

PLAINTIFF'S EXHIBIT

TEX-49

11-568-5 STANDARD EXPENSES
PIGGET SOUND WORKS
YEAR 1949 18 18

WA-TEX 009206

WA-TEX009205

STANDARD EXPENSES

UNIT

PLANT PUGET SOUND WORKSYEAR 1959

	CRUDE REFINING EXPENSE		VACUUM PIPE STILLING		VPS	DEAROMIZER 100%	BSTW 100%	WASTE OIL RECOVERY 100%	F.C.C.	
	UNIT	AMOUNT	UNIT	AMOUNT					UNIT	AMOUNT
ESTIMATED DIVISOR - Barrels		7964000		7964000						3729300
CAPACITY - Barrels		10425000		10425000						9125000
Direct Variable Charges										
Fuel @ \$1.00										
Direct Fuel	0.69	549470.								199480
Fuel in Steam	0.51	407526.								123072
Fuel in Power										
Fuel in Water										
Fuel in Auxiliaries										
Total Fuel	1.20	956996.								323070
Miscellaneous - Fuel Only (1)	0.21	171041.								171041
Chemicals	0.26	368321.								107133
Acid	0.14	111672.								39160
Hydrogen Catalyst	0.13	102200.								
Other Catalyst	0.38	302963.								184000
Chemicals - Auxiliaries										
Other Chemicals	0.10	80723.								15263
Total Chemicals	0.61	487706.								200003
Royalties (Running Royalties)										
Total Direct Variable Charges	2.20	1755045.								492781
Semi-Variable Charges										
Operators - (ex T&I)	0.67	537311.								126646
Maintenance - Labor	0.72	570040.								201607
Maintenance - Contract Work	0.11	86255.								28000
Maintenance - Material	0.23	179260.								60455
Test and Inspection - Labor	0.49	72661.								21370
Test and Inspection - Contract Work	0.28	220000.								64360
Test and Inspection - Material	0.08	673040.								12355
Employee Benefits	0.42	334265.								12355
Indirect Plant - Labor	0.72	574746.								19890
Indirect Plant - Other	0.83	657385.								19890
Steam - Charges Other Than Fuel	1.49	1186257.								358206
Power - Charges Other Than Fuel & Purch. Power	0.01	4307.								873
Power - Purchased										
Water - Charges Other Than Fuel & Purch. Water	0.05	39751.								14358
Water - Purchased										
Auxiliaries - Charges Other Than Fuel & Chemicals	1.32	104751.								281
Miscellaneous - Other										
Rentals and Royalties										
Total Semi-Variable Charges	4.38	3482054.								308487
Non-Variable Charges										
Depreciation	3.81	303657.								780313
Insurance & Taxes Related to Investment	0.29	232892.								62797
General Office and General Overhead	0.47	369768.								109214
Auxiliaries (FOH)										
Rentals and Royalties										
Total Non-Variable Charges	4.57	3639197.								952524
Total Expense	11.15	8876296.								1753897

Notes: (1) CREDIT FOR STEAM PROVIDED FROM WATER HEAT EXCHANGERS, FUEL @ \$1.00, AS FOLLOWS:

FUEL CONSUMPTION REQUIRED - 11,045 BARRELS

TOTAL CRUDE REFINING EXPENSE - 11,045 BARRELS

THE ESTIMATED DIVISION REPRESENTS CHARGE TO UNIT, EXCEPT FOR AUTHORIZED, WHICH IS BASED ON TRUE FISHIER PRODUCTION, AND ALLOCATION, WHICH IS BASED ON TOTAL CRUDE PRODUCTION.

Prepared By

WA-TEX 009207

WA-TEX009206

STANDARD EXPENSES

 UNIT _____
 PLANT PUGET SOUND
 YEAR 1959

	POLYMERIZATION		CATALYTIC REFORMING		ALKYLATION		HYDROREATING	
	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT
ESTIMATED DIVISOR — Barrels		222840		22330870		123940		3488000
CAPACITY — Barrels		1387000		2920000		839500		6261000
Direct Variable Charges								
Fuel @ \$1.00								
Direct Fuel			058	134260			021	77900
Fuel in Steam	192	42877	003	8405	148	62759	003	9775
Fuel in Power								
Fuel in Water	001	124		125		164		151
Fuel in Auxiliaries								
Total Fuel	193	43001	061	142790	148	62920	024	83828
Miscellaneous — Fuel Only								
Chemicals	147	321824	009	21900	064	27403	024	30001
Purchased Powder	047	10359	000	16132	025	17928	003	9923
Purchased Water						704000		
Acid								
Hydrobon Catalyst								
Other Catalyst	020	14068	030	69000			008	28255
Chemicals — Auxiliaries								
Other Chemicals	070	15740	002	3234	063	26662		
Total Chemicals	160	35708	032	73234	308	120682	008	28355
Royalties (Running Royalties)								
Total Direct Variable Charges	547	121912	106	246106	553	234513	049	172157
Semi-Variable Charges								
Operators — (ex T&I)	235	50448	018	41081	128	374127	012	41081
Maintenance — Labor	229	50490	023	52387	170	46600	012	41081
Maintenance — Contract Work	059	13240	004	9400	021	8090	001	5360
Maintenance — Material	041	9220	008	18400	062	26130	007	24500
Test and Inspection — Labor	012	2675	004	9400	062	26130	007	24500
Test and Inspection — Contract Work	012	2675	004	9400	062	26130	007	24500
Test and Inspection — Material	032	7920	011	25200	087	56800	007	24500
Employee Benefits	018	3920	005	10130	019	8190	005	17500
Indirect Plant — Labor	135	30050	012	28848	075	32089	008	26205
Indirect Plant — Other	232	51671	021	49602	130	55177	013	45000
Steam — Charges Other Than Fuel	265	59097	024	56731	149	63107	015	51537
Power — Charges Other Than Fuel & Purch. Power	360	124790	010	24465	431	182682	008	28403
Power — Purchased	007	360		240		84		122
Water — Charges Other Than Fuel & Purch. Water	016	3549	002	3676	011	4540	001	4318
Water — Purchased								
Auxiliaries — Charges Other Than Fuel & Chemicals								
Miscellaneous — Other								
Rentals and Royalties								
Total Semi-Variable Charges	1840	409894	142	331003	1250	570901	049	320715
Non-Variable Charges								
Depreciation	847	188725	089	207774	480	203523	062	217117
Insurance & Taxes Related to Investment	074	16576	007	17289	042	17604	005	17175
General Office and General Overhead	149	33242	014	31971	084	35497	008	28990
Auxiliaries (F&OH)								
Rentals and Royalties								
Total Non-Variable Charges	1070	238543	110	256974	606	246624	075	263282
Total Expense	3457	770349	358	834083	2411	1020238	216	736154

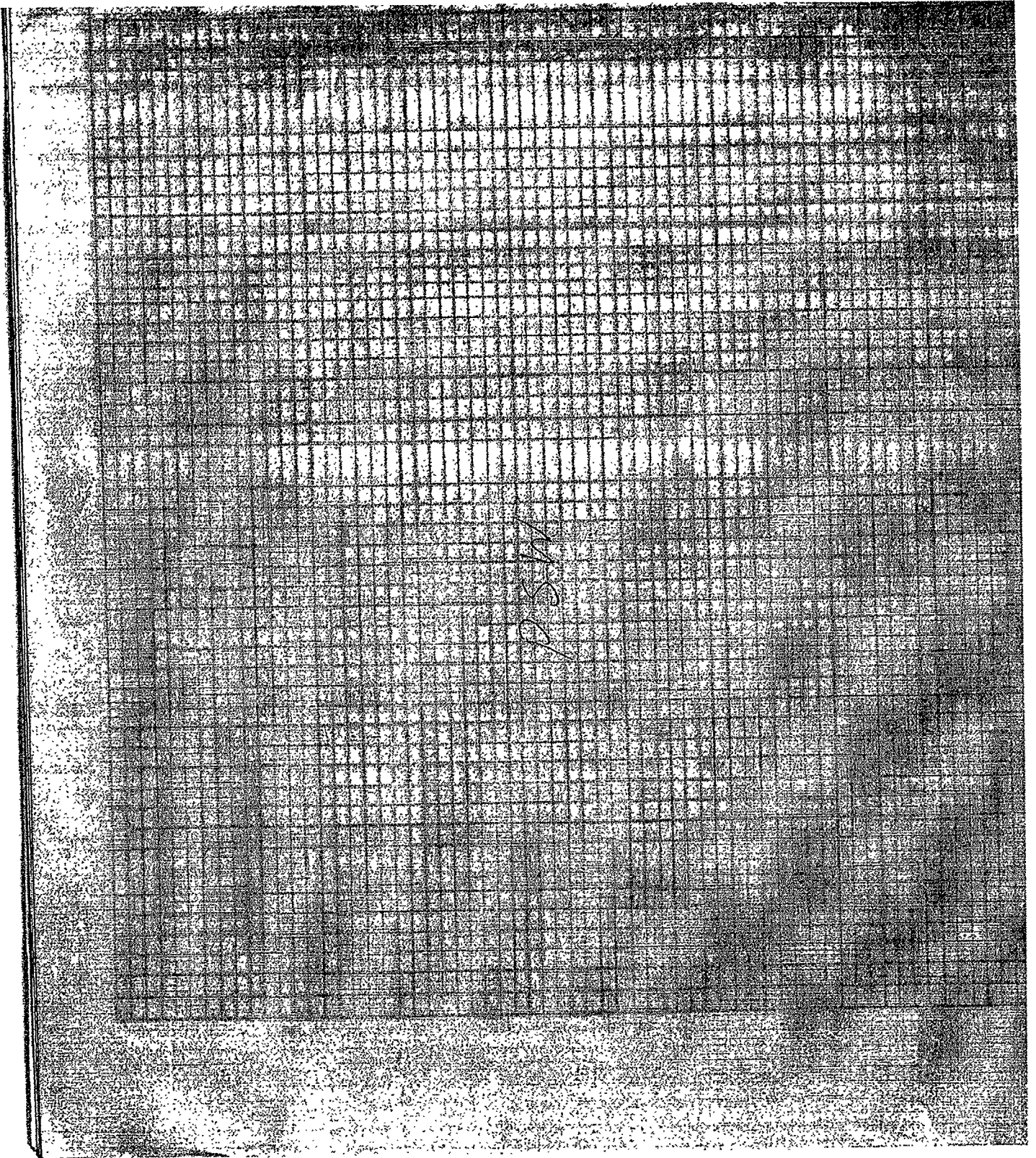
Notes:

Prepared by _____

UNIT	
PLANT	FUGET SOUND
YEAR	1959

STORAGE & SHIPPING		SHIPPING	RATE
UNIT	AMOUNT	100%	DOCK 100%
ESTIMATED DIVISOR - Barrels			
CAPACITY - Barrels			
Direct Variable Charges	79,440.00		
Fuel @ \$1.00	4,230.00		
Direct Fuel			
Fuel in Steam	8,115.8		
Fuel in Power			
Fuel in Water	23		
Fuel in Auxiliaries			
Total Fuel	8,138.8		
Miscellaneous - Fuel Only			
Chemicals	35,292		
Acid	704.7		
Hydrobon Catalyst			
Other Catalyst			
Chemicals - Auxiliaries			
Other Chemicals	399.6		
Total Chemicals	399.6		
Royalties (Running Royalties)			
Total Direct Variable Charges	152,508		
Semi-Variable Charges			
Operators - (ex T&I)	1,144.21	13.83%	170.740
Maintenance - Labor	85,832	57.55%	479.87
Maintenance - Contract Work	12,320	7.15%	80.70
Maintenance - Material	14,500	7.80%	127.58
Test and Inspection - Labor			
Test and Inspection - Contract Work			
Test and Inspection - Material			
Employee Benefits	42,172		
Indirect Plant - Labor	15,690.6		
Indirect Plant - Other	132,370		
Steam - Charges Other Than Fuel	240,797		
Power - Charges Other Than Fuel & Purch. Power	897		
Water - Purchased			
Water - Charges Other Than Fuel & Purch. Water	571		
Water - Purchased			
Auxiliaries - Charges Other Than Fuel & Chemicals			
Miscellaneous - Other			
Rentals and Royalties			
Total Semi-Variable Charges	770,387		
Non-Variable Charges			
Depreciation			
Insurance & Taxes Related to Investment	9,334.62		
General Office and General Overhead	62,398		
Auxiliaries (F&OH)	28,777		
Rentals and Royalties			
Total Non-Variable Charges	100,465.7		
Total Expense	252		

Prepared By -



WA-TEX 009210

WA-TEX009209

P. SW

WA-TEX 009211

WA-TEX009210

TEXACO

Anacortes, Washington, March 16, 1959

FORM R-1211-E
ESTIMATED OPERATING EXPENSES
PUGET SOUND WORKS
YEAR 1959

RECEIVING DEPARTMENT NEW YORK OFFICE			
MAR 19 1959			
JSW		LVP	
WGS		HRK	
DFB			
EOP			
DJH			
JCW			
HSW			
RCR			
CJC		HGP	

PERSONAL

Mr. H. S. Walz

New York, New York

Dear Sir:

Submitted herewith are Schedules 1, 2, 3, 4 and 6 for Form R-1211-E, Estimated Operating Expenses.

The activities shown on the attached statement are in agreement with Form R-1259, Annual Budget. The year of 1959 is the first year during which Puget Sound Works will operate full time. Even so, the plant will be operated at about one-half capacity.

The following details the difference between expenses as shown on the Annual Budget and as shown on the attached statement:

Total Budget - 1959 - Form R-1259	\$5,639,552
Items not included in Budget:	
Marine Dept. - Rental and Services	(10,200)
Total Form R-1211-E	\$5,629,352

The following is a breakdown of expenses included under Miscellaneous Expense:

F.C.C.U.	Credit for Steam	(1,363,090)	
Sub Total Direct Plant			(1,363,090)
Charge Steam Dept. for above item	1,363,090		
Purchased Power	439,000		
Purchased Water	117,000		
Sub Total - SP&W			1,919,090

WA-TEX 009212

WA-TEX009211

Mr. H. S. Walz

- 2 -

March 16, 1959

Vacation Pay	98,400✓
A. & S. Benefits	19,000✓
Telephone	10,000
Telegraph	1,800
Contributions and Donations	500
Memberships and Subscriptions	200
Postage	1,000
Traveling and Personal	30,000
All Other Expense	71,500
Marine Dept. - Rentals & Services	(10,200)

Sub Total Indirect 222,200

Grand Total Miscellaneous Expense 778,200

Labor costs are based on the following manpower:

	No. Men	Cost
Calendar Personnel	3	0
Construction & Outside Charges	0	0
Plant Expense - Form R-1259	309	2,001,000
Total Labor	312	2,001,000
Less: Vacation Pay		98,400
A. & S.		19,000

Labor Distributed on Form R-1211-E as Labor 1,883,600

The following is a breakdown of the component costs used in pricing out steam produced from CO and waste heat boilers:

M. Lbs. Steam	F.C.C.U.
B.T.U.'s/Lb.	2,185,000
M.M. B.T.U.'s	1,331.6
Total Estimated Steam Cost	2,909,640
Credit for Steam	\$ 468,474
	\$1,363,090

Component Costs:

Labor	\$ 102,063
Material	51,314
Fuel - Bbls.	-171,045
Fuel - Cost	315,578
Steam from Waste Heat Boilers	833,762
Transfers of Steam	(3,674)
Transfers from Power	45,802
Transfers from Water	18,245

Total \$1,363,090

Yours very truly, *Jul 10 1959*

G. V. CARROLL

\$ 1,218,557
171,045 Fuel
1,047,512 MISC-CHARGE

GVC-LMR
EOD

WA-TEX 009213

WA-TEX009212

NOTE: 4-6-59 Per discussion w/ Art Weller of Engrg. the CO boiler credit to FCCU is OK and in line as well as the relationship of this charge to Steam Dept. being in line with total Steam Dept. credit. this charge E&H

PLANT LABOR
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

() Indicates Red Figures *excluded*

Line No.	Activities	No. Oper.	Operators Ex T&I			T&I Operating			Other Operating			T&I Repairs		
			Man	Hours	Amount	Man	Hours	Amount	Man	Hours	Amount	Man	Hours	Amount
1.	VPS	13.6	26,208	\$	77,050	3,700	\$	11,000	15,994	\$	50,455	1,636	\$	5,000
2.	Decarbonizer	(1)				680		2,000	3,510		11,075	295		900
3.	F.C.C.U.	22.0	41,960		120,425	4,600		13,500	48,691		153,608	2,193		6,700
4.	Poly (Ehls. Polymer)	8.9	16,992		49,950	580		1,700	12,315		38,850	262		800
5.	Catalytic Reforming	6.8	13,308		39,125	1,820		5,350	12,656		39,926	867		2,650
6.	Alkylation (Bols. Alky)	8.9	17,664		51,930	2,640		7,750	11,260		35,522	1,260		3,850
7.	Hydrotreating	6.8	13,308		39,125	1,820		5,350	10,381		32,749	867		2,650
8.	Shipping - Bulk	(2)	4,720		13,220				8,945		28,219			
9.	RP&S & Docks	23.0	41,000		114,800				11,585		36,548			
10.	BS&W	.5	1,040		3,050				256		808			
11.	Waste Oil Recovery	.5	1,040		3,050				2,077		6,552			
12.	Total Direct	91.0	177,240	\$	511,725	15,840	\$	46,650	137,670	\$	434,312	7,380	\$	22,550
13.	S.P. & W.	12.6	28,274		79,210				26,899		84,589			
14.	Indirect Plant	(3) 25.4	52,858		166,752				96,326		304,154			
15.	Grand Total	129.0	258,320	\$	757,687	15,840	\$	46,650	260,895	\$	823,055	7,380	\$	22,550

- (1) Included in VPS Forces
(2) Included in RP&S and Dock Forces
(3) Laboratory 17.0 men and Effluent Treating 8.4 men

GVC-LMR 3-17-59

HSW(2)

EOD

PLANT LABOR
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.		L A B O R					
		Routine Repairs		Expense Estimate		Total Labor	
		Man	Hours	Man	Hours	Man	Hours
		Amount	Amount	Amount	Amount	Amount	Amount
1.	VPS	4,880	\$ 12,650	1,383	-	52,418	\$156,155
2.	Decarbonizer	870	2,745	1,387	-	5,355	16,720
3.	F.C.C.U.	12,170	38,393	4,023	-	109,614	332,626
4.	Poly(Ethylene Polymer)	3,080	9,717	1,023	-	33,229	101,017
5.	Catalytic Reforming	3,160	9,969	1,067	-	31,811	97,020
6.	Alkylation(Ethylene, Alky)	2,810	8,865	928	-	35,634	107,917
7.	Hydrotreating	2,600	8,202	862	-	28,976	88,076
8.	Shipping - Bulk	2,240	7,067	1,420	-	15,905	48,506
9.	RP&S & Docks	2,900	9,149	966	-	55,485	160,497
10.	BS&W	60	190	300	-	1,356	4,048
11.	Waste Oil Recovery	520	1,640	1,172	-	3,637	11,242
12.	Total Direct	34,420	108,537	14,016	-	372,550	1,123,824
13.	S.P. & W.	6,725	21,217	2,228	-	76,300	185,016
14.	Indirect Plant	32,920	103,894	10,207	-	167,650	574,760
15.	Grand Total	74,065	233,658	45,341	-	616,500	1,883,600
							1977,780

CONTRACT WORK, MATERIAL AND MISCELLANEOUS EXPENSE
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

() Indicates Red Figures

Line No.	CONTRACT WORK					MATERIAL				
	Operating		Repairs		Total Contract	Operating		Repairs		Total
	T & I	Other	T & I	Other		T & I	Other	T & I	Other	
1.VPS	\$ 35,400	\$4,850	\$15,540	\$1,920	\$57,710	\$3,770	\$5,650	\$3,770	\$12,270	\$25,460
2.Decarbonizer	6,300	890	2,800	380	10,370	830	1,240	830	2,700	5,600
3.F.C.C.U.	43,500	22,730	20,860	5,760	92,850	1,650	29,000	14,700	31,250	76,600 (1,335,090)
4.Poly(Bbls. Polymer)	5,400	11,770	2,520	1,470	21,160	2,130	4,250	1,790	4,970	13,140
5.Catalytic Reform.	17,250	7,860	8,190	1,540	34,840	5,530	14,200	6,600	4,400	30,730
6.Alkylation(Bls. Alky)	24,900	7,410	11,900	1,380	45,590	4,140	15,680	4,050	10,450	34,320
7.Hydrotreating	17,250	3,150	8,190	1,210	29,800	10,550	7,000	7,000	17,500	42,050
8.Shipping - Bulk		3,700		1,050	4,750		600		1,200	1,800
9.RP&S		6,700		1,370	8,070		4,200		8,500	12,700
10.B&W		100		60	160		1,000		1,100	2,100
11.Waste Oil Recovery		700		250	950		1,100		1,000	2,100
12. Total Direct	\$150,000	\$69,860	\$70,000	\$16,390	\$306,250	\$28,600	\$83,920	\$38,740	\$95,340	\$246,600 (1,363,090)
13.SP&W		8,180		8,000	16,180		46,200		38,500	84,700
14.Indirect Plant		85,960		15,610	101,570		170,200		41,500	211,700
15. Grand Total	\$150,000	\$164,000	\$70,000	\$40,000	\$424,000	\$28,600	\$300,320	\$38,740	\$175,340	\$543,000 \$778,200

GVC-LMR 3-17-59

HSW(2)

EOD

CHEMICALS & FUEL CONSUMED
ESTIMATED OPERATING EXPENSES -- YEAR 1959
PUGET SOUND WORKS

Line No.		Chemicals			Other Chemicals Amount	Total Chemicals Amount	Fuel Consumed			Total Fuel Amount
		Acid		Catalyst			Gas Std.Bbls.	Liquid Std.Bbls.		
		Tons	Amount							
1.	VPS				\$15,704	\$15,704	50,410	85,790	\$251,289	
2.	Decarbonizer						5,630		10,387	
3.	F.C.C.U.			660.0	\$184,800		60,000	139,480(2)	368,041	
4.	Poly (Bbls. Polymer)			38.4	19,968	15,263				
5.	Catalytic Reforming			19.4	69,840	15,740				
6.	Alkylation(Bbls.Alky)	5,243	\$104,000(1)			3,384	85,000	49,260	247,710	
7.	Hydrotreating			56.3	28,355	26,662				
8.	Shipping ~ Bulk					28,355	73,900		136,346	
9.	RP&S					3,990				
10.	HS&W									
11.	Waste Oil Recovery									
12.	Total Direct		\$104,000	774.10	\$302,963	\$80,743	\$487,706	274,940	\$1,013,773	
13.	SP&W							135,000	498,150	
14.	Indirect Plant							500	923	
15.	Grand Total	5,243	\$104,000	774.10	\$302,963	\$80,743	\$487,706	410,440	\$1,512,846	

(1) 34,669 deducted for sale of spent acid
(2) Total Fuel charged to F.C.C.U. used at CO Boiler for Steam Production

GVC-LMR 3-17-59

HSW(2)

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DETAILED PLANT DISTRIBUTION OF
STEAM, POWER, AND WATER
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.	Operating	STEAM				POWER (1)			
		MM BTU	Fuel Consumed Bbls.	Amount	Other Cost Amount	Total Amount	K.W.H.	Fuel Consumed Bbls.	Other Cost Amount
1.	VPS	328,149	62,204	\$114,776	\$81,481	\$196,257	2,620,000	0	\$18,566
2.	Decarbonizer	235,928	44,722	82,512	58,582	141,094	3,480,000	0	24,661
3.	F.C.C.U.	1,025,894	194,468	358,793	254,734	613,527	5,650,000	0	40,038
4.	Polymerization	357,406	67,750	124,990	88,746	213,736	2,280,000	0	16,157
5.	Cat Reforming	70,063	13,280	24,502	17,397	41,899	1,520,000	0	10,771
6.	Alkylation	523,138	99,166	182,961	129,897	312,858	532,000	0	3,770
7.	Hydrotreating	81,481	15,445	28,496	20,232	48,728	5,200,000	0	36,849
8.	Shipping - Bulk	23,220	4,401	8,120	5,766	13,886	1,320,000	0	9,354
9.	RPS	694,973	131,739	243,058	172,564	415,622	4,350,000	0	30,826
10.	B&W	28,380	5,380	9,926	7,047	16,973	295,000	0	2,091
11.	Waste Oil Recovery	28,380	5,380	9,926	7,047	16,973	0	0	0
12.	Total	3,397,012	643,935	\$1,188,060	\$843,493	\$2,031,553	27,247,000	0	\$193,083
13.	SP&W								
14.	Indirect Plant	279,410	52,964	97,718	69,379	167,097	8,808,000	0	62,417
15.	Grand Total	3,676,422	696,899	\$1,285,778	\$912,872	\$2,198,650	36,055,000	0	\$255,500

(1) All power is purchased

GVC-LMR 3-17-59

HSW(2)

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DETAILED PLANT DISTRIBUTION OF
STREAM, POWER AND WATER
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.	Operating	M. Gals	WATER			Total Plant Amount
			Fuel Consumed	Other Cost	Total	
		Bbls.	Amount	Amount	Amount	
1. VPS		167,300	\$ 419	\$ 38,654	\$ 39,073	\$ 760,214
2. Decarbonizer		35,300	89	8,211	8,300	217,132
3. F.C.C.U.		382,800	518	88,194	89,150	449,805
4. Polymerization		91,500	124	21,126	21,355	422,273
5. Cat Reforming		91,800	125	21,310	21,541	557,735
6. Alkylation		119,000	161	27,399	27,696	662,813
7. Hydrotreating		113,000	153	26,015	26,297	436,501
8. Shipping - Bulk		3,000	4	646	653	78,949
9. RP&S		14,200	19	3,229	3,264	634,969
10. B&W		5,900	8	1,384	1,399	26,771
11. Waste Oil Recovery		5,900	8	1,384	1,399	32,664
12. Total		1,029,700	1,395	\$ 2,575	\$240,127	\$ 4,279,826
13. SP&W						
14. Indirect Plant		38,000	51	8,764	8,859	(2,703,136)
15. Grand Total		1,067,700	1,446	\$ 2,670	\$ 246,316	\$ 5,629,352

WA-TEX 009219

DETAILED DISTRIBUTION OF CHEMICALS CONSUMED
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.	Chemical	V.P.S. Quantity	V.P.S. Amount	F.C.C.U. Quantity	F.C.C.U. Amount	POLY Quantity	POLY Amount	ALKYLATION Quantity	ALKYLATION Amount	HYDROTREATING Quantity	HYDROTREATING Amount	RP&S Quantity	RP&S Amount
1.	Anti-Foam DC#200	1,112	\$3,470										
2.	Acid, Alky Sulfuric												
3.	Catalyst												
4.	UOP-R-5 Platf. Recon.												
5.	AERO, HDS ₂ , Hydro.												
6.	Spent (Unifiner & Hydrobon)												
7.	F.C.C.U., Davison MS-FI			1,320,000	\$184,800								
8.	UOP#1 Poly												
9.	Caustic Soda	263,336	7,466	526,664	14,931	76,800	\$19,968	263,336	7,466	18,600	\$19,425	94,000	8,930
10.	Hydrogen												
11.	Litharge, Spec#29			2,200	332								
12.	Crude Mercaptan												
13.	Monoethanolamine					2,480	707						
14.	Propylene Dichloride												
15.	Sodium Chloride					6,900	102	24,300	361				
16.	Triethanolamine							73,300	18,692				
17.	Sodium Fluoride							750	143				
18.	Visco, #678	1,991	4,768										
19.	Total		\$15,704		\$200,063		\$35,708		\$130,662		\$28,355		\$3,990

Line 10 in cu. ft.
Line 12 & 18 in Gals.
Remainder of lines in lbs.

GVC-LMR 3-17-59

HSW(2)

EOD

DETAILED DISTRIBUTION OF CHEMICALS CONSUMED
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.	Chemical	CAT. REFORMING		TOTAL	
		Quantity	Amount	Quantity	Amount
1.	Anti-Foam DC#200			1,112	\$ 3,470
2.	Acid, Alky Sulfuric			10,486,000	104,000
3.	Catalyst				
4.	UOP-R-5 Platforming Reconditioned	38,800	\$69,840	38,800	69,840
5.	ABRO, HDS ₂ , Hydrotreater			18,600	19,425
6.	Spent (Unfiner & Hydrobon)			94,000	8,930
7.	F.C.C.U., Davison MS-F1			1,320,000	184,800
8.	UOP#1 Poly			76,800	19,968
9.	Caustic Soda			1,580,000	44,794
10.	Hydrogen	240,000	2,664	240,000	2,664
11.	Litharge, Spec #29			2,200	332
12.	Crude Mercaptan	550	645	550	645
13.	Monoethanolamine			2,480	707
14.	Propylene Dichloride	1,050	75	1,050	75
15.	Sodium Chloride			300,000	4,453
16.	Triethanolamine			73,300	18,692
17.	Sodium Fluoride			750	143
18.	Visco, #578			1,991	4,768
19.	Total		\$73,224		\$487,706

Line 10 in cu. ft.
Line 12 & 18 in Gals.
Remainder of lines in lbs.

WA-TEX 009221

WA-TEX009220

New York 17, N. Y., March 20, 1959

FORM R-1211-E
ESTIMATED OPERATING EXPENSES
PUGET SOUND WORKS
YEAR 1959

PERSONAL

Mr. G. V. Carroll
Anacortes, Washington

Dear Sir:

Please refer to your letter of March 16, 1959, submitting subject report.

Preliminary examination in this office indicates the exhibits were thoroughly and properly prepared with the exception of certain portions, enumerated below, which, no doubt, was due to lack of sufficiently detailed instructions.

Exhibit 4 - Steam, Power and Water Departments

Exhibit 3 shows 270,000 barrels of fuel charged to the SP&W Department, which, together with the 171,405 equivalent barrels credited the FCCU, as shown in your letter, totals 441,045 barrels of fuel to be distributed to the Steam and Water Departments. However, it is noted that 698,343 barrels fuel were distributed in Exhibit 4.

Purchased Power per your letter is \$439,000 but Exhibit 4 shows a total of \$255,500 for the Power Department. Possibly the balance of \$183,500 has been distributed to "Other Cost" columns under Steam and Water Departments. The same situation applies to Purchased Water in amount of \$117,000.

Revised accounting instructions will be issued in the future to clarify reporting of these items. It will be appreciated if you will issue revised Exhibit 4, using the captions listed below where applicable:

Steam
Fuel Consumed
MM BTU
Barrels
Amount
Purchased Power (Cost)
Purchased Water (Cost)
Other Cost
Total

WA-TEX 009222

WA-TEX009221

Mr. G. V. Carroll

- 2 -

March 20, 1959

Power
Purchased Power
KWH
Amount
Other Cost
Total

Water
M Gals.
Purchased Water (Cost)
Purchased Power (Cost)
Fuel Consumed
Barrels
Amount
Other Cost
Total

Yours very truly,

EHF-GE

H. S. WALZ

EOD

WA-TEX 009223

WA-TEX009222

New York 17, N. Y., March 20, 1959

FORM R-1211-E
ESTIMATED OPERATING EXPENSES
PUGET SOUND WORKS
YEAR 1959

PERSONAL

Mr. G. V. Carroll
Anacortes, Washington

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Revised accounting instructions will be issued in the future to clarify reporting of these items. It will be appreciated if you will issue revised Exhibit 4, using the captions listed below where applicable:

Steam
Fuel Consumed
MM Btu
Barrels
Amount
Purchased Power (Cost)
Purchased Water (Cost)
Other Cost
Total

WA-TEX 009224

WA-TEX009223

Mr. G. V. Carroll

- 2 -

March 20, 1959

Power
Purchased Power
KWH
Amount
Other Cost
Total

Water
M. Gals.
Purchased Water (Cost)
Purchased Power (Cost)
Fuel Consumed
Barrels
Amount
Other Cost
Total

Yours very truly,

EHP-GE

H. S. WALZ

EOD

WA-TEX 009225

WA-TEX009224

K44
TEXACO

Anacortes, Washington, April 3, 1959

FORM R-1211-E
ESTIMATED OPERATING EXPENSES
PUGET SOUND WORKS
YEAR 1959

REFINING DEPARTMENT NEW YORK OFFICE			
APR 6 1959			
JEW		LVP	
WGG		HRK	
DPB			
EOP			
DJH			
JCW			
HSW			
RSB			
QIB		HBP	

AIR MAIL

PERSONAL

Mr. H. S. Walz

New York, New York

Dear Sir:

Attached is Revised Exhibit 4 of Form R-1211-E for Puget Sound Works as requested in your letter of March 20th, above subject.

We do believe the instructions are not sufficiently detailed to enable a person to prepare Form R-1211-E easily and rapidly unless he had experience preparing the report, but we think we can prepare future reports without difficulty if you think this one is satisfactory. Of course we expect to improve our estimates after the plant has been in operation for a while.

You will note that your assumption in regard to Purchased Power and Purchased Water was correct.

Yours very truly,


G. V. CARROLL

WWC-JPE

EOD

WA-TEX 009226

WA-TEX009225

DETAILED PLANT DISTRIBUTION OF
STEAM, POWER, AND WATER
ESTIMATED OPERATING EXPENSES-YEAR 1959
PUGET SOUND WORKS

STEAM

Line No.	Operation	Fuel Consumed		Purchased Power		Purchased Water		Other Cost		Total
		MM BTU	Barrels	Amount	Amount	Amount	Amount	Amount	Amount	
1	VPS	328,149	39,367	\$ 72,632	\$ 6,453	\$ 2,571	\$ 114,601	\$	\$	196,257
2	Decarbonizer	235,928	28,303	52,219	4,640	1,848	82,387			141,094
3	F. C. C. U.	1,025,894	123,072	227,069	20,175	8,037	358,246			613,527
4	Polymerization	357,406	42,877	79,109	7,029	2,800	124,798			213,736
5	Cat. Reforming	70,063	8,405	15,507	1,378	549	24,465			41,899
6	Alkylation	523,138	62,759	115,790	10,288	4,098	182,682			312,858
7	Hydrotreating	81,481	9,775	18,035	1,602	638	28,453			48,728
8	Shipping-Bulk	23,220	2,785	5,138	457	182	8,109			13,886
9	RPES	694,973	83,373	153,823	13,667	5,444	242,688			415,622
10	BSM	28,380	3,405	6,282	558	222	9,911			16,973
11	Waste Oil Recovery	28,380	3,405	6,282	558	222	9,911			16,973
12	Total	3,397,012	407,526	\$751,886	\$ 66,805	\$26,611	\$1,186,251			\$2,031,553
13	SP&W									
14	Indirect Plant	279,410	33,519	61,842	5,495	2,189	97,571			167,097
15	Grand Total	3,676,422	441,045	\$813,728	\$ 72,300	\$28,800	\$1,283,822			\$2,198,650

.59804/MMBTU

4-6-59
NOTE: Fuel barrels should total 441,045 to SPE W Dept. This revision distributes an additional 1446 barrels from the VPS Dept.; however we are not asking for any revision due to this being a rather insignificant quantity as regards the effect on std unit costs.
EHS

DETAILED PLANT DISTRIBUTION OF
STEAM, POWER, AND WATER
ESTIMATED OPERATING EXPENSES-YEAR 1959
PUGET SOUND WORKS

POWER

Line No.	Operation	KWH	Amount	Other Cost Amount	Total Amount
1	VPS	2,620,000	\$ 18,152	\$ 414	\$ 18,566
2	Decarbonizer	3,480,000	24,111	550	24,661
3	F. C. C. U.	5,650,000	39,145	893	40,038
4	Polymerization	2,280,000	15,797	360	16,157
5	Est. Reforming	1,520,000	10,531	240	10,771
6	Alkylation	532,000	3,685	84	3,770
7	Hydrotreating	5,200,000	36,027	822	36,849
8	Shipping-Bulk	1,320,000	9,145	209	9,354
9	RPS	4,350,000	30,138	688	30,826
10	ESW	295,000	2,044	47	2,091
11	Waste Oil Recovery				
12	Total	27,247,000	\$188,776	\$ 4,307	\$193,083
13	SP&W				
14	Indirect Plant	8,808,000	\$ 61,024	\$ 1,393	\$ 62,417
15	Grand Total	36,055,000	\$249,800	\$ 5,700	\$255,500

DETAILED PLANT DISTRIBUTION OF
STEAM, POWER, AND WATER
ESTIMATED OPERATING EXPENSES-YEAR 1959
PUGET SOUND WORKS

WATER

Line No.	Operation	M Gals.	Purchased Water Amount	Power Amount	Fuel Consumed Barrels	Other Cost Amount	Water Total Amount	Total SP&W Amount	Total Plant Amount
1	VPS	167,300	\$13,820	\$18,317	227	\$6,517	\$39,073	\$253,896	\$760,214
2	Decarbonizer	35,300	2,916	3,865	48	89	8,300	174,055	217,132
3	F. C. C. U.	382,800	31,623	41,913	518	956	89,150	742,715	449,805
4	Polymerization	91,500	7,559	10,018	124	229	21,355	251,248	422,273
5	Cat. Reforming	91,800	7,583	10,051	125	331	21,541	74,211	557,735
6	Alkylation	119,000	9,830	13,029	161	297	27,696	344,324	662,813
7	Hydrotreating	113,000	9,335	12,372	153	282	26,297	111,874	436,501
8	Shipping-Bulk	3,000	248	328	4	7	653	23,893	78,949
9	RP&S	14,200	1,173	1,552	19	35	3,264	449,712	634,969
10	BS&W	5,900	487	646	8	15	1,399	20,463	26,771
11	Waste Oil Recovery	5,900	487	646	8	15	1,399	18,372	32,664
12	Total	1,029,700	85,061	\$112,740	1,395	\$2,575	\$240,127	\$2,464,763	\$4,279,826
13	SP&W							(2,703,136)	
14	Indirect Plant	38,000	3,139	4,160	51	\$95	\$8,859	\$238,373	\$1,349,526
15	Grand Total	1,067,700	\$88,200	\$116,900	1,446	\$2,670	\$248,986		\$5,629,352

GVC-JPE 4-2-59

HSW (2)

EOD

TELEGRAM

(DO NOT USE WIRES FOR BUSINESS THAT CAN WAIT FOR THE MAIL)

New York 17 NY Mar 31 59

REFINING DEPARTMENT NEW YORK OFFICE			
JSW		LVO	
WOC		MRK	
DPB			
EOP			
DJH			
JCW			
HSW			
RCR			
CJC		HBP	

G V Carroll

Anacortes

Urgently require R-1211-E. Please airmail revised Exhibit 4.

H S WALZ

EHF-GE
5 10PM

WA-TEX 009231

WA-TEX009230

TELEGRAM

(DO NOT USE WIRES FOR BUSINESS THAT CAN WAIT FOR THE MAIL)

REFINING DEPARTMENT NEW YORK OFFICE			
JSW		LYP	
WGC		MRK	
DPB			
EOP			
DJH			
JCW			
HSW			
RCR			
CJC		H3P	

New York 17 NY Apr 1 59

E O Dunaway

Houston

Please wire your best estimate total dollars fixed and overhead (excluding indirect plant) to be distributed 1959 R-1211-E, Exhibit 5, for Puget Sound Works. Urgently require for crude evaluations.

H S WALZ

EHF-GE

11 15AM

WA-TEX 009232

WA-TEX009231

a-	INSURANCE			TAXES			
	Property	Employee Benefits	Total	Ad Valorem	Pay Roll Taxes	Misc'l.	Total
47	\$ 11,385	\$ 22,710	\$ 34,095	\$ 12,557	\$ 7,434	\$ 10,529	\$ 30,520
08	763	2,434	3,197	842	797	1,129	2,768
13	19,203	48,345	67,548	21,180	15,826	22,414	59,420
25	4,644	14,688	19,332	5,122	4,808	6,810	16,740
74	5,113	14,100	19,213	5,639	4,616	6,537	16,792
23	5,008	15,685	20,693	5,524	5,134	7,272	17,930
17	5,343	12,809	18,152	5,893	4,193	5,939	16,025
53	4,269	7,058	11,327	4,708	2,310	3,272	10,290
29	18,703	23,331	42,034	20,629	7,637	10,817	39,083
50	112	588	700	124	193	273	590
98	180	1,634	1,814	201	535	758	1,494
37	\$ 74,723	\$ 163,382	\$ 238,105	\$ 82,419	\$ 53,483	\$ 75,750	\$ 211,652
37	\$ 74,723	\$ 163,382	\$ 238,105	\$ 82,419	\$ 53,483	\$ 75,750	\$ 211,652

8.7%

2.8%

0.2%

0.1%

WA-TEX 009233

WA-TEX009232

<u>Rentals & Royalties</u>	<u>Total Fixed & Overhead</u>	<u>Grand Total Expenses</u>
\$	\$ 578,660	\$ 1,526,459
	42,483	279,723
	1,016,695	1,865,824
	258,039	801,634
	275,690	949,890
	277,643	1,070,010
	280,284	822,585
	211,044	348,293
	893,949	1,721,631
	7,171	38,801
	14,404	60,564
	\$ 3,856,062	\$ 9,485,414
\$ 0	\$ 3,856,062	\$ 9,485,414
\$ 0	\$ 3,856,062	\$ 9,485,414

WA-TEX 009234

WA-TEX009233

INSURANCE				TAXES			
	Property	Employee Benefits	Total	Ad Valorem	Pay Roll Taxes	Misc'l.	Total
7	\$ 11,385	\$ 22,710	\$ 34,095	\$ 12,557	\$ 7,434	\$ 10,529	\$ 30,520
3	763	2,434	3,197	842	797	1,129	2,768
5	19,203	48,345	67,548	21,180	15,026	22,414	58,420
5	4,614	14,688	19,302	5,122	4,808	6,810	16,740
5	5,113	14,100	19,213	5,639	4,616	6,537	16,792
5	5,008	15,695	20,693	5,524	5,134	7,272	17,930
7	5,343	12,809	18,152	5,893	4,193	5,039	16,025
5	4,269	7,058	11,327	4,708	2,310	3,272	10,290
1	18,703	23,531	42,034	20,629	7,837	10,817	39,083
5	112	588	700	121	193	273	590
5	180	1,654	1,834	201	535	758	1,494
	\$ 74,723	\$ 163,382	\$238,105	\$ 82,419	\$ 53,483	\$ 75,750	\$ 211,652
	\$ 74,723	\$ 163,382	\$238,105	\$ 82,419	\$ 53,483	\$ 75,750	\$ 211,652

8.7%

2.8%

0.2%

0.1%

WA-TEX 009235

WA-TEX009234

<u>Rentals & Royalties</u>	<u>Total Fixed & Overhead</u>	<u>Grand Total Expenses</u>
\$	\$ 578,660	\$ 1,526,459
	42,483	279,723
	1,016,695	1,865,824
	258,039	801,654
	275,690	949,890
	277,643	1,070,010
	280,284	822,585
	211,044	348,293
	895,949	1,721,651
	7,171	38,801
	14,404	60,564
\$ 0	\$ 3,856,062	\$ 9,485,414
\$ 0	\$ 3,856,062	\$ 9,485,414

WA-TEX 009236

WA-TEX009235

PLANT LABOR
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

() Indicates Red Figures

Line No.	Activities Barrels	No. Oper.	Operators Ex T&I				T&I Operating				Other Operating				T&I Repairs			
			Man		Hours		Amount		Man		Hours		Amount		Man		Hours	
			Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount
1. VPS	7,964,000	13.6	26,208	\$ 77,050	3,700	\$11,000	15,994	\$50,455	1,636	\$ 5,000	15,994	\$50,455	1,636	\$ 5,000				
2. Decarbonizer		(1)			680	2,000	3,510	11,075	295	900	3,510	11,075	295	900				
3. F.C.C.U.	3,728,600	22.0	41,960	120,425	4,600	13,500	48,691	153,608	2,193	6,700	48,691	153,608	2,193	6,700				
4. Poly (Ehls. Polymer)	222,840	8.9	16,992	49,950	580	1,700	12,315	38,850	262	800	12,315	38,850	262	800				
5. Catalytic Reforming	2,330,870	6.8	13,308	39,125	1,820	5,350	12,656	39,926	867	2,650	12,656	39,926	867	2,650				
6. Alkylation(Ehls.Alky)	423,940	8.9	17,664	51,930	2,640	7,750	11,260	35,522	1,260	3,850	11,260	35,522	1,260	3,850				
7. Hydrotreating	3,488,000	6.8	13,308	39,125	1,820	5,350	10,381	32,749	867	2,650	10,381	32,749	867	2,650				
8. Shipping - Bulk	7,220,290	(2)	4,720	13,220			8,945	28,219			8,945	28,219						
9. RP&S & Docks		23.0	41,000	114,800			11,585	36,548			11,585	36,548						
10. BS&W		.5	1,040	3,050			256	808			256	808						
11. Waste Oil Recovery		.5	1,040	3,050			2,077	6,552			2,077	6,552						
12. Total Direct	7,964,000	91.0	177,240	\$511,725	15,840	\$46,650	137,670	\$434,312	7,380	\$22,550	137,670	\$434,312	7,380	\$22,550				
13. S.P. & W.		12.6	28,274	79,210			26,899	84,589			26,899	84,589						
14. Indirect Plant		(3) 25.4	52,858	166,752			96,326	304,154			96,326	304,154						
15. Grand Total		129.0	258,320	\$757,687	15,840	\$46,650	260,895	\$823,055	7,380	\$22,550	260,895	\$823,055	7,380	\$22,550				

- (1) Included in VPS Forces
(2) Included in RP&S and Dock Forces
(3) Laboratory 17.0 men and Effluent Treating 8.4 men

GVC-IMR 3-17-59

HSW(2)

ROD

WA-TEX 009237

PLANT LABOR
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.	Description	L A B O R				Total Labor	
		Routine Repairs		Expense Estimate		Man	
		Man	Amount	Man	Amount	Hours	Amount
1.	VPS	4,880	\$ 12,650	-	-	52,418	\$156,155
2.	Decarbonizer	870	2,745	-	-	5,355	16,720
3.	F.C.C.U.	12,170	38,393	-	-	109,614	332,626
4.	Poly(Ebbs. Polymer)	3,080	9,717	-	-	33,229	101,017
5.	Catalytic Reforming	3,160	9,969	-	-	31,811	97,020
6.	Alkylation(Bbbs. Alky)	2,810	8,865	-	-	35,634	107,917
7.	Hydrotreating	2,600	8,202	-	-	28,976	88,076
8.	Shipping - Bulk	2,240	7,067	-	-	15,905	48,506
9.	RP&S & Docks	2,900	9,149	-	-	55,485	160,497
10.	BS&W	60	190	-	-	1,356	4,048
11.	Waste Oil Recovery	520	1,640	-	-	3,637	11,242
12.	Total Direct	34,420	108,587	-	-	372,550	1,123,824
13.	S.P. & W.	6,725	21,217	-	-	76,300	185,016
14.	Indirect Plant	32,920	103,854	-	-	167,650	574,760
15.	Grand Total	74,065	233,658	-	-	616,500	1,883,600

WA-TEX 009238

WA-TEX009237

CONTRACT WORK, MATERIAL AND MISCELLANEOUS EXPENSE
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

() Indicates Red Figures

Line No.		CONTRACT WORK				Total Contract	MATERIAL				Misc. Expense	
		Operating		Repairs			Operating		Repairs			
		T & I	Other	T & I	Other		T & I	Other	T & I	Other		
1	VPS	\$ 35,400	\$4,850	\$15,540	\$1,920	\$57,710	\$3,770	\$5,650	\$3,770	\$12,270	-	\$25,460
2	Decarbonizer	6,300	890	2,800	380	10,370	830	1,240	830	2,700	-	5,600
3	F.C.U.	43,500	22,730	20,860	5,760	92,850	1,650	29,000	14,700	31,250	-	76,600
4	Poly(Bols. Polymer)	5,400	11,770	2,520	1,470	21,160	2,130	4,250	1,790	4,970	-	13,140
5	Catalytic Reform.	17,250	7,860	8,190	1,540	34,840	5,530	14,200	6,600	4,400	-	30,730
6	Alkylation(Bls,Alky)	24,900	7,410	11,900	1,380	45,590	4,140	15,680	4,050	10,450	-	34,320
7	Hydrotreating	17,250	3,150	8,190	1,210	29,800	10,550	7,000	7,000	17,500	-	42,050
8	Shipping ~ Bulk		3,700		1,050	4,750		600		1,200	-	1,800
9	RP&S		6,700		1,370	8,070		4,200		8,500	-	12,700
10	BS&W		100		60	160		1,000		1,100	-	2,100
11	Waste Oil Recovery		700		250	950		1,100		1,000	-	2,100
12	Total Direct	\$150,000	\$69,860	\$70,000	\$16,390	\$306,250	\$28,600	\$83,920	\$38,740	\$95,340	-	\$246,600 (1,363,090)
13	SP&W		8,180		8,000	16,180		46,200		38,500	-	84,700
14	Indirect Plant		85,960		15,610	101,570		170,200		41,500	-	211,700
15	Grand Total	\$150,000	\$164,000	\$70,000	\$40,000	\$424,000	\$28,600	\$300,320	\$38,740	\$175,340	-	\$543,000
												\$778,200

GVC-LMR 3-17-59

HSW(2)

EOD

CHEMICALS & FUEL CONSUMED
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.	Chemicals			Other Chemicals Amount	Total Chemicals Amount	Fuel Consumed		
	Acid		Catalyst			Gas Std.Bbls.	Liquid Std.Bbls.	Total Fuel Amount
	Tons	Amount						
1. VPS				\$15,704	\$15,704	50,410	85,790	\$251,289
2. Decarbonizer						5,630		10,387
3. F.C.C.U.			660.0	15,263	200,063	60,000	139,480(2)	368,041
4. Poly (Bbls. Polymer)			38.4	15,740	35,708			
5. Catalytic Reforming			19.4	3,384	73,224	85,000	49,260	247,710
6. Alkylation(Bbls.Alky)	5,243	\$104,000(1)		26,662	130,662	73,900		136,346
7. Hydrotreating			56.3		28,355			
8. Shipping - Bulk				3,990	3,990			
9. RP&S								
10. BS&W								
11. Waste Oil Recovery								
12. Total Direct		\$104,000	774.10	\$80,743	\$487,706	274,940	274,530	\$1,013,773
13. SP&W						135,000	135,000	498,150
14. Indirect Plant						500		923
15. Grand Total	5,243	\$104,000	774.10	\$80,743	\$487,706	410,440	409,530	\$1,512,846

(1) 34,669 deducted for sale of spent acid
(2) Total Fuel charged to F.C.C.U. used at CO Boiler for Steam Production

GVC-LMR 3-17-59

HSW(2)

EOD

WA-TEX 009240

DETAILED PLANT DISTRIBUTION OF
STEAM, POWER, AND WATER
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.	Operating	STEAM			POWER (1)			Total Amount
		MM BTU	Fuel Consumed Bbls.	Other Cost Amount	K.W.H.	Fuel Consumed Bbls.	Other Cost Amount	
1.	VPS	328,149	62,204	\$114,776	\$81,481	\$196,257		
2.	Decarbonizer	235,928	44,722	82,512	58,582	141,094		
3.	F.C.C.U.	1,025,894	194,468	358,793	254,734	613,527		
4.	Polymerization	357,406	67,750	124,990	88,746	213,736		
5.	Cat Reforming	70,063	13,280	24,502	17,397	41,899		
6.	Alkylation	523,138	99,166	182,961	129,897	312,858		
7.	Hydrotreating	81,481	15,445	28,496	20,232	48,728		
8.	Shipping - Bulk	23,220	4,401	8,120	5,766	13,886		
9.	RP&S	694,973	131,739	243,058	172,564	415,622		
10.	BS&W	28,380	5,380	9,926	7,047	16,973		
11.	Waste Oil Recovery	28,380	5,380	9,926	7,047	16,973		
12.	Total	3,397,012	643,935	\$1,188,060	\$843,493	\$2,031,553		
13.	SP&W							
14.	Indirect Plant	279,410	52,964	97,718	69,379	167,097		
15.	Grand Total	3,676,422	696,899	\$1,285,778	\$912,872	\$2,198,650		

(1) All power is purchased

GVC-LMR 3-17-59

HSW(2)

EOD

WA-TEX 009241

WA-TEX009240

DETAILED PLANT DISTRIBUTION OF
STEAM, POWER AND WATER
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.	Operating	M. Gals	WATER		Total SP&W Amount	Total Plant Amount
			Fuel Bbls.	Consumed Other Cost Amount		
1.	VPS	167,300	227	\$ 419	\$ 38,654	\$ 760,214
2.	Decarbonizer	35,300	48	89	8,211	217,132
3.	F.C.C.U.	382,800	518	956	88,194	449,805
4.	Polymerization	91,500	124	229	21,126	422,273
5.	Cat Reforming	91,800	125	231	21,310	557,735
6.	Alkylation	119,000	161	297	27,399	662,813
7.	Hydrotreating	113,000	153	282	26,015	436,501
8.	Shipping - Bulk	3,000	4	7	646	78,949
9.	RP&S	14,200	19	35	3,229	634,969
10.	BS&W	5,900	8	15	1,384	26,771
11.	Waste Oil Recovery	5,900	8	15	1,384	32,664
12.	Total	1,029,700	1,395	\$ 2,575	\$237,552	\$ 2,464,763
					\$240,127	\$ 4,279,826
13.	SP&W					(2,703,136)
14.	Indirect Plant	38,000	51	95	8,764	238,373
					8,859	1,349,526
15.	Grand Total	1,067,700	1,446	\$ 2,670	\$ 246,316	\$ 5,629,352
					\$ 248,986	

WA-TEX 009242

DETAILED DISTRIBUTION OF CHEMICALS CONSUMED
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.	Chemical	V.P.S. Quantity	V.P.S. Amount	F.C.C.U. Quantity	F.C.C.U. Amount	POLY Quantity	POLY Amount	ALKYLATION Quantity	ALKYLATION Amount	HYDROTREATING Quantity	HYDROTREATING Amount	RP&S Quantity	RP&S Amount
1.	Anti-Foam DC#200	1,112	\$3,470					10,486,000	\$104,000				
2.	Acid, Alky Sulfuric												
3.	Catalyst												
4.	UOP-R-5 Platf. Recon.												
5.	AERO, HDS ₂ , Hydro.									18,600	\$19,425		
6.	Spent (Unifiner & Hydrobon)									94,000	8,930		
7.	F.C.C.U., Davison MS-F1												
8.	UOP#1 Poly			1,320,000	\$184,800								
9.	Caustic Soda	263,336	7,466	526,664	14,931	76,800	\$19,968	263,336	7,466				
10.	Hydrogen												
11.	Litharge, Spec#29			2,200	332								
12.	Crude Mercaptan					2,480	707						
13.	Monoethanolamine												
14.	Propylene Dichloride					6,900	102	24,300	361				
15.	Sodium Chloride							73,300	18,692				
16.	Triethanolamine							750	143				
17.	Sodium Fluoride												
18.	Visco, #678	1,991	4,768									268,800	\$3,990
19.	Total		\$15,704		\$200,063		\$35,708		\$130,662		\$28,355		\$3,990

Line 10 in cu. ft.
Line 12 & 18 in Gals.
Remainder of lines in lbs.

GVC-LMR 3-17-59

HSW(2)

EOD

DETAILED DISTRIBUTION OF CHEMICALS CONSUMED
ESTIMATED OPERATING EXPENSES - YEAR 1959
PUGET SOUND WORKS

Line No.	Chemical	CAT. REFORMING		TOTAL	
		Quantity	Amount	Quantity	Amount
1.	Anti-Foam DC#200			1,112	\$ 3,470
2.	Acid, Alky Sulfuric			10,486,000	104,000
3.	Catalyst				
4.	UOP-R-5 Platforming Reconditioned	38,800	\$69,840	38,800	69,840
5.	AERO, HDS ₂ , Hydrotreater			18,600	19,425
6.	Spent (Unifiner & Hydrobon)			94,000	8,930
7.	F.C.C.U., Davison MS-F1			1,320,000	184,800
8.	UOP#1 Poly			76,800	19,968
9.	Caustic Soda			1,580,000	44,794
10.	Hydrogen	240,000	2,664	240,000	2,664
11.	Litharge, Spec #29			2,200	332
12.	Crude Mercaptan	550	645	550	645
13.	Monoethanolamine			2,480	707
14.	Propylene Dichloride	1,050	75	1,050	75
15.	Sodium Chloride			300,000	4,453
16.	Triethanolamine			73,300	18,692
17.	Sodium Fluoride			750	143
18.	Visco, #678			1,991	4,768
19.	Total		\$73,224		\$487,706

Line 10 in cu. ft.
Line 12 & 18 in Gals.
Remainder of lines in Lbs.

WA-TEX 009244

DETAILED PLANT DISTRIBUTION OF
STEAM, POWER, AND WATER
ESTIMATED OPERATING EXPENSES-YEAR 1959
PUGET SOUND WORKS

STEAM

Line No.	Operation	Fuel Consumed		Purchased Power		Purchased Water		Other Cost		Total
		MM BTU	Barrels	Amount	Amount	Amount	Amount	Amount	Amount	
1	VPS	328,149	39,367	\$ 72,632	\$ 6,453	\$ 2,571	\$ 114,601	\$	\$ 196,257	
2	Decarbonizer	235,928	28,303	52,219	4,640	1,848	82,387		141,094	
3	F. G. C. U.	1,025,894	123,072	227,069	20,175	8,037	358,246		613,527	
4	Polymerization	357,406	42,877	79,109	7,029	2,800	124,798		213,736	
5	Cat. Reforming	70,063	8,405	15,507	1,378	549	24,465		41,899	
6	Alkylation	523,138	62,759	115,790	10,288	4,098	182,682		312,858	
7	Hydrotreating	81,481	9,775	18,035	1,602	638	28,453		48,728	
8	Shipping-Bulk	23,220	2,785	5,138	457	182	8,109		13,886	
9	RP&S	694,973	83,373	153,823	13,667	5,444	242,688		415,622	
10	ES&W	28,380	3,405	6,282	558	222	9,911		16,973	
11	Waste Oil Recovery	28,380	3,405	6,282	558	222	9,911		16,973	
12	Total	3,397,012	407,526	\$751,886	\$ 66,805	\$26,611	\$1,186,251		\$2,031,553	
13	SP&W									
14	Indirect Plant	279,410	33,519	61,842	5,495	2,189	97,571		167,097	
15	Grand Total	3,676,422	441,045	\$813,728	\$ 72,300	\$28,800	\$1,283,822		\$2,198,650	

DETAILED PLANT DISTRIBUTION OF
STEAM, POWER, AND WATER
ESTIMATED OPERATING EXPENSES-YEAR 1959
PUGET SOUND WORKS

POWER

Line No.	Operation	KWH	Amount	Other Cost Amount	Total Amount
1	VPS	2,620,000	\$ 18,152	\$ 414	\$ 18,566
2	Decarbonizer	3,480,000	24,111	550	24,661
3	F. C. C. U.	5,650,000	39,145	893	40,038
4	Polymerization	2,280,000	15,797	360	16,157
5	Gat. Reforming	1,520,000	10,531	240	10,771
6	Alkylation	532,000	3,686	84	3,770
7	Hydrotreating	5,200,000	36,027	822	36,849
8	Shipping-Bulk	1,320,000	9,145	209	9,354
9	RP&S	4,350,000	30,138	688	30,826
10	ES&W	295,000	2,044	47	2,091
11	Waste Oil Recovery				
12	Total	27,247,000	\$ 188,776	\$ 4,307	\$ 193,083
13	SP&W				
14	Indirect Plant	8,808,000	\$ 61,024	\$ 1,393	\$ 62,417
15	Grand Total	36,055,000	\$ 249,800	\$ 5,700	\$ 255,500

WA-TEX 009246

DETAILED PLANT DISTRIBUTION OF
STEAM, POWER, AND WATER
ESTIMATED OPERATING EXPENSES-YEAR 1959
PUGET SOUND WORKS

WATER

Line No.	Operation	M Gals.	Purchased Water Amount	Power Amount	Fuel Consumed Barrels	Other Cost Amount	Water Total Amount	Total SP&W Amount	Total Plant Amount
1	VPS	167,300	\$13,820	\$18,317	227	\$6,517	\$39,073	\$253,896	\$760,214
2	Decarbonizer	35,300	2,916	3,865	48	1,430	8,300	174,055	217,132
3	F. C. C. U.	382,800	31,623	41,913	518	14,658	89,150	742,715	449,805
4	Polymerization	91,500	7,559	10,018	124	3,549	21,355	251,248	422,273
5	Cat. Reforming	91,800	7,583	10,051	125	3,676	21,541	74,211	557,735
6	Alkylation	119,000	9,830	13,029	161	4,540	27,696	344,324	662,813
7	Hydrotreating	113,000	9,335	12,372	153	4,308	26,297	111,874	436,501
8	Shipping-Bulk	3,000	248	328	4	70	653	23,893	78,949
9	RP&S	14,200	1,173	1,555	19	501	3,264	449,712	634,969
10	B&SW	5,900	487	646	8	251	1,399	20,463	26,771
11	Waste Oil Recovery	5,900	487	646	8	251	1,399	18,372	32,664
12	Total	1,029,700	85,061	\$112,740	1,395	\$2,575	\$240,127	\$2,464,763	\$4,279,826
13	SP&W							(2,703,136)	
14	Indirect Plant	38,000	3,139	4,160	51	\$95	\$8,859	\$238,373	\$1,349,526
15	Grand Total	1,067,700	\$88,200	\$116,900	1,446	\$2,670	\$248,986		\$5,629,352

GVC-JPE 4-2-59
HSW (2)
EOD