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Exhibit MJB 8
(Revised 3/27/95)

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R-943271

Estimated Cost of Voluntary Early Retirement Program
(Million \$)

	<u>Age Group 55 - 59</u>	<u>Age Group 60+</u>	<u>Total</u>
<u>For All Eligible Participants</u>			
Pension Supplement	\$43.9	\$ 3.3	\$47.2
Social Security Bridge	26.3	3.0	29.3
Lump-Sum Payment	<u>16.1</u>	<u>6.9</u>	<u>23.0</u>
	<u>\$86.3</u>	<u>\$13.2</u>	<u>\$99.5</u>
<u>For Estimated Participants</u>			
Pension Supplement	\$27.7	\$ 2.8	\$30.5
Social Security Bridge	16.6	2.6	19.2
Lump-Sum Payment	<u>10.2</u>	<u>5.9</u>	<u>16.1</u>
	<u>\$54.5</u>	<u>\$11.3</u>	<u>\$65.8</u>

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PA PUBLIC UTILITY COMMISSION
V. PENNSYLVANIA POWER & LIGHT
COMPANY
DOCKET NO. R-00943271

OCA CROSS EXAMINATION EXH. NO. 8

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Pennsylvania Power & Light Company
 Response to Interrogatories
 of the Office of Consumer Advocate, Set IV
 Dated February 1, 1995

 Docket No. R-00943271

Q. 84. With regard to Mr. Hill's testimony beginning at line 23 of page 10, please provide PP&L's projections of the rates of return it anticipates it would realize under the investment strategy consistent with reasonable person standard. Provide all workpapers and supporting documentation showing the derivation of those returns.

A. 84. As a starting point in projecting rates of return, the Company has relied on data produced by Ibbotson Associates in their annual Stocks, Bonds, Bills, and Inflation Yearbook. This data is available from 1926 through 1993. It covers periods including war, peace, inflation and deflation.

Based on an analysis of that data, the Company has projected the following returns assuming a 4.0 percent rate of inflation:

	<u>Pre-Tax</u>	<u>Post-Tax Assuming 20% NDT Tax Rates (15% on Equities)</u>
U.S. Treasury Bills	4.2%	3.4%
Long Term Govt. Bonds	5.5	4.4
Long Term Corp. Bonds	6.0	4.8
Equities (S&P 500)	10.0	8.5
Municipal Bonds	4.0	4.0
30% Equities (8.5) =		2.6%
+ 70% Bonds (4.6) =		<u>3.2</u>
SUB TOTAL		5.8%
Less Fees & Transaction Costs		<u>0.3</u>
NET RETURN		<u>5.5%</u>

PA PUBLIC UTILITY COMMISSION
V. PENNSYLVANIA POWER & LIGHT
COMPANY
DOCKET NO. R-00943271

OCA CROSS EXAMINATION EXH. NO. 9

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**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IX
Dated March 8, 1995
Docket No. R-00943271**

Q. 14. With regard to the response to OCA IV-48, please show the calculation of the HTY and FTY amounts for deferral and amortization. Also, identify the PA PUC jurisdictional amounts.

A. 14. Attachment 1 provides the reconciliation of total refueling outage costs and the refueling outage costs deferred in the Historic Test Year and the Future Test Year.

Deferred refueling outage costs are amortized over a period of time beginning with the date the unit is restarted with the refueled core and ending with the date the subsequent refueling outage is completed. Attachment 1 also provides details of amortized refueling outage costs for the Historic Test Year and the Future Test Year.

Calculation of HTY & FTY Refueling Outage Deferrals & Amortizations
(Thousands of Dollars)

Deferral of Refueling Outage Costs:

	<u>Historic Test Year</u>			<u>Future Test Year</u>		
	Unit 1	Unit 2	<u>Total</u>	Unit 1	Unit 2	<u>Total</u>
	<u>Reload 7</u>	<u>Reload 6</u>		<u>Reload 8</u>	<u>Reload 7</u>	
Total Refueling Outage Costs	\$14,487	\$18,222	\$32,709	\$17,991	\$3,460	\$21,451
Less refueling outage costs not subject to deferral:						
BG&E	956	1,203	2,159	1,187	228	1,415
UGI	241	305	546	302	56	358
Deferral - HTY and FTY	<u>\$13,290</u>	<u>\$16,714</u>	<u>\$30,004</u>	<u>\$16,502</u>	<u>\$3,176</u>	<u>\$19,678</u>
Deferral - Total	<u>1,561</u>	(Pre-HTY)		<u>11,466</u>	(Post-FTY)	
	<u>\$14,851</u>			<u>\$14,642</u>		
PUC Jurisdictional Portion						<u>\$15,444</u>

Amortization of Refueling Outage Costs:

	<u>Amortization Period</u>	Pre-	HTY	FTY	Post-	1)	Total
		HTY			FTY	Diff	
Unit 1 Reload 6	5/17/92 - 11/19/93	\$11,503	\$1,146	\$ -	\$ -	\$ -	\$12,649
Unit 1 Reload 7	1/22/94 - 5/19/95	-	7,718	6,500	-	633	14,851
Unit 1 Reload 8	5/22/95 - 11/4/96	-	-	4,798	11,704	-	16,502
Unit 2 Reload 5	11/14/92 - 5/20/94	6,226	4,592	-	-	-	10,818
Unit 2 Reload 6	6/11/94 - 11/17/95	-	3,492	11,104	1,527	591	16,714
		<u>\$17,729</u>	<u>\$16,948</u>	<u>\$22,402</u>	<u>\$13,231</u>	<u>\$1,224</u>	<u>\$71,534</u>
PUC Jurisdictional Portion				<u>\$17,581</u>			

1) Amortization totals for U1 R7 and U2 R6 differ from the actual total deferrals noted above. This is due to the use of the 1994 Budget for the October 1994 through December 1994 portion of the Future Test Year, when the actual deferrals were not known. Had the actual amounts been known at that time, the Future Test Year amortization of \$22,402 would have been \$23,626.

PA PUBLIC UTILITY COMMISSION
V. PENNSYLVANIA POWER & LIGHT
COMPANY
DOCKET NO. R-00943271

OCA CROSS EXAMINATION EXH. NO. 10

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**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271**

Q.99. Please provide a breakdown of the actual environmental remediation expenditures in each month of the historic and future test years to date. Update as additional data become available.

A.99. The information requested for the historic test year ended September 30, 1994 is provided as Attachment 1. The latest available information for the future test year ended September 30, 1995 is provided as Attachment 2.

Also see the response to Question OTS-RE-13D of Interrogatories of the Office of Trial Staff Dated January 13, 1995 for additional information on environmental remediation expenses.

PENNSYLVANIA POWER & LIGHT COMPANY
 ENVIRONMENTAL REMEDIATION EXPENDITURES
 BY MONTH
 FOR THE 12 MONTHS ENDED SEPTEMBER 30, 1995
 (Most recent data available)

	1994 October	November	December	1995 January	February	March	April	May	June	July	August	September	Site / Location Totals
Broadhead Creek	\$63,978.35	\$7,003.53	\$130,380.36										\$201,362.24
Columbia Manufactured Gas Plant	26,464.70	17,348.70	10,204.40										54,017.80
Tamaqua Manufactured Gas Plant	2,483.80	15,214.50	4,587.79										22,286.09
Novak Landfill Superfund Site	159.95		582.41										742.36
Shamokin Gas Plant	13,742.63												13,742.63
Lehighon Gas Plant		3,787.04	7,880.29										11,667.33
Hauto (former Plant Site)	9,976.13	1,713.48	5,305.35										16,994.96
Industrial Solvent NPL Site		9,324.33											9,324.33
Shenandoah Gas Plant	3,486.00	35,556.52	24,040.64										63,083.16
Remediation Strategy	12,087.19	14,306.35	34,976.54										61,370.08
Hazleton Dump		37.62											37.62
Totals	\$ 132,378.75	\$ 104,292.07	\$ 217,957.78										\$454,628.60

PENNSYLVANIA POWER & LIGHT COMPANY
 ENVIRONMENTAL REMEDIATION EXPENDITURES
 BY MONTH
 FOR THE 12 MONTHS ENDED SEPTEMBER 30, 1994

	1993 October	November	December	1994 January	February	March	April	May	June	July	August	September	Site / Location Totals
Broadhead Creek	\$ 6,269.69	\$ 6,197.33	\$ 38,927.52	\$ 2,308.68	\$ 26,552.76	\$ 36,414.72	\$ 84,363.34	\$ 6,647.90	\$ 29,098.33	\$ 4,870.14	\$ 23,614.59	\$ 62,589.03	\$ 327,854.03
Carlisle Manufactured Gas Plant	3,577.00	3,815.90			5,000.00				75.59				12,268.49
Columbia Manufactured Gas Plant	1,143.37	10,958.66	27,690.89	2,824.28	16,068.24	18,288.45	27,950.90	306,003.75	7,744.12	945.71	39,475.68	96,207.21	555,301.26
Jim Thorpe Manufactured Gas Plant							5,202.02						5,202.02
Berks Associates Waste Oil Facility	14,273.22	1,823.38	300.68	35.77		221.02		318.77	793.45	301.60			18,067.89
Hauto (former Plant Site)	100.22		58.04	225.96	760.82	2,459.50	1,298.99	1,662.81	101,693.18	347.58	23,360.40	37,355.21	169,322.71
Novak Landfill Superfund Site		22,795.00							5,080.50	1,806.38	833.97	75.28	30,591.13
Tamaqua Manufactured Gas Plant			67,207.02	702.35	174.96	901.44	1,038.07	1,019.91	959.57	3,471.29	23,378.16	2,426.61	101,279.38
NW Manufacturing		159.06											159.06
Delta Quarries & Disposal		9,444.45											9,444.45
Shamokin Gas Plant					10,183.67		8,977.07			8.50			19,169.24
Heleva Land Fill					483.47	81.70			151.18		5,387.32	405.01	6,508.68
Spencer Transformer Site			121,803.00										121,803.00
Lehighlon Gas Plant							5,202.01				2,562.65		7,764.66
Shenandoah Gas Plant									261.77	7,765.86	3,763.92	8,376.37	20,167.92
Remediation Strategy									1,590.29	5,155.41	9,846.88	18,216.17	34,808.75
Industrial Solvent NPL Site										10,426.56			10,426.56
Hazleton Dump										701.89	13.16		715.05
Totals	\$ 25,363.50	\$ 54,993.78	\$ 255,987.15	\$ 6,097.04	\$ 59,223.92	\$ 58,366.83	\$ 134,032.40	\$ 315,653.14	\$ 147,447.98	\$ 35,800.92	\$ 132,236.73	\$ 225,650.89	\$ 1,450,854.28

PA PUBLIC UTILITY COMMISSION
V. PENNSYLVANIA POWER & LIGHT
COMPANY
DOCKET NO. R-00943271

OCA CROSS EXAMINATION EXH. NO. 11

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**PENNSYLVANIA POWER & LIGHT COMPANY
RESPONSE TO INTERROGATORIES
OF THE OFFICE OF CONSUMER ADVOCATE, SET I
DATED JANUARY 30, 1995**

DOCKET NO. R-00943271

Q.17. Please provide a schedule showing permanent personnel assigned to (or expected to be assigned to) Susquehanna for the years 1990-1995. Please make a distinction among management, supervisory staff, and skilled labor.

A.17. The full-time personnel assigned to Nuclear Department Cost Areas are as follows:

Year	Managers Compensation Plan	Bargaining Unit	Total
1990	716	546	1,262
1991	729	551	1,280
1992	717	550	1,267
1993	710	540	1,250
1994	701	568	1,269*
1995	738	719	1,456**

Notes:

- 1990-1994 Data are Actual at Year End
- 1995 Data are Budget at Year End
- Information tracked at cost level only, not by management, supervisory staff and skilled labor distinctions.

*Reflects replacement of contractors by PP&L employees for Decontamination Work.

**Reflects the combination of consolidating construction workers into the Nuclear Department and reflects Voluntary Early Retirement personnel reductions.

**PENNSYLVANIA POWER & LIGHT COMPANY
RESPONSE TO INTERROGATORIES
OF THE OFFICE OF CONSUMER ADVOCATE, SET I
DATED JANUARY 30, 1995**

DOCKET NO. R-00943271

Q.18. Please provide a schedule similar to the above schedule showing full-time contractor personnel assigned to Susquehanna for the years 1990-1995. Please make a distinction among management, supervisory staff, and skilled labor.

A.18. Consultants and Contractors assigned to Nuclear Department Cost Areas are as follows:

Year	Consultants	Contractors	Total
1990	203	•	N/A
1991	163	156	327
1992	134	132	266
1993	126	157	283
1994	102	54	156
1995	133	79	212

Notes:

- 1990-1994 Data are Actual at Year End
- 1995 Data are Budget at Year End
- Information tracked at cost level only, not by management, supervisory staff and skill labor distinctions.

***Data Tracked by Costs Only (Not People Levels)**

G. T. Jones

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set 1
Dated January 30, 1995
Docket No. R-00943271**

- Q.39. Please describe in detail the Company's plan for the future to increase the time between refueling outages at Susquehanna. Please provide a list and copies of the documents relied upon in developing this response.**
- A.39. The Nuclear Department is currently studying the possibility of increasing the plant's operating cycle from 18 months to 24 months. The analysis to determine the economic viability of this option is just beginning.**

PA PUBLIC UTILITY COMMISSION
V. PENNSYLVANIA POWER & LIGHT
COMPANY
DOCKET NO. R-00943271

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**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271**

Q.11. Please provide a breakdown of the historic test balance of prepaid insurance according to policy type. If breakdown is not available, please list the types of policies included (e.g., property-all risk, motor vehicle liability, replacement power, etc.).

A.11. The breakdown of the historic test year balance of prepaid insurance according to policy type is provided as Attachment 1.

PENNSYLVANIA POWER & LIGHT COMPANY

SUMMARY OF PREPAID INSURANCE
AT SEPTEMBER 30, 1994

Property-All Risk	\$	356,739
Extra Expense-Fossil		152,908
Liability-General Liability		1,190,321
Liability-Directors & Officers		190,575
Liability-CGL For Subcontractors		8,910
Motor Vehicle Liability		16,144
Bonds-Fidelity		3,018
Bonds-Miscellaneous		5,544
Safeco Surety Bond-Waste & Fly Ash		408,672
Nuclear Energy Liability		178,623
Nuclear Property		876,784
Nuclear-Replacement Power		1,514,288
Nuclear-Suppliers&Transporters		8,709
Allegheny Electric 10%		-257,841
Conemaugh		1,566
Keystone		<u>3,396</u>
TOTAL	\$	<u>4,658,356</u>

2,132,1

PA PUBLIC UTILITY COMMISSION
V. PENNSYLVANIA POWER & LIGHT
COMPANY
DOCKET NO. R-00943271

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**Pennsylvania Power & Light Company
Response to Interrogatories of the
Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271**

Q.118. Please explain the nature and cause of the timing difference for each of the following adjustments to taxable income reflected on Schedule D-19 of Exhibit Future 1 and explain why each adjustment is properly reflected for ratemaking:

- Pension and supplemental retirements
- Health care cost PMC amortization
- Miscellaneous adjustments - net
- ECR/FAC underrecovery
- Power plant inventory - tax accounting change
- DOE - uranium enrichment clean-up
- Refueling costs
- ESOP dividend paid in cash
- Postretirement/employment benefits
- Bad debts
- Low level radwaste disposal

A.118. Pensions and Supplemental Retirements

For book purposes, pension expense is determined under SFAS 87. However, for tax purposes, the pension deduction is based on actual cash contributions made to the pension fund and is limited to the annual maximum Internal Revenue Service deductible contributions amount.

Health Care Cost PMC Amortization

The Company will incur additional health care costs for miners who worked for Pennsylvania Mines Corporation, a PP&L subsidiary. The Company is amortizing these projected costs against income based over a ten-year period. The charges to book expense are an unallowable tax deduction until the period in which actual payment is made for these costs.

Miscellaneous Adjustments - Net

This consists of numerous smaller items which are treated differently for book and tax purposes. Some of the items are expensed for books currently, but are not allowed as a tax deduction until there is economic performance.

ECR/FAC Underrecovery

For tax purposes, the ECR and FERC Fuel Adjustment Clause (FAC) revenues are recognized on a billed basis. Therefore, taxable income will exclude the amortization of unbilled ECR and FAC revenue and the deferral / accrual of ECR and FAC revenue. The exclusion of these items from taxable income can represent additional income or additional deduction.

Power Plant Inventory - Tax accounting Change

On January 1, 1991, the Company changed its method of accounting for spare parts at its power plants to the deferred or inventory method. For book purposes, this adjustment will be recognized over a five-year period. For tax purposes, this adjustment will be recognized as a credit to income over a period of six years as approved by the Internal Revenue Service.

DOE Uranium Enrichment Clean-Up

For book purposes, the expense of the estimated assessment to fund the costs of decontamination and decommissioning uranium enrichment facilities operated by the Department of Energy is expensed on an accrual basis over a fifteen-year period. For tax purposes, these costs are deducted as the assessment is paid.

Refueling Costs

For tax purposes, all refueling costs are deducted as incurred. For book purposes, the incremental refueling costs are deferred and amortized over the period beginning after the refueling outage is completed through the end of the unit's next refueling outage.

ESOP Dividend Paid in Cash

Section 404(k) of the Internal Revenue Code allows a tax deduction for the amount of ESOP dividends paid in cash to the plan participants.

Postretirement / Employment Benefits

For book purposes, the Company records the expense for postretirement and postemployment benefits in accordance with SFAS 106 and SFAS 112. These are unallowable tax deductions until payment is made.

Bad Debts

For book purposes, the reserve method for recognizing bad debts is used. However, the specific write-off method is used for tax purposes as required by the 1986 Tax Reform Act.

Low Level Radwaste Disposal

For book purposes, low level radwaste expense is accrued as the nuclear fuel is burned. For tax purposes, the amount is not deductible until economic performance occurs.

Eric Epstein, Cross-Examination Number: |

March 27, 1995

3/27/95 1469 rx

Pennsylvania Public Utility Commission
versus
Pennsylvania Power & Light Company
Docket Number: R-0094327/

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The following problems were documented after this chronology was initially prepared:

- September 22, 1982 - An emergency was declared at the plant. (UPI, September 22, 1982.)

- August 6, 1982 - UPI reported PP&L announced it was investigating nuclear plant allegations; however, the utility initially denied the complaints on December 29, 1981. (UPI, December 29, 1981.)

- January 21, 1983 - UPI reported "Another spill at the Susquehanna nuclear plant."

- March 29, 1983 - UPI reported, "Nuclear plant workers evacuated, Berwick, Pa."

- June 14, 1983 - Susquehanna was forced to shut down. The incident was termed "minor." (UPI, June 14, 1983.)

- April 26, 1984 - "Nuclear plant water discharges studied" (UPI, April 26, 1984.)

- July 26, 1984 - An "unusual event" was declared. (UPI, July 26, 1984.)

- October 1, 1987 - "Four workers contaminated, Berwick, Pa." (UPI, October 1, 1987.)

April 11, 1989 - An "unusual event" was declared at the plant. (UPI, April 11, 1989.)

- November 28, 1990 - "The Nuclear Regulatory Commission Wednesday fined Pennsylvania Power & Light \$25,000 for failing to promptly certify that components at its Susquehanna nuclear power plant would continue to function during an accident. The Allentown-based utility said it would not contest the fine." (UPI, November 28, 1990.)

March 5 and 9, 1992 - PP&L received \$55 million in a settlement with General Electric over the Mark II containment structure. ("Electric Utility Week" and Nucleonics Week.")

Unless otherwise stipulated, all information in this document was derived from reports prepared by the Nuclear Regulatory Commission.

GLOSSARY

ALARA - As Low As Reasonably Achievable. (Radiation Standards.)

EDG - Emergency Diesel Generator.

INPO - Institute for Nuclear Power Operations.

IR - Inspection Report (Prepared by the Nuclear Regulatory Commission.)

LER - License Event Report. (Prepared by Pennsylvania Power and Light Company.)

SALP - Systematic Assessment of Licensee Performance. (Prepared by the Nuclear Regulatory Commission.)

- February 16, 1979 - A Nuclear Regulatory Commission (NRC) inspection noted a non-compliance: Pennsylvania Power and Light (PPL) failed to control structural steel arc strikes. (NRC inspection 50-387/79-03)

- March 1, 1979 - An NRC inspection reported a non-compliance: The Susquehanna Plant failed to meet ASME III code requirements for a pipe weld joint alignment. (NRC inspections 50-387/79-04 and 50-388/79-03.)

- March 3, 1979 - The NRC cited PPL again for a non-compliance involving a failure to remove arc strikes per established procedures. (See February 16, 1979 for a related event.) (NRC inspections 50-387/79-01 and 50/388/79-01.)

- April 6, 1979 - During an NRC inspection, a non-compliance was identified relating to PPL's failure to properly prepare an electrical cable termination prior to installation. (NRC inspections 50-387/79-11 and 50-388/79-07.)

- April 19, 1979 - The NRC noted two non-compliance items: PPL failed to specify supplementary essential variables in welding procedure specs and the utility failed to assure piping cleanliness before closure. (NRC inspections 50-387/79-14 and 50-388/79-08.)

- May 5, 1979 - The NRC observed a non-compliance item: PPL failed to follow documented procedures for control of nonconfirming items. (NRC inspections 50-387/79-10 and 50-388/79-06.)

- June 8, 1979 - The NRC identified two non-compliance items: PPL failed to inspect purging for tack welds and also failed to provide documented instruction to control storage and maintenance of the reactor pressure vessel. (NRC inspections 50-387/79-15 and 50-388/79-09.)

July 11, 1979 - The NRC identified a safety related issue: PPL failed to provide a prescribed weld profile transition on safety related piping. (NRC Inspection 50-387/79-19.)

- September 11, 1979 - PPL failed to control their drawings. (NRC Inspections 50-387/79-21 and 50-388/79-12.)

- September 14, 1979 - PPL failed to comply with applicable codes when burning and welding structural steel. (See February 16 and March 3, 1979, for related events.)

- September 21, 1979 - PPL failed to control erosion-sedimentation. (NRC Inspections 50-387/79-25 and 50-388/79-13.)

- October 10, 1979 - PPL failed to apply design control measures relating to field models in order to demonstrate that Inservice inspection requirements could be met. (NRC Inspection 50-387/79-30.)

- November 15, 1979 - PPL failed to follow instrument procedures' instructions. (NRC Inspections 50-387/79-32 and 50-388/79-17.)

- December 26, 1979 - The NRC noted that PPL incorrectly identified a safety-related conduit. (NRC Inspection 50-387/79-35.)

- January 9, 1980 - The following non-compliance item was identified by the NRC: PPL failed to review their tech specs and provide documented instruction to control completion of related water quenching of a weld. (NRC Inspections 50-387/79-31 and 50-388/79-16.)

- January 11, 1980 - The NRC recorded the following non-compliance issues: PPL failed to provide adequate design review resulting in non-conforming installation, and the licensee also failed to follow procedure for tagging non-conforming items. (See August 18, 1980 and June 30, 1981, for related issues.) (NRC Inspections 50-387/79-36 and 50-388/79-19.)

- January 30, 1980 - The NRC observed non-compliances related to uncontrolled documents and inappropriate documents. (NRC inspections 50-387/79-41 and 50-388/79-22.)

- March 3, 1980 - PPL failed to provide "independence" to employees performing Quality Assurance functions. (NRC inspection 50-387/79--20.)

- April 9, 1980 - The NRC noted that PPL failed to follow approved procedures during preventive maintenance and establish a proper test program for hydrostatic testing. (NRC inspections 50-387/80-01 and 50-388/80-01.)

- April 20, 1980 - PPL failed to identify a nonconforming plant condition. (NRC inspections 50-387/80-05 and 50-388/80-03.)

- May 28, 1980 - PPL failed to document a chemical analysis of weld filler material. (NRC inspections 50-387/80-04 and 50-388/80-02.)

- June 2, 1980 - The NRC observed a failure by PPL to follow approved procedure during ultrasonic examination of piping welds. (NRC inspection 50-387/80-09.)

- June 16, 1980 - Two non-compliance items associated with PPL's failure to establish controls for Quality Control were identified. Additionally, PPL failed to establish controls for field fabrication of incorrect parts. (NRC inspections 50-387/80-06 and 50-388/80-04.)

- July 8, 1980 - A non-compliance item in PPL's program for the nondestructive examination of personnel certification was identified. (NRC inspections 50-387/80-12 and 50-388/80-08.)

- August 13, 1980 - In the Unit-2 primary containment, the NRC found "loose debris" in the construction joint of a concrete placement. (NRC inspections 50-387/80-17 and 50-388/80-11.)

- August 18, 1980 - PPL failed to follow approved procedures for reporting nonconforming items. (See January 11, 1980 and June 30, 1981, for related issues.) (NRC inspection 50-387/80-14.)

- August 19, 1980 - The NRC noted that PPL failed to supply cable tray softners. (NRC inspections 50-387/80-19 and 50-388/80-13.)

- September 8, 1980 - PPL failed to incorporate recirculation system flow testing into preoperational testing. (NRC inspection 50-387/80-16.)

- September 12, 1980 - PPL failed to control weld filter material. (See May 28, 1980, for a related incident.) (NRC inspections 50-387/80-21 and 50-388/80-14.)

- October 16, 1980 - PPL used a field procedure which did not contain quantitative or qualitative acceptance criteria. (NRC inspections 50-387/80-25 and 50-388/80-16.)

- January 21, 1981 - PPL was chastized for failing to have properly approved test procedure changes. (NRC inspection 50-387/80-32.)

- January 26, 1981 - PPL failed to follow Quality Control Instructions for inspection cable terminations prior to taping connections. (NRC inspections 50-387/81-01 and 50-388/81-01.)

- April 13, 1981 - PPL failed to complete design testing before placing a crane system in operation. (NRC inspection 50-387/81-04.)

- May 25, 1981 - The NRC noted shortcomings in auditor certification, inservice inspection design accessibility and a Quality Assurance procedure. (NRC inspections 50-387/81-08 and 50-388/81-04.)

- June 30, 1981 - Among the non-compliance items reported by the NRC: Placement of an electrical ground between a tray and a conduit and failure to tag nonconforming items. (See August, 18 and January 11, 1980 for related issues.) (NRC inspection (50-387/81-12 and 50-388/81-06.)

- July 14, 1981 - The NRC noted that PPL operators were using an "unapproved" and "unsigned" document in the control room. (NRC inspection 50/387/81-10.)

- August 31, 1981 - An electrical component was installed without proper certification. (NRC inspections 50-387/81-14 and 50-388/81-07.)

- October 22, 1981 - PPL's NSSS data sheet specified "insufficiently accurate" turbine test switches. (NRC inspection 50-387/81-19.)

- November 25-27, 1981 - PPL failed to follow written procedures during a maintenance test. (NRC inspection 50-387/81-25.)

- January 7, 1982 - Unit-1 failed to maintain control over modification of electrical equipment. (NRC inspection 50-387/81-26 and 50-388/81-13.)

- March 3, 1982 - The NRC reported that PPL improperly incorporated test requirements in their preoperational tests and exercised inadequate control of environmental conditions activities "affecting quality." (NRC inspection 50-387/82-04.)

- April 8, 1982 - PPL failed to witness a test involving the Reactor Coolant System, and the utility also failed to follow preoperational test procedures. (NRC inspection 50-387/82-08.)

- April 23, 1982 - PPL failed to incorporate all test requirements in a preoperational test failure. Problems relating to surveillance testing and housekeeping were also identified. (NRC inspection 50-387/82-10.)

- May 27, 1982 - PPL failed to obtain proper authorization prior to work on a safety-related system and failed to conduct comprehensive audits of preoperational testing. (NRC inspection 50-387/82-09.)

- September 10, 1982 - PPL failed to provide a second verification on safety-system check lists. (NRC inspections 50-387/82-33 and 50-388/82-10.)

- October 4, 1982 - The following non-compliance items were recorded: PPL failed to provide "adequate training," failed to distribute current and approved design documents and failed to provide suitable design for a small bore pipe anchors. (See January 6, March 14 and April 4, 1984; last entry for 1987; February 18, 1985; and December 13, 1989 for related issues.) (NRC inspection 50-387/82-31.)

- October 14, 1982 - PPL failed to follow written procedures for control of "safety quality-related" computer software. (NRC Inspection 50-387/82-39.)

- November 2, 1982 - PPL failed to issue a field change request for modification of pipe clamp flanges for pipe supports and failed to transmit design information to field. As a result, PPL installed malfunctioning pipe snubbers. (NRC Inspection 50-387/82-34.)

- November 3, 1982 - The NRC identified a security violation and observed that requirements for operable fire protection equipment were not met. (NRC Inspections 50-387/82-32 and 50-388/82-05.)

- November 4, 1982 - PPL failed to properly interpret radiographs. (NRC Inspection 50-387/82-36.)

- December 6, 1982 - The NRC reported that PPL was using an "unqualified material" in the emergency diesel generator lube oil system. (NRC Inspections 50-335/82-36 and 50-389/82-55.)

- December 10, 1982 - During RCIC system testing, PPL did not keep a record of average suppression chamber water temperatures. (See March 8 and June 28, 1984 and August 14, 1985 for related issues.) (50-387/82-40 and 50-388/82-12.)

- In 1982, Susquehanna had 39 "human" errors; 13 "design/manufacturing" errors; 28 "equipment failures;" 1 "significant mishap" and 80 total "mishaps." Berwick-1 also lost emergency diesel generator power in this year (Public Citizen, 1983.)

- February 22, 1983 - Several non-compliances were identified relating to radiological controls: PPL failed to determine low level dose for 24-H iodine and particulate samples and the licensee also failed to keep a log for gamma spectrometry system. In addition, PPL failed to approve contractor procedures prior to implementation. (See August 8 and December 19, 1983, for related issues.) (NRC Inspection 50-387/83-02.)

- March 14, 1983 - The standby gas treatment system was improperly tagged leading to its inoperability. (NRC Inspections 50-387/83-03 and 50-388/83-01.)

- March 23, 1983 - PPL failed to establish a separate log to record safeguard event reports. ((NRC Inspection 50-387/83-04.)

- May 13, 1983 - The NRC found that numerous fuses had one terminal disconnected on the temporary, modification control panels. (NRC Inspections 50-387/83-11 and 50-388/83-04.)

- June 13, 1983 - PPL was caught using an unapproved handbook for acceptance of pipe supports. The NRC also noted that intermittent breaches of secondary containment field changes were not implemented. (NRC Inspections 50-387/83-12 and 50-388/83-06.)

- June 25, 1983 - Susquehanna was shut down due to electrical problems, and on July 26, maintenance found two leads reversed in a control circuit cabinet, preventing the opening of a safety-related valve. (Nuclear Regulatory Commission).

- July 12, 1983 - PPL was operating Susquehanna with a mode switch in run position, while the high-reactor, vessel water level trip to main turbine was bypassed. (NRC Inspection 50-387/83-14.)

- July 14, 1983 - PPL failed to remove from access authorization list four employees who were no longer employed at the site. (NRC Inspection 50-387/83-16.)

- August 18, 1983 - PPL failed to maintain an updated safety-related drawing file. (50-387/83-29, 50-388/83-01 and 50/388-83-11.)

- August 26, 1983 - PPL failed to "adhere to radiation protection procedures" as required by their tech specs. (See February 22 and December 19, 1983, for related issues.) (NRC Inspection 50-387/83-18.)

- September 1983 - Several non-compliance items were identified by the NRC: PPL failed to conduct 15 surveillance tests due to inadequate procedures, the utility failed to test when equipment was operable and several procedures were reported to be "missing." (NRC Inspection 50-387/83-20.)

- November 18, 1983 - At Unit-1, the FSAR was not updated prior to completion of construction. Also, as required, a 31-day surveillance was not performed on a valve. (NRC Inspections 50-387/83-23, 50-388/83-21 and 50-388/83-23.)

- November 21, 1983 - PPL failed to maintain two independent off-site power sources. Also, both trains of the main condenser off-gas treatment system was inoperable. Both issues were non-compliance items. (NRC Inspection 50-387/83-24.)

- December 19, 1983 - The NRC issued a violation for PPL's failure to take weekly iodine samples of the reactor building. (See February 22 and August 26, 1983, for related issues.) (NRC Inspection 50-387/83-17.)

- December 29, 1983 - PPL failed to maintain average reactor coolant temperatures. (NRC Inspections 50-387/83-25, 50-38883-24 and 50-388836-24.)

- January 5, 1984 - PPL failed to follow procedures for liquid, radwaste monitor calibration. (NRC Inspections 50-387/83-27 and 50-388/83-26.)

- January 6, 1984 - The NRC recorded violation regarding PPL's failure to provide training to personnel to control temporary setpoint changes and to assess effectiveness of Quality Assurance audits. (See October 4, 1982; March 14 and April 4, 1984; February 18, 1985; last entry for 1987; and, December 13, 1989 for related issues.) (NRC Inspections 50-387/83-30 and 50-388/83-25.)

- January 25, 1984 - The NRC noted the following violation: PPL failed to follow Quality Assurance/Quality Control interface procedures in nonconformance reporting areas. (NRC Inspections 50-387/83-31 and 50-388/83-31.)

- February 24, 1984 - The NRC issued a violation for PPL's failure to promptly identify and correct "conditions adverse to quality." The NRC identified the following "deviation:" PPL failed to meet FSAR commitments for the automatic depressurization system. (NRC inspections 50-387/83-29, 50-388/83-22 and 50-388/83-32.)

- February 27, 1984 - The NRC identified the following violations: Inadequate preparation of the welds for ultrasonic inspection and a small bore piping flex leg was not installed per engineering design calculation. (NRC inspection 50-387/84-05.)

- March 7, 1984 - PPL failed to follow a Quality Control procedure for radiochemistry to determine instrument operating voltage. (NRC inspections 50-387/84-05 and 50-388/84-06.)

- March 8, 1984 - The NRC inspected system lineup problems that resulted in the HPCI system and the RCIC system's inoperability. (See December 10, 1982 and June 28, 1984 and August 14, 1985 for related issues.) (NRC inspection 50-387/84-11.)

- March 14, 1984 - The NRC reported a violation relating to PPL's failure to follow documentation procedures regarding health physics personnel training. (See October 4, 1982; January 6 and April 4, 1984; February 18, 1985; last entry for 1987; and, December 13, 1989 for related issues.) (50-387/84-01.)

- April 4, 1984 - Another violation was recorded relating to worker training. PPL failed to follow radwaste training and training qualification and certification of personnel procedures. (See October 4, 1982; January 6 and March 15, 1984, February 18, 1985, last entry for 1987; and, December 13, 1989 for related issues.) (50-387/84-09.)

April 16, 1984 - A violation was issued for PPL's failure to take a dose rate instrument into a high radiation area and the Licensee also operated logs that lacked quantitative data. (NRC inspections 50-387/84-07 and 50-388/84-08.)

- April 20, 1984 - The NRC inspected an event involving the inoperability of a source range monitor "while loading fuel in core quadrant "A." (NRC inspection 50-388/84-19.)

- May 14, 1984 - Local, leak-rate test valves in Unit-1 were closed instead of closed and locked as required. PPL was issued a violation due to this incident. (NRC inspections 50-387/84-14 and 50-388/84-16.)

- June 19, 1984 - The NRC and PPL met to discuss a power level transient which apparently exceeded the 5% licensed limit. (Meeting report 50-388/84-25.)

- June 28, 1984 - The RCIC flow controller on Unit-2 was not returned to automatic following surveillance and the secondary containment integrity on Unit-1 was not maintained for two days. Violations was issued by the NRC. (See December 10, 1982 and March 8, 1984 and August 14, 1985 for related issues.) (NRC inspection reports 50-387/84-18 and 50-388/84-22.)

- July 23, 1984 - Among the non-compliances observed by the NRC: Two chemistry grab samples missed a fire detection, instrumentation surveillance not performed with tech spec limit. (NRC inspections 50-387/84-22 and 50-388/84-28.)

- August 21, 1984 - PPL failed to complete required emergency training. (NRC inspection 50-387/84-27.)

- August 23, 1984 - Bracing was not provided to prevent shift of loading under normal transportation conditions. A violation was issued. (NRC inspections 50-387/84-31 and 50-388/84-37.)

- September 17, 1984 - Violations were issued due to inadequate corrective action for plant operator manipulation of DC auxiliary relay and bus-control, knife switches. (NRC inspection 50-388/84-34.)

- October, 1984 - Four control rods failed to insert and nine others hesitated before scrambling. Testing which should brought the problem to light was 15 months overdue. (See November 15, 1985 for a related event.) (Public Citizen, May 3, 1986.)

- November 1, 1984 - A deficiency was noted when two of four control rods failed to scram during rod scram testing and were in control array that exceeded insertion time. (See October, 1984 for a related event.) (NRC Inspections 50-387/84-35 and 50-388/84-44.)

- November 16, 1984 - A violation was issued for PPL's inadequate surveillance procedures for end-of-cycle recirculation pump trip instrumentation. (NRC Inspection 50-388/84-42.)

- November 28, 1984 - A violation was issued by the NRC relating to security issues. (NRC Inspections 50-387/84-34 and 50-388/84-41.)

- In 1984, Susquehanna had 49 (the seventh highest in the nation) accidents or Licensee Event Reports in the nation. Also, an event that took place at Susquehanna-2 in July, resulted in the plant losing all of its AC power, including its back-up emergency diesel generators resulting in the deterioration of crucial instrumentation.

In the 1984 Nuclear Power Safety Report (Public Citizen) Susquehanna had the second highest number of mishaps in the industry and was tied for fifth for the number of "significant" incidents at a reactor.

- February 18, 1985 - The NRC issued violations for inadequate control of combustible gas cylinders and for four, fire brigade members who had not completed initial fire brigade training. (See October 4, 1982; January 6, March 14 and April 4, 1984; last entry for 1987; and, and December 13, 1989 for related issues.) (NRC Inspections 50-387/84-38 and 50-388/84-47.)

- February 25, 1985 - PPL received a violation for failing to analyze post-fuel loading initial program test results per administrative procedure requirements. (NRC Inspection 50-388/85-02.)

- March 27, 1985 - PPL failed to adhere to radiation protection procedures for all operations involving personnel radiation exposure. (NRC Inspections 50-387/85-07 and 50-388/85-07.)

- April 10, 1985 - The NRC recorded a deviation and violation for a failure to maintain and functionally test fire barriers and for failing to perform duct failure analysis. (NRC inspections 50-387/85-06 and 50-388/85-06.)

- May, 1985, the PUC allowed only a 9% rate increase of \$121 million, rather than the 23% or \$330 million PPL requested for costs associated with Susquehanna Unit-2. PUC Chairperson Linda Talliafero told PPL: "You took the risk. You lost."

- May 16, 1985 - A violation and deviation were reported on a late surveillance identified on emergency SVC water system and a lack of indication identified in FSAR and the regulatory guide. An enforcement conference was scheduled for July 8, 1985. (NRC inspections 50-387/85-16 and 50-388/85-15.)

- May 30, 1985 - Fire dampers in the standby gas treatment system was not included in applicable surveillance procedures. A violation was issued. (NRC inspections 50-387/85-12 and 50-388/85-12.)

- July 23, 1985 - The NRC reviewed an "allegation" concerning drywell average air temperatures and found "discrepancies" in associated procedures. (NRC inspections 50-387/85-18 and 50-388/85-16.)

- August 14, 1985 - The NRC found the manual containment isolation valve for the RCIC was closed but not locked. A violation was issued. (See December 10, 1982 and March 8 and June 28, 1984 for related issues.) (NRC inspections 50-387/85-21 and 50-388/85-17.)

- October 10, 1985 - PPL was issued a violation for failing to test entire HPCI channel. (NRC inspections 50-387/85-28 and 50-388/85-23.)

- November 1, 1985 - The NRC convened an enforcement conference to discuss PPL's ability to safely shutdown Susquehanna in the event of a fire.

- February 19, 1986 - PPL was issued a violation for failing to test creosass isolation dampers. (NRC inspections 50-387/85-36 and 50-388/85-32.)

- March 27, 1986 - The RHR pump operated without cooling water due to valve misalignment and installation of expired squib valve in standby liquid control system. A violation was issued. (NRC inspections 50-387/86-02 and 50-388/86-01.)

- April 30, 1986 - PPL failed to include longitudinal seam welds in inservice inspection program and also failed to respond to audit findings. A violation was issued by the NRC. (NRC inspection 50-387/86-05.)

- May 2, 1986 - Violations were issued when PPL improperly controlled maintenance work in reactor building recirculation plenum and when two, scram, discharge volume level transmitters were found to be inoperable. (NRC inspections 50-387/86-06 and 50-388/86-04.)

- May 24, 1986 - With both reactors at full power, all four emergency cooling water pumps were declared inoperable. Both reactors had to be shut down. (Public Citizen, September 8, 1987.)

- August 13, 1988 - One deviation and three unresolved items were reported in the NRC's emergency response appraisal. (NRC reports 50-387/86-10 and 50-388/86-10.)

- September 24, 1986 - Tech specs limiting the condition for operation transversing incore probes were not met. A violation was issued. (NRC inspections 50-387/86-14 and 50-388/86-14.)

- October 22, 1986 - The NRC issued violations when PPL used unqualified terminal blocks in limitorque motor valve operators and failed to follow procedures for sealing conduit entry into components. (NRC inspections 50-387/86-21 and 50-388/86-22.)

- In 1986, the Susquehanna Nuclear Generating Station had the eighth highest number of "scrams" at Unit-1. January 30, 1987 - The following "deficiencies" were recorded by the NRC: PPL failed to demonstrate qualification of valcor, high temperature wire rockbestos cables and raychem cable splices. (See August 16, 1988 for a related development.) (NRC inspections 50-387/86-25 and 50-388/86-28.)

- February 9, 1987 - Due to the inoperability of the station battery supplying common loads, the NRC issued a violation. (NRC Inspections 50-387/86-27 and 50-388/86-30.)

- August 8, 1987 - PPL removed a shift supervisor (the person in charge of the plant) because he repeatedly fell asleep while on duty. (Public Citizen, October 19, 1988.)

- September 4, 1987 - The NRC identified several violations. Major areas inspected included plant operations, radiation protection, physical security, plant events, surveillance and maintenance and previous inspection findings. (NRC inspections 50-387/87-12 and 50-388/87-12.)

- September 23, 1987 - A significant event was reported when a steam line plug blew into the reactor vessel.

- November 16, 1987 - One violation was recorded during this inspection. (NRC inspections 50-387/87-16 and 50-388/87-16.)

- November 25, 1987 - The NRC identified several violations. Major areas inspected were training and qualification, ALARA external and internal exposure controls and radioactive and contaminated materials control. (NRC Inspections 50-387/87-19 and 50-388/87-19.)

- In 1987, at least 40% of the applicants for reactor operations failed their licensing tests at Susquehanna-1. Only 12% of the licensed operators at Susquehanna-1&2 have a bachelor's degree. Only 56% of licensed operators passed their written licensing exams (The industry average is: 86%). (Public Citizen, October 19, 1988). (For other training problems see October 4, 1982; January 6, March 14 and April 14, 1984; February 18, 1985; last entry for 1987; and, December 13, 1989.)

In 1987, Susquehanna-1 was ninth out of 83 reactors in the number of Licensee Event Reports.

- February 24, 1988 - The NRC convened a meeting to discuss, "Licensee beliefs as to causes of weaknesses identified and licensee corrective actions." (NRC inspections 50-387/87-19 and 50-388/87-19.)

- March 11, 1988 - Several violations were reported during an inspection that included plant operations, physical security, plant events, surveillance and maintenance and licensee posting of radiation areas. (NRC inspections 50-387/88-04 and 50-388/88-03.)

- March 16, 1988 - The NRC discussed with PPL "Inattentiveness of [a] licensed operator." (50-387/88-08 and 50-388/88-08.)

- April 25, 1988 - Several violations were identified during an inspection which included plant operations, physical security, plant events, surveillance scram discharge volume capability and fitness for duty. (NRC inspections 50-387/88-07 and 50-388/88-08.)

- July 7, 1988 - Several violations were noted during this inspection. Major areas inspected included corrective and preventive maintenance, engineering and surveillance programs. (NRC inspection 50-388/88-10.)

- August 15, 1988 - A violation was reported during an inspection of the operability of the main, steam tunnel differential temperature isolation modules. (NRC inspections 50-387/88-15 and 50-388/88-18.)

- August 16, 1988 - The NRC held an enforcement conference to discuss the results of a previous inspection on January 30, 1987.

- September, 1988 - The NRC fined PPL \$50,000 for safety violations at the Susquehanna Nuclear Generating Station.

- November 16, 1988 - A violation and unresolved item were identified. The major area of inspection was Unit-2's unplanned ESF actuations in which the RWCU system isolated when a "large" Unit-1 pump started. (NRC inspections 50-387/88-18 and 50-388/88-21.)

- December 20, 1988 - An unresolved item was identified during an inspection which included plant operations, physical security, plant events and surveillance and maintenance activities. (NRC inspections 50-387/88-19 and 50-388/88-22.)

- February 2, 1989 - Several violations were recorded during an inspection which included plant operations, physical security, plant events and surveillance and maintenance activities. (NRC inspections 50-387/88-20 and 50-388/88-23.)

- March 8, 1989 - "Events noted indicate need for increased management attention to weaknesses." The NRC inspected physical security, plant events and surveillance and maintenance activities. (NRC inspections 50-387/89-01 and 50-388/89-01.)

- March 24, 1989 - The NRC met with PPL's management to discuss "reactor building post-accident temperature profile and environmental qualification of electrical equipment." (NRC inspections 50-387/89-03 and 50-388/89-03.)

- June 1, 1989 - The NRC raised concerns about the "adequacy of [the] carbon dioxide system." (NRC inspections 50-387/89-09 and 50-388/89-09.)

- June 16, 1989 - Several violation were reported during an inspection of radiological controls, organization and staffing personnel qualifications and training corrective action system performance monitoring and audits. (NRC inspections 50-387/89-12 and 50-388/89-12.)

- July 26, 1989 - Several violations were observed by the NRC during an inspection of plant operations, physical security, plant events, surveillance and maintenance and Unit-1, refueling outage activities. (NRC inspections 50-387/89-15 and 50-388/89-13.)

- August 8, 1989 - Violations and deviations were identified during an inspection of the emergency diesel generator fuel supply equipment and related procedures. (NRC inspections 50-387/89-18 and 50-388/89-16.)

- August 28, 1989 - During this inspection period, two recirculation pump trips occurred at Unit-2. (NRC inspections 50-387/89-21 and 50-388/89-19.)

- August 31, 1989 - A contractor performing reactor coolant sampling had an "unplanned exposure." (See September 31 and October 18, 1989 for follow up.)

- September 13, 1989 - Violations were noted during an inspection which reviewed, "Licensee evaluations and corrective actions associated with unplanned exposure to contractor performing reactor coolant sampling activities." (See August 31 and October 18, 1989 for more information.) (NRC inspection 50-388/89-25.)

- September 19, 1989 - A violation was issued during a review of a, "Chronology of events and reasons that led to starting up plant with potentially unacceptable ultrasonic indications in reactor vessel." (NRC inspections 50-387/89-26.)

- October 10, 1989 - One unresolved item remained after an inspection which reviewed the, "... adequacy of licensee actions to resolve items." (NRC inspections 50-387/89-27 and 50-388/89-24.)

- October 18, 1989 - The NRC held an enforcement conference to discuss an "unplanned occupational exposure of contractor employee on August 31, 1989." (See August 31 and September 13, 1989 for more information.) (NRC report 50-388/89-25.)

- October 23, 1989 - Several violations were recorded during an inspection of plant operations, physical security, plant events and surveillance and maintenance. (NRC inspections 50-387/89-24 and 50-388/89-22.)

- November 22, 1989 - Violations were reported during an inspection of radiological controls, ALARA and housekeeping. (NRC inspections 50-387/89-28 and 50-388/89-26.)

- November 24, 1989 - Several violations were observed by the NRC during an inspection of plant operations, physical security, plant events and maintenance and surveillance. (NRC inspections 50-387/89-30 and 50-388/89-27.)

- December 13, 1989 - An enforcement conference issued a violation and discussed, "NRC findings [on] root cause of inadequate program provisions and safety significance of nonproficient operators (For other training problems see October 4, 1982; January 6, March 14, April 4, 1984; February 18, 1985; and, the last entry in 1987.) (NRC reports 50-387/89-90 and 50-388/89-27.)

- December 24, 1989 - Several violation were reported during an inspection of PPL's action on previous NRC inspections. (NRC inspections 50-387/89-33 and 50-388/89-31.)

- January 19, 1990 - The NRC cited PPL for violations during this inspection. This report reviewed, "licensee actions in response to contractor employee allegation" relating to a "noncompliance with penetration, fire seal requirements." (NRC inspections 50-387/89-35 and 50-388/89-34.)

- January 19, 1990 - The NRC and PPL met to discuss "preliminary root cause findings for recent emergency diesel generator crankcase explosions at plant, along with possible corrective actions to prevent recurrence." NRC inspections 50-387/89-37 and 50-388/89-36.)

- February 3, 1990 - Unit-1 lost "shutdown cooling." (See February 23, 1990 for follow up.)

- February 4, 1990 - A low-level event was announced due to an electrical function at Susquehanna-2. The Plant was shut down.

- February 23, 1990 - The NRC reviewed PPL's actions in response to the loss of shutdown cooling at Unit-1 on February 3, 1990. (NRC inspections 50-387/90-05 and 50-388/90-05.)

- May 31, 1990 - Several unresolved items remained after a, "Comparison of EOPs [emergency operating procedures] with BWR [boiling water reactors] owners' group emergency procedure guidelines and plant-specific emergency procedure guidelines." (NRC inspections 50-387/90-80 and 50-388/90-80.)

- June 12, 1990 - One violation was noted after an inspection of operations, radiological controls, maintenance surveillance testing, emergency preparedness, security and engineering-technical support. (NRC inspections 50-387/90-08 and 50-388/90-08.)

- June 13, 1990 - The NRC inspected PPL's, "Compliance with ATWS rule including design implementation verification and surveillance test procedure and results review." A deviation was reported. (NRC inspection reports 50-387/90-11 and 50-388/90-11.)

- September 6, 1991 - Several violations were reported during an inspection of, "Transportation and solid radwaste programs." (NRC inspections 50-387/90-16 and 50-388/90-16.)

- September 13, 1990 - Several violations were recorded during an inspection of the qualification of polyurethane seals. (NRC inspections 50-387/90-17 and 50-388/90-17.)

- September 28, 1990 - One unresolved item was observed during an inspection of operations, radiological controls, maintenance-surveillance testing, emergency preparedness, security and engineering technical support. (NRC inspections 50-387/90-15 and 50-388/90-15.)

- October 11, 1990 - The NRC convened an enforcement conference to discuss, "Environmental qualification deficiencies and nonconformance report system concerns." (NRC inspections 50-387/90-17 and 50-388/90-17.)

- November 7, 1990 - One violation was reported during an inspection of written policies and procedures, program administration, key program processes and onsite testing facility. (NRC inspections 50-387/90-14 and 50-388/90-14.)

- November 8, 1990 - One violation was recorded during an inspection of operations, radiological controls, maintenance-surveillance testing, emergency preparedness, security and engineering-technical support. (NRC inspections 50-387/90-20 and 50-388/90-20.)

- January 22, 1991 - The SALP reported, "Overall control of radiological controls effective but weaknesses in contractor and contamination controls noted." (NRC inspections 50-387/89-99 and 50-388/89-99.)

- January 27, 1991 - Several violations were noted during an inspection of, "Maintenance program and implementation of program personnel interviews and observation of maintenance work being performed." (NRC inspections 50-387/90-81 and 50-388/90-81.)

- March 19, 1991 - One violation was observed during an inspection of operations, radiological controls, maintenance-surveillance testing, emergency preparedness, security and engineering-technical support. (NRC inspections 50-387/90-26 and 50-388/90-26.)

- Spring 1991 - PPL filed the final environmental report on a \$23 million, 12,000 square foot radioactive waste holding facility. The building is constructed of steel and has movable interior concrete walls. It is designed to receive a total of 60,000 cubic feet of cement-solidified and dry trash bins per year from the Susquehanna nuclear power plants, it has a four-year, 240,000 cubic foot capacity. This facility has transformed the Susquehanna plant into a nuclear waste facility.

- May 30, 1991 - While Unit was at 100% power, "the primary power supply to the "A" Reactor Protection System (RPS) power distribution panel was lost when its Electrical Protection Assembly (EPA) breakers tripped" (Licensee Event Report 50-388.)

- January 22, 1991 - The SALP reported, "Overall control of radiological controls effective but weaknesses in contractor and contamination controls noted." (NRC inspections 50-387/89-99 and 50-388/89-99.)

- January 27, 1991 - Several violations were noted during an inspection of, "Maintenance program and implementation of program personnel interviews and observation of maintenance work being performed." (NRC inspections 50-387/90-81 and 50-388/90-81.)

- March 19, 1991 - One violation was observed during an inspection of operations, radiological controls, maintenance-surveillance testing, emergency preparedness, security and engineering-technical support. (NRC inspections 50-387/90-26 and 50-388/90-26.)

- Spring 1991 - PPL filed the final environmental report on a \$23 million, 12,000 square foot radioactive waste holding facility. The building is constructed of steel and has movable interior concrete walls. It is designed to receive a total of 60,000 cubic feet of cement-solidified and dry trash bins per year from the Susquehanna nuclear power plants, it has a four-year, 240,000 cubic foot capacity. This facility has transformed the Susquehanna plant into a nuclear waste facility.

- May 30, 1991 - While Unit was at 100% power, "the primary power supply to the "A" Reactor Protection System (RPS) power distribution panel was lost when its Electrical Protection Assembly (EPA) breakers tripped" (Licensee Event Report 50-388.)

- October 4, 1991 - Kemp Houck, editor of "Atoms & Waste," reviewed Susquehanna's 1990 "Radiological Environmental Program." Houck concluded: "The plant has been showing up some very strange environmental data, and they [PPL] keep blaming the anomalies on lab malfunctions." PPL's report concluded: "In 1990, REMP detected the naturally occurring radionuclides beryllium-7, potassium-40, radium-226 and thorium-232 in the environment...The 1990 REMP also reported the following eight man-made radionuclides in the environment: tritium, manganese-54, cobalt-60, zinc-65, strontium-89, iodine-131, and cesium 137" (Susquehanna Steam Electric Station Units 1 & 2, "Radiological Monitoring Program: 1990 Annual Report," April 1991.)

- January 19, 1992 - An explosion injured two workers. One man was burned and contaminated with dust particles. According to PPL: "The accident occurred in the basement of the plant's turbine building during work on an out-of-service recombiner -- equipment that combines hydrogen and oxygen to make water. A review team has found that a leak in a valve on the system allowed the hydrogen gas to build up in the pipe where the employee was working with a grinding wheel. New work procedures have been put into place to more clearly label hazards, and to institute safeguards aimed at preventing such incidents in the future" (PPL's "Shareowners' Newsletter," February 3, 1992.)

- March 7, 1992 - The NRC issued two violations for an accident on January 19, 1992. "The NRC reported that the company did not adequately investigate an incident that may have been a precursor to an accident. In the second case, the NRC found fault with parts of the company's record keeping practices" (Patriot, A5, March 7, 1992.)

- June 6, 1992 - Unit-1 was shut down due to the damage of a large pump and "some associated valves" (Patriot, June 8, 1992.)

- July 30, 1992 - Federal regulators say that a safety mechanism used by three Pennsylvania nuclear power plants [including Susquehanna] might fail to alert operators about a drop in the water level -- a condition which could lead to a nuclear accident." (States News Service, July 30, 1992.)

- December 31, 1992 - Two PP&L engineers charged that Susquehanna's highly radioactive spent fuel pools are unsafe and that if emergency cooling systems fail, a meltdown of spent fuel elements could occur. They told the NRC they reported their concerns to PP&L in March, 1992, and the company dismissed the matter and then tried to fire the engineers. The engineers, Donald Prevatte and David Lochbaum, are consultants for several companies. PP&L's spent fuel pool design is utilized by 1/3 of the nation's 109 nuclear power plants. (See October 1, 1993.)

- May 26, 1993 - PP&L "determined that the 'C' EDG level indicating instrument had drifted in a nonconservative direction." (LER, 93-003.)

- July 1, 1993 - An INPO inspection "pointed out some areas for improvement at the plant, and we're taking appropriate action." (Shareowners' Newsletter, July 1, 1993.)

- July 12, 1993 - While Unit -1 was operating at 100% power, a reactor scram occurred when the Main Turbine tripped. (LER, 93-008.)

- July 12 to August 1, 1993 - Mechanical problems forced Unit-1 out of service for seven weeks. "The unit shut down automatically July 12 when vibrations caused two large turbine blades to break loose, damaging the turbine and other non-nuclear components of the unit." (PPL, Shareowners' Newsletter, October 1, 1993.)

- September 10, 1993 - Power at Unit-2 was reduced to 40% for "control rod sequence" and "reactor recirc motor generator set brush change outs."

- September 24, 1993 - A power reduction was initiated at Unit-1 due to the inoperability of RHR instrumentation; power was held at 26%.

- October 1, 1993 - During an NRC presentation, David Lochbaum and Donald Prevatte postulated that failure in spent fuel pool cooling could possibly lead to safety-related equipment failure and a full core meltdown. (See July 30, 1992.)

- October 28, 1993 - At Unit-1, "PP&L suspended [fuel] loading after experiencing three fuel-loading problems in a 36 hour period" ("Patriot," February 2, 1994.) Unit-1 was due to be back on line by November but not return to service until January 22, 1994; four days after a record demand for electric.

- January 1, 1994 - "Unit-1 at our Susquehanna nuclear plant, out of service since Sept. 25 for refueling and maintenance, is expected to resume operation in early January. Its return was delayed by a series of problems with our fuel-loading operations...In an unrelated development, we further extended the refueling outage to replace metal support beams for pumps that circulate water inside the reactor. We took the action after problems developed with the components at a similar nuclear plant in Mississippi" (PPL, Shareowners' Newsletter, January 1, 1994.)

- January 22, 1994 - Unit-2 tripped and created further problems for the PJM depleted grid.

- July 1, 1994 - "The extended refueling outage at Unit-1 last October resulted in two citations from the NRC, but the agency decided that a fine was not appropriate, noting the prompt and effective actions we took to prevent future fuel-handling problems...The citations dealt with violations of certain NRC requirements during portions of the refueling outage" (PPL Shareowners Newsletter, July 1, 1994.)

- August 1994 - "Safety is our first priority at Susquehanna, and the NRC evaluation [SALP] reflects our continuing emphasis on it. It also points out some areas where we can improve, including refueling activities and corrective action programs" (PPL, Connect August 1994.)

- September 29, 1994 - "Thermal Science Inc. and its president, Rubin Feldman, were indicted September 29 by a federal grand jury on seven criminal charges, including willful violations of the Atomic Energy Act, a decade-long conspiracy to defraud the US government, false statements, and more. The charges are the culmination of a nearly two-year grand jury investigation of the company, which manufactures Thermo-Lag, the ineffective fire barrier material used in more than 70 nuclear reactors [including Susquehanna]" (The Nuclear Monitor, October 17, 1994.)

December 1994 - PP&L joined a consortium of 33 nuclear utilities actively pressuring the Mescalero Apaches to accept high-level radioactive waste.

This chronology does not include the cost to the rate payer to build Susquehanna-1 and -2. PP&L asked the Public Utility Commission (PUC) for \$315 million to recover the cost of building Unit-1. The PUC granted \$203 million on August 22, 1983, or a 16% increase to the customer. The company asked for \$330 million for Unit-2 but was allowed \$121 million in April, 1985; an 8% increase to rate payers. In addition, PP&L consumers have "contributed" approximately \$4.6 million annually (since 1985) to the decommissioning fund.

OFFICE OF TRIAL STAFF

CROSS-EXAMINATION
EXHIBIT NO. 9

Hbg etc 3/27/95

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DATE: MARCH 27, 1995

DOCKETED
EXHIBIT

PA PUBLIC UTILITY COMMISSION
vs.
PENNSYLVANIA POWER & LIGHT COMPANY
DOCKET NO: R-00943271

M. J. Berish
(Revised 3/21/95)

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

- Q. OTS-RE-36D. Reference Schedule B-4 (FTY), Page 5 of 6, Account 904. Supply the supporting calculations for the uncollectible accounts expense of \$16,932,000.
- A. OTS-RE-36D. Attachment 1 provides the requested data.

The uncollectible accounts expense of \$16,932,000 included on Schedule B-4 of Exhibit Future 1, Page 5 of 6 is applicable to the following receivables:

Electric Service Accounts Receivable	\$ 16,800,000 (1)
Property Damage Accounts Receivable	120,000
Other Accounts Receivable	12,000
Total	<u>\$ 16,932,000</u>

(1) The determination of the Electric Service Accounts Receivable is as follows:

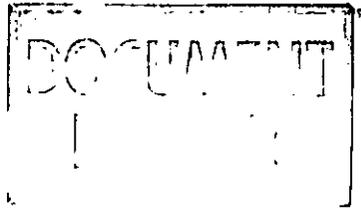
<u>Accounts Receivable Balance as of Sept 30, 1994:</u>	<u>Estimated % to be Written Off</u>	<u>Uncollectible Provision Requirements</u>
Referred for Collection	\$ 5,355,000 81.7%	\$ 4,376,000
Deferred Payment Plans	37,721,000 52.7%	19,882,000
Current to Over 90 Days	129,213,000 5.0%	6,461,000
Total	<u>\$ 172,289,000 17.8%</u>	<u>\$ 30,719,000</u>
Projected Uncollectible Accounts Expense FTY:		
Projected Uncollectible Provision Requirements Sept. 30, 1995		\$ 30,719,000
Less: Provision Balance October 1, 1994	\$ 29,485,000	
Less: 1995 Estimated Net Writeoffs	<u>15,566,000</u>	<u>(13,919,000)</u>
Uncollectible Accounts Expense FTY		<u>\$ 16,800,000</u>

OFFICE OF TRIAL STAFF

CROSS-EXAMINATION
EXHIBIT NO. 10

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DATE: MARCH , 1995

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MAR 31 1995

PA PUBLIC UTILITY COMMISSION
vs.
PENNSYLVANIA POWER & LIGHT COMPANY
DOCKET NO: R-00943271

M. J. Berish
R. J. Bernini

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

- Q. OTS-RE-1D. Reference PP&L Exhibit Future 1, D-5 and provide the following:
- A. The actual number of union and non-union employees by month from October 1, 1992 to date, updating as budgeted becomes actual.
 - B. The budgeted number of union and non-union employees by month from October 1993 to December 1995.
- A. OTS-RE-1D. The following responses reference Exhibit Future 1, Schedule D-5.
- A. Attachment 1 provides the actual number of employees by month from October 1, 1992 to date.
 - B. Attachment 2 provides the budgeted number of employees by month from October 1993 to December 1995.

Actual Number of Employees ^{1/}

<u>Date</u>	<u>Non- Union</u>	<u>Union</u>		<u>Total</u>
		<u>Regular, Full-Time</u>	<u>Part-time, Temp. Co-op</u>	
1992				
Sept	2,908	5,013	172	8,093
Oct	2,901	5,006	170	8,077
Nov	2,900	4,994	109	8,003
Dec	2,894	4,988	99	7,981
1993				
Jan	2,884	4,982	71	7,937
Feb	2,874	4,969	81	7,924
Mar	2,846	4,934	114	7,894
Apr	2,842	4,931	95	7,868
May	2,837	4,930	130	7,897
Jun	2,840	4,924	138	7,902
Jul	2,837	4,910	144	7,891
Aug	2,819	4,896	153	7,868
Sep	2,815	4,890	128	7,833
Oct	2,812	4,879	157	7,848
Nov	2,811	4,874	142	7,827
Dec	2,809	4,868	88	7,765
1994				
Jan	2,807	4,864	102	7,773
Feb	2,801	4,858	140	7,799
Mar	2,791	4,845	148	7,784
Apr	2,785	4,844	164	7,793
May	2,783	4,833	136	7,752
Jun	2,776	4,825	115	7,716
Jul	2,776	4,816	94	7,686
Aug	2,767	4,810	98	7,675
Sep	2,764	4,804	103	7,671
Oct	2,760	4,804	100	7,664
Nov	2,741	4,767	96	7,604
Dec	2,692	4,739	58	7,489 ^{2/}

^{1/} Employees at month end.^{2/} Reflects reductions due to Voluntary Early Retirement Program.

Budgeted Number of Employees^{1/}

<u>Date</u>	<u>Non-Union</u>	<u>Union</u>		<u>Total</u>
		<u>Regular, Full-Time</u>	<u>Part-time, Temp, Co-op</u>	
1993				
Oct	2,886	4,903	121	7,910
Nov	2,887	4,894	115	7,896
Dec	2,847	4,899	63	7,809
1994				
Jan	2,831	4,892	57	7,780
Feb	2,835	4,880	72	7,787
Mar	2,846	4,862	108	7,816
Apr	2,849	4,863	151	7,863
May	2,848	4,862	147	7,857
Jun	2,832	4,865	142	7,839
Jul	2,827	4,869	120	7,816
Aug	2,828	4,868	114	7,810
Sep	2,830	4,859	101	7,790
Oct	2,833	4,872	101	7,806
Nov	2,832	4,870	95	7,797
Dec	2,815	4,846	43	7,704
1995				
Jan	2,754	4,793	51	7,598
Feb	2,748	4,783	50	7,581
Mar	2,748	4,753	87	7,588
Apr	2,741	4,758	157	7,656
May	2,726	4,769	132	7,627
Jun	2,720	4,776	122	7,618
Jul	2,713	4,778	107	7,598
Aug	2,720	4,772	107	7,599
Sep	2,731	4,760	102	7,593
Oct	2,731	4,759	150	7,640
Nov	2,726	4,759	75	7,560
Dec	2,712	4,771	63	7,546

^{1/} Employees at month end.

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

Q. OTS-RE-2D. Reference PP&L Exhibit Future 1, D-5 and provide the following:

- A. An explanation of how the average monthly wage per employee was determined.
- B. Provide the supporting calculations for the average monthly wage per employee.
- C. If specific identification (matching an employee's actual wage/salary related to the personnel at the end of the year) was not used, explain why not and the different method that was used.
- D. Provide the PPUC jurisdictional allocation percentage for wage expense.

A. OTS-RE-2D. The following response references PP&L Exhibit Future 1, Schedule D-5:

- A. The average monthly wage was determined by dividing the sum of the projected wages in the last three months of the Future Test Year by the sum of the total projected employees in the last three months of the Future Test Year.

B.

<u>Month</u>	<u>Projected Wages</u> (Thousands of \$)	<u>Projected Employees</u>
July 1995	\$32,360	7,598
August 1995	36,371	7,599
September 1995	<u>34,346</u>	<u>7,593</u>
	<u>\$103,077</u>	<u>22,790</u>
Avg. Monthly Wage =	$\frac{\$103,077}{22,790}$	= \$4,523

- C. The average monthly wage rate of \$4,523 is a projected average wage rate for the future period July 1995 through September 1995. The projected wages for these months, however, is based on the actual salaries/wages of employees at the start of the budgeting process. The actual wage amount and actual employee levels are then adjusted for employee changes and wage rate increases to produce the budgeted wages and employees in the months July 1995 through September 1995.
- D. The PPUC jurisdictional allocation percentage for wage expense is 86.5872%.

Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995

Docket No. R-00943271

- Q. OTS-RE-3D. Reference PP&L Exhibit II-D-10 and provide a breakdown of benefits showing the amount and percentage of total payroll for the historic and future test years. Also, provide the PPUC jurisdictional allocation percentage for benefits.
- A. OTS-RE-3D. The following is a breakdown of benefits and the percentage of total payroll for the Future Test Year. Also shown is the PPUC jurisdictional allocation percentage for benefits.

	Future Test Year		
	Total Benefits (M\$)	% of Total Payroll	PUC Jurisdictional %
Pensions	\$17,898	4.33 %	
Group Life	8,587	2.08	
Med Care-Active	28,852	6.50	
Med Care-Retirees	22,113	5.35	
Dental Plan	3,033	0.73	
Long Term Disab	3,033	0.73	
Longevity	1,316	0.32	
AD&D ^{1/}	296	0.07	
SIP ^{2/}	597	0.14	
Def Svgs Plan	2,275	0.55	
ESOP Cash Div	7,103	1.72	
Total	\$93,103	22.52 %	86.5518%

^{1/} Accidental Death & Dismemberment

^{2/} Survivor Income Protection

The following is a breakdown of benefits and the percentage of total payroll for the Historic Test Year. Also shown is the PPUC jurisdictional allocation percentage for benefits.

	Historic Test Year		
	Total Benefits (M\$)	% of Total Payroll	PUC Jurisdictional %
Pensions	\$16,804	4.04 %	
Group Life	11,459	2.75	
Med Care-Active	26,809	6.44	
Med Care-Retirees	29,069	6.98	
Flex Benefits	21	0.01	
Dental Plan	3,010	0.72	
Long Term Disab	2,239	0.54	
Longevity	1,408	0.34	
AD&D	267	0.06	
SIP	2,849	0.68	
Def Svgs Plan	1,539	0.37	
ESOP Cash Div	6,808	1.64	
Total	\$102,282	24.57 %	86.4849%

The PUC jurisdictional amount of employee benefits for the 12 months ended September 30, 1995 is provided in Exhibit JMK 2, page 71, line 11. The PUC jurisdictional amount of employee benefits for the 12 months ended September 30, 1994 is provided in Exhibit JMK 1, page 73, line 11.

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

Q. OTS-RE-5D. Reference PP&L Exhibit II-D-10 and provide the effective dates for the union and non-union wage rate increases shown in Part D.

A. OTS-RE-5D. Following are the rates and effective dates of the union and non-union wage rate increases for the historic and future test periods.

	<u>Future Test Period</u>	<u>Historic Test Period</u>
Non-Union		
Rate	3.25%	4.00%
Effective Date	2/27/95	2/28/94
Union		
Rate	3.25%	4.00%
Effective Date	5/22/95	5/23/94

M. J. Berish

(Revised 3/6/95)

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

Q. OTS-RE-5D. Reference PP&L Exhibit II-D-10 and provide the effective dates for the union and non-union wage rate increases shown in Part D.

A. OTS-RE-5D. Following are the rates and effective dates of the union and non-union wage rate increases for the historic and future test periods.

	<u>Future Test Period</u>	<u>Historic Test Period</u>
Non-Union		
Rate	3.00%	4.00%
Effective Date	2/27/95	2/28/94
Union		
Rate	3.00%	4.00%
Effective Date	5/22/95	5/23/94

Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995
Docket No. R-00943271

Q. OTS-RE-38D. Reference PP&L Exhibit Future 1, Schedule D-5, Line No. 2. Provide a detailed reconciliation between the 1994 personnel level of 7,671 and the 1995 level of 7,593, including any newly-created positions.

A. OTS-RE-38D.

Actual Employee Level (September 1994)	7,671
<u>Nuclear</u>	37
Expected additions were due to hiring additional co-op students and transfer of employees from other departments, particularly security personnel.	
<u>Construction</u>	(45)
Reductions due to cut-back on maintenance activities at fossil plants.	
<u>Power Production & Engineering</u>	(16)
Reductions due to general downsizing through retirements and displacements throughout the department.	
<u>System Power & Engineering</u>	(27)
Reductions were due to restructuring in the Bulk Power & Engineering Department and the displacement of personnel.	
<u>Division Operations</u>	(17)
Reductions were due to anticipated downsizing throughout the department.	
Additions/reductions were due to general staffing changes and transfers throughout the Company in the following departments:	
Office of the Chairman	6
Financial	(8)
Information Services	(2)
HR&D	<u>(6)</u>
Budgeted Employee Level (September 1995)	<u>7,593</u>

M. J. Berish
T. L. Rosbaugh

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 26, 1995
Docket No. R-00943271**

Q. OTS-RE-74D. Reference PP&L Exhibit II-D-10 and provide the average starting salary of employees by categories.

A. OTS-RE-74D. The starting salary of employees (1994-1995) by categories is as follows:

Weekly Rate

Management/Professional:

Engineering	\$700.00
Computer Science	640.00
Accounting	545.00

Union Personnel:

Physical Worker	447.96
Clerical Worker	375.12

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271**

- Q. 57.** Please provide a comparison between budgeted and actual employees for each month of the historical test year.
- A. 57.** The following is a monthly comparison of the budgeted and actual employees for the Historical Test Year.

	<u>Actual</u>	<u>Budget</u>
1993		
Oct.	7,848	7,910
Nov.	7,827	7,896
Dec.	7,765	7,809
1994		
Jan.	7,773	7,780
Feb.	7,799	7,787
Mar.	7,784	7,816
Apr.	7,793	7,863
May	7,752	7,857
Jun.	7,716	7,839
Jul.	7,686	7,816
Aug.	7,675	7,810
Sept.	7,671	7,790

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00843271**

Q. 58. Please provide the budgeted employees for each bi-weekly pay period for the future test year. Provide a comparison showing actual employees for each period to date. Update monthly as additional data become available.

A. 58. Employees are not budgeted for each bi-weekly pay period. Employees are budgeted on a monthly basis. The following is a comparison of actual versus budgeted employees for the Future Test Year, where available.

	<u>Employees</u>	
	<u>Actual</u>	<u>Budget</u>
1994		
Oct.	7,664	7,806
Nov.	7,604	7,797
Dec.	7,489	7,704
1995		
Jan.	6,978	7,598

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271**

Q. 59. Please provide the same information requested in the previous question for budgeted and actual wages for the future test year. Update monthly as additional data become available.

A. 59. Wages are not budgeted by bi-weekly pay periods. The following is a comparison of actual versus budgeted total wages for the Future Test Year, where available.

	<u>Total Wages</u>	
	<u>Actual</u>	<u>Budget</u>
	(\$000)	
1994		
Oct.	\$33,784	\$33,604
Nov.	37,318	35,063
Dec.	27,808	34,177
1995		
Jan.	35,453	34,713

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271**

Q. 61. Please explain how the percentages of wages and benefits charged to O&M for the future test year were determined and why the rates differ.

A. 61. When each cost area prepares a budget, it is asked to estimate how much of its labor and other costs will be expended on capital and O&M work. For each cost area, its wages and benefits are then allocated to expense or capital accounts based on the estimate of the type of work it plans to do. The percentage charged to expense for each cost area will differ from that of another cost area. In addition, the percentage charged to expense for any one cost area may differ from one month to another.

The Company total is a product of combining the monthly cost area estimates of their work to be performed in the Future Test Year.

Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271

Q. 63. Please provide a breakdown of total wages for each month of the future test year between union and non-union personnel and separately show normal and overtime payroll for each group in each month.

A. 63. The following is the requested breakdown of total wages for the Future Test Year.

TOTAL WAGES

	<u>UNION</u>		<u>NON-UNION</u>		<u>TOTAL</u>
	<u>NORMAL</u>	<u>OVERTIME</u>	<u>NORMAL</u>	<u>OVERTIME</u>	
	(\$000)				
1994 OCT	\$16,898	\$2,220	\$13,912	\$774	\$33,804
NOV	17,534	2,158	14,805	766	35,063
DEC	17,423	1,796	14,324	834	34,177
1995 JAN	17,171	2,144	14,631	767	34,713
FEB	15,480	1,882	12,997	598	30,757
MAR	18,156	1,865	15,800	845	36,666
APR	15,719	2,954	13,424	1,206	33,303
MAY	18,120	2,631	15,362	1,019	37,132
JUN	17,543	2,007	14,357	835	34,542
JUL	15,949	2,249	13,369	793	32,360
AUG	18,661	1,799	15,306	805	36,371
SEP	16,927	2,413	13,980	1,026	34,346
	<u>\$205,381</u>	<u>\$25,918</u>	<u>\$172,067</u>	<u>\$9,868</u>	<u>\$413,034</u>

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00843271**

Q. 64. Please identify the effective dates of the union and non-union wage rate increases scheduled for the future test year.

A. 64. The effective dates of the union and non-union wage rate increases for the Future Test Year are:

Non-Union	2/27/95
Union	5/22/95

See the response to Question OTS-RE-5D of Interrogatories of the Office of Trial Staff Dated January 13, 1995.

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271**

Q. 66. Please identify the average annual salary increases granted union and, separately, non-union employees in each of the last five years.

A. 66. The average annual salary increases which were granted in the last five years are:

	<u>Union</u>	<u>Non-Union</u>
1994	4.00%	4.00%
1993	4.25	4.50
1992	4.50	5.00
1991	4.50	5.25
1990	5.00	4.50

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271**

Q. 67. Please identify the future percentage wage increases provided for in any existing union contracts.

A. 67. The following are the future wage increases which are provided for in the existing union contract.

1995	3.00%
1996	3.00%

Note: The response to Question OTS-RE-5D of Interrogatories of the Office of Trial Staff Dated January 13, 1995 inadvertently identified the wage increases for both union and non-union employees for the Future Test Year as 3.25%. The correct response, for both union and non-union employees, for the Future Test Year is 3.00%.

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271**

Q. 100. Please provide a breakdown of benefits expense by type of benefit for the historic and future test year. Provide an explanation of any changes in excess of 10 percent.

A. 100. See the response to Question OTS-RE-3D of Interrogatories of the Office of Trial Staff Dated January 13, 1995.

The following are explanations of any changes in excess of 10%:

Group Life (-25%) / Medical Care-Retirees (-24%)

Beginning in 1993, the Company was required, under Statement of Financial Accounting Standards (SFAS) No. 106, to begin accruing the cost of post-retirement benefits attributable to current employees. Because this accounting charge would have a significant impact on earnings, the Company requested, and was granted, PUC approval to defer such costs until its next base rate case which includes recovery of such costs. In May 1994, as a result of a complaint filed by the Office of Consumer Advocate, the Commonwealth Court reversed the PUC order. The Company began booking the cost of post-retirement benefits in addition to writing off the amount deferred from 1993. Thus, the 1994 amount includes two years of costs associated with post-retirement benefits.

Long-Term Disability (+35%)

Additional employees on long-term disability in the Future Test Year, as well as higher costs of providing coverage.

Accidental Death & Dismemberment (+11%)

Increase due to unfavorable claims experience in 1993 and 1994, and higher salaries on which the expense is based.

Survivor Income Protection (-79%)

Due to an abnormal charge in December 1993 for the SFAS No. 112 portion of Survivor Income Protection, which became part of the Historic Test Year amount. The Future Test Year shows the normalized amount.

Deferred Savings Plan (+48%)

A change in the plan which provided for the Company matching a portion of deferred savings for union employees. This was negotiated as part of the existing union contract.

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EXHIBIT NO. 11

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DATE: MARCH ²⁷, 1995

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MAR 31 1995

PA PUBLIC UTILITY COMMISSION

vs.

PENNSYLVANIA POWER & LIGHT COMPANY
DOCKET NO: R-00943271

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

- Q. OTS-RE-12D. Reference PP&L Exhibit Future 1, D-14 and provide the following:
- A. Provide the dates that Unit 1 and Unit 2 went into service and were recognized in rates.
 - B. Provide the supporting calculations for operating expense, interchange energy savings and carrying costs for each unit. Also, provide a break-down of operating expenses by major category for each unit.
- A. OTS-RE-12D. Following is the information requested:
- A. Susquehanna Unit No. 1 went into service on June 8, 1983 and was recognized in rates effective August 22, 1983 pursuant the Commission's Order entered on August 22, 1983 at Docket R-822169.
Susquehanna Unit No. 2 went into service on February 12, 1985 and was recognized in rates effective April 26, 1985 pursuant to the Commission's Order entered on April 26, 1985 at Docket R-842651.
 - B. See Attachment 1.

PENNSYLVANIA POWER & LIGHT CO.

SUMMARY OF SUSQUEHANNA SES WINDOW DEFERRED COSTS
(Thousands of Dollars)

	<u>UNIT 1</u>	<u>UNIT 2</u>	<u>TOTAL</u>
Operating Costs (See Attachment 1, Page 2)	\$21,280	\$18,176	\$39,456
Amortization of ITC	(\$178)	(\$84)	(\$262)
Interchange Energy Savings (See Attachment 1, Page 3)	(\$40,994)	(\$47,167)	(\$88,161)
Carrying Costs (See Attachment 1, Page 4)	<u>\$28,834</u>	<u>\$32,125</u>	<u>\$60,959</u>
Totals	<u>\$8,942</u>	<u>\$3,050</u>	<u>\$11,992 (a)</u>

(a) In addition, \$27,223 of income tax expense has been deferred.

PENNSYLVANIA POWER & LIGHT COMPANY

SSES OPERATING & MAINTENANCE COSTS - WINDOW DEFERRED COSTS
(Thousands of Dollars)

	UNIT 1				UNIT 2					
	Jun-83	Jul-83	Aug-83	Total	Feb-85	Mar-85	Apr-85	Jul-85	Aug-85	Total
Nuclear Power Generation	\$3,970	\$5,540	\$6,708		\$3,336	\$5,346	\$3,998			
Administrative & General	489	752	617		143	220	1,158			
Depreciation	896	1,198	828		649	1,551	1,091			
Payroll Taxes	45	107	130		9	22	16			
Total	\$5,400	\$7,597	\$8,283	\$21,280	\$4,137	\$7,139	\$6,263	\$580 (1)	\$57 (1)	\$18,176
Unit 1	\$21,280									
Unit 2	18,176									
Total O&M Unit I and Unit II	\$39,456									

(1) PUC Rate Order R-842651 on April 25, 1985 terminated the window deferral for Unit II. Since receipt of vendor invoices and payment thereof often lags the receipt of services rendered, subsequent adjustments to the window deferral were required.

PENNSYLVANIA POWER & LIGHT CO.

DEFERRED ENERGY SAVINGS SSES
(Thousands of Dollars)

	UNIT 1				UNIT 2			
	Jun-83	Jul-83	Aug-83	Totals	Feb-85	Mar-85	Apr-85	Totals
Energy Savings Attributable To SSES	\$8,881	\$14,962	\$18,668	\$42,511	\$14,198	\$17,410	\$17,383	\$48,991
Less: FERC and UGI	(\$317)	(\$534)	(\$666)	(\$1,517)	(\$529)	(\$648)	(\$647)	(\$1,824)
Net Savings to PP&L	\$8,564	\$14,428	\$18,002	<u>\$40,994</u>	\$13,669	\$16,762	\$16,736	<u>\$47,167</u>

The energy savings were calculated by determining, after the fact, what impact PP&L's share of actual Susquehanna generation had on PP&L's PJM interchange and two-party transactions. These calculations were performed using actual data for each hour while considering Susquehanna's generation, PJM interchange (receipts and deliveries) quantities and prices, and two party transaction (receipts and deliveries) quantities and prices.

PENNSYLVANIA POWER & LIGHT CO.

SSES CARRYING COSTS CALCULATION
(Thousands of dollars)

	UNIT 1						UNIT 2			
	Jun-83	Jul-83	Aug-83	May-84	Feb-85	Total	Feb-85	Mar-85	Apr-85	Total
Net Plant	\$1,729,047	\$1,739,676	\$1,737,369	\$4,398	\$72,283		\$1,893,873	\$1,889,261	\$1,891,734	
Portion Applicable To PUC Jurisdiction	\$1,547,497	\$1,557,010	\$1,554,945	\$3,936	\$64,693		\$1,692,554	\$1,688,433	\$1,347,463	
AFUDC	0.773%	0.773%	0.773%	0.773%	0.773%		0.780%	0.772%	0.795%	
Number of Days in Month Without Rate Relief	23	31	21	75	23		19	30	25	
Initial Carrying Cost Deferred	\$9,171	\$12,036	\$8,142	(\$25)	(\$383)		\$8,361	\$13,035	\$10,712	
Adjustments		(9)	(A) (98)	(A)					17	(D)
Final Carrying Cost Deferred	\$9,171	\$12,027	\$8,044	(\$25)	(B) (\$383)	(C) \$28,834	\$8,361	\$13,035	\$10,729	\$32,125
Unit 1	\$28,834									
Unit 2	\$32,125									
Total	<u>\$60,959</u>									

(A) Adjustment due to a change in the Overhead rates for the previous month.

(B) Records adjustment to carrying charges for months of June, July, and August 1983.
Adjustment resulted from a failure to identify an accrual for nuclear fuel disposal costs.

(C) To adjust carrying charges for June 1983 as noted in FERC audit finding no. 17 related to their audit of years 1980-83.

(D) Adjustment due to a revision in the CWIP balance used to calculate the carrying charge rate.

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

- Q. OTS-RE-6D. Reference PP&L Exhibit Future 1, D-6, Page 3 and PP&L Statement 3, Page 18 and provide an explanation of why the Company is making a claim for the amortization of the deferred asset in this filing. Also, provide the PPUC jurisdictional allocation percentage.
- A. OTS-RE-6D. As stated in Statement 3, Page 18, lines 24 and 25: "Both PP&L and the PUC have filed Petitions for Allowance of Appeal asking the Pennsylvania Supreme Court to review the Commonwealth Court's decision."

If the Company did not seek to recover its deferred SFAS 106 compliance costs and the Supreme Court were to reverse the Commonwealth Court's decision, PP&L would be forced to file a separate request with the Commission to recover these deferred amounts. Moreover, apart from the PUC's deferral order, the Company believes that its claim is reasonable and appropriate to test year conditions in a rate case where all issues can be considered.

The PPUC jurisdictional allocation percentage is 86.8421% as shown in Section III of Exhibit JMK 2.

Pennsylvania Power & Light Company
Responses to Interrogatories of
the Office of Consumer Advocate, Set IV
Date February 1, 1995
Docket No. R-00943271

- Q. 74. Please state whether the Company intends to revise the interest rate which it pays on customer deposits to conform with the changes to Section 56.57 of the 51 Pa. Code published in the Pennsylvania Bulletin on January 14, 1995. If not, explain why not.
- A. 74. Yes, the Company intends to revise the interest rate which it pays on residential and commercial and industrial customer deposits to conform to the change which will be effective on April 14, 1995. When PP&L filed its base rate proceeding on December 30, 1994, the revisions to the Chapter 56 regulations had not yet been published in the Pennsylvania Bulletin. In Supplement No. 50 to Tariff Electric--Pa. P.U.C. No. 200, PP&L proposed to reduce its rate of interest on customer deposits for non-residential customers (see Exhibit OGK-1), but it did not propose to modify the rate of interest on customer deposits for residential customers.

As a result of publication in the Pennsylvania Bulletin on January 14, 1995 of the revisions to 52 Pa. Code § 56.57 to be effective on April 14, 1995, PP&L will propose to modify its Tariff Rule 2.D.2 to provide as follows:

"The amount of deposit shall not exceed the Company's estimate of the average bill for one billing period plus one month, with a minimum of \$5.00. Interest at the rate of the average 1-year Treasury Bills for September, October and November of the previous year is paid annually on all deposits made to secure the payment of bills for service. Interest ceases upon refund of deposit or upon discontinuance or termination of services, whichever occurs first."

Interest paid on customer deposits would then be the same for both residential (as required by 52 Pa. Code § 56.57) and non-residential customer accounts.

R. J. Bernini

**Pennsylvania Power & Light Company
Response to Interrogatories of
the Office of Trial Staff
Dated January 13, 1995
Docket No. R-00943271**

- Q.OTS-RE-7D. Reference PP&L Exhibit Future 1, D-7 and provide the following:
- A. A breakdown of rate case expense.
 - B. An explanation of how the two-year normalization period was determined.
 - C. Provide actual costs incurred to date, updating for additional costs incurred.
- A.OTS-RE-7D. A. and C. See Attachment 1.
- B. In the Company's SSES Unit 2 base rate proceeding, the rate case expenses were divided by two.

Rate Case Expenses
Twelve Months Ended September 30, 1995
(Thousands of Dollars)

	<u>Claimed</u>	<u>Billed</u> (as of 1/25)
1) Legal Fees (Morgan, Lewis & Bockius)	675	7
2) Witnesses/Consultants		
- TLG Services, Inc.	250	141
- P. Moul & Associates	40	19
- Putnam Hayes & Bartlett, Inc.	200	21
- Coopers & Lybrand, LLP	100	35
- Towers & Perrin	110	0
- HRN	35	14
- Deloitte & Touche	10	5
3) Employee Expenses	20	3
4) Printing & Advertising	40	12
5) Miscellaneous	11	1
TOTALS	<u>\$ 1,491</u>	<u>\$ 258</u>

Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995

Docket No. R-00943271

Q. OTS-RE-13D. Reference PP&L Exhibit Future 1, D-16 and provide the following:

- A. Define and explain the purpose of environmental remediation expenses.
- B. Provide a breakdown and supporting calculations for these expenses.
- C. Explain why these expenses do not show up in the historic test year and the treatment of the expense.
- D. Are these expenses to be included in a contingency fund in anticipation of future claims? Explain.

A. OTS-RE-13D. A. The environmental remediation program is intended to proactively reduce the environmental liabilities that resulted from standard past practices at operating facilities. Although these facilities were operated in accordance with applicable laws and regulations at the time, the environmental impacts that may have been caused by those operations are now considered to be unacceptable.

The remediation program helps to levelize, and achieve maximum value for, the cost of cleaning up these sites, while avoiding the inefficiencies of conducting this work in a reactive mode. Without this approach, the required level of work and associated costs could fluctuate over time. The result would be uncertain and, perhaps, result in inefficient use of Company resources.

It is expected that this program will be conducted under a Department of Environmental Resources (DER) Consent Order and Agreement that is based on cooperation, flexibility, efficiency, priority and continued progress. The program covers manufactured gas plant sites, substations and utility pole sites with PCB spill histories, and decommissioned power plants.

- B. The Company accounts for environmental remediation costs on an accrual basis. Upon identification of potential environmental costs resulting from prior operations or other environmental obligations applicable to prior periods that are material in amount, an accrual is recorded to recognize the estimated future costs of remediation. As remediation costs are incurred, the accrued liability is reversed.

The environmental remediation expense claimed on Exhibit Future 1, Schedule D-16 is \$5,400,000. (\$4,050,000 budgeted in the Future Test Year plus the adjustment of \$1,350,000 to reflect a full-year's cost of remediation. An amount was not budgeted for the last three months of 1994.) This claim is based on the estimate of environmental assessment/remediation payments expected to be made during 1995 under the Company's remediation program as shown on Attachment 1. The list includes certain remediation work for which costs previously have been accrued and are not reflected in expense during the future test period. These projects are presented as examples of additional potential environmental costs that the Company expects will be identified and must be recorded as additional accruals during the Future Test Year.

- C. Attachment II-D-7 of Exhibit Regs. §53.53, Part II – Primary Statements of Rate Base and Operating Income shows environmental remediation expenses for the Historic Test Year under Miscellaneous General Expenses - Account 930. This amount is a full 12 months of expenses recorded during the 12 months ended September 30, 1994. The Future Test Year includes nine months of 1995 budgeted expenses plus an adjustment of \$1,350,000 to reflect the balance of the total amount claimed which was not included in the 1994 budget amount. At the time the 1994 budget was prepared (fall 1993), an environmental accrual was not anticipated.
- D. No. These are amounts based on estimates of potential future costs. The specific sites and amounts are as yet unknown, but expenditures for similar sites will be made during the test year and on into the future.

Pennsylvania Power & Light Company
1995 Estimated Environmental Assessment/Remediation Payments

	<u>Annual Amount</u>
Manufactured Gas Plants (MGP) Sites	
Brodhead Creek	\$ 375,000
Columbia	710,000
Tamaqua	160,000
Shamokin	10,000
Lehighton	10,000
Jim Thorpe	25,000
Shenandoah	5,000
 Non-MGP Superfund Sites	
Berks Associates - EPA Settlement	850,000
Novak Landfill - Remedial Action Costs	50,000
Heleva Landfill - AT&T Settlement	750,000
 PCB Pole Sites	
10 Assessment Kits	5,000
5 Site Cleanups	147,500
 PCB Substations	
5 Assessment Kits	50,000
Remediation Kits	5,000
1 Substation Remediation	265,000
 Decommissioned Power Plants	
Hauto Remediation	1,595,000
Other Old Plants - 2 Assessments	300,000
 Remediation Agreement/Other	
DER Oversight Costs	<u>130,000</u>
 Total	 <u><u>\$ 5,442,500</u></u>

R. J. Bernini
M. J. Berish

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Consumer Advocate, Set IV
Dated February 1, 1995
Docket No. R-00943271**

Q.99. Please provide a breakdown of the actual environmental remediation expenditures in each month of the historic and future test years to date. Update as additional data become available.

A.99. The information requested for the historic test year ended September 30, 1994 is provided as Attachment 1. The latest available information for the future test year ended September 30, 1995 is provided as Attachment 2.

Also see the response to Question OTS-RE-13D of Interrogatories of the Office of Trial Staff Dated January 13, 1995 for additional information on environmental remediation expenses.

PENNSYLVANIA POWER & LIGHT COMPANY
 ENVIRONMENTAL REMEDIATION EXPENDITURES
 BY MONTH
 FOR THE 12 MONTHS ENDED SEPTEMBER 30, 1994

	1993 October	November	December	1994 January	February	March	April	May	June	July	August	September	Site / Location Totals
Broadhead Creek	\$ 6,269.69	\$ 6,197.33	\$ 38,927.52	\$ 2,308.68	\$ 26,552.76	\$ 36,414.72	\$ 84,363.34	\$ 6,647.90	\$ 29,098.33	\$ 4,870.14	\$ 23,614.59	\$ 62,589.03	\$ 327,854.03
Carlisle Manufactured Gas Plant	3,577.00	3,615.90			5,000.00				75.59				12,268.49
Columbia Manufactured Gas Plant	1,143.37	10,958.66	27,690.89	2,824.28	16,068.24	18,288.45	27,950.90	306,003.75	7,744.12	945.71	39,475.68	96,207.21	555,301.26
Jim Thorpe Manufactured Gas Plant							5,202.02						5,202.02
Berks Associates Waste Oil Facility	14,273.22	1,823.38	300.68	35.77		221.02		318.77	793.45	301.60			18,067.89
Haulo (former Plant Site)	100.22		58.04	225.96	760.82	2,459.50	1,298.99	1,662.81	101,693.18	347.58	23,360.40	37,355.21	169,322.71
Novak Landfill Superfund Site		22,795.00							5,080.50	1,806.38	833.97	75.28	30,591.13
Tamaqua Manufactured Gas Plant			67,207.02	702.35	174.96	901.44	1,038.07	1,019.91	959.57	3,471.29	23,378.16	2,426.61	101,279.38
NW Manufacturing		159.06											159.06
Delta Quarries & Disposal		9,444.45											9,444.45
Shamokin Gas Plant					10,183.67		8,977.07			8.50			19,169.24
Heleva Land Fill					483.47	81.70			151.18		5,387.32	405.01	6,508.68
Spencer Transformer Site			121,803.00										121,803.00
Lehigh Gas Plant							5,202.01				2,562.65		7,764.66
Shenandoah Gas Plant									261.77	7,765.86	3,763.92	8,376.37	20,167.92
Remediation Strategy									1,590.29	5,155.41	9,846.88	18,216.17	34,808.75
Industrial Solvent NPL Site										10,426.56			10,426.56
Hazellon Dump										701.89	13.16		715.05
Totals	\$ 25,363.50	\$ 54,993.78	\$ 255,987.15	\$ 6,097.04	\$ 59,223.92	\$ 58,366.83	\$ 134,032.40	\$ 315,653.14	\$ 147,447.98	\$ 35,800.92	\$ 132,236.73	\$ 225,650.89	\$ 1,450,854.28

PENNSYLVANIA POWER & LIGHT COMPANY
ENVIRONMENTAL REMEDIATION EXPENDITURES
BY MONTH
FOR THE 12 MONTHS ENDED SEPTEMBER 30, 1995
 (Most recent data available)

	<u>1994</u> <u>October</u>	<u>November</u>	<u>December</u>	<u>1995</u> <u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>Site /</u> <u>Location</u> <u>Totals</u>
Broadhead Creek	\$63,978.35	\$7,003.53	\$130,380.36										\$201,362.24
Columbia Manufactured Gas Plant	26,464.70	17,348.70	10,204.40										54,017.80
Tamaqua Manufactured Gas Plant	2,483.80	15,214.50	4,587.79										22,286.09
Novak Landfill Superfund Site	159.95		582.41										742.36
Shamokin Gas Plant	13,742.63												13,742.63
Lehighon Gas Plant		3,787.04	7,880.29										11,667.33
Hauto (former Plant Site)	9,976.13	1,713.48	5,305.35										16,994.96
Industrial Solvent NPL Site		9,324.33											9,324.33
Shenandoah Gas Plant	3,486.00	35,556.52	24,040.64										63,083.16
Remediation Strategy	12,087.19	14,306.35	34,976.54										61,370.08
Hazleton Dump		37.62											37.62
Totals	\$ 132,378.75	\$ 104,292.07	\$ 217,957.78										\$454,628.60

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PA PUBLIC UTILITY COMMISSION
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PENNSYLVANIA POWER & LIGHT COMPANY
DOCKET NO: R-00943271

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

- Q. OTS-RE-19D. Reference Schedule C-4 (Historic Test Year), page 2. Supply the following supporting information:
- A. Provide the supporting workpapers for the collection lags of 17 days, 24 days and 21 days for the 15, 20 and 30 day due date customers, respectively.
 - B. Supply the supporting computation for the revenue lags related to Interchange Delivered, Revenue from UGI and Revenue from Power Contracts.
- A. OTS-RE-19D.
- A. Attachment 1 sets forth the supporting computation for the revenue lag for the 15, 20 and 30 day due date customers. In comparing the revenue lags on Attachment 1 to those appearing on Schedule C-4 of Exhibit Historic 1, it was discovered that a 24 day lag between the billing date and payment date had erroneously been used for the 20 day due date customers instead of 22 days.
 - B. The supporting computation for the 35 day lag applicable to Interchange Delivered is set forth on Page 44 of Attachment II-B-3 in Pennsylvania Power & Light Company, Exhibit Regs. §53.53, Part II - Primary Statements of Rate Base and Operating Income.
- UGI is billed monthly, therefore, there is a 15 day lag from the mid-point of the service period. There is a 3 day lag from the end of the month to the bill date. Under the contract, such bills are due and payable in 2 banking days after the date received by UGI. The total is a 20 day lag.
- The Power Contracts are billed on the twentieth of the month of service or 5 days beyond the mid-point of the service period. Such bills are due and payable 10 banking days subsequent to the date on which the bill is rendered. Including a weekend, this is effectively 12 days. The total is 17 days.

PENNSYLVANIA POWER & LIGHT COMPANY
CUSTOMER PAYMENT HABIT STUDY
MONTHLY ACCOUNTS DUE IN 16 DAYS
BILLED 7/8/84 - DUE 7/21/84

PAYMENT DATE	CURRENT PAYMENT	DAY LAG	WEIGHTED AMOUNT
6-Jul	\$23.03	0	\$0.00
7-Jul	161.12	1	161.12
8-Jul	5,704.77	2	11,409.54
9-Jul	0.00	3	0.00
10-Jul	0.00	4	0.00
11-Jul	51,351.43	5	256,757.15
12-Jul	74,147.07	6	444,882.42
13-Jul	119,759.23	7	838,314.61
14-Jul	131,883.15	8	1,055,065.20
15-Jul	155,773.10	9	1,401,957.90
16-Jul	0.00	10	0.00
17-Jul	0.00	11	0.00
18-Jul	925,044.62	12	11,100,535.44
19-Jul	463,983.65	13	6,031,767.45
20-Jul	422,434.83	14	5,914,067.82
21-Jul	484,346.72	15	7,265,200.80
22-Jul	222,010.53	16	3,552,168.48
23-Jul	0.00	17	0.00
24-Jul	0.00	18	0.00
25-Jul	387,342.55	19	7,359,508.45
26-Jul	68,254.74	20	1,365,094.80
27-Jul	77,458.33	21	1,626,624.93
28-Jul	55,035.59	22	1,210,782.98
29-Jul	37,092.77	23	853,133.71
30-Jul	0.00	24	0.00
31-Jul	0.00	25	0.00
1-Aug	45,839.81	26	1,191,835.06
2-Aug	15,876.21	27	428,657.67
3-Aug	5,851.75	28	163,848.68
4-Aug	11,344.76	29	328,998.17
5-Aug	11,307.57	30	339,227.20
6-Aug	0.00	31	0.00
7-Aug	0.00	32	0.00
8-Aug	6,109.33	33	201,607.82
9-Aug	8,775.05	34	296,351.54
10-Aug	8,168.91	35	285,911.72
11-Aug	7,332.35	36	263,984.65
12-Aug	3,145.97	37	116,400.97
13-Aug	0.00	38	0.00
14-Aug	0.00	39	0.00
15-Aug	16,296.69	40	651,867.78
16-Aug	16,738.38	41	688,273.69
17-Aug	21,165.64	42	888,958.78
18-Aug	22,551.84	43	969,729.19
19-Aug	25,416.98	44	1,118,348.38
20-Aug	0.00	45	0.00
21-Aug	0.00	46	0.00
22-Aug	39,714.77	47	1,868,594.18
23-Aug	18,576.41	48	891,667.81
24-Aug	11,701.87	49	573,391.43
25-Aug	9,400.91	50	470,045.64
26-Aug	11,966.33	51	610,282.64
27-Aug	0.00	52	0.00
28-Aug	0.00	53	0.00
29-Aug	54,577.29	54	2,947,173.86
30-Aug	10,350.08	55	569,254.68
31-Aug	77,826.76	56	4,358,298.38
TOTAL	\$4,141,842.88		\$70,508,158.82

WEIGHTED AVERAGE

17 DAYS

PENNSYLVANIA POWER & LIGHT COMPANY
CUSTOMER PAYMENT HABIT STUDY
MONTHLY ACCOUNTS DUE IN 20 DAYS
BILLED 7/6/94 - DUE 7/26/94

PAYMENT DATE	CURRENT PAYMENT	DAY LAG	WEIGHTED AMOUNT
6-Jul	\$875.13	0	\$0.00
7-Jul	1,220.31	1	1,220.31
8-Jul	12,740.02	2	25,480.04
9-Jul	0.00	3	0.00
10-Jul	0.00	4	0.00
11-Jul	312,827.46	5	1,564,137.30
12-Jul	241,428.17	8	1,448,557.02
13-Jul	214,153.30	7	1,499,073.10
14-Jul	184,679.43	8	1,477,435.44
15-Jul	77,812.33	9	700,310.97
16-Jul	0.00	10	0.00
17-Jul	0.00	11	0.00
18-Jul	318,862.50	12	3,828,350.00
19-Jul	242,837.94	13	3,156,893.22
20-Jul	199,707.73	14	2,795,908.22
21-Jul	156,153.33	15	2,342,299.95
22-Jul	151,204.18	16	2,419,288.88
23-Jul	0.00	17	0.00
24-Jul	0.00	18	0.00
25-Jul	263,938.98	19	5,014,840.62
26-Jul	680,238.88	20	13,604,777.60
27-Jul	187,323.44	21	3,833,782.24
28-Jul	120,723.26	22	2,655,911.72
29-Jul	118,657.94	23	2,729,132.62
30-Jul	0.00	24	0.00
31-Jul	0.00	25	0.00
1-Aug	122,979.72	26	3,197,472.72
2-Aug	87,798.97	27	2,370,572.19
3-Aug	10,478.32	28	293,382.86
4-Aug	8,695.08	29	252,157.40
5-Aug	9,750.82	30	292,524.58
6-Aug	0.00	31	0.00
7-Aug	0.00	32	0.00
8-Aug	10,280.02	33	339,240.50
9-Aug	9,180.40	34	312,133.60
10-Aug	9,628.12	35	336,984.09
11-Aug	7,699.27	36	277,173.78
12-Aug	4,584.00	37	169,808.04
13-Aug	0.00	38	0.00
14-Aug	0.00	39	0.00
15-Aug	13,207.79	40	528,311.52
16-Aug	10,204.48	41	418,383.58
17-Aug	8,774.87	42	368,544.57
18-Aug	7,625.59	43	327,900.54
19-Aug	7,049.14	44	310,182.38
20-Aug	0.00	45	0.00
21-Aug	0.00	46	0.00
22-Aug	12,900.95	47	608,344.81
23-Aug	22,343.10	48	1,072,468.59
24-Aug	15,128.13	49	741,278.45
25-Aug	10,954.56	50	547,727.84
26-Aug	12,653.86	51	645,348.77
27-Aug	0.00	52	0.00
28-Aug	0.00	53	0.00
29-Aug	14,413.18	54	778,311.84
30-Aug	15,607.99	55	858,439.67
31-Aug	664,391.24	56	37,205,909.43
TOTAL	\$4,581,711.93		\$101,445,776.95

WEIGHTED AVERAGE

22 DAYS

PENNSYLVANIA POWER & LIGHT COMPANY
CUSTOMER PAYMENT HABIT STUDY
MONTHLY ACCOUNTS DUE IN 30 DAYS
BILLED 7/7/94 - DUE 8/8/94

<u>PAYMENT DATE</u>	<u>CURRENT PAYMENT</u>	<u>DAY LAG</u>	<u>WEIGHTED AMOUNT</u>
7-Jul	\$0.00	0	\$0.00
8-Jul	0.00	1	0.00
9-Jul	0.00	2	0.00
10-Jul	0.00	3	0.00
11-Jul	321.18	4	1,284.72
12-Jul	958.85	5	4,794.25
13-Jul	1,420.08	6	8,520.48
14-Jul	6,985.00	7	48,895.00
15-Jul	799.84	8	6,398.72
16-Jul	0.00	9	0.00
17-Jul	0.00	10	0.00
18-Jul	37,828.14	11	418,087.54
19-Jul	10,027.83	12	120,333.96
20-Jul	4,132.37	13	53,720.81
21-Jul	1,741.17	14	24,378.38
22-Jul	50,065.79	15	750,986.85
23-Jul	0.00	16	0.00
24-Jul	0.00	17	0.00
25-Jul	72,331.78	18	1,301,972.04
26-Jul	17,644.97	19	335,254.43
27-Jul	7,108.44	20	142,168.80
28-Jul	21,674.94	21	455,173.74
29-Jul	5,817.18	22	127,977.96
30-Jul	0.00	23	0.00
31-Jul	0.00	24	0.00
1-Aug	15,648.02	25	391,200.50
2-Aug	46,461.58	26	1,208,001.08
3-Aug	8,615.25	27	232,811.80
4-Aug	1,562.24	28	43,742.67
5-Aug	0.00	29	0.00
6-Aug	0.00	30	0.00
7-Aug	2,042.99	31	63,332.75
8-Aug	13.00	32	416.09
9-Aug	9.53	33	314.37
10-Aug	183.99	34	6,255.58
11-Aug	90.14	35	3,154.85
12-Aug	0.00	36	0.00
13-Aug	0.00	37	0.00
14-Aug	0.00	38	0.00
15-Aug	2,074.11	39	80,890.36
16-Aug	0.00	40	0.00
17-Aug	435.51	41	17,855.78
18-Aug	851.75	42	35,773.41
19-Aug	0.00	43	0.00
20-Aug	0.00	44	0.00
21-Aug	476.69	45	21,450.92
22-Aug	7,574.41	46	348,423.03
23-Aug	4,183.15	47	197,077.94
24-Aug	6,022.73	48	289,090.88
25-Aug	120.11	49	5,885.41
26-Aug	0.00	50	0.00
27-Aug	0.00	51	0.00
28-Aug	0.00	52	0.00
29-Aug	4,714.85	53	249,896.97
30-Aug	1,696.33	54	91,601.83
TOTAL	\$341,641.93		\$7,084,911.97

WEIGHTED AVERAGE

21 DAYS

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

- Q. OTS-RE-20D. Reference Schedule C-4 (Historic Test Year), page 2, lines 9 & 10.
- A. Do the expense amounts of \$216,316,000 (payroll-salary) and \$71,368,000 (payroll-hourly) represent gross payroll or payroll net of withholdings?
 - B. If the payroll expense claims represent gross payroll, provide a schedule to reflect payroll tax withholdings, FICA withholdings and net payroll.
- A. OTS-RE-20D.
- A. The payroll expense amounts shown on Exhibit Historic 1, Schedule C-4, page 2, lines 9 & 10 represent gross payroll.
 - B. The payroll charged to expense is based on gross payroll. The Company does not have a system which tracks wages charged to expense based on payroll net of withholdings.

Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995

Docket No. R-00943271

- Q. OTS-RE-21D. Reference Schedule C-4, page 3, (Historic Test Year). Supply the following information.
- A. Do the monthly amounts reflected under Insurance represent actual monthly expenses incurred and supported by invoices?
 - B. Provide a detailed explanation of items included in the column titled "other".
 - C. Provide an Itemized break-down of "other" expenses of \$68,114,000 for the month of March 1994.
- A. OTS-RE-21D.
- A. The monthly amounts reflected under insurance represent the balance in the prepaid account at the end of the month. That is, the initial prepayment (which is an actual payment supported by an invoice) less any amortization (activity or amount charged to expense) equals the monthly amounts reflected on Schedule C-4, page 3 of Exhibit Historic 1.
 - B. The column titled "other" includes 4 components.
 - 1) Prepaid Rents: Prepayments made on rents for property used in the Company's operations.
 - 2) Cowanesque Project: Prepayments made in accordance with an agreement between the Susquehanna River Basin Commission (SRBC) and PP&L. This agreement provides PP&L with access to a specified amount of water stored at the Cowanesque Reservoir for periods of low flow at the Susquehanna River. PP&L is responsible for replacing river water consumed by the Susquehanna Steam Electric Station and Montour Steam Electric Station when their operations cause the river to fall below a specified level.

- 3) Other - Payments to Electric Power Research Institute (EPRI): Prepaid research and development costs.
- 4) Other - Barnwell Facility: Prepayments to Chem-Nuclear Systems, Inc. for low level radioactive waste disposal services.

C. Breakdown of "other" prepayments for the month March 1994:

	(000's of Dollars)
Balance of "other" at February 28, 1994	\$ 1,292
March payment for Barnwell Facility	\$ 605
March amortization for Barnwell Facility	(202)
March amortization of EPRI payment	(546)
March amortization for Cowanesque Project	(165)
Prepayment of interest on Long-Term Debt	24,138 ^{A/}
Prepayment of cash dividends on capital stock	<u>42,992</u> ^{B/}
Total March Activity	<u>66,822</u>
Balance of "other" at March 30, 1994	<u>\$68,114</u>

^{A/} Prepayment of interest on long-term debt was necessary because the mortgage bond interest payments were due April 1, 1994 and the commercial paper markets were closed on April 1, 1994 in observance of the Good Friday holiday. Banks were open on April 1, 1994 and therefore, the Company had to have funds in the bond interest accounts at Chase Manhattan and Morgan Guaranty Bank to cover any checks that would clear.

^{B/} Prepayment of dividends on capital stock was necessary due to the circumstances as noted in ^{A/} above.

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

- Q. OTS-RE-28D. Reference Schedule C-4, Page 3, FTY. Provide the following information:
- A. Explain why the historic payment pattern and amounts were used for all expenses except the PUC Annual Assessment?
 - B. How was the September 1995 amount of \$2,461,000 determined for the Pa. P.U.C. assessment?
- A. OTS-RE-28D. The following information refers to Exhibit Future 1, Schedule C-4, page 3.
- A. The historic test year pattern and amounts were used for all prepayments except the PUC Annual Assessment because the forecasted data was not available in the detail required.
 - B. The annual amount of the PUC Assessment is paid in June and amortized over a twelve-month period. At the request of the FERC, the accounting for the amortization was changed in 1994 from Account 408 - Taxes Other Than Income Taxes to Account 928 - Regulatory Commission Expenses. In September, 1994, the last month of the historic year, the unamortized balance of the PUC Assessment of \$2,460,526 was reclassified from Prepaid Taxes to Prepaid PUC Annual Assessment. Schedule C-4, page 3 of Exhibit Historic 1, therefore, reflects the only month that a balance existed in this prepaid account.
- Schedule C-4, page 3 of Exhibit Future 1 did not reflect the unamortized balances which will exist at the end of each month. Attachment 1 reflects the revised computation of the prepayment related to the PUC Annual Assessment based on the detail available from the year ended September 30, 1994. This would increase the claim for this item from \$379,900 (Exhibit Future 1, Schedule C-4, page 3, line 15) to \$1,782,000.

PENNSYLVANIA POWER & LIGHT COMPANY

Average Prepayment
As of September 30, 1995
(Thousands of Dollars)

<u>Month</u>	<u>PUC Annual Assessment</u>
September, 1994	\$2,321
October	2,063
November	1,805
December	1,547
January, 1995	1,290
February	1,032
March	774
April	516
May	258
June	3,309
July	3,033
August	2,758
September	<u>2,461</u>
Total	<u>\$23,167</u>
Monthly Average	<u>\$1,782</u>

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995
Docket No. R-00943271**

Q. OTS-RE-32D. Reference Attachment II-B-4, Page 30. A negative lag of (4.00) days is reflected for postage, Keystone and Conemaugh.

- A. Supply the supporting calculation for each lag.
- B. Provide an explanation of how postage is incurred and why postage is included in both the working capital calculation and the average prepayments (C-4, Page 3, FTY).

A. OTS-RE-32D. A. Postage Lag Calculation

Postage meters are replenished as needed. For the three months ended July 1994, meters were replenished every 8 to 14 days (eliminating the highest and lowest lag). Mid-point should be -4 to -7 days. A -4 lag was used to be conservative.

Keystone and Conemaugh Lag Calculation

PP&L supplies working funds to Keystone and Conemaugh prior to the week Keystone & Conemaugh use the funds. The lag is calculated as follows: (using data for the period July 27 through August 2, 1994):

Invoice Date	7/19
Payment Date	7/26
Funds to be "used"	7/27 through 8/2
Total Period of Service	= (8) days
Mid-point	= (4) days

(negative lag as payment is made before service is used)

B. Postage is purchased to replenish postage meters as needed. The meters are then utilized for a period of time until the postage supply reaches its minimum required supply, at which time additional postage is purchased.

Both operation and maintenance expense and average prepayments are included in the total cash working capital requirement calculation. A portion⁽¹⁾ of postage is included in the operation and maintenance expense calculation and a portion⁽²⁾ is included in average prepayments. In this way, total postage is accounted for in the total cash working capital requirement calculation.

⁽¹⁾ The expense portion of postage or the actual usage of postage is included in the operation and maintenance expense calculation.

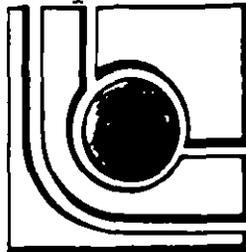
⁽²⁾ The investment or remaining prepaid balance (amount purchased but not expensed) of postage is included in the average prepayments calculation.

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated January 13, 1995**

Docket No. R-00943271

- Q. OTS-RE-29D. Reference Attachment II-B-4, Page 31, lag in payment of materials and supplies. Supply copies of the invoices for Stamet, Inc. and Grover Chemical. Explain how the mid-point of service date was determined.
- A. OTS-RE-29D. Copies of invoices for Stamet, Inc. and Grover Chemical are labeled Attachment 1 and Attachment 2, respectively. The mid-point of service for both items was the receipt date.

STAMET



SOLIDS TRANSPORT AND METERING INCORPORATED

17244 S. MAIN STREET, GARDENA, CA 90248-3130 TEL. 310-719-7110 FAX. 310-523-1920

INVOICE

DATE: APRIL 25, 1994
INVOICE NO.: 101 PPL - 494
TERMS: NET 10
REF: P.O. NO. 4-10560-1

TO: PENNSYLVANIA POWER & LIGHT
SUNBURY STEAM ELECTRIC STATION
OLD SUSQUEHANNA TRAIL
SHAMOKIN DAM, PA 17876

ATTN: ACCOUNTS PAYABLE

<u>QUANTITY</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE</u>	<u>TOTAL PRICE</u>
-2-	15' FIRTH SOLIDS PUMP SYSTEM	\$ 85,000.00	\$170,000.00
-2-	INDICATOR - VOID DETECTOR	\$ 1,200.00	\$ 2,400.00
-2-	ACCESS DOORS - MODIFICATION AS PER CHANGE ORDER 4/14/94)	\$ 520.00	\$ 520.00 1040.
TOTAL AMOUNT DUE			\$173,440.00 ✓

Please remit check to: STAMET, Incorporated, 17244 S. Main Street, Gardena, CA 90248

GRAVER CHEMICAL

Graver Chemical Company
 200 Lake Drive, Glasgow, DE 19702-3319
 302-731-3505

Attachment 2
REMIT PAYMENT

P.O. Box 91494
 Chicago, IL 60693-1494

PAGE: 1

*** INVOICE ***

SOLD TO
 PENNSYLVANIA POWER & LIGHT CO.
 ACCOUNTS PAYABLE SECTION
 TWO NORTH NINTH STREET
 ALLENTOWN PA 18101

SHIP TO
 PA P & L
 SUSQUEHANNA SES STOREROOM
 5 MI NE OF BERWICK ON US R
 BERWICK PA 18603

12

3-332541 C41210 041508 04/30/94 051741

NET 30 DAYS 04/29/94 GLENWOOD

DESCRIPTION / LOT NUMBER	QUANTITY	UNIT PRICE	AMOUNT
9003702 GRAVEX GR-3-2: 5 CF DR.	800	216.00	172,800.00
		SUB-TOTAL	\$172,800.00
TAX EXEMPT NUMBER 132		**TOTAL**	\$172,800.00
1%, % PER MONTH CHARGED ON OVERDUE ACCOUNTS			

MAY - 6 1994

SELLER REPRESENTS THAT WITH RESPECT TO THE PRODUCTION OF THE ARTICLES AND/OR THE SERVICES COVERED BY THIS INVOICE, IT HAS FULLY COMPLIED WITH THE PROVISIONS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED.

ORIGINAL

**Pennsylvania Power & Light Company
Response to Interrogatories
of the Office of Trial Staff
Dated February 15, 1995
Docket No. R-00943271**

Q.OTS-RE-97. Reference the Company's response to OTS-RE-29D.

- A. Explain exactly what are firth solids and whether these pumps were capitalized into rate base.
- B. Explain exactly what is Gravex GR-3-2 and its purpose or use. Does this constitute a supply of chemicals that will be used over a specific time period?

A.OTS-RE-97. A. The Firth Solids that were identified in the response to Question OTS-RE-29D of Interrogatories of the Office of Trial Staff Dated January 13, 1995 actually refer to the pump manufacturer (i.e. Firth) and the type of material these pumps can pump (i.e. solids). Firth is a manufacturer in England who is marketing these pumps in the United States through STAMET, Inc.

At the Sunbury plant, these pumps are used in the coal feeder system to pump anthracite silt into the ball mills for grinding and eventual use in the boilers for combustion.

The cost of these pumps is included in the Company's rate base.

- B. The Gravex GR-3-2 that was identified in the response to Question OTS-RE-29D of Interrogatories of the Office of Trail Staff Dated January 13, 1995, is an ion exchange resin used to remove impurities from the condensate in the steam cycle.

Gravex has a certain capacity to remove impurities and is disposed of when its capacity has been reached. The total supply of resin purchased is placed in a demineralizer and used over an 18-month fuel cycle.