ST. JOSEPH LIGHT & POWER COMPANY ALLOCATION PROCEDURES CASE NO. E0-94-36

VII. EXPENSES - O & M Expense Allocation.

The allocation of the individual LR O & M Expense Accounts are described as follows.

OPERATION AND MAINTENANCE ACCOUNTS: Refer to Appendix I & II

<u>Account #</u> 2500-000	<u>Account Description</u> Oper. Supv/Engr	Allocation Assign "Area 15" (SOC) expenses to Electric; remainder is allocated: • 1/3 based on "Equivalent Employment Factor" • 1/3 based on "900/1800 lb Steam Demand Factor" • 1/3 allocated 100% to Electric
2500-001 2500-002	Oper.Supv/Engr Supv/Engr - Recruiting	same as Account 2500-000 same as Account 2500-000
2500-003	Oper. Training Payroll	same as Account 2500-000
2500-009	Oper. Supv. & Eng. Envir.	same as Account 2500-000
2500-011	Oper/Supv/Eng - Flyash	[account not used]
2500-700	Oper Supv & Eng - Iatan	100% Electric
2501-000	Fuel Exp Supervision	[account not used]
2501-010	Fuel Exp LR Coal	Allocate daily based on the Fuel Allocation Procedure.
2501-011	Flyash Offsite Dump	[account not used]
2501-012	Coal Handling Labor	Allocate daily based on the Fuel Allocation Procedure.
2501-020	Fuel Exp LR No. 6 Oil	Allocate daily based on the Fuel Allocation Procedure.
2501-030	Fuel Exp LR Gas	Allocate daily based on the Fuel Allocation Procedure.
2501-119	Daily Ash Removal Expense	

2501-219	Pond Cleaning/West Coal Pile Material Removal Expense - Total	Holding Account transferred between ash handling acct 2501- 319 and feedwater acct 2502-019 per new procedure (See Attached Report dated April 14, 1994 and marked as Schedule 8 found in
2501-319	Pond Cleaning/West Coal Pile Material Removal Expense - Ash	the section on Fuel Expense). Allocate ash handling portion of total expenses per new procedure as shown in Schedule 8 found in the section on Fuel
2501-710 2501-720	Fuel Exp Iatan Coal Fuel Exp Iatan No2 Oil	Expense. 100% Electric 100% Electric
2502-010	Boiler Feedwater Expenses	Allocate 93.4% Steam and 6.6% Electric in accordance with the Schedule 9. (The report is attached and dated February 24, 1994 and marked as Schedule 9).
2502-015	Boiler Feedwater Purch	[account not used]
2502-016 2502-019	Blr No. 6 Feedwater Pond Cleaning/West Coal Pile Material Removal Expense - Feedwater	100% Electric Allocate feedwater portion of total expense per new procedure as shown on Schedule 8 in the section on Fuel Expense.
2502-020	Steam Expenses Other	Allocate based on "900/1800 lb
2502-025	No. 5 Labor Ash	Steam Demand Factor" Allocate based on "900 lb. Coal Use Factor"
2502-026 2502-029	No. 6 Labor Ash Slag Stm Exp Other Envir	100% Electric 100% Electric; (Blr 6 precip control house AHU mtce, Company will abandon this account and charge these expenses to a different account)
2502-710	Steam Exp Boiler Feed - Iatan	100% Electric
2504-010	Steam Transf Cr Fuel	Total fuel expenses allocated to Industrial Steam
2504-020	Steam Transf Cr Other	
2505-000	Electric Expenses	
2505-700	Electric Expenses - Iatan	100% Electric 100% Electric

allocate D% on 900# Feedboater the Factor and 50%. on the fredhoater system demand factor used in the feedboater plant allocation study. (As of 3/1/95, the factor are 0.953 and 0.872, respectively). 91.3%

2506-000	Misc Steam Power Exp, i.e., secrt'l support, office supl's, jnt'rl svc, supplies&consumables , etc.	"Equivalent Employment Factor";
2506-001	Misc Stm Exp - Training	same as Account 2506-000
2506-002	Stm Power Recruiting	Allocate based on "Equivalent Employment Factor"
2506-009	Misc Stm Power Envir.	Allocate based on "900/1800 lb Steam Demand Factor"
2506-100	Human Resources	Allocate based on "Equivalent Employment Factor"
2506-200	Safety Glasses	Allocate based on "Equivalent Employment Factor"
2506-201	HAZCOM	Allocate based on "Equivalent Employment Factor"
2506-202	Asbestos	Allocate based on "Equivalent Employment Factor"
2506-203	Respirators	Allocate based on "Equivalent Employment Factor"
2506-204	Poison Ivy Shots	Allocate based on "Equivalent Employment Factor"
2506-205	Audiometric	Allocate based on "Equivalent Employment Factor"
2506-206	First Aid / CPR	Allocate based on "Equivalent Employment Factor"
2506-700	Misc Steam Power Exp - Iatan	100% Electric
2507-000 2507-700	Rents Production	Allocate between the combustion turbines (CT's) and the 900/1800 lb. steam plant based on the Combustion Turbine/Plant Capacity Factor. The portion allocated to the CT's is assigned to electric (and transferred to Account # 2549- 000); the remainder is allocated based on "900/1800 lb Steam Demand Factor"
2507-700	Rents Production - Iatan	
2546-000	Oper Supv/Engr - Other Gen	100% Electric
2547-020 2547-030	Fuel Exp LR No 2 Oil Fuel Exp LR Gas Turbine	100% Electric 100% Electric
2548-000	Other Generation Expenses	100% Electric
2549-000	Misc Other Power Exp	100% Electric

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3510-000	Maint Supv & Eng	Allocate based on the percentage of the total expenses allocated to
		industrial steam in accounts
		3511, 3512 and 3513, less the
		Iatan sub-accounts
3510-001	Supv/Eng Training	same_as_3510~000
3510-700	Maint Supv & Eng -	
	Iatan	TOON PIECCIIC
3511-000	Maint Structures	Allocate based on "Plant
		Allocate based on "Plant Structure Allocation Factor"
3511-100	Maint Structures	
3511-700	Maint Structures -	[account not used] 100% Electric
	Iatan	100% FIECULIC
3512-000	Misc 900# Steam	Allocate based on the
	Plant Mtce	
		percentage of the total expenses allocated to
3512-001	Rotary Car Dumper	3512-010 through 3512-050
0022 002	Mtce	Allocate based on "Plant Coal Burn Allocation Factor"
3512-002	Coal Yard Eqpt Mtce	
	cour rara hype meee	Allocate based on "Plant Coal Burn Allocation Factor"
3512-003	Ash Yard Eqpt Mtce	same as Account 2501-119-
3512-004	900# Boiler Feedpump	
	Mtce	
		expenses allocated to Industrial Steam in Accounts
		3512-010 through 3512-050
3512-010	No 1 Boiler Mtce	Allocate based "900 lb. Steam
		Demand Factor
3512-020	No 2 Boiler Mtce	same as Account 3512-010
3512-030	No 3 Boiler Mtce	same as Account 3512-010
3512-040	No 4 Boiler Mtce	Allocate 50% based on "900 lb.
		Steam Fuel Consumption Factor"
		& 50% based on "900 lb. Steam
		Demand Factor"
3512-050	No 5 Boiler Mtce	same as Account 3512-040
3512-051	No 5 Blr Coal Mills	same as Account 3512-040
	Mtce	
3512-052	No 5 Blr Coal Bunker	same as Account 3512-040
	to Blr	
3512-053	No 5 Blr Ash Blr To	same as Account 3512-040
	Tank	
3512-054	No 5 Blr Electro	same as Account 3512-040
	Precip	
3512-055		[account not used]
3512-060	No 6 Blr Misc	100% Electric
3512-061	No 6 Blr Coal	100% Electric
	Crushers	
3512-062.		100% Electric
,	to Blr	

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3512-063	No 6 Blr Ash to Pit or Tank	100% Electric
3512-064	No 6 Blr Electro Precip	100% Electric
3512-065	No 6 Boiler Feedpump	100% Electric
3512-066	No 6 Blr Studding	
0010 000	and Related	100% Electric
3512-067	Maint 1800# Boiler Plant	100% Electric
3512-700	Maint Boiler Plant - Iatan	100% Electric
3513-000	Maint Electric Plant	100% Electric
3513-010	No 1 Turb Ord	
		Set up a separate account to track the Turbine #1.
		track the Turbine #1, Extraction #4 related
		maintenance expenses (including
		extraction control valve, V-2;
		the extraction pressure
		regulator; non-return valve;
		motor operated valve, MOV; and
		piping between the turbine and
		MOV) and assign those expenses
· .		to Industrial Steam. Remaining
		Turbine #1 maintenance
		expenses, including extraction
		piping from Turbine #1 to
		Turbine #3 (north line) and
		associated equipment, will be
3513-011	No 1 Turb CW Pumps	assigned to Electric. 100% Electric
3513-012	No 1 Cooling Tower	100% Electric
3513-018	No 1 Turb Extraord	same as Account 3513-010
3513-020	No 2 Turb Ord	100% Electric
3513-021	No 2 Turb CW Pumps	100% Electric
3513-022	No 2 Cooling Tower	100% Electric
3513-028	No 2 Turb Extraord	100% Electric
3513-030	No 3 Turb Ord	100% Electric
3513-031	No 3 Turb CW Pumps	100% Electric
3513-032	No 3 Cooling Tower	100% Electric
3513-040	No 4 Turb Ord	100% Electric
3513-041	No 4 Turb CW Pumps	100% Electric
3513-042	No 4 Turb Pump House	100% Electric
3513-048	No 4 Turb Extraord	100% Electric
3513-050	Gas Turb Aux Maint	100% Electric
3513-700	Mtce Electric Plant	100% Electric
3514-000	- Iatan	717
2214-000	Mtce Misc Steam Plant	Allocate based on the
	rially -	percentage of the total
		expenses allocated to
		THUNDERED CROOM IN SOCOUNTS

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percentage of the total expenses allocated to industrial steam in accounts 3511, 3512 and 3513, less the Iatan sub-acccunts

3514-009	Mtce Other Pollut	Stm same	as Account 3514-000
3514-700	Maint Misc Steam - Iatan	Plt 100%	Electric
3551-000	Mtce Supv/Engr Other Gen	- 100%	Electric
3552-000	Mtce Structures Other Gen	- 100%	Electric
3553-000	Maint Gen & E Equip	lec 100%	Electric
3553-010	Maint Gen/Jet1 U 6	nit 100%	Electric
3553-020	Maint Gen/Jet2 U 7	nit 100%	Electric
3553-050	Maint No 5 Turb Ord	ine 100%	Electric
3553-057	Maint No 7 Boiler	100%	Electric
3553-060	Maint No 6 Turb Ord	ine 100%	Electric
3553-070	Maint No 7 Turb Ord	ine 100%	Electric
3554-000	· · ·	her 100%	Electric

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MEMORANDUM

MEMO TO: Jim Mover

March 14, 1995

IN RE: <u>Equivalent Employment Factor Review & Update</u>

This memo documents the calculation to update the Equivalent Employment Factor used in our Steam/Electric allocation procedures for 1995. The adjustment is made primarily to account for less time needed for water softener operation by the Auxiliary Operator due to Monfort Pork and Swift Adhesive leaving the system. It is assumed the hours directly gained by reduced water softener work are redistributed between the two jurisdictions in the same proportion as the Equivalent Employment Factors.

The adjusted operator hours for steam are as follows:

	<u>Before</u>	After
Head Operator	0.5 hrs	0.5 hrs
Inside Operator		4.0 hrs
Outside Operator	0.5 hrs	
Auxiliary Operator	<u>5.0 hrs</u>	<u>4.5 hrs</u>
Total time to steam	10.0 hrs	9.5 hrs
The adjusted Equivalent	Employment	Factors are as follows:
Steam: Equivalent	Employment	Factor = $9.5 \div 32 = 0.297$
Electric: Equivalent	Employment	Factor = 1 - 0.297 = <u>0.703</u>

Mike Smith Mike Smith

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cc: TMR file

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Appendix I

ST. JOSEPH LIGHT & POWER COMPANY

INDUSTRIAL STEAM EXPENSE ALLOCATION FOR _

OTHER OPERATING EXPENSE ALLOCATION

I. 900 LB COAL USE FACTOR HGW

Previous 3 Calendar Years of Steam Coal Fuel (MMBTU) Previous 3 Calendar Years of 900 Lb Coal Fuel (MMBTU) = ____

II. COMBUSTION TURBINE/PLANT CAPACITY FACTOR ITM

- (a) 900 LB total required fuel input (MMBTU/HR) less Boiler #7 Steam to produce maximum rated electric generation on turbines #1 through #3 = ______MMBTU/HR.
- (b) Total required fuel input (MMBTU/HR) to produce maximum rated electric generation on units #4 = ______ MMBTU/HR.
- (c) Total required fuel input (MMBTU/HR) to produce maximum rated electric generation on units #5, #6 and #7 = _____ MMBTU/HR.
- (d) Sum of maximum non-coincidental steam customer peak demands (MMBTU/HR) for the past 3 calendar years = _____.

(e) MMBTU of fuel required per MMBTU of industrial steam sold for the previous calendar year = _____.

Combustion Turbine/Plant Capacity Factor =

c = c = ca + b + c + (d * e)

III. EQUIVALENT EMPLOYMENT FOR STEAM FACTOR M55

- (a) Lake Road Operation personnel manhours per shift
- (b) Manhours per shift required to operate steam sales

Equivalent employment factor = b/a = ____%

. IV. 900 LB STEAM DEMAND ALLOCATION FACTOR JTM.

Determine the maximum coincident peaks for each month in the three year period. This produces 36 individual monthly maximum demands for the 900 psi system. From these 36 values, the three highest amounts are taken for each calendar year. This result in nine values. The percentage of steam and electric use in each of these nine values is then determined. The last step in the process is to add each of the nine percentages for electric and industrial steam allocation factors and divide by nine.

V. 900 LB STEAM FUEL CONSUMPTION FACTOR HGW
Past 3 Calendar Years of Steam Fuel (MMBTU from I)
Past 3 Calendar Years of L.R. 900 LB Fuel (MMBTU)
= ______ %

VI. TOTAL PLANT COAL BURN ALLOCATION FACTOR H^{GW} Past 3 Calendar Years of Steam Coal Fuel (MMBTU) = ____ = ___% Past 3 Calendar Years of L.R. Coal Fuel (MMBTU)

VII. TOTAL PLANT #6 OIL BURN ALLOCATION FACTOR #6.00 Past 3 Calendar Years of Steam 6 oil Fuel (MMBTU) = ____ = ____ % Past 3 Calendar Years of L.R. 6 oil Fuel (MMBTU)

VIII. PLANT STRUCTURE ALLOCATION FACTOR <u>Steam A/C 311</u> = _____ = _____% IDM Total A/C 311

IX. 900/1800 LB STEAM DEMAND FACTOR

Determine the maximum coincident peaks for each month in the three year period. This produces 36 individual monthly maximum demands for the 900/1800 psi system. From these 36 values, the three highest amounts are taken for each calendar year. This result in nine values. The percentage of steam and electric use in each of these nine values is then determined. The last step in the process is to add each of the nine percentages for electric and industrial steam allocation factors and divide by nine.

FUEL INVENTORY ALLOCATION

X. COAL INVENTORY ALLOCATION FACTOR

(a) Average Minimum Coal Inventory for Industrial Steam ______ tons

HGW

=____%

a + b

(b) Average Minimum Coal Inventory for Electric _____ tons

Coal Inventory Allocation Factor = _a = ____ = ____%

XI. NO. 6 OIL INVENTORY ALLOCATION FACTOR HGw

- (a) Average minimum #6 oil inventory for industrial steam in bbl = _____ BBLS
- (b) Average minimum #6 oil inventory for electric in bbl = _____ BBLS

#6 Oil Inventory Allocation Factor = $\underline{a} = \underline{a}$

Note: The industrial steam demand and energy levels used in determining the above allocation factors will be based on customer levels at the end of the period used in determining the allocations. For example, in the data used in this procedural manual, Monfort Pork was a customer during the period up to the end of the period used for determining the allocation factors. Then they ceased operations. Monfort Pork would be excluded from the allocation calculation, because they were not a customer during the intended use of the allocations. This includes the following allocations:

A.) Customer Allocator (and allocators based on the number of customers)

B.) Gross Margin Base (and allocators based on gross margin base)

C.) Direct Expense Base (and allocators based on direct expenses base)

- D.) Adjusted Plant Base (and allocators based on adjusted plant base)
- E.) 900 LB Coal Use Factor
- F.) Combustion Turbine/Plant Capacity Factor
- G.) 900 LB Steam Demand Allocation Factor
- H.) 900 LB Steam Fuel Consumption Factor
- I.) Total Plant Coal Burn Allocation Factor
- J.) Total Plant #6 Oil Burn Allocation Factor
- K.) 900/1800 LB Steam Demand Factor

Appendix II

Definitions of Terms

900 LB COAL USE FACTOR

The ratio of coal fuel energy used for industrial steam sales to the total coal energy consumed by the 900 psi plant, based on the previous three calendar years.

COMBUSTION TURBINE/PLANT CAPACITY FACTOR

The ratio of the fuel energy required to produce maximum rated electric generation on the Lake Road combustion turbines (Units 5, 6, and 7) to the fuel energy required to simultaneously supply both maximum industrial steam sales and maximum rated electrical generation on all Lake Road generating units. This factor is calculated from the peak non-coincident customer steam demands from the past three calendar years and the most recent available information from electric unit capability or performance tests.

EQUIVALENT EMPLOYMENT FACTOR

The fraction of time spent by a typical Lake Road Plant operating crew on the operation of the industrial steam system, based upon a breakdown of each operator's time.

900 LB STEAM DEMAND ALLOCATION FACTOR

Determine the maximum coincident peaks for each month in the three year period. This produces 36 individual monthly maximum demands for the 900 psi system. From these 36 values, the three highest amounts are taken for each calendar year. This result in nine values. The percentage of steam and electric use in each of these nine values is then determined. The last step in the process is to add each of the nine percentages for electric and industrial steam allocation factors divided by nine.

900/1800 LB STEAM DEMAND ALLOCATION FACTOR

Determine the maximum coincident peaks for each month in the three year period. This produces 36 individual monthly maximum demands for the 900/1800 psi system. From these 36 values, the three highest amounts are taken for each calendar year. This result in nine values. The percentage of steam and electric use in each of these nine values is then determined. The last step in the process is to add each of the nine percentages for electric and industrial steam allocation factors divided by nine.

900 LB STEAM FUEL CONSUMPTION FACTOR

The ratio of fuel energy used for industrial steam sales to the total fuel energy consumed by the 900 psi plant, based on the previous three calendar years.

PLANT COAL BURN ALLOCATION FACTOR

The ratio of coal energy used for industrial steam sales to the total coal energy consumed by the entire Lake Road Plant, based on the previous three calendar years.

PLANT STRUCTURE ALLOCATION FACTOR

The ratio of the total steam account 311 after the plant allocation has been made to the total plant in service for all 311 accounts.

COAL INVENTORY ALLOCATION FACTOR

The ratio of the average minimum coal inventory for industrial steam to the average minimum coal inventory for the entire plant.

NO. 6 OIL INVENTORY ALLOCATION FACTOR

The ratio of the emergency no. 6 fuel oil inventory for industrial steam to the emergency no. 6 fuel oil inventory for the entire plant.

ST. JOSEPH LIGHT & POWER COMPANY

Procedure for Determining Lake Road Plant Electric/Industrial Steam 3-CP Demand Factors

March 1995

The allocation of Lake Road Plant capital investment and operating and maintenance expenses between electric and industrial steam jurisdictions requires that the relative demand of the two utilities on the plant equipment be determined. The determination of this relative demand can be made in various ways, based on different types of measurements, and using different philosophical approaches. In the Missouri Public Service Commission Docket EO-94-36, the PSC Staff has recommended that the relative demands be determined utilizing a "3-CP" method with exergy flow as the measured demand variable. This procedure defines three-year, 3-CP factors and how they can be determined from Lake Road Plant operating records.

DEFINITIONS

Demand - The amount of product delivered to a single consumer or group of consumers during a relatively short period of time. In this procedure the "product" is the net "exergy" or available energy in the form of steam and/or condensate. The "consumers" consist of the industrial steam distribution system ("steam") and the Lake Road Plant steam turbine-generators, as a group ("electric"). Depending upon which 3-CP factor is being calculated the electric demand may be the total exergy demand of Turbines 1, 2, and 3 (900# 3-CP) or it may be the total exergy demand of Turbines 1, 2, 3, and the Turbine 4 steam cycle (900#/1800# 3-CP). Demand is measured over an one hour period.

The direct steam and electric demands, as defined above, do not constitute the total exergy demand upon the Lake Road Plant. Auxiliary steam loads, which typically benefit both steam and electric consumers, cause an additional demand on the plant equipment. These auxiliary loads fall into three areas: 1) The water

treatment steam load, which primarily benefits the industrial steam system, 2) Loads that benefit the electric system (Unit 4/6 auxiliary steam, #2 fuel oil heating), and 3) Loads that benefit both systems in roughly the same proportion as the direct demands (Boiler 5 ash handling, #6 fuel oil heating, etc). These loads are ignored in measuring the steam and electric demands for the following reasons: 1) They are usually much smaller than the normal steam and electric demands (especially during peak demand periods), 2) The majority of these loads benefit both groups and would be allocated based upon direct demands anyway, 3) Loads which primarily benefit one jurisdiction or the other tend to offset each other, and 4) These auxiliary loads are difficult, and often impossible, to measure accurately.

Exergy - The thermodynamic quantity representing the maximum work than can be extracted from a given system or flow in an ideal, reversible process. It is calculated as $E = H - H_o + T_o(S - S_o)$ (neglecting kinetic and potential energy terms), in which H represents total enthalpy, S represents total entropy, and T represents absolute temperature. The subscript "o" indicates the property is at a reference state representative of ambient conditions or a "zero-energy level". In the case of steam, the reference state is defined by water at 14.3 psia and Lake Road well water temperature (typically 60 °F). Total exergy is measured in Btu and is often called "availability" or "available energy." The term "exergy" often refers to specific exergy, which is the amount of exergy per unit of mass in a system or flow. Specific exergy has units of Btu/lb and is calculated as $\epsilon = h - h_o + T_o(s - s_o)$ in which total enthalpy and entropy values are replaced with the corresponding specific enthalpy (h) and entropy (s). In practice, total exergy of a fluid flow, E, is usually calculated as the total mass flow (M) times specific exergy, or E = M ϵ .

Coincident Demand - The total product delivered to two or more consumers from a common system over a relatively short period of time. For this procedure, the coincident demand is the sum of the industrial steam exergy demand and the electric exergy demand for the same one hour period.

Demand Factor - The ratio of one consumer's individual demand to the system's coincident demand for the same one hour period. For example, the industrial steam demand factor represents the ratio of the industrial steam demand to the corresponding coincident demand.

Coincident Peak or "CP" - The maximum coincident demand experienced by a system over an extended period of time. In this procedure, the coincident peak is defined as the maximum coincident demand of the industrial steam and electric systems occurring during a calendar month. Therefore, there are twelve CP's during a year.

3-CP Factor - In this procedure, the 3-CP factor is calculated from three calendar years' data. It is defined as the **un-weighted average of the nine demand factors corresponding to the three maximum coincident peaks from each of the three years.** The industrial steam 3-CP factor is calculated as the sum of these nine industrial steam system demand factors divided by nine.

900# 3-CP Factor - The 3-CP factor, as defined above, in which the electric demand is the total demand of Lake Road Turbines 1, 2, and 3, including condensers.

900#/1800# 3-CP Factor - The 3-CP factor for the total Lake Road steam production plant, including both the 900# and 1800# (Unit 4/6) systems. The electric demand is the total demand of Lake Road Turbines 1, 2, 3 and the Turbine 4 steam cycle (main steam + hot reheat steam - feedwater to the boiler economizer - cold reheat steam).

The steam turbines are considered for the 900# plant electric demand, while the turbine steam cycle (turbine and feedwater heaters) is used for the 1800# plant for the following reasons: 1) The 900# feedwater heating process benefits both steam

Attachment A 3 of 3

and electric jurisdictions and therefore should not be charged against the turbines, but allocated. 2) On Unit 4/6, the feedwater heating process benefits only electric, and therefore the turbine steam cycle is appropriately treated as a totally electric exergy demand on Boiler 6. 3) Extraction steam metering is available on the 900# turbines; it is not available on Turbine 4. 4) It is much more straight forward to measure and calculate the exergy demand of the Turbine 4 steam cycle than Turbine 4 by itself.

PROCEDURE

The process of calculating either 3-CP factor requires the following steps for each month.

- 1. Determine the time (day and hour) of the monthly coincident peak.
- Determine the steam and electric demands during the hour of the coincident peak. Check these demands for reasonableness against other sources (boiler loads, hourly generation, neighboring hours, etc).
- 3. Calculate the coincident peak (CP).

After the twelve CP's have been calculated for each of the three years, the following steps are completed.

- Select the three maximum values from each set of twelve CP's determined in Step 3. The corresponding hours are the nine peak time to be used for the factor determination.
- 5. Calculate the industrial steam demand factor for each of the nine CP's selected in Step 4.
- 6. Sum the nine demand factors determined in Step 5.
- 7. The industrial steam 3-CP factor is the result of Step 6 divided by nine.
- 8. Calculate the electric 3-CP factor as 1 (steam 3-CP factor).

The following sections describe the above steps in greater detail for each of the two factors.

900# 3-CP Factor

- 1. The coincident peak time is defined as the hour of maximum net 900# boiler exergy flow during the month, as calculated from hourly steam flow readings and typical boiler operating conditions. Determine the peak date and time for each of the 36 months of the three-year period.
- 2(a). The industrial steam system demand is the steam exergy flow measured leaving the plant through the 12" and 16" header meters plus the exergy flow through the high pressure steam customer meter plus the calculated exergy flow of desuperheating water to the low pressure steam customers and calculated exergy losses on the high pressure steam customer line between the plant and the customer meter. (The exergy contribution of the latter two calculated quantities is less than 0.5% of the total steam system exergy demand.)
- 2(b). The electric system demand is net exergy flow to Turbines 1, 2, and3. This is calculated as the total main steam exergy flow to the turbines minus the exergy flow returned to the 900# plant as extraction steam and/or condensate.
- 3. Calculate the CP as the sum of 2(a) and 2(b).
- Select the three maximum values from each set of twelve CP's determined in Step 3.
- Calculate the nine industrial steam demand factors corresponding to the CP's selected in Step 4. This factor is the ratio of the demand from step 2(a) to the corresponding CP from step 3.
- 6. Calculate the sum of the nine demand factors from Step 5.
- Calculate the industrial steam 900# 3-CP factor as the result of Step 5 divided by nine.
- Calculate the electric 900# 3-CP factor as 1 minus the result of Step
 7.

900#/1800# 3-CP Factor

- The coincident peak time is defined as the hour of maximum combined net 900#/1800# boiler exergy flow during the month as calculated from hourly 900# boiler steam flows and 1800# (Unit 4/6) gross generation.
- 2(a). The industrial steam system demand is determined in the same manner as in the 900# 3-CP Factor, Step 2(a) above.
- 2(b). The electric system demand is the net exergy flow determined in the same manner as in the 900# 3-CP factor, Step 2(b) above, plus the net exergy flow to the Turbine 4 steam cycle. This latter exergy flow is calculated directly from the Unit 4/6 gross generation using a least-squares, quadratic equation based on heat rate test data. The exergy flow to the Turbine 4 steam cycle is the exergy to the turbine in the main steam and hot reheat steam flows minus the exergy returned to Boiler 6 in the feedwater and cold reheat flows.
- 3. Calculate the CP as the sum of 2(a) and 2(b).
- Select the three maximum values from each set of twelve CP's determined in Step 3.
- Calculate the nine industrial steam demand factors corresponding to the CP's selected in Step 4. This factor is the ratio of the demand from step 2(a) to the corresponding CP from step 3.
- 6. Calculate the sum of the nine demand factors from Step 5.
- Calculate the industrial steam 900#/1800# 3-CP factor as the result of Step 5 divided by nine.
- Calculate the electric 900#/1800# 3-CP factor as 1 minus the result of Step 7.

ST. JOSEPH LIGHT & POWER COMPANY CASE #EO-94-36 SETTLEMENT SCENARIO

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Maintena		1	Total	Allocation	Allocation
	tors	Account #	Amount	Factor	Amount
35.62%		3510-000	\$192,049	% of TE to IS (3511+3512+3513) - latan	\$68,408
35.62%		3510-001	27,285	% of TE to IS (3511+3512+3513) - latan	9,719
13.60%		3511-000	187,261	PCTPLT - 13.6%	25,468
40.66%		3512-000	302,967	% of TE to IS (3512-010 thru 3512-050)	1
31.20%		3512-001	45,562	PCTCB - 31.2%	123,186
31.20%		3512-002	61,083	PCTCB - 31.2%	14,215
31.20%		3512-003	53,182	PCTCB - 31.2%	19,058
40.66%		3512-004	526	% of TE to IS (3512-010 thru 3512-050)	16,593
23.10%		3512-010	41,793	PCTMD - 23.1%	214
23.10%		3512-020	34,491	PCTMD - 23.1%	4,827
23.10%		3512-030	98,230	PCTMD - 23.1%	3,984
75.50%	23.10%	3512-040	395,982	50% PCTMF - 75.5% & 50% PCTMD - 23.1%	11,346
75.50%	23.10%		191,978	50% PCTMF - 75.5% & 50% PCTMD - 23.1%	195,219
75.50%	23.10%	3512-051	70.372	50% PCTMF - 75.5% & 50% PCTMD - 23.1%	94,645
75.50%	23.10%	3512-052	3,101	50% PCTMF - 75.5% & 50% PCTMD - 23.1%	34,693
75.50%		3512-053	4,571	50% PCTMF - 75.5% & 50% PCTMD - 23.1%	1,529
75.50%		3512-054	1,349	50% PCTMF - 75.5% & 50% PCTMD - 23.1%	2,253
0.00%	0.00%	3513-010	50,573		665
0.00%	100.00%	3513-040		100% Industrial Steam	0
0.00%		3513-018	0		2,691
35.62%		3514-000	51,448	% of TE to IS (3511+3512+3513) - latan	0
35.62%		3514-009	01,140	% of TE to IS $(3511+3512+3513) - 1atan$	18,326
0.00%		3553-057	122.678	100% Electric	0
			\$1,939,173		0
					\$647,039

Operation			Total	Allocation	Allocation
Facto		Account #	Amount		Amount
31.30%	10.70%	1	\$414,420	1/3 PCTEQR - 31.3% 1/3 PCTED - 10.7% 1/3 Elec	\$58,01
93.40%		2502-010	202,955	Water Treatment	189,56
0.00%	•	2502-016	22,409	Water Treatment, 100% Electric	109,000
93.40%		2502-019	15,030	Water Treatment	14,03
10,70%		2502-020	338,510	PCTPD - 10.7%	36,22
23.10%		2502-021	96,936	PCTMD - 23.1%	1
0.00%		2502-022	23,853	100% Electric	22,392
77.00%		2502-025	38,833	PCTCU - 77.0%	00.00
0.00%		2504-010	0	Steam - 100%	29,901
0.00%		2504-020	0	Steam - 100%	
31.30%	10.70%	2506-000	401,546	1/2 PCTEQR - 31.3% & 1/2 Comb. Turbine 38.4% to Elec.	78.075
31.30%	10.70%	2506-001	0	1/2 PCTEQR - 31.3% & 1/2 Comb. Turbine 38.4% to Elec.	76,075
31.30%		2506-002	39	PCTEQR - 31.3%	
10.70%		2506-009	56,420	PCTPD - 10.7%	6,037
31.30%		2506-100	0	PCTEQR - 31.3%	
31.30%		2506-200	916	PCTEOR - 31.3%	
31.30%		2506-201	0	PCTEOR - 31.3%	287
31.30%		2506-202	956	PCTEOR - 31.3%	000
31.30%		2506-203	2,935	PCTEQR - 31.3%	299
31.30%		2506-204	0	PCTEQR - 31.3%	919
31.30%		2506-205	1,566	PCTEOR - 31.3%	0
31.30%		2506-206	0	PCTEOR - 31.3%	490
10.70%		2507-000	614	Comb. Turb. 38.4% to Electric - PCTPD - 10.7%	0
100.00%	Í		67,250	Missouri Air Law Fee	40
100.00%			187,635	Auxiliary Station Use - Fuel	67,250
100.00%			57,556	Auxiliary Station Use - Demand	187,635
otal Operat	ions		\$1,930,378		57,556
					\$746,731
otal Operat	ion & Mai	intenance \$	3,869,551.49		\$1,393,769,94

OFFICE MEMORANDUM

June 24, 1991

TO:	Dwight	Svuba	

John Modlin FROM:

RE: Equivalent Employment Factor to be used in plant O&M allocation

As a part of the company's review of the allocation of plant accounts between steam and electric, the method of determining the equivalent employment factor has been reviewed by Mike Smith. He has proposed the following method which is more representatvie of current plant operation. The following text would replace the section of the allocation procedure which begins with the last paragraph of page 5 of the "Electric/Industrial Steam Allocation Procedure" which was effective January, 1987.

> The other half of the sum of these accounts will be allocated based upon the equivalent employment required to operate the steam plant under normal plant operating conditions. In order to determine this factor, the fraction of time spent by operating personnel devoted to the operation of the steam plant is determined. At the time of this writing, a normal operating crew is made up of four individuals each working eight hours for a total of 32 operating manhours per shift. The amount of time devoted to the industrial steam system spent by each operator on a typical shift is as follows.

Head Operator Inside Operator		hour hours
Outside Operator Auxiliary Operator		hour hours
Total time to steam	10.0	hours

By taking the ratio of 10 to 32, the allocation would be 31.2% to steam and 68.8% to electric. Each year, Lake Road Operations Supervision will review plant operations to determine if changes have occurred which effect the equivalent employment factor, and update the above figures as appropriate.

If you have any questions or require further information regarding the above, please contact me at extension 169.

èc:	R.	Sullwold	J.	Weisensee	s.	Ferry	
	Μ.	Smith	J.	Fangman	H.	Wyble	
	Τ.	Rush	В.	Dillon	D,	Buresh	fil

To	From
" TIM RUSH	JTM
Co.	Ca.
Dept.	Phone d
Fax #	Fax #

· · ·					St. Jo:	seph Ligh	St. Joseph Light & Power	er Co.				
Report ID: PAYROLL					Payro	II Amour	Payroll Amounts by Month	onth				
Layout: PAYROLL					Departme	nt 16: Lake	Department 16: Lake Road-Maintenance	ntenance				
As of: December 31, 1997						1997	97					
Filename: N:/FS510/NVISION/REPORTS/ABM_RPTS/15/97_12/PAYROLL_XIS	ABM_RPTS\16\	97_12\PAYROL	L, xls									
Hun: November 04, 1997 at 12:28											,	
		1997-1	1997-2	1997-3	1997-4	1997-5	1997-6	1997-7	1997-8	1997-9	YTD	
Supervise maint of IS system	G0201	122	823		•	1	1	75			000 1	
Maintain IS lines	G0210	1,129	3,667	1,047	1.227	601	2.867	4 303	- 877	1 108	18 015	
Maintain IS instrumentation	G0220	2,201	3,274	1,689	754	1,076	965	3.500	1.545	1.073	16.077	
Handle coal	H0110	P	1	729	L	•	•				729	
Operate 900# bollers	H0210	5	,	•	1	•	•	150			150	
Operate water treatment plant	H0220			r	1	•	E	1,155		1	1.155	
Clean water plant	H0222	r	E	1	•	1,555	3,533	4,582	7,052	2,767	19,489	
Clean boilers 1-5	H0225	F	۱	I	•	•	•	224	1	1.738	1.962	
Operate 900# units	H0310	1	7	•	,	1	1	*			2	
Clean boiler 6	H0363	•	26	•	56	215	ť				207	
Operate steam plant- misc.	H0410	47	1	•		r	107	1			154	
Maintain coal yard equipment	H0510	649	1.041	2.595	658	1.652	2.599	2 893	2 166	1 875	15 070	
Maintain rotary dumper	H0512	1,324	1,133	59	E	354	355	802	1 063	2	5 001	
Maintain #2 oil rec/stor equip	H0520	15	ı	ŀ	293	46	38		08	1	422	
Maintain propane equipment	H0550	1	,	,		32	150	136	411		720	
Maintain #6 oil rec/stor equip	H0560	183	283	710	50	2,528	5.656	2.696	1 338	1 116	14 560	
Maintain ashyard equipment	H0570	169	2,190	194	696	481	336	408	424	772	5.942	
Maintain 900# water plant	H0601	3,004	1,224	111	87	2.102	5.018	4.563	3 444	956	20.508	
Maintain boiler 1	H0610	269	1,048		412		928	1.645	615	385	5.302	
Maintain boiler 2	H0620	1,137	766	1	286	29	502	246	860	474	4.299	
Maintain boiler 3	H0630	642	477	F	128	1,257	434	217	231	230	3,615	
Maintain boiler 4	H0640	2,811	006	303	2,390	391	534	1,865	593	728	10,516	-
Maintain boiler 5	H0650	3,336	1,860	1,254	545	2,802	5,919	2,690	3,637	32,643	54,685	
Maintain coal mills	H0651	1,177	1,163	849	626	222	2,325	516	102	15,281	22,260	
Maintain coal bunker to bir	H0652	245	251	617	1	60	Ŧ	339	1,234	1,108	3,882	
Maintain ash bir to tank	H0653	591	651	125	225	105	432	64	234	44	2.473	
Maintain blr #5 elect precip.	H0654	185	71	328	130	13	97	96	60	1,704	2.684	
Maintain 900# plant	H0690	17,658	19,770	5,664	5,039	7,215	9,874	11,444	8,880	4,732	90.278	
Maintain 900# boiler feed pump	H0691	752	1,388	244	126	407	539	91			3.547	
Maintain pressure red. equip.	H0692	+	I	ł	Ŧ		1	1	•	89	89	
Maintain turb 1-4 extraction	H0694		424	54	•	1	1	ı	ł		478	
Maintain 900# compr. air syst.	H0695	1	1,032		515	89	248	767	•	359	3.010	
Maintain electric plant	H0701	477	193	316	32	21	178	743	44	564	2.568	
Maintain turbine 1 ordinary	H0710	412	2,627	118	130	402	319	534	217	339	5.099	
Maintain T1 cooling tower	H0712	105	387	+		67	282	86	48	1	1.005	
											1	

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Page 1

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Origination H/722 E4 723 731 4,557 24 100 6,56 731 6,75 One Soling tower H/723 26 731 4,557 26 61 731 236 731 236 731 236 731 236 731 236 731 236 731 236 731 236 731 236 731 236 731 236 731 236 530 236 530 236 530 236 530 236 530 236 530 236 530 236 530 236 530 236 530 236 530 236 530 236 530 236 530 236 530 236 530 236 237 236 237 236 237 236 237 236 237 236 237 236 237 236 237 236 237 236 237 236 237<	Maintain turbine 2 ordinary	H0720	21	3 866	e a	3	, t	•	Ŧ	•	ŧ		
Onlog barery funce 3 millionery H/073 · · · · · · · · · · · · · · · · · · ·	Maintain T2 cooling tower	H0722	2	200	8	1	18/	46	1,008	1,128	233		
Society Levert HOV2 Cols Tell A,27 26 61 7 6 7 6 7 6 7 6 7 6 61 7 6 61 7 6 61 7 6 61 7 7 7 9 7 8 61 7 7 7 61 7	Maintain turbine 3 ordinary	H0730	5		1	88	63	\$	ŧ	155	•		
Trick of leg best T/12 2.6 5.9 2.12 2.00 6.4 4.4 2.00 Trick of leg best H072 2.8 5.9 5.83 5.83 5.83 5.83 5.93 5.93 Trick of leg best H072 2.8 5.83 5.33 5.33 5.33 5.71 3.070 5.93 5.71 3.070 5.93 5.71 3.070 5.93 5.71 3.070 5.93 5.71 3.070 5.93 5.71 3.070 5.93 5.71 5.03 5.71 3.070 5.71 3.070 5.71 3.070 5.71 3.070 5.71 <td>Maintain T3 cooling tours</td> <td></td> <td>-</td> <td>258</td> <td>781</td> <td>4,257</td> <td>24</td> <td>285</td> <td>476</td> <td>86</td> <td> </td> <td>0407</td> <td></td>	Maintain T3 cooling tours		-	258	781	4,257	24	285	476	86		0407	
Drive contrary HO74 226 160 521 2510 860 2261 170 529 5707 Drive for mary HO740 333 73 2331 2661 2201 271 271 271 371 3010 Drive flags creates HO740 138 75 9.683 6.617 2.318 2.604 2.617 3.71 4.005 5.93 3.71 3010 5.71 3010 5.71 3010 5.71 3010 5.71 3010 5.71 3010 5.71 3010 5.71 5.70 3.73 5.71 3.70 5.71 3.70 5.71 5.70 3.71 3.70 5.71 3.70 5.71 3.71 3.70 5.71 3.71 3.71 3.71 3.71 5.71 3.71 5.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71	Maintain 10 couling tower	HU/32	•	59	1	172	26	61				201 'n	
It wereases H0742 333 973 433 633 733 630 630 Trining Screens H0756 -	Walntain turbine 4 ordinary	H0740	226	150	522	2.510	850	284	000	1	1	595	
Mine 5 onthary HO760 138 75 9686 6.537 2,318 2,41 1,410 23 35,70 mono plant HO765 - 2.88 60 1,017 - 21,33 30,00 orpresend at: xmm HO765 - 2.88 60,1 1,01 - 21,33 30,00 orpresend at: xmm HO765 - 2.90 1,060 2,01 2,06 84 - 1,10 ale stots to belier HO765 - 2.90 1,060 2,01 2,00 1,00 3,07 1,01 ale stots to belier HO765 - 4.6 1,29 1,60 2,71 1,41 4 9 1,44 Bel entity HO765 - 4.38 - 1,31 30,0 1,14 Be entity HO765 - 4.38 1,71 1,69 2,31 1,32 6,30 3,71 1,44 30 1,44 30 1,44 30	Maintain 14 traveling screens	H0742	333	973	43	833	}	1070	500	the the	162	6,307	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Maintain turbine 5 ordinary	H0750	198	75	9,688	R 507	2 240	n 100 c	177	1,4/0	529	5,787	
	Mtn 5-7 common plant	H0755	ŀ		2225	1000	010'7	2,002	4,504	2,287	377	30,709	
Ordinary H0757	Maint 5-7 compressed air sxm	H0756	•	258	808	1044	4	54	34	1,281	68	1,906	
Mere Horizon H	Maintain B7 ordinary	H0757		223	000	1.70,1	•	I	8	3	ı	2.135	
all custers HOTO Curact 2.001 1.305 61.002 3.310 1.17.8 1.43 1.05.7 all custers HOT62 - - 3.00 1.18 1.66 - - 3.309 3.17.8 1.66 3.03 3.17.8 1.66 3.03 3.17.8 1.66 3.03 3.17.8 1.66 3.03 3.17.8 1.66 3.03 3.17.8 1.66 3.03 3.17.8 1.66 3.17.8 3.66 3.47.8 1.66 3.17.8 3.66 3.47.8 1.40 9 1.44 3.671	Maintain boiler 6 misc	H0760			1,056	241		122	206	84		1710	
all siles to boler $HV72$ \cdot all 1266 2306 137 246 3205 317 3605 8072 # 86 ESD $H0763$ 272 616 3206 1737 274 96 317 # 86 ESD $H0763$ 272 616 3206 1737 274 96 327 # 86 ESD $H0766$ $ 438$ $ 1891$ 3266 3272 863 3172 863 3273 3800 3173 3800 3173 380 32171 386 3213 1347 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 3213 3800 32131 3800	Maintain coal cuishers	10/00	280,0	2,801	5,983	60,905	16,032	3,971	2,580	6,908	3.478	105 740	
answer outer HORZ 7.2 4.6 1.29 1.690 - 3.300 118 166 2.605 8.072 #6 static pit HOYEs - - 1 1610 2.336 1.720 584 - - 1 1444 #6 static pit HOYEs - - 1 1610 2.533 2.74 - 1 9 1 450 00# plant HOYEs - - 1 1610 2.533 2.74 - 1 9 1 3 <th< td=""><td>Maintain coal silos to hoilos</td><td>10/01</td><td>1</td><td>308</td><td>1,256</td><td>t</td><td>200</td><td>1</td><td>373</td><td>44</td><td>89</td><td>046 6</td><td>*</td></th<>	Maintain coal silos to hoilos	10/01	1	308	1,256	t	200	1	373	44	89	046 6	*
Image: Neurophy Image: Ne	Maintain blr #6 och to cit	70/01	1	46	129	1,699		3,309	118	166	2 805	0.1414	
Image: Process Hordet 419 165 377 1610 270 549 533 1,722 863 6,193 lier #6 cyclones HO766 - 438 - 1,697 1,697 - - 129 3,800 0.04 plant HO766 - 438 - 1,697 1,697 2,316 3,345 2,477 2,486 1,595 3,513 0.04 plant HO766 - 438 2,610 1,367 2,319 1,490 3,513 2,513 3,513 2,513 1,450 1,450 1,450 1,450 1,450 1,450 1,450 3,513 3,513 1,450 </td <td>Maintain but #0 abil (0 pil</td> <td>HU/03</td> <td>2/2</td> <td>615</td> <td>4,019</td> <td>2,936</td> <td>1,720</td> <td>265</td> <td>1 373</td> <td>774</td> <td></td> <td></td> <td></td>	Maintain but #0 abil (0 pil	HU/03	2/2	615	4,019	2,936	1,720	265	1 373	774			
Image: Market plant HO/Reb - 1 <td>Maintain buile! #0 COF Maintain hoilor food</td> <td>HU/64</td> <td>419</td> <td>165</td> <td>377</td> <td>1,610</td> <td>270</td> <td>549</td> <td>553</td> <td>1 722</td> <td>0 853</td> <td>11,404 6 F40</td> <td></td>	Maintain buile! #0 COF Maintain hoilor food	HU/64	419	165	377	1,610	270	549	553	1 722	0 853	11,404 6 F40	
Interfact HO766 - 438 164 376 233 - 89 213 1380 06f # water plant H0767 6.232 4,709 2.660 3,766 3,345 2,497 2,466 1,366 32,513 #6 CEMS equipment H0769 2,602 2,039 2,714 1,355 3,803 3,171 2,669 2,917 1,360 0/f water plant H0769 2,602 2,039 2,714 1,356 3,803 3,171 2,669 2,517 2,513 3,604 4,661 1,140 0/f water plant H0775 -		HU/65	ŧ	ł	ł	1,897	1.864	1				0,019	
Outb plant HOT67 6.232 $4,700$ 2.830 3.365 2.47 2.465 1.361 3.375 2.47 2.465 1.361 3.375 2.47 2.666 3.513 <th< td=""><td>Maintain boiler #6 cyclones</td><td>H0766</td><td>3</td><td>438</td><td>r</td><td>164</td><td>376</td><td>23</td><td></td><td>. 00</td><td>A71</td><td>3,890</td><td></td></th<>	Maintain boiler #6 cyclones	H0766	3	438	r	164	376	23		. 00	A71	3,890	
00# water plant H0768 70 164 172 012 440 1,466 35,513 00# water plant H0776 2,562 2,039 2,791 1,356 3,171 2,699 2,906 1,767 23,193 00# compr <at td="" yes<=""> H0775 - - - - 1 460 1,467 01# common pit H0775 - - - 1 1 456 1,467 00# compr air syst H0775 - - - - - - - - - - - - 1 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 1 4 <td< td=""><td>Maintain 1800# plant</td><td>H0767</td><td>6,232</td><td>4,709</td><td>2.630</td><td>4 890</td><td>3 786</td><td>2045</td><td></td><td>80</td><td>187</td><td>1,387</td><td></td></td<></at>	Maintain 1800# plant	H0767	6,232	4,709	2.630	4 890	3 786	2045		80	187	1,387	
#6 CEMS equipment H0769 $2,602$ $2,039$ $2,751$ $1,358$ $3,803$ $3,171$ $2,699$ $2,908$ $1,767$ $23,139$ 00# compt. air sys. H0770 534 848 208 92 $1,169$ $23,139$ $1,767$ $23,139$ 0uth compt. air sys. H0775 $ -$	Maintain 1800# water plant	H0768	2	70	184	173	413	2100	2,431	2,480	1,956	32,513	
Oth compr Morry 53.4 -0.04 5,010 3,171 2,690 2,008 1,767 23,139 tubline common pt H0773 - 42 217 - - - 19 4,561 tubline common pt H0776 - 42 217 - 32 - 19 - - 109 4,561 tubline common pt H0776 - - 143 32 - 140 867 1,176 104 4,097 ti 7 ordinary H0779 - - 161 - - 161 - - 324 344 - - 324 ti 7 ext. ord. H0779 - - 161 - - 325 1,058 74 3,484 ti 7 ext. ord. H0810 7,866 7,503 10,148 5,761 6,361 7,154 7,011 6,678 6,748 7,617 3,484 ublant facilites R	Maintain blr #6 CEMS equipment	H0769	2.602	1~	107 0	4 200	711	17.0	40	81	460	1,140	
turbine common pt H0773 - 10 4 5 - - 1 - 160 4.561 6.061 160 4.561 160 160 160 160 160 <th< td=""><td>Maintain 1800# compr. air svs.</td><td>H0770</td><td>534</td><td>00011</td><td>10157</td><td>000'1</td><td>5,8U3</td><td>3,171</td><td>2,699</td><td>2,908</td><td>1,767</td><td>23,139</td><td></td></th<>	Maintain 1800# compr. air svs.	H0770	534	00011	10157	000'1	5,8U3	3,171	2,699	2,908	1,767	23,139	
D compr air syst H0775 - 42 217 - 1360 - 34 - 19 - 19 It 7 ordinary H0775 177 43 1350 - 24 177 - - 34 It 7 ordinary H0777 - 118 1,484 38 237 103 372 1,176 104 4,097 It 7 ordinary H0779 - - 161 - - - 348 It 7- extr. ord. H0810 7,886 7,503 10,148 5,761 6,361 7,154 7,011 6,678 6,246 6,748 n ploter 2011 - - - - 161 - - - 251 n ploter 2011 6,021 - - 1,668 1,168 693 12,878 66,178 n ploter 80301 - - 126 4,123 1,161 - -	Maintain let turbine common of	H0773	5	040	004	208	92	1,154	627	126	109	4.561	
If 6 ordinary HO777 - 42 217 - 32 - 34 - - 325 If 7 ordinary H0777 - 117 43 1,550 - 241 140 867 1,176 - - 325 If 7 ordinary H0777 - 161 - - - - - 161 - - 344 - - - 161 - - - 161 - - 161 - - - 161 - - - 161 - - - 161 - - - 161 - - - 161 - - - 161 - - - 161 - - - 161 - - - 161 - - - 161 1616 0 173 161 1616 0 161 1616 0	Maint let turb comor air svst	HUTTE	•	,	1	1	ł	4	10		1	19	
If 7 ordinary H0770 1/1 43 1,350 - 241 140 867 1,176 104 4,097 If 7 ordinary H0770 - 118 1,484 38 237 103 372 1,056 74 3,484 n plant facilities H0810 7,886 7,503 10,148 5,761 6,361 7,154 7,011 6,678 6,346 161 n plant facilities H0810 7,886 7,503 10,148 5,761 6,361 7,164 70,11 6,678 6,246 6,4748 uctures H0820 1,169 2,139 1,805 778 1,1698 1,183 1,501 1,616 989 1,183 uctures R0203 - - 251 - - 251 - - 251 16 4,568 665 665 665 665 665 665 665 665 665 665 665 665 665 <td< td=""><td>Vaintain unit 6 ordinan</td><td>10776</td><td></td><td>47</td><td>117</td><td>1</td><td>32</td><td>•</td><td>34</td><td></td><td></td><td>325</td><td></td></td<>	Vaintain unit 6 ordinan	10776		47	117	1	32	•	34			325	
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ST. JOSEPH LIGHT & POWER COMPANY ALLOCATION PROCEDURES CASE NO. E0-94-36

VIII. Expenses- General & Administrative Expenses

General & administrative (G&A) expenses refer to expenses associated with general and administrative functions of the Company, as contrasted with expenses directly associated with the production and transmission and distribution functions. G&A expenses include salaries and wages, supplies, outside services, injuries and damages, employee benefits, regulatory commission expenses, advertising, rents and maintenance. G&A expenses are classified in FERC accounts 920 through 935.

Not all charges to G&A FERC accounts are allocable. Costs incurred which benefit only a particular utility operation are directly charged to that operation.

SJLP allocates its allocable G&A expenses to its electric, natural gas and industrial steam operations based on the following methods:

1) - A payroll allocator is used to allocate employee benefit expenses and two payroll-related insurance expenses- crime and workers compensation.

2) - An inventory and plant balance allocator is used to allocate property insurance.

3) - A computer equipment allocator is used to allocate rental expense, almost all of which is computer related.

4) - A general plant allocator is used to allocate maintenance expense of general plant.

5) - A general and administrative (G&A) allocator is used to allocate all remaining allocable expenses.

Payroll Allocation Rate

The payroll allocation rate is calculated based on a three step process. First, the Company determines the percentage of total payroll (exclusive of construction and retirement) related to G&A activities and the percentage related to non-G&A or direct activities. This determination is based on actual payroll charges.

Next, the G&A portion is allocated between electric, gas and steam based on the G&A allocation factor discussed below. The direct portion is allocated among the three operations based on their respective percentage of direct payroll, after consideration of Lake Road payroll transferred to steam.

Finally, the Company determines the payroll allocation rate by weighing the two factors noted above (G&A and direct).

Inventory and Plant Balance Allocation Rate

The inventory and plant allocation rate for electric is determined by dividing total electric plant in service, at original cost, by the sum of electric and steam plant in service, fuel inventory and materials and supplies. The steam factor is calculated the same way, with steam plant as the numerator. The electric and steam plant in service balances include the effects of the Lake Road and general plant allocations.

Computer Equipment Allocation Rate

The computer equipment allocation rate is obtained from the general plant allocation for Plant Account 391.1 (see Section II of this manual).

General Plant Allocation Rate

The general plant allocation rate is obtained from the composite general plant allocation (see Section II of this manual).

G&A Allocation Rate

The G&A allocation rate is based on two factors that are given a 80/20% weighting: direct O&M expenses, excluding fuel and purchased power, and allocated plant, respectively.

There should be a reasonable correlation between the factor(s) used and the G&A costs incurred. The two factors selected include that correlation as G&A expenses primarily represent costs incurred in <u>managing</u> the Company's personnel and operating and maintenance activities and <u>controlling</u> the Company's investment in plant.

The primary function of most of the administrative, finance and other management of the Company is to monitor and control these two key elements of revenue requirements (i.e., cost of service (O&M expenses) and rate base). The 80/20 weighting reflects recognition that Comapny G&A personnel devote more of their time to managing personnel and related activities than managing plant. St. Joseph Light & Power Company G&A Allocation Method- Electric

Account	Allocation Method	Percentage to Electric 1993	1993 Allocable \$'s	Allocation
920	80% O&M/ 20% plant	0.8840 (2)	\$2,842,686	\$2,512,934
921	80% O&M/ 20% plant	0.8840 (2)	448,849	396,783
923	80% O&M/ 20% plant	0.8840 (2)	605,766	535,497
924 – Property insurance	Inventory & plant balances	0.9245 (3)	407,769	376,982
924 - Crime insurance	Payrol	0.8686 (1)	6,330	5,498
925- W/C insurance	Payroll	0.8686 (1)	38,449	33,397
925- General liab. insurance	80% O&M/ 20% plant	0.8840 (2)	340,839	301,302
925- Other (non-insurance)	80% O&M/ 20% plant	0.8840 (2)	130,184	115,083
926- Fiduciary insurance	Payroll	0.8686 (1)	14,898	12,940
926-01,02,07 & 08	Payroll	0.8686 (1)	1,713,731	1,488,547
926 - Other	Payrol	0.8686 (1)	1,768,573	1,536,183
930 – D&O insurance	80% O&M/ 20% plant	0.8840 (2)	57,152	50,522
930 – Lawyer insurance	80% O&M/ 20% plant	0.8840 (2)	635	561
930 - Other	80% O&M/ 20% plant	0.8840 (2)	485,882	429,520
931	Computer equipment	0.9220 (4)	262,832	242,331
935	General plant equipment	0.9239 (5)	310,545	286,913
Total			\$9,435,120	\$8,324,993

total company O&M payroll, adjusting for the steam transfer effect. The factors used were (1)- SJLP uses the ratio of electric payroll (including the allocated G&A payroll) divided by determined based on a study using 1993 payroll data. (2) - Based on SJLP's 12/31/93 G&A allocation calculation (used by SJLP in 1994), adjusted for the revised steam transfer amounts.

(3) - Based on calculation done in 1993 (JE 44), adjusted for revised plant allocations.

(4)- Based on the allocation of computer equipment per the revised general plant allocation method.

St. Joseph Light & Power Company G&A Allocation Method - Steam

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Allocation	6 \$211,212	33,349	•		0 494	3,003				\$	3 138,126			2 36,101	2 9,041	5 8,571	\$674,412
1993 Allocable \$'s	\$2,842,686	448,849	605,766	407,769	6,330	38,449	340,839	130,184	14,898	1,713,731	1,768,573	57,152	635	485,882	262,832	310,545	\$9,435,120
Percentage to Steam	0.0743 (2)	0.0743 (2)	0.0743 (2)	0.0373 (3)	0.0781 (1)	0.0781 (1)	0.0743 (2)	0.0743 (2)	0.0781 (1)	0.0781 (1)	0.0781 (1)	0.0743 (2)	0.0743 (2)	0.0743 (2)	0.0344 (4)	0.0276 (5)	
Allocation Method	80% O&M/ 20% plant	80% O&M/ 20% plant	80% O&M/ 20% plant	Inventory & plant balances	Payroll	Payrol	80% O&M/ 20% plant	80% O&M/ 20% plant	Payroll	Payroll	Payroll	80%	80% O&M/ 20% plant	80% O&M/ 20% plant	Computer equipment	General plant equipment	
Account	920	921	923	924 - Property insurance	924 - Crime insurance	925 - W/C insurance	925 - General Ilab. insurance	925 - Other (non-insurance)	926 – Fiduciary insurance	926-01,02,07 & 08	926 - Other	930 - D&O insurance	930 – Lawyer insurance	930 - Other	931	935	lotal

total company O&M payroll, adjusting for the steam transfer effect. The factors used were (1)- SJLP uses the ratio of electric payroll (including the allocated G&A payroll) divided by determined based on a study using 1993 payroll data. (2) - Based on SJLP's 12/31/93 G&A allocation calculation (used by SJLP in 1994), adjusted for the revised steam transfer amounts.

(3) - Based on calculation done in 1993 (JE 44), adjusted for revised plant allocations.

(4) - Based on the allocation of computer equipment per the revised general plant allocation method.

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Account	Allocation Method	Percentage to Gas	1993 Allocable \$'s	Allocation
920	80%	0.0417 (2)	\$2,842,686	\$118,540
921	80% O&M/ 20% plant	0.0417 (2)	448,849	18,717
	80% O&M/ 20% plant	0.0417 (2)	605,766	25.260
ø	Inventory & plant balances	0.0000 (3)	407,769	0
	Payroll	0.0533 (1)	6,330	337
	Payroll	0.0533 (1)	38,449	2,049
	80% O&M/ 20% plant	0.0417 (2)	340,839	14,213
ice)	80% O&M/ 20% plant	0.0417 (2)	130,184	5,429
	Payroli	0.0533 (1)	14,898	794
07 & 08	Payroll	0.0533 (1)	1,713,731	91,342
	Payroll	0.0533 (1)	1,768,573	94,265
	80% O&M/ 20% plant	0.0417 (2)	57,152	2,383
Lawyer insurance	80%	0.0417 (2)	635	8
- Other	80% O&M/ 20% plant	0.0417 (2)	485,882	20,261
	Computer equipment	0.0436 (4)	262,832	11,459
	General plant equipment	0.0485 (5)	310,545	15,061
Total			\$9,435,120	\$420,139

total company O&M payroll, adjusting for the steam transfer effect. The factors used were (1)- SJLP uses the ratio of electric payroll (including the allocated G&A payroll) divided by determined based on a study using 1993 payroll data. (2) - Based on SJLP's 12/31/93 G&A allocation calculation (used by SJLP in 1994), adjusted for the revised steam transfer amounts.

(3) - Based on calculation done in 1993 (JE 44), adjusted for revised plant allocations.

(4) - Based on the allocation of computer equipment per the revised general plant allocation method.

ST. JOSEPH LIGHT & POWER COMPANY ALLOCATION PROCEDURES CASE NO. E0-94-36

IX. EXPENSES - Property Taxes

Property tax expenses are accounted for by department with an adjustment made on JE 21 for general plant and Lake Road plant allocations. This adjustment is based on adjusted net plant after allocation as net plant balances are a key factor in the determination of property tax assessments.