem 2		68		31.2	PWR
R[illegible]ester Gas and Electric Company	94		35.1		
[illegible]na		94		35.1	PWR
Sacramento Municipal Utility District	65		30.1		
Rancho Seco		65		30.1	PWR
South Carolina Electric & Gas Company	110		50.4		
Summer		110		50.4	PWR
Southern California Edison Co.	180		73.9		
San Onofre 1		52		19.3	PWR
San Onofre 2		64		27.3	PWR
San Onofre 3		64		27.3	PWR
Tennessee Valley Authority	1219		277.0		
Browns Ferry 1		420		76.7	BWR
Browns Ferry 2		603		110.3	BWR
Sequoyah 1		128		58.7	PWR
Sequoyah 2		68		31.2	PWR
Toledo Edison Co.	65		30.6		
Davis-Besse		65		30.6	PWR
U.S. DOE	0		0.1		
Oconee 1		0		0.1	PWR

TABLE B.7
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2016

	ASSEMBLIES		MTU		
PURCHASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Virginia Electric and Power Co.	330		151.3		
North Anna 1		107		49.1	PWR
North Anna 2		97		44.6	PWR
Surry 1		72		32.9	PWR
Surry 2		54		24.7	PWR
Wisconsin Electric Power Company	75		29.9		
Point Beach 1		31		12.4	PWR
Point Beach 2		44		17.5	PWR
Wisconsin Public Service Corporation	131		49.8		
Kewaunee		131		49.8	PWR
Yankee Atomic Electric Company	76		17.7		
Yankee Rowe		76		17.7	PWR
TOTAL SNF	10461	10461	3000.5	3000.6	

NO. OF PURCHASERS	43
NO. OF FUEL ORIGINATORS	76
NO. OF PWR ASSEMBLIES	4481
NO. OF BWR ASSEMBLIES	5972
NO. OF RCH ASSEMBLIES	8
NO. OF HTG ASSEMBLIES	0

* The sum of the allocations in the MTU Originator column may not match the total in the MTU Purchaser column due to independent rounding. In such cases, DCS review and approval will be based on the value in the MTU Purchaser column.
** BWR=Boiling Water Reactor; PWR=Pressurized Water Reactor; HTG=High Temperature Gas Reactor; RCH=Research Reactor

TABLE B.8
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2017

PURCHASER / FUEL ORIGINATOR	ASSEMBLIES		MTU		FUEL
	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	TYPE**
Alabama Power Company	169		77.8		
Farley 1		59		27.2	PWR
Farley 2		110		50.6	PWR
Ameren UE	96		44.3		
Callaway		96		44.3	PWR
AmerGen Energy Company, LLC	259		67.0		
Oyster Creek		184		32.2	BWR
Three Mile Island 1		75		34.7	PWR
Arizona Public Service Company	157		66.5		
Palo Verde 1		73		31.1	PWR
Palo Verde 2		84		35.4	PWR
Baltimore Gas & Electric Co.	162		62.0		
Calvert Cliffs 1		76		29.0	PWR
Calvert Cliffs 2		86		33.0	PWR
Carolina Power & Light Company	409		87.3		
Brunswick 1		176		32.3	BWR
Brunswick 2		183		33.5	BWR
Robinson 2		50		21.6	PWR
cticut Yankee Atomic Power Co.	53		21.8		
Haddam Neck		53		21.8	PWR
Consumers Power Co.	24		3.1		
Big Rock Point		24		3.1	BWR
Dairyland Power Cooperative	72		7.8		
La Crosse		72		7.8	BWR
Dominion Nuclear Connecticut, Inc.	405		123.7		
Millstone 1		196		34.7	BWR
Millstone 2		134		54.4	PWR
Millstone 3		75		34.6	PWR
Duke Power Company	711		318.5		
Catawba 1		129		54.7	PWR
Catawba 2		64		27.2	PWR
McGuire 1		147		65.4	PWR
McGuire 2		143		65.7	PWR
Oconee 1		56		25.8	PWR
Oconee 2		112		51.9	PWR
Oconee 3		60		27.8	PWR
Energy Northwest	161		29.4		
Columbia		161		29.4	BWR

TABLE B.8
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2017

PURCHASER / FUEL ORIGINATOR	ASSEMBLIES		MTU		
	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Entergy Arkansas, Inc.	175		76.8		
Arkansas Nuclear One 1		64		29.6	PWR
Arkansas Nuclear One 2		111		47.2	PWR
Entergy Gulf States, Inc.	164		30.5		
River Bend		164		30.5	BWR
Entergy Louisiana, Inc.	92		38.6		
Waterford 3		92		38.6	PWR
Entergy Nuclear FitzPatrick, LLC	196		35.8		
Fitzpatrick		196		35.8	BWR
Entergy Nuclear Generation Company	192		34.2		
Pilgrim		192		34.2	BWR
Entergy Nuclear Indian Point 2, LLC	68		31.1		
Indian Point 2		68		31.1	PWR
Entergy Nuclear Indian Point 3, LLC	79		36.1		
Indian Point 3		79		36.1	PWR
Entergy Nuclear Vermont Yankee, LLC	136		24.9		
Vermont Yankee		136		24.9	BWR
Exelon Generation Company, LLC	1620		375.2		
Byron 1		88		37.3	PWR
Dresden 2		172		30.4	BWR
La Salle County 2		224		41.0	BWR
Limerick 1		100		18.6	BWR
Peach Bottom 2		272		49.7	BWR
Peach Bottom 3		192		35.0	BWR
Quad Cities 1		200		35.4	BWR
Quad Cities 2		152		26.9	BWR
Zion 1		140		64.3	PWR
Zion 2		80		36.6	PWR
Florida Power & Light Co.	301		117.1		
Saint Lucie 1		84		31.3	PWR
Saint Lucie 2		156		57.9	PWR
Turkey Point 3		61		27.9	PWR
Florida Power Corporation	89		41.3		
Crystal River 3		89		41.3	PWR
General Atomics	2		0.1		
General Atomics		2		0.1	RCH
Georgia Power Company	635		116.3		
Hatch 1		272		49.8	BWR
Hatch 2		363		66.5	BWR

TABLE B.8
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2017

ASHER / FUEL ORIGINATOR	ASSEMBLIES PURCHASER	ASSEMBLIES ORIGINATOR	MTU PURCHASER*	MTU ORIGINATOR*	FUEL TYPE**
Indiana Michigan Power Co.	80		35.7		
Cook 1		80		35.7	PWR
Interstate Power & Light	128		23.4		
Duane Arnold		128		23.4	BWR
Kansas Gas & Electric Company	60		27.7		
Wolf Creek		60		27.7	PWR
Maine Yankee Atomic Power Company	67		24.5		
Maine Yankee		67		24.5	PWR
Nebraska Public Power District	204		37.3		
Cooper		204		37.3	BWR
Nine Mile Point Nuclear Power Station, LLC	176		31.1		
Nine Mile Point 1		176		31.1	BWR
Northern States Power Co.	385		92.6		
Monticello		256		46.0	BWR
Prairie Island 1		41		15.0	PWR
Prairie Island 2		88		31.6	PWR
a Public Power District	46		16.4		
Fort Calhoun		46		16.4	PWR
Pacific Gas & Electric Company	103		47.5		
Diablo Canyon 1		66		30.4	PWR
Diablo Canyon 2		37		17.0	PWR
Pennsylvania Power & Light Co.	564		103.5		
Susquehanna 1		240		44.0	BWR
Susquehanna 2		324		59.5	BWR
Pennsylvania Power Company	138		63.6		
Beaver Valley 1		138		63.6	PWR
Portland General Electric Company	118		54.2		
Trojan		118		54.2	PWR
PSEG Nuclear LLC	428		133.0		
Hope Creek		232		43.0	BWR
Salem 1		139		63.9	PWR
Salem 2		57		26.2	PWR
Rochester Gas and Electric Company	65		23.5		
Ginna		65		23.5	PWR

TABLE B.8
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2017

..CHASER / FUEL ORIGINATOR	ASSEMBLIES PURCHASER	ASSEMBLIES ORIGINATOR	MTU PURCHASER*	MTU ORIGINATOR*	FUEL TYPE**
South Carolina Electric & Gas Company	60		27.6		
Summer		60		27.6	PWR
Southern California Edison Co.	291		118.7		
San Onofre 2		202		83.3	PWR
San Onofre 3		89		35.4	PWR
Systems Energy Resources, Inc.	552		101.5		
Grand Gulf		552		101.5	BWR
U.S. DOE	0		0.1		
Arkansas Nuclear One 1		0		0.1	PWR
Virginia Electric and Power Co.	187		86.0		
North Anna 1		47		21.7	PWR
North Anna 2		57		26.4	PWR
Surry 1		58		26.5	PWR
Surry 2		25		11.5	PWR
Wisconsin Electric Power Company	135		53.7		
Point Beach 1		71		28.5	PWR
Point Beach 2		64		25.2	PWR
Wi- ..nsin Public Service Corporation	61		23.1		
..waunee		61		23.1	PWR
Yankee Atomic Electric Company	36		8.3		
Yankee Rowe		36		8.3	PWR
TOTAL SNF	10311	10311	3000.2	3000.3	

NO. OF PURCHASERS	47
NO. OF FUEL ORIGINATORS	84
NO. OF PWR ASSEMBLIES	4566
NO. OF BWR ASSEMBLIES	5743
NO. OF RCH ASSEMBLIES	2
NO. OF HTG ASSEMBLIES	0

* The sum of the allocations in the MTU Originator column may not match the total in the MTU Purchaser column due to independent rounding. In such cases, DCS review and approval will be based on the value in the MTU Purchaser column.

** BWR=Boiling Water Reactor; PWR=Pressurized Water Reactor; HTG=High Temperature Gas Reactor; RCH=Research Reactor

TABLE B.9
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2018

	ASSEMBLIES		MTU		
CHASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Alabama Power Company	130		60.2		
Farley 1		73		33.7	PWR
Farley 2		57		26.6	PWR
Ameren UE	88		38.0		
Callaway		88		38.0	PWR
AmerGen Energy Company, LLC	402		88.6		
Clinton		168		30.9	BWR
Oyster Creek		176		30.8	BWR
Three Mile Island 1		58		26.9	PWR
Arizona Public Service Company	169		69.4		
Palo Verde 1		100		39.8	PWR
Palo Verde 3		69		29.6	PWR
Baltimore Gas & Electric Co.	165		64.2		
Calvert Cliffs 1		93		36.1	PWR
Calvert Cliffs 2		72		28.0	PWR
BWXT	0		0.1		
Oconee 1		0		0.1	PWR
Carolina Power & Light Company	405		87.4		
Brunswick 1		184		33.7	BWR
Brunswick 2		168		30.9	BWR
Harris		4		1.9	PWR
Robinson 2		49		21.0	PWR
Cleveland Electric Illuminating Co.	123		22.6		
Perry		123		22.6	BWR
Connecticut Yankee Atomic Power Co.	54		21.0		
Haddam Neck		54		21.0	PWR
Consumers Power Co.	94		25.9		
Big Rock Point (Shut Down)		42		5.5	BWR
Palisades		52		20.4	PWR
Detroit Edison Company	104		19.1		
Enrico Fermi 2		104		19.1	BWR
Dominion Nuclear Connecticut, Inc.	354		103.9		
Millstone 1 (Shut Down)		196		34.9	BWR
Millstone 2		73		29.8	PWR
Millstone 3		85		39.2	PWR

TABLE B.9
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2018

	ASSEMBLIES		MTU		
›HASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
Duke Power Company	535		234.6		
Catawba 1		61		25.8	PWR
Catawba 2		71		30.2	PWR
McGuire 1		77		32.7	PWR
McGuire 2		142		60.7	PWR
Oconee 1		53		24.5	PWR
Oconee 2		43		19.9	PWR
Oconee 3		88		40.8	PWR
Energy Northwest	288		52.5		
Columbia		288		52.5	BWR
Entergy Arkansas, Inc.	61		28.2		
Arkansas Nuclear One 1		61		28.2	PWR
Entergy Gulf States, Inc.	222		41.1		
River Bend		222		41.1	BWR
Entergy Louisiana, Inc.	80		31.8		
Waterford 3		80		31.8	PWR
Entergy Nuclear FitzPatrick, LLC	184		33.6		
Fitzpatrick		184		33.6	BWR
›y Nuclear Indian Point 2, LLC	72		33.0		
Indian Point 2		72		33.0	PWR
Entergy Nuclear Indian Point 3, LLC	62		28.4		
Indian Point 3		62		28.4	PWR
Entergy Nuclear Vermont Yankee, LLC	136		25.0		
Vermont Yankee		136		25.0	BWR
Exelon Generation Company, LLC	2328		523.9		
Braidwood 1		88		37.5	PWR
Byron 1		76		32.2	PWR
Byron 2		88		37.6	PWR
Dresden 2		200		35.2	BWR
Dresden 3		168		29.6	BWR
La Salle County 1		396		72.5	BWR
La Salle County 2		236		43.1	BWR
Limerick 1		636		117.4	BWR
Quad Cities 1		132		23.5	BWR
Quad Cities 2		164		29.1	BWR
Zion 1 (Shut Down)		76		35.0	PWR
Zion 2 (Shut Down)		68		31.2	PWR
Florida Power & Light Co.	220		86.9		
Saint Lucie 1		83		30.8	PWR
Saint Lucie 2		84		31.8	PWR
›key Point 4		53		24.3	PWR

TABLE B.9
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2018

CHASER / FUEL ORIGINATOR	ASSEMBLIES		MTU		FUEL
	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	TYPE**
General Atomics	13		0.1		
General Atomics		13		0.1	RCH
Georgia Power Company	459		103.3		
Hatch 1		150		27.5	BWR
Hatch 2		242		44.6	BWR
Vogtle 1		67		31.2	PWR
Indiana Michigan Power Co.	152		65.7		
Cook 1		80		36.8	PWR
Cook 2		72		29.0	PWR
Interstate Power & Light	120		21.9		
Duane Arnold		120		21.9	BWR
Kansas Gas & Electric Company	73		33.7		
Wolf Creek		73		33.7	PWR
Maine Yankee Atomic Power Company	57		20.8		
Maine Yankee (Shut Down)		57		20.8	PWR
Nebraska Public Power District	176		32.2		
Cooper		176		32.2	BWR
Northern States Power Co.	209		52.3		
Monticello		128		22.7	BWR
Prairie Island 1		37		13.5	PWR
Prairie Island 2		44		16.0	PWR
Omaha Public Power District	44		15.2		
Fort Calhoun		44		15.2	PWR
Pacific Gas & Electric Company	142		65.3		
Diablo Canyon 1		68		31.3	PWR
Diablo Canyon 2		74		34.0	PWR
Pennsylvania Power & Light Co.	669		121.2		
Susquehanna 1		228		40.5	BWR
Susquehanna 2		441		80.8	BWR
Pennsylvania Power Company	122		56.3		
Beaver Valley 1		69		31.9	PWR
Beaver Valley 2		53		24.4	PWR
Portland General Electric Company	106		48.8		
Trojan (Shut Down)		106		48.8	PWR

TABLE B.9
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2018

	ASSEMBLIES		MTU		
CHASER / FUEL ORIGINATOR	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	FUEL TYPE**
PSEG Nuclear LLC	301		96.0		
Hope Creek		155		28.6	BWR
Salem 1		65		30.2	PWR
Salem 2		81		37.3	PWR
Rochester Gas and Electric Company	36		12.8		
Ginna		36		12.8	PWR
Sacramento Municipal Utility District	177		82.0		
Rancho Seco (Shut Down)		177		82.0	PWR
South Carolina Electric & Gas Company	61		28.0		
Summer		61		28.0	PWR
South Texas Project NOC	18		9.8		
South Texas 1		18		9.8	PWR
Southern California Edison Co.	274		112.7		
San Onofre 1 (Shut Down)		52		19.2	PWR
San Onofre 2		109		45.7	PWR
San Onofre 3		113		47.8	PWR
Systems Energy Resources, Inc.	276		50.4		
Grand Gulf		276		50.4	BWR
Tennessee Valley Authority	72		33.1		
Sequoyah 2		72		33.1	PWR
Toledo Edison Co.	65		30.5		
Davis-Besse		65		30.5	PWR
U.S. DOE	1482		15.7		
Fort St. Vrain		1482		15.7	HTG
Virginia Electric and Power Co.	236		108.6		
North Anna 1		54		24.9	PWR
North Anna 2		61		28.2	PWR
Surry 1		52		23.8	PWR
Surry 2		69		31.6	PWR
Wisconsin Electric Power Company	100		37.8		
Point Beach 1		66		25.3	PWR
Point Beach 2		34		12.5	PWR
Wisconsin Public Service Corporation	45		17.1		
Kewaunee		45		17.1	PWR
Yankee Atomic Electric Company	40		9.2		
Yankee Rowe (Shut Down)		40		9.2	PWR

TABLE B.9
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2018

CHASER / FUEL ORIGINATOR	ASSEMBLIES		MTU		FUEL
	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	TYPE**
TOTAL SNF	11801	11801	2999.9	3000.1	
NO. OF PURCHASERS	50				
NO. OF FUEL ORIGINATORS	95				
NO. OF PWR ASSEMBLIES	4467				
NO. OF BWR ASSEMBLIES	5839				
NO. OF RCH ASSEMBLIES	13				
NO. OF HTG ASSEMBLIES	1482				

* The sum of the allocations in the MTU Originator column may not match the total in the MTU Purchaser column due to independent rounding. In such cases, DCS review and approval will be based on the value in the MTU Purchaser column.
** BWR=Boiling Water Reactor; PWR=Pressurized Water Reactor; HTG=High Temperature Gas Reactor; RCH=Research Reactor

TABLE B.10
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2019

CHASER / FUEL ORIGINATOR	ASSEMBLIES PURCHASER	ASSEMBLIES ORIGINATOR	MTU PURCHASER*	MTU ORIGINATOR*	FUEL TYPE**
Alabama Power Company	194		89.9		
Farley 1		137		63.5	PWR
Farley 2		57		26.4	PWR
Ameren UE	71		30.3		
Callaway		71		30.3	PWR
AmerGen Energy Company, LLC	451		107.4		
Clinton		216		39.7	BWR
Oyster Creek		144		25.5	BWR
Three Mile Island 1		91		42.3	PWR
Arizona Public Service Company	166		66.2		
Palo Verde 2		97		38.7	PWR
Palo Verde 3		69		27.5	PWR
Carolina Power & Light Company	303		94.8		
Brunswick 1		159		29.3	BWR
Harris		107		49.4	PWR
Robinson 2		37		16.0	PWR
Cleveland Electric Illuminating Co.	416		76.7		
Perry		416		76.7	BWR
mers Power Co.	95		32.0		
Big Rock Point		20		2.6	BWR
Palisades		75		29.3	PWR
Dominion Nuclear Connecticut, Inc.	164		71.2		
Millstone 2		85		34.7	PWR
Millstone 3		79		36.5	PWR
Duke Power Company	561		246.3		
Catawba 1		138		58.6	PWR
Catawba 2		69		29.3	PWR
McGuire 1		70		29.7	PWR
McGuire 2		76		32.3	PWR
Oconee 1		52		24.1	PWR
Oconee 2		48		22.3	PWR
Oconee 3		108		50.0	PWR
Energy Northwest	208		37.9		
Columbia		208		37.9	BWR
Entergy Arkansas, Inc.	206		87.6		
Arkansas Nuclear One 1		57		26.4	PWR
Arkansas Nuclear One 2		149		61.1	PWR
Entergy Gulf States, Inc.	178		32.9		
River Bend		178		32.9	BWR

TABLE B.10
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2019

/HASER / FUEL ORIGINATOR	ASSEMBLIES PURCHASER	ASSEMBLIES ORIGINATOR	MTU PURCHASER*	MTU ORIGINATOR*	FUEL TYPE**
Entergy Louisiana, Inc.	170		70.8		
Waterford 3		170		70.8	PWR
Entergy Nuclear FitzPatrick, LLC	148		27.3		
Fitzpatrick		148		27.3	BWR
Entergy Nuclear Indian Point 2, LLC	56		25.8		
Indian Point 2		56		25.8	PWR
Entergy Nuclear Indian Point 3, LLC	73		33.8		
Indian Point 3		73		33.8	PWR
Entergy Nuclear Vermont Yankee, LLC	129		23.6		
Vermont Yankee		129		23.6	BWR
Exelon Generation Company, LLC	1870		433.6		
Braidwood 1		60		25.5	PWR
Braidwood 2		84		35.6	PWR
Byron 1		88		37.4	PWR
Byron 2		79		33.7	PWR
Dresden 2		168		29.1	BWR
Dresden 3		136		23.6	BWR
La Salle County 1		192		35.2	BWR
' ~ Salle County 2		216		39.5	BWR
ıerick 1		164		30.4	BWR
Limerick 2		139		25.9	BWR
Peach Bottom 2		160		29.2	BWR
Quad Cities 1		144		25.6	BWR
Quad Cities 2		168		29.8	BWR
Zion 2		72		33.1	PWR
Florida Power & Light Co.	297		122.2		
Saint Lucie 1		101		37.7	PWR
Saint Lucie 2		76		29.3	PWR
Turkey Point 3		56		25.7	PWR
Turkey Point 4		64		29.4	PWR
Florida Power Corporation	73		33.8		
Crystal River 3		73		33.8	PWR
General Atomics	6		0.1		
General Atomics		6		0.1	RCH
Georgia Power Company	467		117.3		
Hatch 1		180		33.2	BWR
Hatch 2		176		32.6	BWR
Vogtle 1		75		34.9	PWR
Vogtle 2		36		16.7	PWR

TABLE B.10
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2019

CHASER / FUEL ORIGINATOR	ASSEMBLIES		MTU		FUEL
	PURCHASER	ORIGINATOR	PURCHASER*	ORIGINATOR*	TYPE**
Indiana Michigan Power Co.	166		71.5		
Cook 1		81		37.3	PWR
Cook 2		85		34.2	PWR
Interstate Power & Light	104		19.1		
Duane Arnold		104		19.1	BWR
Kansas Gas & Electric Company	76		35.3		
Wolf Creek		76		35.3	PWR
Maine Yankee Atomic Power Company	73		27.4		
Maine Yankee		73		27.4	PWR
Nebraska Public Power District	168		30.9		
Cooper		168		30.9	BWR
Nine Mile Point Nuclear Power Station, LLC	196		36.3		
Nine Mile Point 2		196		36.3	BWR
Northern States Power Co.	107		38.4		
Prairie Island 1		54		19.4	PWR
Prairie Island 2		53		18.9	PWR
Omaha Public Power District	37		13.1		
Fort Calhoun		37		13.1	PWR
Pacific Gas & Electric Company	238		110.2		
Diablo Canyon 1		154		71.3	PWR
Diablo Canyon 2		84		38.8	PWR
Pennsylvania Power & Light Co.	451		78.9		
Susquehanna 1		220		38.8	BWR
Susquehanna 2		231		40.1	BWR
Pennsylvania Power Company	69		31.8		
Beaver Valley 2		69		31.8	PWR
Portland General Electric Company	106		49.0		
Trojan		106		49.0	PWR
PSEG Nuclear LLC	513		133.8		
Hope Creek		373		68.9	BWR
Salem 1		65		30.2	PWR
Salem 2		75		34.7	PWR
Rochester Gas and Electric Company	66		23.6		
Ginna		66		23.6	PWR
South Carolina Electric & Gas Company	69		31.9		
Summer		69		31.9	PWR

TABLE B.10
ANNUAL ACCEPTANCE CAPACITY ALLOCATIONS, 2019

HASER / FUEL ORIGINATOR	ASSEMBLIES PURCHASER	ASSEMBLIES ORIGINATOR	MTU PURCHASER*	MTU ORIGINATOR*	FUEL TYPE**
South Texas Project NOC	93		50.4		
South Texas 1		92		49.9	PWR
South Texas 2		1		0.5	PWR
Southern California Edison Co.	149		60.5		
San Onofre 1		40		14.8	PWR
San Onofre 3		109		45.7	PWR
Systems Energy Resources, Inc.	284		50.2		
Grand Gulf		284		50.2	BWR
Tennessee Valley Authority	131		60.3		
Sequoyah 1		54		24.8	PWR
Sequoyah 2		77		35.5	PWR
Toledo Edison Co.	60		28.1		
Davis-Besse		60		28.1	PWR
Virginia Electric and Power Co.	186		85.9		
North Anna 1		68		31.4	PWR
North Anna 2		63		29.2	PWR
Surry 1		55		25.3	PWR
Wisconsin Electric Power Company	103		37.7		
Point Beach 1		38		13.9	PWR
Point Beach 2		65		23.8	PWR
Wisconsin Public Service Corporation	70		26.5		
Kewaunee		70		26.5	PWR
Yankee Atomic Electric Company	37		8.4		
Yankee Rowe		37		8.4	PWR
TOTAL SNF	9854	9854	3000.7	3000.3	

NO. OF PURCHASERS	46
NO. OF FUEL ORIGINATORS	92
NO. OF PWR ASSEMBLIES	4811
NO. OF BWR ASSEMBLIES	5037
NO. OF RCH ASSEMBLIES	6
NO. OF HTG ASSEMBLIES	0

* The sum of the allocations in the MTU Originator column may not match the total in the MTU Purchaser column due to independent rounding. In such cases, DCS review and approval will be based on the value in the MTU Purchaser column.

** BWR=Boiling Water Reactor; PWR=Pressurized Water Reactor; HTG=High Temperature Gas Reactor; RCH=Research Reactor

Attachment D

COPY

Trojan Nuclear Plant

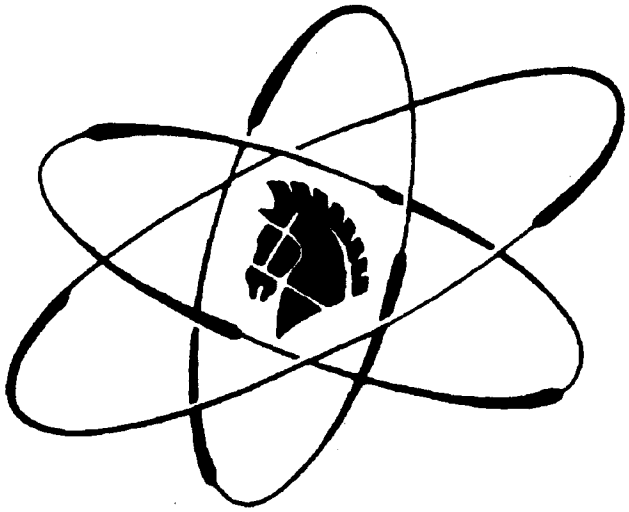
Decommissioning Plan

PORTLAND GENERAL ELECTRIC COMPANY

PGE-1061

PGE-1061

Trojan Nuclear Plant
Decommissioning Plan



January 26, 1995

Portland General Electric

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LIST OF FIGURES FOR DECOMMISSIONING PLAN

5. DECOMMISSIONING COST ESTIMATE AND FUNDING PLAN

In accordance with 10 CFR 50.82, this section provides an updated cost estimate for the decommissioning alternative selected by the TNP co-owners, a comparison of the estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning.

5.1 DECOMMISSIONING COST ESTIMATE

This section provides the results of and basis for a cost estimate prepared by PGE and TLG Services, Inc. (TLG) for the decommissioning of TNP. Incorporated into this cost estimate are costs of activities involved in radiological decommissioning necessary for termination of TNP's Part 50 license, as well as expenditures necessary to complete nonradiological site restoration activities. The costs of removal and disposal of nonradioactive structures and materials beyond that necessary for license termination have been identified separately from radiological decommissioning costs.

Also separately identified are cost projections and funding requirements for the onsite management of irradiated fuel until possession and title of the irradiated fuel is transferred to DOE for ultimate disposal. The description of the spent fuel management costs and associated funding plan provided in this section, together with the description of the spent fuel management program in Section 3.3.1, fulfil the requirements of 10 CFR 50.54(bb), which stipulate that "nuclear power reactors licensed by the NRC ... shall, within 2 years following permanent cessation of operation of the reactor ..., submit written notification to the Commission ... of the program by which the licensee intends to manage and provide funding for the management of all irradiated fuel at the reactor until title to the irradiated fuel and possession of the fuel is transferred to the Secretary of Energy for its ultimate disposal in a repository."

5.1.1 COST ESTIMATE RESULTS

As indicated in Table 5.1-1, the costs (in 1993 dollars) for the selected decommissioning alternative are estimated to be approximately $196,992,000 for radiological decommissioning activities, approximately $42,213,000 for nonradiological decommissioning activities (site restoration), and approximately $168,648,000 for spent fuel management. Costs associated with securing and maintaining decommissioning financial assurance and bridging funds are projected to total approximately $7,226,000. A detailed schedule of TNP's decommissioning and spent fuel management costs, totalling approximately $415,079,000, is provided in Table 5.1-2 and described in Section 5.1.2.

5.1.2 COST ESTIMATE DESCRIPTION

The final decommissioning cost estimate is based largely on the TNP-specific cost estimate performed for PGE by TLG Services, Inc. in May 1994. The methodology used to develop the TLG Services, Inc. cost estimate follows the approach presented in AIF/NESP-036, "Guidelines to Producing Decommissioning Cost Estimates," and the DOE "Decommissioning Handbook.". These guidance documents utilize a unit cost factor method for estimating decommissioning activity costs. Unit cost factors incorporate site-specific considerations whenever practicable. Using plant drawings and inventory documents, TLG Services, Inc. estimated quantities and volumes of the equipment and material to be removed during decommissioning. Unit cost factors were applied to the volumes and quantities to estimate the "activity dependent" costs. "Period dependent" costs were determined from a critical path schedule based on the removal activity duration.

To develop TNP's final decommissioning cost estimate, PGE applied additional TNP-specific factors and cost analyses to further refine the TLG Services, Inc. cost study results. These refinements to the TLG Services, Inc. cost study ensure that the decommissioning cost estimate provides a complete representation of TNP decommissioning costs.

The results of PGE's decommissioning cost estimate have been incorporated into Table 5.1-2, which provides a comprehensive expenditure schedule for the decommissioning of TNP. This table incorporates an annual breakdown of projected costs associated with radiological and nonradiological decommissioning, spent fuel management, and decommissioning expenditure financing activities. The decommissioning cost estimate expenditure schedule contained in Table 5.1-2 is described in the remainder of this section.

5.1.2.1 NRC (Radiological) Decommissioning Costs

The cost schedule for NRC decommissioning activities is incorporated into Table 5.1-2, which reflects the results of the decommissioning cost estimate for TNP. Consistent with current NRC policy, the TNP decommissioning cost estimate considers NRC decommissioning costs to be only those costs associated with normal decommissioning activities necessary for termination of the Part 50 license and release of the site for unrestricted use. The decommissioning cost estimate does not include in NRC decommissioning costs those costs associated with spent fuel management or the disposal of nonradioactive structures and materials beyond that necessary to terminate TNP's Part 50 license.

NRC decommissioning activity costs are separately identified in Table 5.1-2 as large component removal activities and other radiological decommissioning costs, the latter of which are incorporated into the column entitled "DECON Planning/DECON/License Termination." With the exception of costs associated with radiological waste burial, reactor vessel internals removal, and decommissioning plan preparation, the DECON Planning/DECON/License Termination column costs are derived from the TLG Services, Inc. decommissioning cost analysis methodology. Burial costs were derived from PGE modeling and analysis of low-level radioactive waste disposal costs in July 1994, which more conservatively reflect projected burial rates. PGE also used site-specific data to independently analyze and project costs associated with removal of the reactor vessel internals and development of the decommissioning plan.

5.1.2.2 Nonradiological Decommissioning Costs

Although not required by NRC regulations, the decommissioning cost estimate for TNP incorporates nonradiological decommissioning costs, as indicated in Table 5.1-2. The TNP decommissioning cost estimate considers nonradiological decommissioning costs to be those costs associated with site remediation and demolition and removal of uncontaminated structures. The decommissioning cost estimate does not include in nonradiological decommissioning costs those costs associated with spent fuel management or NRC decommissioning activities.

Nonradiological site remediation costs were identified and incorporated into the TLG Services, Inc. cost estimate based on a study conducted for PGE in April 1994 by CH2M Hill, an engineering firm specializing in environmental remediation and water treatment. The methodology that CH2M Hill used to estimate the nonradiological site remediation costs was consistent with the methods used by EPA and State of Oregon under their site clean-up programs.

The relatively larger projected expenditures in 2018 and 2019 for nonradiological decommissioning activities (Table 5.1-2) reflect the intent to perform the majority of the site restoration and uncontaminated building demolition activities after the spent fuel and other high-level radioactive waste have been transferred to an offsite repository in 2018. Significant activities planned prior to this time include removal and disposal of asbestos contained in the cooling tower in 1997, as well as annual activities related to nonradiological site remediation.

5.1.2.3 Spent Fuel Management Costs

Implementation costs associated with the spent fuel management plan described in Section 3.3.1 are reflected in the projected cost schedule for the onsite management of irradiated fuel detailed in Table 5.1-2. Spent fuel management costs begin with ongoing

spent fuel pool operation, surveillance, and maintenance activity costs, and continue through ISFSI planning, construction, and operation until possession and title of the irradiated fuel is transferred to the DOE for ultimate disposal (assumed in this estimate to be completed in 2018). As indicated in Table 5.1-2, spent fuel pool operation expenditures are projected to end in 1998 as a result of the transfer of the spent fuel pool contents to the ISFSI. Costs associated with onsite management of the spent fuel will then involve ISFSI operation, maintenance, and surveillance expenditures. Finally, upon transfer of the ISFSI contents to an offsite repository, spent fuel management costs end in 2018 with final expenditures necessary for disposal of greater than Class C waste and ISFSI decommissioning activities.

PGE has analyzed spent fuel operations and maintenance costs related to storage in both the spent fuel pool and the ISFSI. The methodology used in this analysis considered plant-specific values, as applicable, for labor, material, and outside professional services requirements as well as for other distributed items such as overheads, property and liability insurance, regulatory fees, fire protection activities, and power usage. The results of this analysis were then incorporated into the TLG decommissioning cost study.

5.1.2.4 Financial Activity Costs

Additional costs will be incurred by each TNP co-owner as necessary during decommissioning to secure and maintain assurance that adequate funds will be available to complete radiological decommissioning of the TNP site, and to secure loans or other "bridging" mechanisms to augment existing funds to cover near-term decommissioning costs. The financial assurance costs (e.g., letter of credit and standby trust fees) indicated in Table 5.1-2 are based on the basis points and projected amount of required financial assurance appropriate for each co-owner as described in Section 5.3, "Decommissioning Funding Plan." The loan costs in Table 5.1-2 are based on the interest rate and loan amount appropriate for each TNP co-owner requiring financial bridging as described in Section 5.3. The method which each co-owner will use to provide the required financial assurance mechanism and bridging funds is described in detail in Section 5.3.

5.2 SPENT FUEL MANAGEMENT FUNDING PLAN

Spent fuel management costs are segregated in Table 5.1-2 into spent fuel pool operation costs and dry storage (ISFSI) costs. Ongoing costs associated with the storage of spent fuel and other high-level radioactive waste in the spent fuel pool are currently incorporated into the TNP O&M budget, and are expected to continue to be funded in this manner until the contents of the spent fuel pool are transferred to the ISFSI. Costs associated with dry storage activities, including ISFSI planning, construction, O&M, and decommissioning, as reflected under the column heading "Dry Storage" in Table 5.1-2,

will be funded with decommissioning trust funds collected for that purpose. Additional details on the decommissioning trust fund collections for each TNP co-owner are provided in Section 5.3.

5.3 DECOMMISSIONING FUNDING PLAN

5.3.1 CURRENT DECOMMISSIONING FUNDING CAPABILITIES

Each of the TNP co-owners separately collect and maintain funds for the decommissioning of TNP. These funds are collected through rates and deposited to external trust funds in accordance with 10 CFR 50.75. However, the external trust funds were established assuming that the total collected funds at the expected time of decommissioning would be sufficient to pay both radiological and nonradiological decommissioning costs. Because the TNP was shutdown prematurely, the external trust funds established by the TNP co-owners currently contain only a portion of the total amount needed for site radiological decommissioning. Table 5.3-1 summarizes the status of the TNP co-owners' decommissioning trust funds as of December 31, 1993.

The NRC's general policy requires, prior to the start of final dismantlement (DECON), either funds needed for decommissioning (as the term "decommission" is defined in 10 CFR 50.2, "Definitions") to be available or an appropriate financial vehicle to be secured and maintained that will assure the availability of adequate funds for completion of NRC (radiological) decommissioning. As indicated above, the trusts established by the TNP co-owners for decommissioning will not contain the funds necessary for completion of radiological decommissioning prior to the start of the DECON phase in 1998. Thus prior to commencing DECON, each TNP co-owner is required to secure a financial assurance mechanism allowed by 10 CFR 50.75. This financial assurance must be maintained throughout the DECON period until termination of TNP's Part 50 license. Furthermore, during DECON each co-owner's decommissioning trust fund balance is projected to be reduced to a point where it will be necessary in certain instances to borrow or otherwise provide "bridging" funds to complete decontamination activities and allow scheduled collections to restore the decommissioning trust fund balance.

5.3.2 TNP CO-OWNERS' DECOMMISSIONING FUNDING PLANS

Each of the TNP co-owners has established a program in conjunction with specified goals for the collection of funds for the decommissioning of TNP. These programs were based upon early studies of costs for decommissioning nuclear plants of comparable type and size to TNP. At the time that these programs were established, a specific decommissioning study for the TNP was not performed due to the existence and availability of studies for similar nuclear plants and because it was not planned to decommission until after 2011.

Following the decision to permanently shutdown TNP, the TNP-specific decommissioning cost estimate described in Section 5.1 was prepared, enabling each TNP co-owner to evaluate the adequacy of its current funding plan. Because the results of the decommissioning cost estimate indicate total decommissioning costs higher than those upon which the current TNP co-owner decommissioning trust fund contribution schedules are based, each TNP co-owner has adopted a revised decommissioning fund collection schedule which ensures that each co-owner's portion of the decommissioning activity expenditures will be fully funded. These updated trust fund contribution schedules are based on funding requirements for both radiological and nonradiological decommissioning costs, as well as financing costs and specific spent fuel management costs including planning, design, construction, O&M, and decommissioning of an ISFSI. The updated collection schedules do not include funding for spent fuel pool O&M costs since these costs are being paid with O&M budget funds rather than decommissioning trust funds. The decommissioning trust fund cash flow for each of the TNP co-owners, based on the expenditure schedule in Table 5.1-2 and the revised co-owner contribution schedules, is described below.

5.3.2.1 PGE Funding

Table 5.3-2 provides PGE's decommissioning trust fund cash flow in nominal dollars (3.8% escalation) during decommissioning. The trust fund expenditures described in this table are PGE's share (67.5%) of the expenditures described in Table 5.1-2, with the exception of spent fuel pool O&M costs since these costs are being paid with O&M budget funds rather than decommissioning trust funds. The trust fund contributions listed in Table 5.3-2 are based upon PGE's updated decommissioning trust fund contribution schedule which ensures that PGE's portion of the decommissioning activity expenditures will be fully funded.

Projected requirements for bridging funds have been incorporated into PGE's decommissioning trust fund cash flow. As previously discussed, PGE's external trust fund currently contains only a portion of the total amount needed for PGE's share of site radiological decommissioning costs. Based on the decommissioning trust fund cash flow analysis presented in Table 5.3-2, bridging funds will be required in the year 2000 to complete decontamination activities and allow scheduled collections to restore the decommissioning trust fund balance. Projected interest on bridging funds has also been incorporated into PGE's trust fund cash flow as indicated in Table 5.3-2.

In addition, because the trusts established by the TNP co-owners for decommissioning will not contain the funds necessary for completion of radiological decommissioning prior to the start of the DECON phase in 1998, each TNP co-owner must secure a financial assurance mechanism allowed by 10 CFR 50.75, and maintain this assurance throughout the DECON period until termination of TNP's Part 50 license. PGE's financial

assurance mechanism will consist of the decommissioning trust fund balance together with a letter of credit. Because financial assurance will be maintained only for NRC decommissioning activities, the methodology used to determine the size of the letter of credit ensures that if a given amount of the decommissioning trust fund is used for non-NRC activities during a current year, the portion of the financial assurance provided by the letter of credit must be increased by the same amount. This methodology can be summarized as follows:

$$L_{fa} = T_1 - T_2 + T_3 \quad \text{where}$$

L_{fa} = Letter of Credit Portion of Financial Assurance Needed for Current Year
T_1 = Total costs of remaining NRC activities
T_2 = Current decommissioning trust fund balance
T_3 = Portion of trust balance planned for non-NRC costs during current year

Financial assurance for remaining NRC decommissioning activities will be calculated at the beginning of each year and will be periodically reviewed during each year to ensure that an adequate level of financial assurance is maintained.

5.3.2.2 EWEB/BPA Funding

BPA is obligated through Net Billing Agreements to pay costs associated with EWEB's share of TNP, including decommissioning and spent fuel management costs. BPA will fulfill the decommissioning funding obligations of EWEB, including providing financial assurance for EWEB's portion of decommissioning costs in a manner stipulated in 10 CFR 50.75(e)(3)(iv) for Federal government licensees. Table 5.3-3 provides BPA/EWEB's decommissioning trust fund cash flow in nominal dollars (3.8% escalation) during decommissioning. The trust fund expenditures described in this table are BPA/EWEB's share (30%) of the expenditures described in Table 5.1-2, with the exception of spent fuel pool O&M costs since these costs are being paid with O&M budget funds rather than decommissioning trust funds. The trust fund contributions listed in Table 5.3-3 are based upon BPA/EWEB's updated decommissioning trust fund contribution schedule which ensures that BPA/EWEB's portion of the decommissioning activity expenditures will be fully funded.

Projected requirements for bridging funds have been incorporated into BPA/EWEB's decommissioning trust fund cash flow. As previously discussed, BPA/EWEB's external trust fund currently contains only a portion of the total amount needed for BPA/EWEB's share of site radiological decommissioning costs. Based on the decommissioning trust fund cash flow analysis presented in Table 5.3-3, bridging funds will be required to complete decontamination activities and allow scheduled collections to restore the decommissioning trust fund balance. These bridging funds are not

expected to incur interest costs since BPA, as a government entity, will provide the additional decommissioning funding when necessary according to the schedule listed in Table 5.3-3.

As allowed by 10 CFR 50.75(e)(3)(iv), BPA, as a Federal government entity fulfilling the decommissioning funding obligations of EWEB, a licensee, will provide financial assurance in the form of a statement of intent. The statement of intent will contain a reference to the TNP decommissioning cost estimate described in Section 5.1, indicating that funds for radiological decommissioning will be obtained when necessary.

5.3.2.3 PP&L Funding

Table 5.3-4 provides PP&L's decommissioning trust fund cash flow in nominal dollars (3.8% escalation) during decommissioning. The trust fund expenditures described in this table are PP&L's share (2.5%) of the expenditures described in Table 5.1-2, with the exception of spent fuel pool O&M costs since these costs are being paid with O&M budget funds rather than decommissioning trust funds. The trust fund contributions listed in Table 5.3-4 are based upon PP&L's updated decommissioning trust fund contribution schedule which ensures that PP&L's portion of the decommissioning activity expenditures will be fully funded.

Based on the decommissioning trust fund cash flow analysis presented in Table 5.3-4, PP&L's decommissioning trust balance will remain adequately funded during decommissioning such that bridging funds will not be required. However, because the trusts established by the TNP co-owners for decommissioning will not contain the funds necessary for completion of radiological decommissioning prior to the start of the DECON phase in 1998, PP&L must secure a financial assurance mechanism allowed by 10 CFR 50.75, and maintain this assurance throughout the DECON period until termination of TNP's Part 50 license. PP&L's financial assurance mechanism will consist of the decommissioning trust fund balance together with a letter of credit. The methodology for determining the size of the letter of credit is as described in Section 5.3.2.1, "PGE Funding."

Table 5.1-1

Total Decommissioning Costs
Radiological, Nonradiological (Site Restoration),
Spent Fuel Management, and Financing
(1993 dollars)

Radiological (NRC) Decommissioning Costs	$
Large Component Removal	18,533,000
DECON Planning/DECON/License Termination	178,459,000
Total	196,992,000

Nonradiological Decommissioning Costs	$
Site Restoration	42,213,000
Total	42,213,000

Spent Fuel Management Costs	$
Spent Fuel Pool Operation/Maintenance (non-trust fund expenditures)	66,365,000
ISFSI Construction and Decommissioning	36,667,000
ISFSI Operation/Maintenance	65,616,000
Total	168,648,000

Financing Costs	$
Financial Assurance	590,000
Decommissioning Loans	6,636,000
Total	7,226,000

Total Decommissioning and Fuel Management Costs	$415,079,000
Total Trust Fund Expenditures	$348,714,000

Table 5.1-2
Decommissioning Cost Estimate for Trojan Nuclear Plant
Itemized Decommissioning Expenditure Schedule
(1993 $ x 1000)

Total Expenditures						NRC (Radiological) Decommissioning		Nonradiological Decommissioning	Spent Fuel Management			Financing Activities	
									Dry Storage		Spent Fuel Pool O&M		
Year	Total NRC Decommissioning Expenditures	Total Nonradiological Decommissioning Expenditures	Total Spent Fuel Management Expenditures	Total Financing Activity Expenditures	Combined Expenditures	Large Component Removal	DECON Planning/ DECON/ License Termination	Additional Activities - Site Restoration	ISFSI Construction and Decommissioning	ISFSI O&M		Costs for Maintaining Financial Assurance	Costs of Loans
1993	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	8,051				8,051	3,812	4,239						
1995	15,692		22,858		38,550	14,721	971		1,710		21,148		
1996	8,416		23,840		32,256		8,416		4,515		19,325		
1997	25,329	3,829	23,018		52,176		25,329	3,829	7,400		15,618		
1998	33,391	420	16,511	235	50,557		33,391	420	4,600	1,637	10,274	235	
1999	56,160	1,291	3,252	193	60,896		56,160	1,291		3,252		193	
2000	48,006	1,291	3,279	1,109	53,685		48,006	1,291		3,279		156	953
2001	1,947	1,415	3,350	1,976	8,688		1,947	1,415		3,350		6	1,970
2002		784	3,347	1,643	5,774			784		3,347			1,643
2003		683	3,341	1,292	5,316			683		3,341			1,292
2004		302	3,331	720	4,353			302		3,331			720
2005		302	3,317	54	3,673			302		3,317			54
2006		302	3,298	4	3,604			302		3,298			4
2007		302	3,274		3,576			302		3,274			
2008		302	3,244		3,546			302		3,244			
2009		302	3,208		3,510			302		3,208			

Table 5.1-2
Decommissioning Cost Estimate for Trojan Nuclear Plant
Itemized Decommissioning Expenditure Schedule
(1993 $ x 1000)

Total Expenditures						NRC (Radiological) Decommissioning		Nonradiological Decommissioning	Spent Fuel Management			Financing Activities	
									Dry Storage		Spent Fuel Pool O&M		
Year	Total NRC Decommissioning Expenditures	Total Nonradiological Decommissioning Expenditures	Total Spent Fuel Management Expenditures	Total Financing Activity Expenditures	Combined Expenditures	Large Component Removal	DECON Planning/ DECON/ License Termination	Additional Activities - Site Restoration	ISFSI Construction and Decommissioning	ISFSI O&M		Costs for Maintaining Financial Assurance	Costs of Loans
2010		302	3,165		3,467			302		3,165			
2011		302	3,114		3,416			302		3,114			
2012		302	3,114		3,416			302		3,114			
2013		302	3,114		3,416			302		3,114			
2014		302	3,114		3,416			302		3,114			
2015		302	3,114		3,416			302		3,114			
2016		302	3,114		3,416			302		3,114			
2017		302	3,114		3,416			302		3,114			
2018		10,453	21,217		31,670			10,453	18,442	2,775			
2019		13,357			13,357			13,357					
2020		302			302			302					
2021		728			728			728					
2022		722			722			722					
2023		2,710			2,710			2,710					
Total	196,992	42,213	168,648	7,226	415,079	18,533	178,459	42,213	36,667	65,616	66,365	590	6,636

Table 5.3-1

Status of Decommissioning Trust Funds as of December 31, 1993

Trojan Co-Owner	Fund Balance as of 12/31/93
Portland General Electric (PGE)	$48,873,915
Eugene Water & Electric (EWEB)/ Bonneville Power Administration (BPA)	$11,688,875
Pacific Power & Light (PP&L)	$2,431,938
Total	$62,994,728

Table 5.3-2
Portland General Electric
Decommissioning Trust Fund Cash Flow
(Nominal $ x 1000)

Year	PGE Trust Fund Expenditures	PGE Trust Fund Contributions	PGE Trust Fund Net Earnings	PGE Trust Fund EOY Balance	Bridge Funds	Bridge Funds Interest	Letter of Credit	Letter of Credit Fee
1993				48,874				
1994		11,220	(21)	60,073				
1995	(18,057)	17,992	2,830	62,838				
1996	(10,001)	14,041	3,177	70,055				
1997	(28,647)	14,041	2,623	58,072				
1998	(32,574)	14,041	1,860	41,169			65,759	(230)
1999	(51,250)	14,041	178	3,949			53,923	(189)
2000	(46,075)	14,041	0	0	28,239	(953)	43,842	(154)
2001	(6,106)	14,041	53	1,153	(6,829)	(1,970)	1,771	(6)
2002	(3,901)	14,041	214	4,678	(6,829)	(1,643)		
2003	(3,944)	14,041	240	5,239	(9,776)	(1,292)		
2004	(3,696)	14,041	240	5,239	(10,585)	(720)		
2005	(3,822)	14,041	700	15,360	(799)	(54)		
2006	(3,947)	14,041	1,210	26,610	(54)	(4)		
2007	(4,069)	14,041	1,742	38,320	(4)			
2008	(4,188)	14,041	2,292	50,465				
2009	(4,303)	14,041	2,865	63,068				

Table 5.3-2
Portland General Electric
Decommissioning Trust Fund Cash Flow
(Nominal $ x 1000)

	PGE Trust Fund Expenditures	PGE Trust Fund Contributions	PGE Trust Fund Net Earnings	PGE Trust Fund EOY Balance	Bridge Funds	Bridge Funds Interest	Letter of Credit	Letter of Credit Fee
2010	(4,412)	14,041	3,458	76,155				
2011	(4,513)	15,529	4,148	91,319				
2012	(4,684)		4,120	90,754				
2013	(4,862)		4,083	89,975				
2014	(5,047)		4,038	88,966				
2015	(5,239)		3,983	87,709				
2016	(5,438)		3,915	86,186				
2017	(5,644)		3,835	84,377				
2018	(54,311)		1,422	31,489				
2019	(23,776)		364	8,076				
2020	(558)		356	7,874				
2021	(1,396)		307	6,785				
2022	(1,437)		252	5,600				
2023	(5,600)		0	0				
Total	(351,496)	255,356	54,484			(6,636)		(579)

Table 5.3-3
EWEB/BPA
Decommissioning Trust Fund Cash Flow
(Nominal $ x 1000)

	EWEB/BPA Trust Fund Expenditures	EWEB/BPA Trust Fund Contributions	EWEB/BPA Trust Fund Earnings	EWEB/BPA Trust Fund EOY Balance	Bridge Funds	Bridge Funds Interest*	Letter of Credit*	Letter of Credit Fee*
Year								
1993				11,689				
1994		2,051	533	14,273				
1995	(8,026)	2,154	399	8,800				
1996	(4,445)	2,261	314	6,930				
1997	(12,732)	2,374	0	0	3,427			
1998	(14,477)	2,493	0	0	11,984			
1999	(22,778)	2,618	0	0	20,160			
2000	(20,478)	3,749	0	0	17,730			
2001	(2,714)	650	31	681	2,714			
2002	(1,734)	650	63	1,395	1,734			
2003	(1,753)	650	97	2,142	1,753			
2004	(1,643)	650	133	2,925	1,643			
2005	(1,699)	650	170	3,746	1,699			
2006	(1,754)	650	209	4,605	1,754			
2007	(1,809)	650	249	5,503	1,809			
2008	(1,862)	650	292	6,445	1,862			
2009	(1,913)	650	337	7,432	1,913			

Table 5.3-3
EWEB/BPA
Decommissioning Trust Fund Cash Flow
(Nominal $ x 1000)

	EWEB/BPA Trust Fund Expenditures	EWEB/BPA Trust Fund Contributions	EWEB/BPA Trust Fund Earnings	EWEB/BPA Trust Fund EOY Balance	Bridge Funds	Bridge Funds Interest*	Letter of Credit*	Letter of Credit Fee*
2010	(1,961)	650	384	8,466	1,961			
2011	(2,005)	650	433	9,550	2,006			
2012	(2,082)	650	484	10,684	2,082			
2013	(2,161)	650	538	11,872	2,161			
2014	(2,243)	650	594	13,117	2,243			
2015	(2,328)	650	653	14,420	2,328			
2016	(2,416)	650	715	15,785	2,417			
2017	(2,508)	650	780	17,216	2,509			
2018	(24,138)	650	0	0	6,277			
2019	(10,567)	650	0	0	9,917			
2020	(248)	650	19	421	0			
2021	(621)	650	21	472	0			
2022	(639)	650	23	506	0			
2023	(2,489)	650	0	0	1,333			
Total	(156,222)	31,650	7,471		105,416			

* BPA will provide bridging funds as necessary from their operating budget, and thus will incur no loan costs. Financial assurance will be provided by a statement of intent as allowed by 10 CFR 50.75.

Table 5.3-4
Pacific Power & Light
Decommissioning Trust Fund Cash Flow
(Nominal $ x 1000)

	PP&L Trust Fund Expenditures	PP&L Trust Fund Contributions	PP&L Trust Fund Earnings	PP&L Trust Fund EOY Balance	Bridge Funds	Bridge Funds Interest	Letter of Credit	Letter of Credit Fee
Year								
1993				2,432				
1994		500	139	3,071				
1995	(669)	551	139	3,092				
1996	(370)	551	155	3,428				
1997	(1,061)	551	139	3,057				
1998	(1,206)	551	113	2,509			4,386	(5)
1999	(1,898)	551	55	1,213			3,380	(4)
2000	(1,707)	551	3	59			1,624	(2)
2001	(226)	381	10	224			66	(0)
2002	(144)	381	22	482				
2003	(146)	381	34	751				
2004	(137)	381	47	1,042				
2005	(142)	381	61	1,343				
2006	(146)	381	75	1,652				
2007	(151)	381	89	1,972				
2008	(155)	381	128	2,326				
2009	(159)	381	121	2,668				

Table 5.3-4
Pacific Power & Light
Decommissioning Trust Fund Cash Flow
(Nominal $ x 1000)

	PP&L Trust Fund Expenditures	PP&L Trust Fund Contributions	PP&L Trust Fund Earnings	PP&L Trust Fund EOY Balance	Bridge Funds	Bridge Funds Interest	Letter of Credit	Letter of Credit Fee
2010	(163)	381	136	3,022				
2011	(167)	381	153	3,389				
2012	(173)		153	3,368				
2013	(180)		151	3,339				
2014	(187)		149	3,301				
2015	(194)		146	3,253				
2016	(201)		144	3,196				
2017	(209)		141	3,128				
2018	(2,012)		52	1,168				
2019	(881)		13	301				
2020	(21)		13	293				
2021	(52)		12	253				
2022	(53)		9	207				
2023	(207)		0	0				
Total	(13,018)	7,997	2,602					(11)