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APR 16 2004

Missouri Public
Service Commission

Exhibit No. 28
Case No(s) EO-2004-008
Date 3-28-04 Rptd 15

STATE OF MISSOURI
PUBLIC SERVICE COMMISSION

At a session of the Public Service
Commission held at its office
in Jefferson City on the 21st
day of August, 1992.

In the matter of the application of Union Electric)
Company for approval of decommissioning cost estimate)
and funding level of nuclear decommissioning trust) Case No. EO-91-300
fund.)
)

ORDER APPROVING STIPULATION AND AGREEMENT

Procedural History

On March 29, 1991, Union Electric Company (UE) filed an application pursuant to 4 CSR 240-20.070(9) which requested the Commission to approve changes in the accrual and funding levels for its Callaway nuclear plant (Callaway) decommissioning fund and a waiver of any requirement to file tariffs reflecting any change in rates due to the increased funding. On February 6, 1992, UE, Kansas City Power & Light Company (KCPL), Office of Public Counsel (OPC) and Commission Staff filed a motion to consolidate this case with a similar application filed by KCPL in Case No. EO-91-84. The motion also requested the Commission establish a procedural schedule for the consolidated cases and issue a Protective Order.

On February 14, 1992 the Commission issued an order consolidating the two cases, giving notice, adopting a Protective Order and establishing a procedural schedule. The procedural schedule set an intervention date. Missouri Public Interest Research Group (MoPIRG), Missouri Retailers Association, and Armco Inc. sought and were granted intervention.

On April 1, 1992, the Commission issued a notice suspending the procedural schedule in these consolidated cases based upon the parties' statement that settlement negotiations were proceeding. On August 6, 1992 a Nonunanimous Stipulation And Agreement was filed by UE, OPC and Staff reflecting a resolution

~~Exhibit No. _____~~
~~Case No. _____~~
~~Date _____~~

of all of the issues in this case. The stipulation indicated that nonsignatory parties did not object to the stipulation. Pursuant to 4 CSR 240-2.115 the Commission will consider a stipulation not agreed to by all parties as a unanimous stipulation where no party requests a hearing of any issue. Nonsignatory parties have five days in which to request a hearing. No hearing was requested in this case so the Stipulation And Agreement filed in this matter will be treated as a unanimous stipulation.

Decision

4 CSR 240-20.070(9) required UE to file, on or before September 1, 1990, cost studies detailing its latest cost estimates for decommissioning the Callaway nuclear plant along with funding levels necessary to defray these decommissioning costs. UE obtained an extension of the filing requirement in Case No. EO-90-308 until April 1, 1992. The rule also requires that UE file the appropriate tariffs to effectuate the change in rates necessary to accomplish the funding required. In this case UE filed its cost studies but has requested that the tariff filing requirement be waived.

Section 393.292 grants the Commission the authority to review and approve changes in the rates and charges of an electrical corporation as a result of a change in the level of annual accrual of funding necessary for its nuclear power plant decommissioning trust fund. The statute requires the Commission to conduct a hearing and consider all relevant factors before it can approve a change in rates or charges and it authorizes the Commission to promulgate rules and regulations for the submission, review and approval of decommissioning funds.

In this case, an opportunity for hearing has been provided and no party has requested a hearing. The Commission therefore finds that the requirement for hearing in Section 393.292 has been met. *State ex Rel. Deffenderfer Enterprises, Inc. v. P.S.C.*, 776 S.W.2d 494, 496 (Mo. App. 1989). In addition, the

stipulation presented in this case contains an increase in funding but no increase in rates and so, arguably, no hearing is necessary under the statute.

The parties reached agreement concerning the appropriate level of funding for the Callaway decommissioning fund and other matters at issue. The Stipulation And Agreement reflecting the parties' agreement is attached to this order as Attachment 1 and is incorporated herein by reference. The stipulation indicates that (1) it would cost \$347 million, in 1990 dollars, to immediately decommission Callaway; (2) UE's Missouri retail jurisdiction annual trust fund accrual and payment shall be \$6,214,184; (3) the trust fund accruals and payments will be increased to this amount without a change in Missouri jurisdictional rates; and (4) UE will work with KCPL and Staff to reach agreement on the installed quantities and levels of radioactivity of Wolf Creek systems. In addition, the parties agree that the Commission grant a waiver of any requirement that UE file tariffs effectuating any change in rates due to the increased decommissioning funding, and they agree that the increased decommissioning costs are included in UE's current cost of service and are reflected in its current rates for ratemaking purposes.

The Commission has considered the stipulation and finds its terms reasonable. As indicated, the increase in estimated decommissioning costs has risen from \$120,000,000 in 1983 dollars to \$347 million in 1990 dollars in this case, and the annual trust fund accrual and payment requirement has increased from \$2.9 million in 1985 to \$6,214,184 in this case. Re: UE, 27 Mo. P.S.C. (N.S.) 183, 256 (March 29, 1985). The amounts in UE's 1985 Callaway rate case were approved based upon data concerning decommissioning costs at that time. The amounts stipulated to by the parties are based upon more recent data and although they are significant increases, they appear reasonable realizing the uncertainties which exist with the disposal of radioactive material.

The parties have agreed that UE will fund the increase in the accrual and funding level agreed upon without any increase in rates charged to its customers. UE agrees not to file a tariff to increase the accrual and funding level until its next general rate case or the filing of its next decommissioning cost study. UE further agrees to fund the accrual and funding level increase consistent with the Cases No. EO-87-175 and EO-91-29 moratorium on the filing of a general rate increase prior to January 1, 1993. Based upon UE's proposal concerning the funding of the decommissioning costs of its Callaway plant, the Commission finds it is reasonable to waive the tariff filing requirement.

As part of the agreement, UE agrees to seek an Internal Revenue Service ruling regarding the increased accrual and funding level to ensure it receives maximum tax benefits. To facilitate the IRS rulings, the parties agree that the decommissioning costs are included in UE's current cost of service and are reflected in its current rates for ratemaking purposes. The Commission finds, specifically, that based upon the agreement of the parties, the increased decommissioning costs as reflected in the agreement are included in UE's current cost of service and are reflected in its current rates for ratemaking purposes.

The parties have also agreed that the prefiled testimony of Staff witnesses Jay W. Moore, Melvin T. Love, David M. Rosenbaum, Jeffrey D. Kimball and John D. Peters shall be received into the record without objection. The parties have agreed, additionally, that the decommissioning cost study of KCPL be received into evidence without objection.

IT IS THEREFORE ORDERED:

1. That the Nonunanimous Stipulation And Agreement filed in this matter on August 6, 1992 be hereby approved as a resolution of all of the issues in this case.

2. That the following exhibits be hereby received into evidence.

Jay W. Moore	Exhibit 1
Melvin T. Love	" 2
David M. Rosenbaum	" 3
Jeffrey D. Kimball	" 4
John D. Peters	" 5
Decommissioning Cost Study	" 6

3. That the requirement that Union Electric Company file tariffs to effectuate an increase in decommissioning funding be hereby waived.

4. That this order shall become effective on the 1st day of September, 1992.

BY THE COMMISSION

Brent Stewart

Brent Stewart
Executive Secretary

(S E A L)

McClure, Chm., Mueller, Rauch,
Perkins and Kincheloe, CC., concur.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

FILED

AUG - 6 1992

PUBLIC SERVICE COMMISSION

In the matter of the Application)
of Union Electric Company for)
Approval of Decommissioning Cost) Case No. EO-91-300
Estimate and Funding Level of)
Nuclear Decommissioning Trust Fund.)

NONUNANIMOUS STIPULATION AND AGREEMENT

Comes now Union Electric Company (UE), Staff of the Missouri Public Service Commission (Staff), and Office of the Public Counsel (Public Counsel), and state the following in resolution of Case No. EO-91-300.¹

Section 393.292 RSMo Supp. 1991 states that the Commission, pursuant to regulations, may authorize changes to the rates and charges of an electrical corporation as a result of a change in the level or annual accrual of funding necessary for its nuclear power plant decommissioning trust fund. 4 CSR 240-20.070(9) requires that on or before September 1, 1990 and every three (3) years thereafter, utilities with decommissioning trust funds shall file cost studies with the Commission detailing their latest cost estimates for decommissioning, along with the funding levels necessary to defray these costs.

On May 16, 1990, Union Electric Company (UE) filed an Application pursuant to 4 CSR 240-20.070(17) requesting a waiver of

¹ Missouri Retailers Association (Missouri Retailers), Missouri Public Interest Research Group (MoPIRG), and ARMCO INC. (Armco), although not signatories to this Nonunanimous Stipulation And Agreement, have authorized counsel for the Staff to indicate that they have no objection to this Nonunanimous Stipulation And Agreement.

4 CSR 240-20.070(9), for good cause shown, and authorization to file its latest cost study on April 1, 1991. The Staff recommended that the Commission authorize UE's request. On October 16, 1990 in Case No. EO-90-308, the Commission authorized UE's request.

On March 29, 1991, pursuant to 4 CSR 240-20.070 and the Commission's Order Granting Waiver in Case No. EO-90-308, UE filed an Application for, among other things, approval of its decommissioning cost estimate and funding level for its nuclear decommissioning trust fund for its Callaway nuclear plant (Callaway) and waiver of that part of 4 CSR 240-20.070(9) that requires UE to file "appropriate tariff(s) effectuating the change in rates necessary to accomplish the funding required." Accompanying said Application was a cost study detailing UE's latest cost estimate for decommissioning Callaway. UE's filing was docketed as Case No. EO-91-300.

On February 6, 1992 in Case No. EO-91-84, Kansas City Power & Light Company (KCPL), Staff, and Public Counsel, and on said date in Case No. EO-91-300, UE, Staff, and Public Counsel, filed a Joint Motion To Consolidate, Set Procedural Schedule, And Issue Protective Order.

KCPL, UE, Staff, and Public Counsel sought to consolidate Case Nos. EO-91-84 and EO-91-300 for several reasons. The Wolf Creek and Callaway nuclear generating stations have the same architect/engineer, nuclear steam supply system (NSSS), and turbine-generator manufacturer. As with the rate cases where KCPL and UE sought to place Wolf Creek and Callaway in rate base, KCPL

and UE retained the same consulting firm, LaGuardia and Associates/TLG Engineering, Inc., to perform the updates of the initial decommissioning cost studies that had been performed for KCPL and UE for the Wolf Creek and Callaway rate cases. The Staff retained the same consulting firm, Technical Analysis Corporation, to perform updates of the initial decommissioning cost studies that had been performed for the Staff for the Wolf Creek and Callaway rate cases. In addition to involving the same consultants, KCPL, UE, Public Counsel, and the Staff stated that Case Nos. EO-91-84 and EO-91-300 involve related questions of law and fact and therefore consolidating the two cases would avoid unnecessary costs and delay. Said parties asserted that consolidating said cases would be consistent with 4 CSR 240-2.110(16).

On February 7, 1992, the Staff filed the prepared direct testimonies, schedules, and report of Jay W. Moore, Melvin T. Love, David M. Rosenbaum, Jeffrey D. Kimball, and John D. Peters in Case No. EO-91-300.

The Commission on February 14, 1992 in Case Nos. EO-91-84 and EO-91-300 issued an Order Establishing Procedural Schedule And Protective Order.

Missouri Retailers, MoPIRG, and Armco filed Applications To Intervene in Case No. EO-91-300. Said Applications To Intervene were granted at the commencement of the early Prehearing Conference that opened on March 16, 1992. On March 17, 1992, the Commission issued an Order Granting Interventions. During the course of said early Prehearing Conference and thereafter, certain agreements were

reached. Consequently, UE, Staff, and Public Counsel stipulate and agree as follows:

1. The cost in 1990 dollars to immediately decommission Callaway, as if it had completed 40 years of service at the present time, shall be deemed to be \$347 million.²

2. UE's Missouri retail jurisdiction annual trust fund accrual and payment requirement shall be \$6,214,184.³ (See Attachment A to this Nonunanimous Stipulation And Agreement for a depiction of the calculation of this number and the assumptions on which it is premised. Trust fund payments to the trustee of the external trust fund are made on a quarterly basis in the month following the end of the quarter to which the payment applies.). Accrual of the increase in UE's Missouri retail jurisdiction annual trust fund payments shall commence concurrently with the second (2nd) quarter of 1992.

3. UE shall fund the increase in the accrual and funding level agreed upon herein without any increase in rates charged to its customers. UE shall not file a tariff to increase the accrual and funding level until UE's next general rate case⁴ (whether initiated by UE or by complaint) or the filing of its next

² In 1985 in UE's Callaway rate case, UE and the Staff stipulated that the decommissioning costs of Callaway were \$120,000,000 in 1983 dollars.

³ As a result of the Commission's Report And Order in UE's Callaway rate case, UE's annual trust fund payment requirement to date has been \$2.9 million.

⁴ Nothing herein requires UE to file such tariff in UE's next general rate case.

decommissioning cost study pursuant to 4 CSR 240-20.070(9). Said increase in accrual and funding level should be recognized in the Commission's Report And Order as being included in UE's cost of service covered by UE's present tariffed rates. The manner in which UE shall fund the increase in the accrual and funding level agreed upon herein shall be consistent with the Case No. EO-87-175 and Case No. EM-91-29 moratorium on the filing of a general increase in rates prior to January 1, 1993.

4. In order for UE to receive the maximum tax benefits associated with its decommissioning costs, UE shall seek in a timely manner an Internal Revenue Service (IRS) ruling regarding the increased accrual and funding level. The parties to this Nonunanimous Stipulation And Agreement agree that such increased decommissioning costs are included in UE's current cost of service and are reflected in its current rates for ratemaking purposes and request Commission recognition of this in its Report And Order.

5. The Commission's Report And Order authorizing the increased decommissioning funding shall grant UE a waiver of any requirement that UE file tariffs effectuating any change in rates reflecting the increased decommissioning funding.

6. UE shall work with KCPL and the Staff to reach agreement on the installed quantities, and levels of radioactivity of Callaway systems so that, among other things, these items can be reconciled between the Callaway and Wolf Creek stations for purposes of the decommissioning cost studies to be filed by UE and KCPL with the Commission on or about September 1, 1993 as required

by 4 CSR 240-20.070(9). The process to attain the necessary information in a timely manner as agreed to by UE, KCPL, and the Staff is set out in detail in Attachment B to this Nonunanimous Stipulation And Agreement.

7. None of the parties to this Nonunanimous Stipulation And Agreement shall be deemed to have approved or acquiesced in any question of Commission authority, decommissioning methodology, ratemaking principle, valuation methodology, cost of service methodology or determination, depreciation principle or method, rate design methodology, cost allocation, cost recovery, or prudence, that may underlie this Nonunanimous Stipulation And Agreement, or for which provision is made in this Nonunanimous Stipulation And Agreement.

8. The Staff shall have the right to submit to the Commission, in memorandum form, an explanation of its rationale for entering into this Nonunanimous Stipulation And Agreement and to provide to the Commission whatever further explanation the Commission requests. Such memorandum shall not become a part of the record of this proceeding and shall not bind or prejudice the Staff in any future proceeding or in this proceeding in the event the Commission does not approve the Nonunanimous Stipulation And Agreement. It is understood by the signatories hereto that any rationales advanced by the Staff in such a memorandum are its own and are not acquiesced in or otherwise adopted by UE or any other party hereto.

9. This Nonunanimous Stipulation And Agreement represents a negotiated settlement for the sole purpose of addressing the authority requested by the Application of UE. Except as specified herein, the parties to this Nonunanimous Stipulation And Agreement shall not be prejudiced, bound by, or in any way affected by the terms of this Nonunanimous Stipulation And Agreement: (a) in any future proceeding; (b) in any proceeding currently pending under a separate docket; and/or (c) in this proceeding should the Commission decide not to approve the instant Nonunanimous Stipulation And Agreement in the instant proceeding, or in any way condition its approval of same.

10. The prepared direct testimonies, schedules, and report of Staff witnesses Jay W. Moore, Melvin T. Love, David M. Rosenbaum, Jeffrey D. Kimball, and John D. Peters shall be received into evidence without the necessity of these witnesses taking the witness stand. The decommissioning cost study of UE also shall be received into evidence.

11. The provisions of this Nonunanimous Stipulation And Agreement have resulted from extensive negotiations among the signatory parties and are interdependent. In the event that the Commission does not approve and adopt the terms of this Nonunanimous Stipulation And Agreement in total, it shall be void and no party hereto shall be bound by, prejudiced, or in any way affected by any of the agreements or provisions hereof unless otherwise provided herein.

12. In the event the Commission accepts the specific terms of this Nonunanimous Stipulation And Agreement, the signatories waive their respective rights to cross-examine witnesses; their respective rights to present oral argument and written briefs pursuant to Section 536.080.1 RSMo 1986; their respective rights to the reading of the transcript by the Commission pursuant to Section 536.080.2 RSMo 1986; and their respective rights to judicial review pursuant to Section 386.510 RSMo 1986. This waiver applies only to a Commission Report And Order issued in this proceeding, and does not apply to any matters raised in any subsequent Commission proceeding, or any matters not explicitly addressed by this Nonunanimous Stipulation And Agreement.

Respectfully submitted,

Michael F. Barnes by SD
Michael F. Barnes

Union Electric Company
P.O. Box 149
St. Louis, MO 63166
314-554-2552

Steven Dottheim
Steven Dottheim

Staff of the Missouri Public
Service Commission
P.O. Box 360
Jefferson City, MO 65102
314-751-7489

Lewis R. Mills, Jr.
Lewis R. Mills, Jr.

Office of Public Counsel
P.O. Box 7800
Jefferson City, MO 65102
314-751-4857

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing have been mailed or hand-delivered to all counsel of record as shown on the attached service list this 6th day of August, 1992.

Steven Dotz

UNION ELECTRIC COMPANY
Case Number EO-91-300

**CALLAWAY PLANT
NUCLEAR DECOMMISSIONING TRUST FUND REQUIREMENT**

MISSOURI RETAIL JURISDICTION

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Year #	Year	Beginning Balance	Fund Payments	Interest Income	Decommission Expenses (Inflated \$)	Ending Balance	Decommission Expenses (1990 \$)	Inflation Factor	Decommission Expenses (Inflated \$)
1	1985	\$0	\$1,385,555	\$24,387	\$0	\$1,409,942	\$0	0.7835	\$0
2	1986	1,409,942	2,900,000	358,871	0	4,668,813	0	0.8227	0
3	1987	4,668,813	2,900,000	221,289	0	7,788,102	0	0.8638	0
4	1988	7,788,102	2,900,000	885,822	0	11,573,724	0	0.9070	0
5	1989	11,573,724	2,900,000	1,511,840	0	15,985,565	0	0.9524	0
6	1990	15,985,565	2,900,000	1,243,882	0	20,129,248	0	1.0000	0
7	1991	20,129,248	2,900,000	1,834,238	0	24,863,482	0	1.0500	0
8	1992	24,863,482	4,557,092	2,307,072	0	31,727,647	0	1.1025	0
9	1993	31,727,647	6,214,184	2,980,853	0	40,902,783	0	1.1578	0
10	1994	40,902,783	6,214,184	3,740,839	0	50,857,807	0	1.2155	0
11	1995	50,857,807	6,214,184	4,587,016	0	61,659,007	0	1.2783	0
12	1996	61,659,007	6,214,184	5,505,118	0	73,378,309	0	1.3401	0
13	1997	73,378,309	6,214,184	6,501,259	0	86,083,752	0	1.4071	0
14	1998	86,083,752	6,214,184	7,582,072	0	99,890,007	0	1.4775	0
15	1999	99,890,007	6,214,184	8,754,753	0	114,858,945	0	1.5513	0
16	2000	114,858,945	6,214,184	10,027,113	0	131,100,241	0	1.6289	0
17	2001	131,100,241	6,214,184	11,407,823	0	148,722,049	0	1.7103	0
18	2002	148,722,049	6,214,184	12,905,477	0	167,841,709	0	1.7959	0
19	2003	167,841,709	6,214,184	14,530,848	0	188,586,541	0	1.8856	0
20	2004	188,586,541	6,214,184	16,283,859	0	211,084,584	0	1.9799	0
21	2005	211,084,584	6,214,184	18,207,151	0	235,518,019	0	2.0789	0
22	2006	235,518,019	6,214,184	20,282,984	0	262,013,167	0	2.1829	0
23	2007	262,013,167	6,214,184	22,535,222	0	290,762,573	0	2.2920	0
24	2008	290,762,573	6,214,184	24,978,921	0	321,955,678	0	2.4086	0
25	2009	321,955,678	6,214,184	27,630,335	0	355,800,197	0	2.5270	0
26	2010	355,800,197	6,214,184	30,507,120	0	392,521,501	0	2.6533	0
27	2011	392,521,501	6,214,184	33,628,430	0	432,364,115	0	2.7880	0
28	2012	432,364,115	6,214,184	37,015,053	0	475,593,351	0	2.9253	0
29	2013	475,593,351	6,214,184	40,689,536	0	522,497,073	0	3.0715	0
30	2014	522,497,073	6,214,184	44,676,354	0	573,387,611	0	3.2251	0
31	2015	573,387,611	6,214,184	49,002,050	0	628,603,844	0	3.3884	0
32	2016	628,603,844	6,214,184	53,685,430	0	688,513,458	0	3.5557	0
33	2017	688,513,458	6,214,184	58,787,747	0	753,515,388	0	3.7335	0
34	2018	753,515,388	6,214,184	64,312,911	0	824,042,483	0	3.9201	0
35	2019	824,042,483	6,214,184	70,307,714	0	900,564,380	0	4.1181	0
36	2020	900,564,380	6,214,184	76,812,075	0	983,590,639	0	4.3219	0
37	2021	983,590,639	6,214,184	83,889,307	0	1,073,674,130	0	4.5380	0
38	2022	1,073,674,130	6,214,184	91,528,404	0	1,171,414,718	0	4.7648	0
39	2023	1,171,414,718	6,214,184	99,834,354	0	1,277,463,256	0	5.0032	0
40	2024	1,277,463,256	4,880,838	108,085,108	18,408,194	1,373,800,806	3,123,378	5.2533	18,408,194
41	2025	1,373,800,806	0	113,159,050	85,035,728	1,401,924,130	15,418,151	5.5180	85,035,728
42	2026	1,401,924,130	0	115,052,823	98,723,012	1,420,253,940	18,699,945	5.7918	98,723,012
43	2027	1,420,253,940	0	112,485,240	194,286,948	1,338,452,231	31,944,409	6.0814	194,286,948
44	2028	1,338,452,231	0	93,338,324	480,708,611	951,081,943	75,281,547	6.3855	480,708,611
45	2029	951,081,943	0	80,746,897	472,825,124	539,003,717	70,520,908	6.7048	472,825,124
46	2030	539,003,717	0	33,889,255	285,319,092	287,373,880	40,528,345	7.0400	285,319,092
47	2031	287,373,880	0	16,971,029	175,429,429	128,915,480	23,732,374	7.3920	175,429,429
48	2032	128,915,480	0	5,255,547	134,171,028	0	17,288,544	7.7618	134,171,028
			<u>\$220,642,883</u>	<u>\$1,720,244,181</u>	<u>\$1,940,887,163</u>		<u>\$294,533,600</u>		<u>\$1,940,887,163</u>

UNION ELECTRIC COMPANY
Case Number EO-91-300

CALLAWAY PLANT
NUCLEAR DECOMMISSIONING TRUST FUND REQUIREMENT
MISSOURI RETAIL JURISDICTION

ASSUMPTIONS:

UE's Missouri Retail Allocation Factor: 84.88%
(Nuclear Allocator as of 6/30/91)

UE's Missouri Annual Trust Deposit Requirement: \$6,214,183.82

To Be Collected From Ratepayers: 4/1/92 through 6/30/24

Check:	Begin. Balance	0
	Payments	220,642,983
	Interest	1,720,244,181
	<hr/>	<hr/>
	Decom. Expense	<u>\$1,940,887,164</u>

NOTES:

(2) = Projected levelized nominal dollar payment that will match the projected decommissioning expenditures.

(3) = $[(1) + \{(2) / 2\} - \{(4) / 2\}] * 0.085$

(4) = (8)

(5) = $[(1) + (2) + (3) - (4)]$; Actual ending market value balances used through 1990.

(6) = UE's Total Company Projected Expenses of \$347,000,000 computes to a Missouri Retail Jurisdictional Projected Expense of \$294,533,600 ($\$347,000,000 * 84.88\%$), which is projected to be expensed during 2024 through 2032. See Attachment A-3 for the annual projected expenses for UE's Missouri Retail Jurisdiction.

(7) = $[(7) * 1.05]$

(8) = $[(6) * (7)]$

Projected Rate of Inflation is 5.0%.

Projected After-Tax Return on Investment (Net of Fees) is 8.5%.

Dollar figures are not adjusted for inflation, except where noted.

Payment for the 2nd quarter of 2024 will be deposited in the 3rd quarter of 2024.

**UNION ELECTRIC COMPANY
CASE NUMBER EO-91-300**

**CALLAWAY PLANT
NUCLEAR DECOMMISSIONING EXPENSES**

MISSOURI RETAIL JURISDICTION

	(1)	(2)	(3)
Year	Total Plant Decommission Expenses (1990 \$\$)	Percentage of Total Expenses for Total Plant	MO Retail Jurisdictional Decommission Expenses [(1) X 84.88%]
2024	\$3,679,758	1.06%	\$3,123,378
2025	\$18,162,289	5.23%	\$15,416,151
2026	\$19,674,771	5.67%	\$16,699,945
2027	\$37,634,789	10.85%	\$31,944,409
2028	\$88,691,738	25.56%	\$75,281,547
2029	\$83,083,065	23.94%	\$70,520,906
2030	\$47,747,815	13.76%	\$40,528,345
2031	\$27,959,913	8.06%	\$23,732,374
2032	\$20,365,863	5.87%	\$17,286,544
	<u>\$347,000,000</u>	<u>100.00%</u>	<u>\$294,533,600</u>

NOTES: (1) = Stipulated Total Dollar Amount.

(2) = Stipulated Percentages per TLG Engineering, Inc. calculations.

(3) = [(1) X UE's Missouri Retail Allocation Factor of 84.88%]

STIPULATION REGARDING INFORMATION TO BE PRODUCED BY UNION
ELECTRIC COMPANY AND KANSAS CITY POWER & LIGHT COMPANY

July 24, 1992

I. INTRODUCTION

As a result of discussions at and subsequent to the early prehearing conference commencing March 16, 1992, Kansas City Power & Light Company (KCPL)/Wolf Creek Nuclear Operating Corporation (WCNOC) and Union Electric Company (UE) will provide the information specified below on quantities, dimensions, weights and radioactivities relevant to estimating decommissioning costs for the Wolf Creek Nuclear Generating Station (Wolf Creek) and the Callaway Plant (Callaway). Where the quantities provided for the nuclear steam supply systems at Wolf Creek and Callaway are not the same, an explanation of the differences will be provided by KCPL/WCNOC and UE.

The description below is intended to cover all the information necessary to estimate the immediate and deferred decommissioning costs of Wolf Creek and Callaway. However, it is agreed that if more or different types of information are needed in the future, UE and KCPL/WCNOC will provide the information if it exists or can be obtained or developed without unreasonable expense and effort. Before any costs or effort of consequence are incurred or expended, UE and KCPL/WCNOC should first advise the Missouri Public Service Commission Staff (Staff).

At a minimum, the information provided in response to this agreement should cover all systems, components, materials, and items that were calculated by the Companies' consultant, TLG Engineering, Inc., to be radioactive in Case Nos. EO-91-84 and EO-91-300.

The Staff shall also be provided with a complete inventory of quantities that will be present at the start of demolition. Where quantities supplied are different for the power block and other structures that are similar at the two plants, an explanation of the differences will be provided by KCPL/WCNOC and UE.

All information should be complete and, where possible, there should be no "double counting" of systems, components or

materials. Any "double counting" that is unavoidable shall be identified.

This information is being sought at this time so that, among other things, the installed quantities, and radioactivity levels can be reconciled between the Wolf Creek and Callaway stations for purposes of the next decommissioning cost studies.

In an attempt to clarify the specific requests below, reference is made to tables in the TAC Report on the Cost to Decommission Callaway Plant, Case No. EO-91-300, dated February 1992 (TAC Callaway Report) and in the TAC Report on the Cost to Decommission Wolf Creek Nuclear Generating Station, Case No. EO-91-84, dated February 1992 (TAC Wolf Creek Report).

II. DECOMMISSIONING

In items which refer to "final plant shutdown", the assumption should be that the plant operates for the full term of the operating license and operates for 30 equivalent full-power years.

A. Activation

For the reactor vessel, reactor internals, the biological shield, and any other material subject to activation please provide:

- A1. the characteristic dimensions;
- A2. the volume and weight;
- A3. the initial isotopic concentration of manganese, iron, cobalt and nickel in all material subject to activation over the full term of the operating license of the plant including the reactor pressure vessel, internals and the biological shield (Staff acknowledges that UE will not provide this information for the biological shield because the necessary information does not presently exist for Callaway);
- A4. all of the most recent neutron flux calculations;

- A5. the projected number (at final plant shutdown) of curies of each isotope which contributes significantly to the total number of curies (Staff acknowledges that UE and KCPL/WCNOC will not provide this information for the biological shield because the necessary information does not presently exist for Callaway and Wolf Creek);
- A6. a reconciliation of the projected distributions (at final plant shutdown) of each such isotope (Staff acknowledges that UE and KCPL/WCNOC will not provide a reconciliation for the biological shield because the necessary information does not presently exist for Callaway or Wolf Creek).

Where there is more than one material in an item, such as rebar in concrete, please state whether the data given is for all the material combined or only for one type of material. Do not "double count"; e.g., do not include rebar in the biological shield and also list the rebar or concrete in the biological shield separately without a clear explanation of such a "double counting".

Items A1 through A3 listed above can be satisfied by providing the characteristic dimensions, volume and weight, projected total radioactivity after the full license period (in curies), and the initial isotopic concentration of manganese, iron, cobalt, and nickel in all material subject to activation over the life of the plant, including the reactor pressure vessel, internals, and the biological shield,¹ for the following items:

- Core Shroud
- Upper Core Barrel
- Lower Core Barrel
- Upper Core Grid Plate
- Lower Core Grid Plate
- Lower Core Support Columns
- Lower Core Forging
- Thermal Pads
- Miscellaneous Internals

¹ Staff acknowledges that UE and KCPL/WCNOC will not provide the breakdown of trace elements by isotope for the biological shield because the necessary information does not presently exist for Callaway and Wolf Creek.

- Vessel Cladding
- Vessel Wall
- Guide Tubes
- Upper Core Support Columns
- Upper Support Columns
- Vessel Head
- Vessel Bottom
- Reactor Cavity Liner
- Biological Shield Concrete

B. Contamination

For each system, component and all material that is expected to be contaminated at final plant shutdown at levels that would require burial in licensed sites (including material that may be cleaned and later released), please provide:

- B1. the characteristic dimensions;
- B2. the volume;
- B3. the weight.

Items B1 through B3 listed above can be satisfied by providing the following information. For every component and system listed in the following tables and all contaminated components and systems similar to them, provide the characteristic dimensions, volume and weight:

TAC CALLAWAY REPORT

Table 7-7
7-8

TAC WOLF CREEK REPORT

Table 7-7
7-8

This information will cover all material at each plant that is estimated to be contaminated after the full term of the operating license and may be broken down by line item as appears in the Daniel International Corporation (Daniel) Labor Cost Status Report or by line item as appears in the TLG Engineering, Inc. Backup/Workpapers,² but said information

² As an example, see TLG Engineering, Inc. Callaway Backup/Workpapers, \$E, page 63 for system components for Callaway, and TLG Engineering, Inc. Wolf Creek Backup/Workpapers, \$3, page 59 for system components for Wolf Creek. UE response to Staff Data Request No. 6 and KCPL/WCNOC response to Staff Data Request No. 1.

will be provided on a consistent basis for the Callaway and Wolf Creek plants.

III. DEMOLITION

Provide a complete inventory of quantities that will be demolished, and where quantities are different for the power block and other structures that are similar at Callaway and Wolf Creek, provide an explanation of the differences.

Provide characteristic dimensions, volume, and weight for the items in the following tables by line item as appears in the Daniel Labor Cost Status Report or by line item as appears in the TLG Engineering, Inc. Backup/Workpapers,³ but said information will be provided on a consistent basis for the Callaway and Wolf Creek plants:

TAC CALLAWAY REPORT

Table	9-2
	9-3
	9-4
	9-5
	9-6
	9-7
	9-8
	9-9
	9-10
	9-11
	9-12

TAC WOLF CREEK REPORT

Table	9-2
	9-3
	9-4
	9-5
	9-6
	9-7
	9-8
	9-9

If information is provided by line item as appears in the TLG Engineering, Inc. Backup/Workpapers, provide TLG Engineering,

The TLG Engineering, Inc. Backup/Workpapers indicate the level of detail that is presently available and which the Staff is requesting.

³ As an example, see TLG Engineering, Inc. Callaway Backup/Workpapers, \$G, Building Inventory Listing for Callaway, and TLG Engineering, Inc. Wolf Creek Backup/Workpapers, \$5, Building Inventory Listing for Wolf Creek. UE response to Staff Data Request No. 6 and KCPL/WCNOC response to Staff Data Request No. 1. The TLG Engineering, Inc. Backup/Workpapers indicates the level of detail that is presently available.

Inc.'s definition of the terms used, e.g., monolithic concrete, heavily reinforced concrete, masonry/blockwalls, etc.

If the information regarding demolition provided in accordance with this agreement includes any "double counting", please state explicitly what, how much, and where this "double counting" occurs.

IV. BASIC ASSUMPTIONS

This agreement is based on the assumption that for each decommissioning cost update the Staff will ask for additional information. Since the information to be provided in response to this stipulation will establish baseline quantities, at each decommissioning cost review the Staff will request the changes, both increases and decreases, in the baseline quantities. Each Company should establish a method of tracking these changes.

In drafting this stipulation, no distinction has been made between information held by the Companies and information held by their contractor, TLG Engineering, Inc. If the information requested above already exists, it should be delivered whether it is in the possession of the Companies or in the possession of their contractor.

Where quantities provided by KCPL/WCNOC and UE are not the same, an explanation of each difference is to be provided by KCPL/WCNOC and UE by February 28, 1993.

V. SCHEDULE

Provide all information by February 28, 1993.

Service List for Case No. EO-91-300

Willard C. Reine
Attorney at Law
314 East High Street
Jefferson City, MO 65101

Michael J. Hoare
Attorney at Law
406 9-5 Shenandoah
St. Louis, MO 63110

Stuart W. Conrad
Attorney at Law
2600 Mutual Benefit Life Building
2345 Grand Avenue
Kansas City, MO 64108

Michael F. Barnes
Union Electric Company
P.O. Box 149
St. Louis, MO 63166

Lewis R. Mills, Jr.
Office of the Public Counsel
P.O. Box 7800
Jefferson City, MO 65102

Sam Overfelt
Missouri Retailers Association
618 East Capitol Avenue, Box 1336
Jefferson City, MO 65101