

December 26, 2002

LICENSEE: Entergy Operations, Inc.

FACILITIES: Arkansas Nuclear One, Units 1 and 2  
River Bend Station, Unit 1  
Waterford Steam Electric Station, Unit 3

SUBJECT: SUMMARY OF MEETING HELD SEPTEMBER 24, 2002, WITH  
ENTERGY OPERATIONS, INC., TO DISCUSS ISSUES RELATED TO  
DECOMMISSIONING FUNDING

On September 24, 2002, representatives of the Nuclear Regulatory Commission (NRC) met with Entergy Operations, Inc. (EOI or the licensee) to discuss issues related to decommissioning funding for EOI's nuclear power plants in Arkansas and Louisiana. Representatives from the Public Service Commissions of Arkansas and Louisiana attended the meeting and participated in the discussions of the issues. A list of the meeting attendees is provided as Attachment 1. The agenda for the meeting is provided as Attachment 2.

As outlined in the meeting agenda, the following issues or questions were discussed at the meeting:

1. Relationship between license renewal and decommissioning funds
2. Assumptions on rates of return on decommissioning trust funds
3. Schedules for contributing to decommissioning trust funds
4. Reasonable assurance of availability of decommissioning funding
5. NRC actions in response to questions about reasonable assurance of decommissioning funding

The specific questions related to these issues were provided by the licensee in letters dated July 25, 2002 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML022390430), and July 18, 2002 (ADAMS Accession No. ML022390429). A summary of the discussions related to each of the agenda items is provided as Attachment 3. The specific questions raised and discussions held at the meeting were related to requirements for external sinking funds used by electric utilities recovering the cost of decommissioning through rates established by rate setting authorities such as State public service commissions. Attachment 4 provides a list of selected documents related to the discussions that are available on the NRC web site or electronic record-keeping system (ADAMS).

December 26, 2002

LICENSEE: Entergy Operations, Inc.

FACILITIES: Arkansas Nuclear One, Units 1 and 2  
River Bend Station, Unit 1  
Waterford Steam Electric Station, Unit 3

SUBJECT: SUMMARY OF MEETING HELD SEPTEMBER 24, 2002, WITH  
ENTERGY OPERATIONS, INC., TO DISCUSS ISSUES RELATED TO  
DECOMMISSIONING FUNDING

On September 24, 2002, representatives of the Nuclear Regulatory Commission (NRC) met with Entergy Operations, Inc. (EOI or the licensee) to discuss issues related to decommissioning funding for EOI's nuclear power plants in Arkansas and Louisiana. Representatives from the Public Service Commissions of Arkansas and Louisiana attended the meeting and participated in the discussions of the issues. A list of the meeting attendees is provided as Attachment 1. The agenda for the meeting is provided as Attachment 2.

As outlined in the meeting agenda, the following issues or questions were discussed at the meeting:

1. Relationship between license renewal and decommissioning funds
2. Assumptions on rates of return on decommissioning trust funds
3. Schedules for contributing to decommissioning trust funds
4. Reasonable assurance of availability of decommissioning funding
5. NRC actions in response to questions about reasonable assurance of decommissioning funding

The specific questions related to these issues were provided by the licensee in letters dated July 25, 2002 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML022390430), and July 18, 2002 (ADAMS Accession No. ML022390429). A summary of the discussions related to each of the agenda items is provided as Attachment 3. The specific questions raised and discussions held at the meeting were related to requirements for external sinking funds used by electric utilities recovering the cost of decommissioning through rates established by rate setting authorities such as State public service commissions. Attachment 4 provides a list of selected documents related to the discussions that are available on the NRC web site or electronic record-keeping system (ADAMS).

**DISTRIBUTION:**

PUBLIC	RidsNrrDlpm (JZwolinski/TMarsh)	RidsNrrPMWReckley
PDIV-1 Reading	RidsNrrDlpmLpdiv (WRuland)	RidsNrrPMTAlexion
RidsOgcRp	RidsNrrDlpmLpdiv1 (RGramm)	RidsNrrPMDJaffee
RidsAcrsAcnwMail Center	RidsRgn4MailCenter (AHowell)	RidsNrrNKalyanam
RidsNrrLADJohnson	MKotzalas (MXK5)	SMorris (SAM1)
WMaier, RIV (WAM)		

**Mtg. Notice: ML 022470377**

**PKG#: ML:023600116**

**ADAMS Accession No.: ML023600049**

NRC-001

\*See previous concurrence

OFFICE	PDIV-1/PM	PDIV-1/LA	DRIP/RPRP	PDIV-1/SC
NAME	WReckley:rkb	DJohnson	BThomas*	RGramm
DATE	12/17/02	12/16/02	12/11/02	12/24/02

OFFICIAL RECORD COPY

**Meeting on Decommissioning Funding Issues  
Tuesday, September 24, 2002**

Attendees

Christopher Grimes	NRR/DRIP/RPRP
Brian Thomas	NRR/DRIP/RPRP/FRAS
Ronald Uleck	NRR/DRIP/RPRP/FRAS
Alex McKeigney	NRR/DRIP/RPRP/FRAS
Michael Dusaniwskyj	NRR/DRIP/RPRP/FRAS
Robert Gramm	NRR/DLPM/PDIV1
William Reckley	NRR/DLPM/PDIV1
Janice Moore	NRC/OGC
Steven Hom	NRC/OGC
John McGaha	Entergy Operations
Jager Smith	Entergy Operations
Les England	Entergy Operations
Tim Gragin	Entergy Louisiana; Entergy Gulf States
Steven Strickland	Entergy Arkansas
Donna Gray	Arkansas Public Service Commission (PSC)
Valerie Boyce	Arkansas PSC
Karen Fricke	Arkansas PSC
Michael Fontham	Louisiana PSC/Stone Pigman
Dana Shelton	Louisiana PSC/Stone Pigman
Stephen Baron	Louisiana PSC/J. Kennedy and Associates
Tom Lewis	Nuclear Management Company
Jenny Weil	McGraw-Hill

## Agenda

### 9/24/02 Meeting on Decommissioning Funding Questions Raised by Entergy Operations, Inc.

- Introductions
- Decommissioning Funding Issues/Questions
  - License Renewal
  - Rate of Return
  - Decommissioning Trust Fund Contribution Schedules Established by PSC
  - Reasonable Assurance
  - NRC Actions in Response to Questions Regarding Reasonable Assurance

## Summary of Discussions

### 1. Relationship between license renewal and decommissioning funds

A question has been raised related to the possible renewing of a license for an operating nuclear power plant and the collection of decommissioning funds. This topic was the primary subject addressed at a meeting held on March 12, 2001, between the NRC staff and EOI. A letter from EOI dated March 26, 2001 (J. McGaha to Chairman Meserve; ADAMS Accession No. ML010960432) formally requested an interpretation of NRC regulations in this area. The NRC responded to the EOI inquiry in a letter dated May 11, 2001 (Chairman Meserve to J. McGaha; ADAMS Accession No. ML011070650). During the meeting of September 24, 2002, the NRC restated the following main point from the letter dated May 11, 2001:

The NRC expects that decommissioning funding assurance will be provided such that the necessary funds will be available by the end of the licensed operating life, based on the current license term. Section 50.75 (e)(1)(ii) of the Commission's regulations provides that payments to an external sinking fund are to be made such that "the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected." The NRC interprets this section of its regulations to require that the accumulation of decommissioning funds in an external sinking fund be based on the remaining term of the license. Thus, if the NRC issues an operating license for a nuclear power plant for a term of 40 years, the decommissioning funds collection and earnings period should be based on that 40-year license term. Decommissioning fund collection can be based on a renewed license (e.g., 60 years) only after the NRC has approved the license renewal. Issuance of a renewed license is subject to a favorable review by the NRC and cannot be taken for granted....

There was a short discussion of the topic during which there seemed to be a general understanding by all participants that NRC regulations do not support a licensee taking credit for a service life for a nuclear power plant beyond the plant's existing operating license for the purpose of projecting decommissioning funds.

### 2. Assumptions on rates of return on decommissioning trust funds

The second item discussed at the meeting involved the NRC requirements and appropriate assumptions related to the rate of return on existing principal in decommissioning funds. The NRC regulations related to acceptable assumptions for rates of return for external sinking funds are included in 10 CFR 50.75(e)(1)(ii), which states:

... A licensee may take credit for projected earnings on the external sinking funds using up to a 2 percent annual real rate of return from the time of future funds' collection through the decommissioning period. This includes the periods of safe storage, final dismantlement, and license termination, if the licensee's rate-setting authority does not authorize the use of another rate. However, actual earnings on existing funds may be used to calculate future fund needs....

The real rate of return for decommissioning funds is the income earned from the principal in the fund minus the escalation of decommissioning costs. There was some discussion during the meeting about the use of NUREG-1307, "Report on Waste Burial Charges: Changes in Decommissioning Waste Disposal Costs at Low-Level Waste Burial Facilities," to update estimated decommissioning costs and to project such costs into the future. The staff acknowledged that actual cost increases described in NUREG-1307 were potentially useful in projecting future cost increases. The variations in assumed net rates of return are reflected in the table provided in Attachment 4.

The general message offered by the NRC staff was that licensees are responsible to assume reasonable rates of return. The NRC staff would generally not challenge assumptions of low rates of return since this assumption would require higher current and near-term balances in the funds. The NRC staff reviews the assumed rates of returns and could, on a case-by-case basis, challenge specific assumptions if the assumptions were considered to be too high. As stated in 10 CFR 50.75(e)(1)(ii), assumed real rates of return above 2% need to be authorized by the appropriate rate-setting authority.

### **3. Decommissioning trust fund contribution schedules established by PSC**

Another topic discussed at the meeting relates to the periodic contributions to a decommissioning sinking fund. The principal of a sinking fund is that it ensures adequate money is available for decommissioning a nuclear facility at the end of its operating life by steadily growing the fund through periodic contributions and returns on investments. NRC regulations require that deposits be made "periodically" (see 10 CFR 50.75(e)(1)(ii)). A typical approach to a sinking fund is that contributions are scheduled on an annual or other fixed interval. This practice is reflected in the NRC guidance document NUREG-1577, "Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance." The issue raised at the meeting was whether contributions could be made on alternative schedules, which might include making no contributions for multiple years.

The NRC regulations do not define a specific schedule for contributions to a sinking fund. The NRC staff stated during the meeting that it would evaluate the overall decommissioning funding plan to gain reasonable assurance that adequate funds would be available at the end of a nuclear facility's operating life. Funding strategies that include an interruption of contributions to a sinking fund would be reviewed by the NRC staff to ensure that the contribution schedule does not result in an unreasonable or unrealistic loading of the contributions to some future date. Regarding fund contributions coming directly from ratepayers, the NRC recognizes the long history of effective rate regulatory oversight and recovery of safety-related expenses through rates and has largely deferred to the rate setting authorities on the timing of contributions to decommissioning trust funds. The discussion basically concluded with the staff acknowledging that decommissioning funding strategies might include a cessation of contributions for some period of time, provided that the strategy maintained a reasonable confidence in the adequacy of the decommissioning fund at the end of a facility's operating life. Such strategies may warrant additional monitoring and adjustments to ensure later contributions may be reasonably collected from ratepayers or other sources. The NRC staff may give added attention to such strategies and would make judgements and determine appropriate interactions, if needed, on a case-by-case basis.

#### **4. Standards for "reasonable assurance"**

The NRC staff makes its judgment that there is reasonable assurance of adequate funding for decommissioning a nuclear power plant by comparing the projected balance of the fund at the end of a unit's operating life against the minimal funds defined in NRC regulations. The minimum estimation of decommissioning costs are defined by the equations in 10 CFR 50.75(c)(1). Licensees may also perform plant-specific calculations that result in estimations above those resulting from the generic formulas. It should be noted that the NRC regulations for required decommissioning funds do not address the cost of removal and disposal of spent fuel or of nonradioactive structures and materials beyond that necessary to terminate the license.

The NRC staff uses information provided by licensees to assure that decommissioning funds will cover the costs of decommissioning a facility at the end of its operating life. Licensees were required to provide an initial report, with certification that financial assurance for decommissioning will be provided, in accordance with 10 CFR 50.33(k) and 10 CFR 50.75(b). Licensee are also required by 10 CFR 50.75(f)(1) to provide periodic (i.e., biennial if remaining operating life exceeds 5 years) reports providing information about decommissioning cost estimates, fund balances, assumptions on cost escalations and earnings, and other factors used in funding projections. Licensees are required to provide additional information as a licensed facility approaches or enters into decommissioning activities. The staff documents its reviews in reports such as SECY-01-0197, "Summary of Decommissioning Trust Funding Status Reports for Power Reactors." A listing of useful documents, such as SECY-01-0197, along with associated web addresses or accession numbers within the NRC's electronic record-keeping system, ADAMS, is provided in Attachment 4.

#### **5. NRC actions in response to questions about reasonable assurance**

Discussions during the meeting often involved what, if any, actions the NRC would take in response to concerns about reasonable assurance in the adequacy of a licensee's decommissioning fund. To date, the NRC staff has not had to take action in this area since the related reviews have, to the staff's satisfaction, concluded that the decommissioning fund for each facility has satisfied the minimal requirements. The staff's responses to the meeting were, therefore, somewhat hypothetical and were generally offered as options that would be considered more so than definitive actions and criteria.

As with most interactions between the NRC staff and licensees, the most likely initial response to a concern about financial assurance of a decommissioning fund would be a request from the staff to the licensee for additional information. The staff might ask for information about data, assumptions, and the licensee's plans to deal with a projected shortfall or other condition. The emphasis and urgency given to the request for information would depend on the specific nature and magnitude of the concern. The staff could also choose to consult with a rate setting authority such as a State PSC. In the unexpected case that financial assurance and compliance issues could not be resolved to the satisfaction of the NRC using routine interactions, the agency would rely on the available regulatory, enforcement, and administrative tools to address the situation (e.g., granting relief, monitoring corrective actions, or requiring action). The staff emphasized that the NRC's regulatory authority was over the licensee and that the licensee is responsible for assuring the adequacy of the decommissioning funds.

**List of Decommissioning-Related Documents on the NRC web site or ADAMS**

NRC Web Site	
Document	URL
Decommissioning (General)	<a href="http://www.nrc.gov/reactors/decommissioning.html">http://www.nrc.gov/reactors/decommissioning.html</a>
10 CFR 50.75	<a href="http://www.nrc.gov/reading-rm/doc-collections/cfr/part050/part050-0075.html">http://www.nrc.gov/reading-rm/doc-collections/cfr/part050/part050-0075.html</a>
SECY-01-0197 (Summary Report)	<a href="http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2001/secy2001-0197/2001-0197scy.pdf">www.nrc.gov/reading-rm/doc-collections/commission/secys/2001/secy2001-0197/2001-0197scy.pdf</a>
NUREG 1577, Revision 1 (Decommissioning Standard Review Plan)	<a href="http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1577/">www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1577/</a>
Proposed Rulemaking on Decommissioning Trust Provisions	<a href="http://ruleforum.llnl.gov/cgi-bin/rulemake?source=DT_PLAN&amp;st=prule">http://ruleforum.llnl.gov/cgi-bin/rulemake?source=DT_PLAN&amp;st=prule</a>
Draft Regulatory Guide DG-1106	<a href="http://ruleforum.llnl.gov/cgi-bin/downloader/rg_lib/123-0132.pdf">http://ruleforum.llnl.gov/cgi-bin/downloader/rg_lib/123-0132.pdf</a>
NUREG-1307, Revision 10, Report on Waste Burial Charges	<a href="http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1307/">www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1307/</a>
SECY-97-117, Final Policy Statement on Restructuring and Economic Deregulation of the Electric Utility Industry	<a href="http://www.nrc.gov/reading-rm/doc-collections/commission/secys/1997/secy1997-117/1997-117scy.html">www.nrc.gov/reading-rm/doc-collections/commission/secys/1997/secy1997-117/1997-117scy.html</a>



ADAMS	
Document	Accession No.
NUREG-1307, Revision 9, Report on Waste Burial Charges: Changes in Decommissioning Waste Disposal Cost at Low-Level Waste Burial Facilities	ML003757577
Letter from Arkansas PSC, dated 8/29/02 (with background letters)	ML022490126
Letter from Entergy, dated 7/25/02	ML022390430
Letter from Entergy dated 7/18/02	ML022390429
Biennial Decommissioning Funding Report for Arkansas Nuclear One, dated 4/2/01	ML011000009
Biennial Decommissioning Funding Report for Grand Gulf Nuclear Station, River Bend Station, and Waterford Steam Electric Station, Unit 3, dated 3/30/02	ML010940134

cc:

Mr. John McGaha, President  
Entergy Operations, Inc.  
P.O. Box 31995  
Jackson, MS 39286-1995

Mr. Jager Smith  
Entergy Operations, Inc.  
1340 Echelon Parkway  
Jackson, MS 39213-8298

Mr. Les England  
Nuclear Safety and Licensing  
Entergy Operations, Inc.  
1340 Echelon Parkway  
Jackson, MS 39213-8298

Mr. Timothy S. Cragin, Senior Counsel  
Entergy Services, Inc.  
639 Loyola Avenue  
New Orleans, LA 70113

Ms. Donna Gray, Director  
Financial Analysis  
Arkansas Public Service Commission  
1000 Center  
P.O. Box 400  
Little Rock, AR72203-0400

Ms. Karen Fricke  
Financial Analysis  
Arkansas Public Service Commission  
1000 Center  
P.O. Box 400  
Little Rock, AR72203-0400

Ms. Valerie Boyce  
Staff General Counsel  
Arkansas Public Service Commission  
1000 Center  
P.O. Box 400  
Little Rock, AR72203-0400

Mr. Michael R. Fontham,  
Stone, Pigman, Walther, Wittman  
& Hutchinson, L.L.P.  
546 Carondelet Street  
New Orleans, LA 70130-3588

Ms. Dana M. Shelton  
Stone, Pigman, Walther, Wittman  
& Hutchinson, L.L.P.  
546 Carondelet Street  
New Orleans, LA 70130-3588

Mr. Stephen J. Baron, President  
J. Kennedy and Associates, Inc.  
570 Colonial Park Drive, Suite 305  
Roswell, GA 30075

Entergy Operations, Inc.

cc:

Executive Vice President  
& Chief Operating Officer  
Entergy Operations, Inc.  
P.O. Box 31995  
Jackson, MS 39286-1995

Director, Division of Radiation  
Control and Emergency Management  
Arkansas Department of Health  
4815 West Markham Street, Slot 30  
Little Rock, AR 72205-3867

Winston & Strawn  
1400 L Street, N.W.  
Washington, DC 20005-3502

Mr. Mike Schoppman  
Framatone ANP, Richland, Inc.  
Suite 705  
1911 North Fort Myer Drive  
Rosslyn, VA 22209

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
P.O. Box 310  
London, AR 72847

Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-8064

County Judge of Pope County  
Pope County Courthouse  
Russellville, AR 72801

Vice President, Operations Support  
Entergy Operations, Inc.  
P.O. Box 31995  
Jackson, MS 39286-1995

Wise, Carter, Child & Caraway  
P.O. Box 651  
Jackson, MS 39205

Mr. Craig G. Anderson  
Vice President Operations, ANO  
Entergy Operations, Inc.  
1448 S. R. 333  
Russellville, AR 72801

Director  
Division of Solid Waste Management  
Mississippi Department of Natural  
Resources  
P.O. Box 10385  
Jackson, MS 39209

President  
Claiborne County Board of Supervisors  
P.O. Box 339  
Port Gibson, MS 39150

Senior Resident Inspector  
U. S. Nuclear Regulatory Commission  
P.O. Box 399  
Port Gibson, MS 39150

General Manager, GGNS  
Entergy Operations, Inc.  
P.O. Box 756  
Port Gibson, MS 39150

State Health Officer  
State Board of Health  
P.O. Box 1700  
Jackson, MS 39205

Office of the Governor  
State of Mississippi  
Jackson, MS 39201

Attorney General  
Asst. Attorney General  
State of Mississippi  
P.O. Box 22947  
Jackson, MS 39225

Entergy Operations, Inc.

cc:

Director, Nuclear Safety  
and Regulatory Affairs  
Entergy Operations, Inc.  
P.O. Box 756  
Port Gibson, MS 39150

Mr. William A. Eaton  
Vice President, Operations GGNS  
Entergy Operations, Inc.  
P.O. Box 756  
Port Gibson, MS 39150

Manager - Licensing  
Entergy Operations, Inc.  
River Bend Station  
P.O. Box 220  
St. Francisville, LA 70775

Senior Resident Inspector  
P.O. Box 1050  
St. Francisville, LA 70775

President of West Feliciana  
Police Jury  
P.O. Box 1921  
St. Francisville, LA 70775

Ms. H. Anne Plettinger  
3456 Villa Rose Drive  
Baton Rouge, LA 70806

Mr. Michael E. Henry, Administrator  
and State Liaison Officer  
Department of Environmental Quality  
P.O. Box 82135  
Baton Rouge, LA 70884-2135

General Manager - Plant Operations  
Entergy Operations, Inc.  
River Bend Station  
P.O. Box 220  
St. Francisville, LA 70775

Director - Nuclear Safety  
Entergy Operations, Inc.  
River Bend Station  
P.O. Box 220  
St. Francisville, LA 70775

Attorney General  
State of Louisiana  
P.O. Box 94095  
Baton Rouge, LA 70804-9095

Mr. Brian Almon  
Public Utility Commission  
William B. Travis Building  
P.O. Box 13326  
1701 North Congress Avenue  
Austin, TX 78701-3326

Mr. Paul B. Hinnenkamp  
Vice President - Operations  
Entergy Operations, Inc.  
River Bend Station  
P.O. Box 220  
St. Francisville, LA 70775

Director  
Nuclear Safety Assurance  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70066-0751

General Manager Plant Operations  
Waterford 3 SES  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70066-0751

Resident Inspector/Waterford NPS  
P.O. Box 822  
Killona, LA 70066-0751

Parish President Council  
St. Charles Parish  
P.O. Box 302  
Hahnville, LA 70057

Entergy Operations, Inc.

cc:

Chairman  
Louisiana Public Service Commission  
P.O. Box 91154  
Baton Rouge, LA 70825-1697

Mr. Joseph E. Venable  
Vice President Operations  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70066-0751

Mr. Michael R. Kansler  
Vice President, Operations Support  
P.O. Box 31995  
Jackson, MS 39286-1995