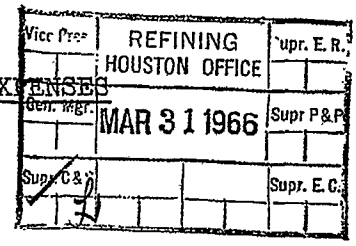
PLAINTIFF'S EXHIBIT

TEX-37

TEXACO Anacortes, Washington 98221, March 29, 1966



FORM R-1211-E
ESTIMATED OPERATING EXPENSES
YEAR 1966

AIR MAIL

Mr. J. R. Lemmer

Houston, Texas

This is a reply to your memorandum of 3-23-66, above subject.

We apologize for the inaccuracies that have appeared in Form R-1211-E, particularly the Steam, Power and Water distribution. Our engineers make estimates of SP&W consumption based on what they consider a representative week's running inasmuch as the day-by-day clerical tabulations have been eliminated. Some inaccuracies may result. We also point out that Form R-1503 as calculated and printed by the computer contains inaccuracies in yields, particularly on the Polymerization and Alkylation Units which are at "the end of the line".

It appears the R-1503 estimate of Polymer gasoline production should have been 364,000 barrels rather than 516,058 barrels. Our estimate of fuel consumed for polymerization appears to be reasonable when based on the data available for preparing the estimate, although the estimate for 1965 might have been a little high.

The estimate of 53,000 pounds of Poly Catalyst was definitely too low; an estimate of 120,000 pounds would probably be more accurate. There has been considerable improvement in catalyst consumption in the last year or so and we think an estimate of 120,000 pounds would be reasonable.

We have reworked the purchased power section of the steam, power and water distribution and submit the following if you wish to incorporate it in Form R-1211-E.

Unit	Purchased Power Amount
VPS	27,200
BDU	21,000
FCCU	66,800
Poly	20,000
CRU	14,300
Alky	16,700
HTU	33,200
Shipping	7,500
RP&S	28,700

WA-TEX 008911

WA-TEX008911

Unit	Purchased Power Amount
BS&W	1,900
Waste Oil	500
Total	237,800
Indirect	47,800
GRAND TOTAL	285,600

G. V. CARROLL

WWC-JPE

WA-TEX008912

Miscellaneous - Fuel Only (1)	.095	.031	.063	.218	.082	.193	.024	.005
Purchased Power	(.026)	-	(.064)	-	-	-	-	-
Purchased Water	.021	.002	.014	.098	.008	.036	.006	.003
Purchased Utilities in Auxiliaries	.006	.001	.004	.053	.002	.013	.001	-
Chemicals	-	.002	-	-	-	-	-	-
Acid								
Hydrobon Catalyst	.009	-	-	-	-	.249	-	-
Other Catalyst	-	-	-	-	-	-	-	-
Chemicals - Auxiliaries	.028	-	.053	.143	.020	-	.002	-
Other Chemicals	-	-	-	-	-	-	-	-
Total Chemicals	.002	.001	.001	.053	.002	.007	-	-
Royalties (Running Royalties)	.039	.001	.054	.196	.022	.256	.002	-
TOTAL DIRECT VARIABLE CHARGES	.001	.001	-	-	-	-	-	-
	.136	.038	.071	.565	.114	.498	.033	.008
SEMI-VARIABLE CHARGES								
Operators - (ex T&I)	.036	.006	.022	.157	.018	.083	.006	.009
Test and Inspection - Labor	.005	-	.007	.018	.002	.013	.001	-
Maintenance - Labor	.020	.002	.012	.105	.009	.029	.002	.007
Test and Inspection-Contract Work	.008	-	.019	.009	-	.003	-	-
Maintenance - Contract Work	.002	-	.001	.009	.002	.005	-	-
Test and Inspection - Material	.011	-	.026	.006	.003	.002	.001	-
Maintenance - Material	.013	.001	.009	.054	.007	.023	.002	.004
Employe Benefits	.018	.002	.013	.085	.009	.038	.003	.005
Indirect Plant - Labor	.030	.004	.020	.138	.014	.061	.005	.007
Indirect Plant - Other	.027	.003	.019	.131	.014	.058	.004	.007
Steam - Charges Other Than Fuel	.023	.003	.025	.108	.004	.096	.001	.002
Power - Charges Other Than Fuel & Purch. Power	-	-	-	-	-	-	-	-
Water - Charges Other Than Fuel & Purch. Water	.004	.001	.003	.028	.002	.010	.001	-
Auxiliaries-Other Than Fuel, Chemicals & Purch. Util.	-	.007	-	-	-	-	-	-
Miscellaneous - Other	(.015)	-	(.037)	-	-	-	-	-
Rentals and Royalties	-	-	-	-	-	-	-	-
TOTAL SEMI-VARIABLE CHARGES	.182	.029	.139	.848	.084	.421	.026	.041
NON-VARIABLE CHARGES								
Depreciation	.120	.014	.078	.403	.050	.228	.017	.037
Insurance & Taxes Related to Investment	.038	.005	.024	.118	.016	.069	.005	.013
General Office and General Overhead & Past Serv. Pens.	.028	.004	.019	.131	.014	.058	.005	.007
Auxiliaries (B&OH)	-	.008	-	-	-	-	-	-
Rentals and Royalties	-	-	-	-	-	-	-	-
TOTAL NON-VARIABLE CHARGES	.186	.031	.121	.652	.080	.355	.027	.057
TOTAL EXPENSE	.504	.098	.331	2.065	.278	1.274	.086	.106

Notes: (1) Credit For Fuel Only in Steam Produced from CO and Waste Heat Boilers;

Fluid Catalytic Cracking	485,816 Barrels @ $1.00
Total Crude Refining Expense	485,816 Barrels @ $1.00

The estimated divisor represents charge to unit; except for Polymerization, which is based on true Polymer production; and Alkylation, which is based on total Alkylate production.

VPS not scheduled for T&I in 1964.

JRL-RJ
6-1-64

WA-TEX008913

[redacted]

M-580-11 Standard Expenses 18
Puget Sound Plant
Year 1966

WA-TEX008914

~~[illegible]~~

MEMORANDUM LETTER

INSTRUCTIONS—CANCELS LETTER(S) OF _____ SIGNED BY _____ FORM 5-45 1-62-31M PADS

☐ PERMANENT ☐ ROUTINE ☐ TEMPORARY

Air Mail

Mr. J. R. Lemmer Anacortes, Wash 6-3 1966
(Location) (Date)

Houston Form R-1211-E
(Subject)

Estimated Operating Expenses-1966

Vice Pres.	REFINING HOUSTON OFFICE	Supr. E.R.
Gen. Mgr.	JUN 8 1966	Supr P&P
Supr.		Supr. E.C.

We have checked the differences called to our attention in your Memorandum of 5-31-66, above subject, and submit the following to be used in place of the figures shown:

1966

Average Steam Cost Per M Pounds $. 4093

Average Water Cost Per M Gallons $. 2447

Yours very truly,

G Carroll

By _____

If letter requires reply prepare in triplicate, forwarding original and duplicate, and retain copy.

lwwe/

Make explanation below. Return original. Retain duplicate.

_____ 19____ By _____

PRINTED IN U. S. A.

WA-TEX 008915

WA-TEX008915

MEMORANDUM LETTER

INSTRUCTIONS—CANCELS LETTER(S) OF_____ SIGNED BY_____ FORM S-45 1-62-31M PADS

☐ PERMANENT ☐ ROUTINE ☐ TEMPORARY

Air Mail

Mr. J. R. Lemmer

Houston

Anacortes, Wash (Location) 6-3 (Date) 1966

(Subject) Form R-1211-E

Estimated Operating Expenses - 1966

We have checked the differences called to our attention in your Memorandum of 5-31-66, above subject, and submit the following to be used in place of the figures shown:

1966	
Average Steam Cost Per M Pounds	$.4093
Average Water Cost Per M Gallons	$.2447

Yours very truly,

Signed: G. V. CARROLL

By_____

If letter requires reply prepare in triplicate, forwarding original and duplicate, and retain copy.

WWJC/

Make explanation below. Return original. Retain duplicate.

_____ 19____

By_____

PRINTED IN U. S. A.

WA-TEX 008916

WA-TEX008916

EH

Houston, Texas 77052, May 31, 1966

FORM R-1211-E
ESTIMATED OPERATING EXPENSES
YEAR 1966

REFINING HOUSTON OFFICE		
VICE PRES.		
GEN. MGR.		
SUPVR. COST & ST.		
SUPRV. EMP. REL.		
Supry. Proc. & Prod.		
SUPRV. EXP. CONT.		

M E M O R A N D U M

Mr. G. V. Carroll
Anacortes, Washington

Please refer to Exhibit 3 of subject form and reported average steam cost of $.2629 per M pounds, and average water cost of $.0589 per M gallons.

Steam cost in 1964 was $.492 per M pounds, and water cost was $.310 per M gallons as extracted from Exhibit 4 of the 1964 report and summarized under the Steam and Water Department sections of the "Analysis" summary of your copy of R-1211-F.

We will appreciate your checking these differences and advising promptly as we are holding up issuance of the 1966 R-1211-F pending receipt of your reply.

J. R. LEMMER

EHF-MLM

WA-TEX 008917

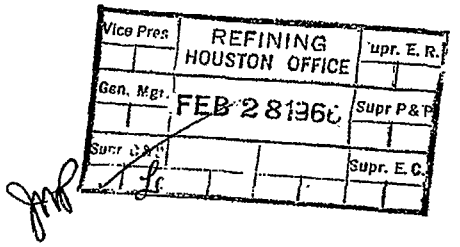
WA-TEX008917

T E X A C O

Anacortes, Washington 98221, February 23, 1966

3-21-66 checked against Budget (within close limits)

FORM R-1211-E
ESTIMATED OPERATING EXPENSES
YEAR 1966



AIR MAIL

PERSONAL

MEMORANDUM

Mr. J. R. Lemmer

Houston, Texas

We are submitting herewith Estimated Crude Refining Expenses, Form R-1211-E. Exhibits 1, 2, 3 and 4.

The activities shown on the attached statement are in agreement with those shown in the Annual Budget, Form R-1259, as submitted except, Labor was increased by $88,490 and Contract Work was increased by $18,200 because of the 4½% wage increase which became effective after the budget was submitted. No new equipment is to start up and none of the present equipment is to be shut down during the year.

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

FCCU - Credit for Steam	(894,700)	
Sub-total Direct Plant		$ (894,700)
Charge Steam Dept. for above item	894,700	
Purchased Power	285,600	
Purchased Water	117,200	
Total SP&W		1,297,500
Vacation Pay	149,500	
A&S Benefits	25,510	
Telephone	13,100	
Telegraph	2,400	
Contributions & Donations	200	
Memberships & Subscriptions	30	
Postage	1,300	
Traveling & Personal	8,000	
All Other Expense	9,370	
Marine Dept-Rentals & Services	(11,200)	
Sales Dept.-Electric Sign	(800)	
Rentals	6,315	
Sub-total Indirect		203,725
Grand Total Miscellaneous Expense		$606,525

Included in Material Operating is an estimate of $6,980 for Printing and Stationery and excluded from Material Operating is an estimate of $3,000 for Hydrogen which has been included with Chemicals.

WA-TEX 008918

Labor costs are based on the following manpower:

	No. Men	Cost
Calendar Personnel & Other Staff	6	0
Construction & Outside Charges	4	31,400
Plant Expense - Form R-1259	258	2,054,730
Total Labor	268	2,086,130
Less: Vacation Pay		149,500
A&S Benefits		25,510
Construction & Outside		31,400
Labor Distributed on Form R-1211-E as Labor		1,879,720

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

	FCCU
M Lbs. Steam	2,211,000
BTU's/Lb.	1,326
MM BTU's	2,932,000
Total Steam Cost basis Unit Cost previous report	.30516
Credit for Steam	$ 894,700
Component Costs:	
Labor	199,071
Material	28,809
Contract Work	626
Fuel-Bbls.	427,747
Fuel-Cost	629,332
Transfers of Steam	(14,315)
Transfers from Power	39,725
Trnasfers from Water	11,452
	$ 894,700

G. V. CARROLL

WWC-JPE

JRL(2)

LHB (Bookkeeping)

Attachments

WA-TEX008919

Form R-1211-E
Exhibit I

PLANT LABOR AND CONTRACT WORK
ESTIMATED OPERATING EXPENSES - YEAR 1966
PUGET SOUND PLANT

Line No.		Activities Barrels	LABOR: Operators-Ex. I&T Number Employes	Operators-Ex. I&T $ Amt.	I&T $ Amt.	Maint. $ Amt.	Total $ Amt.	Contract Work: I&T	Contract Work: Maint.	Contract Work: Total
1	VPs	21,493,000	14.0	110,500		58,100	168,600		43,400	43,400
2	Decarbonizer		(1)			26,700	26,700		5,300	5,300
3	FCCU	7,918,135	18.0	148,400	56,900	79,300	284,600	287,400	6,700	294,100
4	Poly (Bbls. Polymer)	* 364,000 ~~516,058~~	7.0	56,400		34,000	90,400		5,300	5,300
5	Catalytic Reforming	3,096,000	7.0	56,400		23,700	80,100		5,500	5,500
6	Alkylation (Bbls. Alkylate)	702,189	7.0	56,600		30,800	87,400		9,500	9,500
7	Hydrotreating	9,660,611	7.0	56,400	17,100	13,500	87,000	37,600	5,500	43,100
8	Shipping Bulk	20,068,494	(2)			33,800	33,800		6,700	6,700
9	RP&S		20.0	195,300		81,400	276,700		36,100	36,100
10	BS&W		0.5	3,800			3,800			
11	Waste Oil Recovery		0.5	3,800			3,800			
12	Total Direct	20,445,000	81.0	687,600	74,000	381,300	1,142,900	325,000	124,000	449,000
13	S.P. & W.		13.0	98,200		115,400	213,600		2,100	2,100
14	Indirect Plant		14.0(3)	113,700		409,520	523,220-		28,800	28,800
15	GRAND TOTAL		108.0	899,500	74,000	906,220	1,879,720	325,000	154,900	479,900

(1) Operated by VPS Personnel
(2) Included in RP&S Dock Forces
(3) Includes 13 from Laboratory and 1 from Effluent Treating

WA-TEX 008920

GVC-JPE 2-23-66

* PsP memo GVC → JRL 3-29-66

JRL (2)

LHB (Bookkeeping)

1,142,000 = .0
874967 +

WA-TEX008920

R-1211-E
Schedule II

MATERIAL, MISCELLANEOUS EXPENSE AND FUEL CONSUMED
ESTIMATED OPERATING EXPENSES - YEAR 1966
PUGET SOUND PLANT

Line No.		Material			Miscl. Expense	Fuel Consumed		
		I&T	Maint.	Total		Total Gas Std. Bbls.	Liquid Std. Bbls.	Total Fuel Amount
1	VPS		26,500	26,500		426,759	10,058	797,700
2	Decarbonizer		17,100	17,100		21,554	0	39,600
3	FCCU	225,000	62,800	287,800	(894,700)(*)	60,300	60,300	177,400
4	Poly (Bbls. Polymer)		18,400	18,400		-	-	-
5	Catalytic Reforming		19,200	19,200		199,729	21,554	390,100
6	Alkylation (Bbls. Alkylate)		14,900	14,900		-	-	-
7	Hydrotreating	8,000	19,400	27,400		241,399	0	440,500
8	Shipping Bulk		11,200	11,200		-	-	-
9	RP&S		58,100	58,100		-	-	-
10	BS&W		900	900		-	-	-
11	Waste Oil Recovery		900	900		-	-	-
12	Total Direct	233,000	249,400	482,400	(894,700)	949,741	91,912	1,845,300
13	SP&W		44,600	44,600	1,297,500	196,022	196,225	577,100
14	Indirect Plant		187,250	187,250	203,725	3,000	-	5,305
15	GRAND TOTAL	233,000	481,250	714,250	606,525	1,148,763	288,137	2,427,705

	Std. Bbls.	$/Bbl.	Amount
Gas Produced	1,123,263	1.820	2,044,338
Liquid Fuel	288,137	1.107	319,087
Purchased Gas	25,500	2.521	64,280
TOTALS	1,436,900	1.690	2,427,705

(*) Includes $629,332 Fuel

GVC-JPE 2-23-66

JRL (2)

LHB (Bookkeeping

WA-TEX 008921

WA-TEX008921

Form R-1211-E
Exhibit III
Sheet 1 of 2

DETAILED DISTRIBUTION OF CHEMICALS CONSUMED
ESTIMATED CRUDE REFINING OPERATING EXPENSES - YEAR 1966
PUGET SOUND PLANT

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
1	Acid, Alky Sulfuric-Tons							8,740	205,600
2	Anti-Foam DC-200-Lbs.	585	1,300						
3	Catalyst: -								
4	HDS-2 Hydrotreater-Lbs.								
5	Davison F-1-13-Tons			1299.8	447,600	120,000 ~~53,000~~	33,600 ~~14,700~~		
6	UOP #1 Poly-Lbs.								
7	UOP-R-5 Platinum-Lbs.								
8	Caustic Soda - Lbs.			156,000	4,800	147,000	4,400	78,500	2,300
9	Monoethanolamine-Lbs.					33,000	9,400		
10	Nalco 537-D-Gals.	4,890	11,400						
11	Sodium Chloride - Lbs.					15,000	200	263,000	4,000
12	Hydrogen - Cu. Ft.								
13	TOTAL		12,700		452,400		~~28,700~~ 47,600		211,900

GVC-JPE 2-23-66

JRL(2)

LHB (Bookkeeping)

See Correction in PSP ltr 3-29-66

WA-TEX 008922

WA-TEX008922

Form R-1211-E
Exhibit IV
Page 1 of 2

STEAM, POWER, & WATER EXPENSES
ESTIMATED OPERATING EXPENSES - YEAR
PUGET SOUND PLANT

Line No.		Barrels	Amount	Purchased Power	Purchased Water	Other Cost	Total SP&W		Total Plant	
1	VPS	133,100	195,800	~~29,500~~ 27,700	22,100	85,300	~~323,700~~ 330,400		~~1,372,600~~	1,379,300
2	Decarbonization	65,700	96,700	~~25,900~~ 21,000	3,800	42,100	~~168,500~~ 163,600		~~257,200~~	252,300
3	FCCU	255,900	376,300	~~44,600~~ 46,800	36,700	164,000	~~621,600~~ 643,800		~~1,223,200~~	1,245,400 330,700 OK
4	Polymerization	63,300	93,100	~~17,900~~ 20,100	15,300	40,600	~~166,900~~ 169,000		~~309,700~~	~~330,700~~ 311,800
5	Catalytic Reforming	16,700	24,600	~~12,000~~ 14,300	8,900	10,700	~~56,200~~ 58,500		~~595,500~~	597,800
6	Alkylation	118,300	174,000	~~4,200~~ 16,700	11,500	75,800	~~265,500~~ 278,000		~~589,200~~	601,700
7	Hydrotreating	10,900	16,100	~~40,800~~ 33,200	11,800	7,000	~~75,700~~ 68,100		~~677,300~~	669,700
8	Shipping Bulk	4,600	6,800	~~10,800~~ 7500	400	3,000	~~21,000~~ 17,700		~~72,700~~	69,400
9	RP&S	67,800	99,700	~~38,200~~ 25700	1,700	43,400	~~183,000~~ 173,500		~~559,500~~	550,000
10	BS&W	4,600	6,800	~~2,300~~ 1900	600	3,000	~~12,700~~ 12,300		~~17,400~~	17,000
11	Waste Oil Recovery	7,700	11,400	—0— 500	600	5,000	~~17,000~~ 17,500		~~21,700~~	22,200
12	Total	748,600	1,101,300	~~217,200~~ 237,800	113,400	479,900	~~1,911,800~~ 1,932,400		5,696,000	~~5,716,600~~ 5,730,500
13	S.P. & W.						(2,134,900)		0,000	
14	Indirect Plant	71,394	105,132	~~68,480~~ 47,800	3,800	45,768	~~223,100~~ 202,500		~~1,171,400~~	1,150,800
15	GRAND TOTAL	819,994	1,206,432	285,600	117,200	525,668	0,000		~~6,867,400~~	6,886,300

D36 1964 55
106

8923

2 255 000
1 341 300
3 596 300
1 427 747
$1,747

Changes based
PSP ltr
GVG → JRL 7/29/66

WA-TEX 008923

WA-TEX008923

STEAM, POWER & WATER EXPENSES
ESTIMATED OPERATING EXPENSES YEAR 1966
PUGET SOUND PLANT

Distribution	Steam	Power	Water	Total
Fuel - Barrels	814,135		5,859	819,994
Fuel - Cost	1,197,813		8,619	1,206,432
Purch. - Power	36,139	187,897	61,564	285,600
Purch. - Water	10,323		106,877	117,200
Other Cost	462,161	2,500	61,007	525,668
TOTAL COST	1,706,436	190,397	238,067	2,134,900
Avg. Steam Cost / M Lbs.	$.262857			
Avg. Power Cost / KW		$.005238		
Avg. Water Cost / M Gals.			$.058939	
Purchased Utility Rates				
* Last Increment of Power /KW		$.000000		
Last Increment of Water /M Gal.			$.039000	

SP&W Fuel Summary

Total SP&W Fuel From Exhibit II	Barrels	392,247
Plus FCCU Waste Heat Fuel Credit	Barrels	427,747
TOTAL SP&W FUEL TO DISTRIBUTE	Barrels	819,994

* PSP has a power contract based on a peak demand of 8010 KW. No additional payment is required unless demand exceeds 8010 KW, and if demand exceeds 8010 KW the monthly charge will be increased by $2.31 per KW in excess of 8010.

GVC-JPE 2-23-66

JRL (2)

LHB (Bookkeeping)

WA-TEX 008924

WA-TEX008924

TEXACO

3-21-66

PSP

Budget Vs R-1211-E

6,678,045

Budget Request		
Reductions	<7300>	
	<51,100>	
	<6400>	
	<14,100>	
	<23,300>	<106,200>
Labor Addn - Request Understated		70,000
Sub-total		<36,200>
4 1/2% —	74,400	
—	1150	
—	12200	
—	6000	
	12200	105,950
Sub		69,750

Note:
Acctg. Not in Budget Labor
but incl in R-1211-E Indirect
$10000 + Labor adj } Not in R-1211-E
or Budget Cuts

WA-TEX 008925

WA-TEX008925

TEXACO

3-21-66

PSP
Budget No. R-1211-E

Item	Budget	R-1211-E	Budget Order R-1211-E
Dist Labor	$1,961,600	$1,879,720	$81,880
Added WSD			70,000
			11,880
Curbe Total	459,300	479,900	(20,600)
Labor-Kirk			(19,815)
Material Total	710,000	714,250	(4,250)
Fuel	2,427,705	2,427,705	-0- ✓
Chem	756,300	759,300	(3000)
Purch Power			-0- ✓
✓ Water			-0- ✓

A ½% Over PSD → 106,690 ✓
105,910 ✓
780

A ½% per WSD

WA-TEX008926

TEXACO

7/23/66 BSP – R-1211-E	#6,867,400
R-1259 per TRL 12/27/65	6,742,695
	124,705
Note 9-2-65 Request	#6,678,045
Plus 12/27/65 Adjustments	64,650
Cuts +4% +70,000 Man Labor	
R-1259 Per TRL	#6,742,695
Per PSP	
9-2-65 Request	#6,678,045
Min Cklist Adj.	(9,400)
	#6,668,645
Plus 4½% Per Plant	88,490
	18,200
Adj Total	#6,775,335
Less	6,742,695
Δ?	32,640

WA-TEX008927

TEXACO

BP - R-1211-E $6,867,400

Budget 6,748,045

Δ 119,355

Planning 4½% { 88,490 / 18,200 } 106,690

~~Orig Request 6,678,045~~

~~$6,784,735~~

$6,867,400

-106,690

6,760,710

Requested 9-2-65 6,678,045

82,665 ?

(10,000 - 600) 9,400

92,065

WA-TEX008928

~~6,867,400~~
~~6,784,~~

6,742,695
~~82,665~~ 85,393

~~6,825,360~~

Budget 6,828,088
R-1211-E 6867,400

$39,312

Matl <4,250>
~~Cuk.~~ 20
Chem <3,000>

WA-TEX008929

TEXACO

#6,748,045 orig adj. Budget Bureau

WA-TEX008930

TEXACO

3-11-65

Puget Sound

Budget Vs R-1211-E

Item	Budget	R-1211-E	Budget over R-1211-E △
Plant Labor	1,937,000	1,855,900	81,100*
Cuk oper	80,500	82,900	<2400>
✓ Rpos	118,800	119,100	<300>
✓ Sub-total	2,136,300	2057,900	78,400.
Material			
Oper	324,100	329,300	<5200>
Rpos	272,500	272,500	-0-
sub-total	596,600	601,800	<5200>
Chemicals	902,100*	902,100	-0-
* Ex 2200 H_2			
Fuel			
Bbls	1332 774	1,332,774	-0-
$	2127 200	2127 200	—
Unit	1.596	1.596	—
Purch Power	474,800	474,800	-0-
✓ Water	118 300	118 300	-0-
other	38,800	199,670	<160,870>
total	6,394,100	6,481,770	<87,670>

* Accounting 87630

WA-TEX 008931

Houston, Texas 77052, March 23, 1966

FORM R-1211-E
ESTIMATED OPERATING EXPENSES
YEAR 1966

AIR MAIL

MEMORANDUM

Mr. G. Carroll
Anacortes, Washington

This will refer to your memorandum of February 23, 1966, transmitting PSP's R-1211 for year 1966.

In analyzing the subject report for 1966 we note that fuel (SP&W) as well as UOP No. 1 catalyst, required for polymerization in 1966 does not appear consistent with that required for previous years considering true polymer production, as indicated by the following:

Item	1964	1965	1966
Barrels true polymer produced	319,353	397,142	516,058
Barrels of fuel (SP&W) for polymerization	76,193	102,969	63,300
Pounds of UOP No. 1 Catalyst	172,500	198,200	53,000

We also note that the power requirement for alkylation in 1966 apparently has dropped drastically. Whereas the total cost of power decreased by some 40%, the power required for alkylation has apparently decreased some 85% as indicated by the following:

Item	1964	1965	1966
Alkylate production - bbls.	665,873	767,146	702,189
Dollars of purchased power for alkylation	$ 24,584	$ 27,820	$ 4,200

Although there may be some reasons for the items drawn to your attention above, we would appreciate your identification of such reasons. We will then be in a better position to use this data for economic cost studies and other purposes.

J. R. LEMMER

WFH-MLM

WA-TEX008932

TEXACO

Bbls alkylate	665,873	767,146	702,189
	1964	1965	1966
Purch Power for alky	.037	.036	.006
	24,584	~~$77,87~~	$4,200
		27,820	
		18367,000	21,493000 ~~[illegible]~~
~~Voltage Charge (VPS)~~	~~18,870,000~~	~~18,990,000~~	~~21,493,000~~
~~Total Power Unit~~	~~.021~~	~~.017~~ ~~.027~~	~~.010~~
	~~$307,500~~	~~395,345~~	~~$285,600~~
	388,015	313,350	

WA-TEX 008933

WA-TEX008933

TEXACO

3-23-66

G. V. Carroll

Recurmemo 2/23/66, R-1211-E 1966, ~~Polymerization, Cost of Fuel Steam Power, Water & Fuel Valued @ $1.00 please note u~~

Comparison of Polymerization Cost and Activity for last 3 R-1211-E's:

	1964	1965	1966
Bbls True Polymer	~~350,000~~ 319,353 ✓	397,142	516,058
~~Purchased Power~~			
~~Total $~~	~~34,125~~	~~33,291~~	~~17,900~~
Poly. Fuel Barrels (SP&W)	76,193 ✓	102,969 ✓	63,300 ✓
Catalyst #'s Vol #1	172,500 lbs	198,200 lbs.	53,000 lbs
" $ "	$50,000	$57,800	$14,700
Caustic Soda Lbs	210,000 lbs	158,000 lbs	147,000 lbs
✓ ✓ $	$6740	$5200	$4400
MEA - #'s	40,000	25000 lbs.	33,000 lbs
✓ $	$12000	$7600	$9,400
Sodium Chloride #'s	3100	13,000	15000 lbs
✓ ✓ $	50	200	$200

WA-TEX 008934

WA-TEX008934

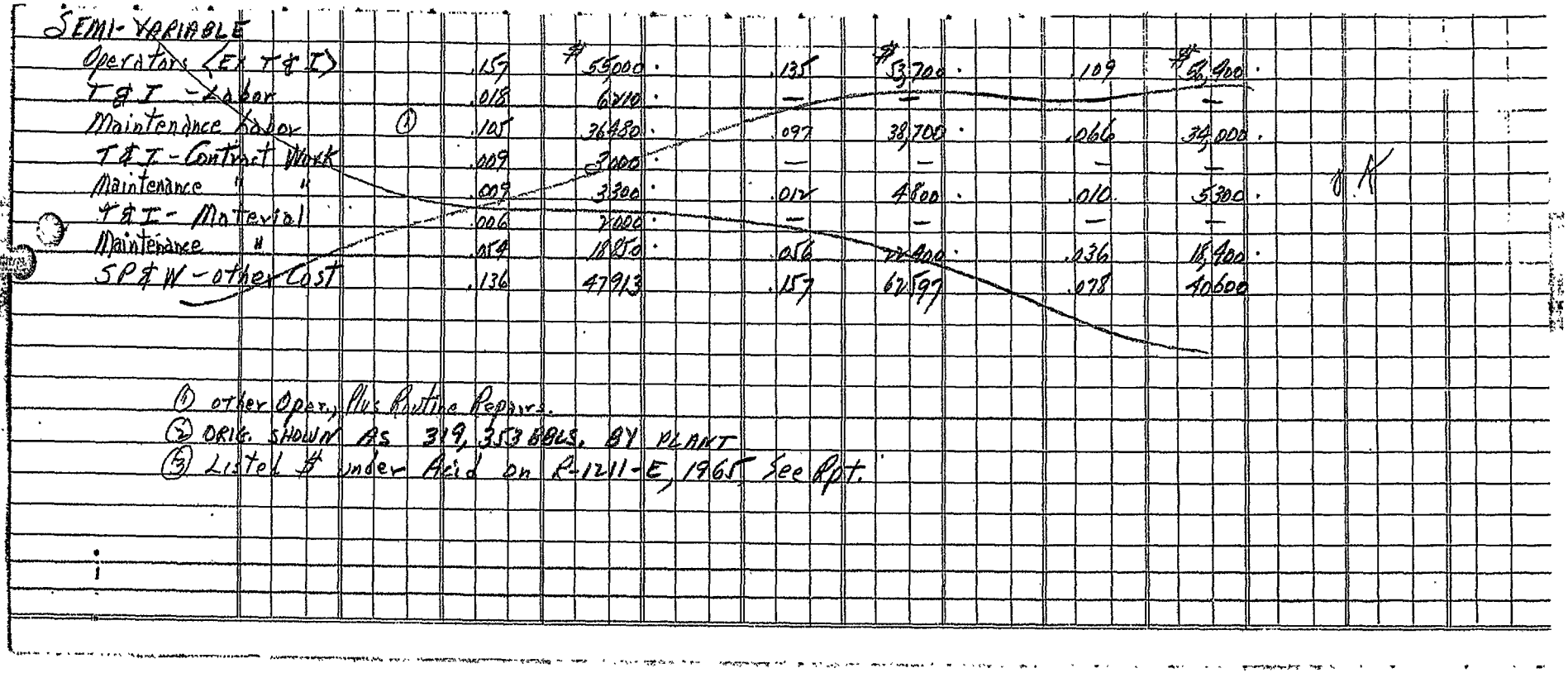
FORM G-102 (11-64) 350M

Propylene Plant - Comparison of Estimated Expenses
Polymerizations
Years 1964, 1965, and 1966

	1964		1965		1966	
Activity - Bbls. Fuel Polymer	350,000 BBLS.		397,142 BBLS.		516,858 BBLS.	
	#Per BBL. Polymer	#/YR	#Per BBL. Polymer	#/YR	#Per BBL. Polymer	#/YR
Fuel, $1.00 BBL. (Inc Steam, Power, & Water)	.218	# 76,193	.259	# 102,969	.122	# 63,300
Purch. Power	.098	34,125	.084	33,291	.035	17,900
Purch. Water	.053	18,525	.033	12,895	.030	15,300
UOP Catalyst	.143	50000	.146	57,800	.028	14,700
Other Chemicals	.053	18,770	.032	13,000	.028	14,000
SUB-TOTAL (VARIABLE)	.565	# 197,633	.554	# 219,955	.243	# 125,200

WA-TEX 008935

WA-TEX008935



SEMI-VARIABLE										
Operators (E T & I)		.157	$55,000.		.135	$3,700.		.109	$6,900.	
T & I - Labor		.018	6210.		—	—		—	—	
Maintenance Labor	①	.105	36480.		.097	38,700.		.066	34,000.	
T & I - Contract Work		.009	3000.		—	—		—	—	
Maintenance " "		.009	3300.		.012	4800.		.010	5300.	
T & I - Material		.006	2000.		—	—		—	—	
Maintenance "		.054	18850.		.056	22400.		.036	18,400.	
SP & W - other Cost		.136	47913		.157	62597		.078	40600	

① other Oper. Plus Routine Repairs.
② ORIG. SHOWN AS 319,353 BBLS. BY PLANT
③ Listed $ under Acid on R-1211-E, 1965 See Rpt.

WA-TEX 008936

WA-TEX008936

PUGET SOUND 1966

DISTR. OF INDIRECT PLT.

FORM G-102 (11-64) 3501

IND. PLT.

	DIRECT LABOR %	FRINGE BENEFITS	LABOR	OTHER INDIRECT	TOTAL	EMPL. BENE & PAYROLL TAXES	Invest-ment
	%	$					
VPS	14.75%	$ 25,814	$ 77,175	$ 66,759 ~~69,793~~	$ 172,782	$ 37,462	
FCCU	24.90	43,578	130,282	112,690 ~~117,819~~	291,679	63,241	
POLY.	7.91	13,843	41,387	35,798 ~~37,420~~	92,658	20,090	
CRU	7.01	12,268	36,678	31,725 ~~33,169~~	82,115	17,804	
ALKY	7.65	13,388	40,026	34,622 ~~36,198~~	89,612	19,429	
HTU	7.61	13,318	39,817	34,441 ~~36,008~~	89,143	19,328	
S&S {S.B.& RP&S	27.17	47,550	142,159	122,963 ~~128,560~~	318,269	69,007	
Decarbonizer	2.34	4,095	12,243	10,590 ~~11,072~~	27,410	5,943	
BS&W	.33	578	1,727	1,493 ~~1,561~~	3,866	838	
Waste Oil Recovery	.33	578	1,726	1,494 ~~1,562~~	3,866	838	
TOTAL	100% ✓						
	$ 1,142,900	$ 175,010 ✓	$ 523,220	$ 452,570 ~~493,170~~	$ 1,150,800 ~~1,171,400~~ ✓	$ 253,980 ✓	

WA-TEX 008937

WA-TEX008937

Info for R-1211 E 2/2/66 Est Exp Exhibit 5

FORM G-102 (11-64) 3501

	INSURANCE			TAXES			INVESTMENT	G.O. & G.D.
	Property	Empl. Bene.	Past Serv. Pensions	Ad Valorem	Misc.	Payroll		
Caspian Plant	6 440	158 410	~~70 930~~ ~~120,150~~	157,000	4670	76 850		
Los Angeles Plant	6 450	265,910	~~197 440~~ ~~224,000~~	1,058,400	36 470	228 780		
Puget Sound Plant	26 710	159 770	~~89 330~~ ~~125,540~~	515,160	332 070	99 710		
		Fringes 1				Fringes		

WA-TEX 008938

WA-TEX008938

WJD
WFH

STANDARD EXPENSES

UNIT

PLANT PUGET SOUND

YEAR 1965

	TOTAL REFINING	CRUDE EXPENSE		VACUUM STILLING	PIPE STILLING	DECARBONIZER 100%	BS&W 100%	WASTE OIL RECOVERY 100%		F.C.C.U.	
ESTIMATED DIVISOR — Barrels	18367000			18990000						7547923	
CAPACITY — Barrels	18250000			18250000						9125000	
Direct Variable Charges											
Fuel @ $1.00											
Direct Fuel	.048	890400		.040	397700	16500	—	—		.018	139100
Fuel in Steam	.050	922608		.005	96176	48256	8552	11694		.052	389854
Fuel in Power	—	—		—	—	—	—	—		—	—
Fuel in Water	.001	9680		—	1892	330	48	48		—	3141
Fuel in Auxiliaries	—	—		.005	86097					—	—
Total Fuel	.099	1822688		.030	556815					.070	547076
Miscellaneous — Fuel Only (1)	(.030)	(559036)		—	—					(.078)	(559036)
Purchased Power	.012	325344.5		.002	45211	35097	3146	764		.015	114019
Purchased Water	.006	114150		.001	21405	4085	606	620		.005	38031
Purchased Utilities in Auxiliaries	—	—		.002	44338					—	—
Chemicals											
Acid	.010	186300		—	—					—	—
Hydrobon Catalyst	—	4000		—	—					—	—
Other Catalyst	.034	619475		—	—					.006	50875
Chemicals — Auxiliaries	—	—		—	—					—	—
Other Chemicals	.002	41400		.001	7800	—	—	—		.001	5944
Total Chemicals	.046	851175		.001	7800	—	—	—		.007	56819
Royalties (Running Royalties)	—	—		—	—					—	—
TOTAL DIRECT VARIABLE CHARGES	.143	2624322		.036	675569					.083	624385
SEMI-VARIABLE CHARGES											
Operators — (ex T&I)	.036	654700		.006	105200	—	3600	3600		.019	141300
Test and Inspection — Labor	.001	24200		—	3500	—	—	—		—	—
Maintenance — Labor	.022	401300		.002	44900	28700	—	—		.012	93100
Test and Inspection — Contract Work	.004	68800		.002	30200	—	—	—		—	—
Maintenance — Contract Work	.003	60700		—	5200	4800	—	—		.002	15200
Test and Inspection — Material	.001	17000		—	5000	—	—	—		—	—
Maintenance — Material	.016	298800		.002	27900	20900	1000	1100		.010	76500
Employe Benefits	—	—		—	—					—	—
Indirect Plant — Labor	—	—		—	—					—	—
Indirect Plant — Other	—	—		—	—					—	—
Steam — Charges Other Than Fuel	.026	481454		.003	50141	25536	4445	6100		.027	203357
Power — Charges Other Than Fuel & Purch. Power	—	2167		—	205	258	23	—		—	444
Water — Charges Other Than Fuel & Purch. Water	.004	75213		.001	15355	2534	450	450		.003	23536
Auxiliaries — Other Than Fuel, Chemicals & Purch. Util.	—	—		.005	103496					—	—
Miscellaneous — Other	(.018)	(328054)		—	—					.043	(328054)
Rentals and Royalties	—	—		—	—					—	—
TOTAL SEMI-VARIABLE CHARGES											
NON-VARIABLE CHARGES											
Depreciation											
Insurance & Taxes Related to Investment											
General Office and General Overhead & PAST SERV. PENS.											
Auxiliaries (F&OH)											
Rentals and Royalties											
TOTAL NON-VARIABLE CHARGES											
TOTAL EXPENSE											

WA-TEX 008939

Notes: (1) CREDIT FOR FUEL ONLY IN STEAM PRODUCED FROM CO AND WASTE HEAT BOILERS

#

WA-TEX008939

STANDARD EXPENSES

UNIT

PLANT PUGET SOUND

YEAR 1965

	POLYMERIZATION		CATALYTIC REFORMING		ALKYLATION		HYDROTREATING		STORING AND SHIPPING	
ESTIMATED DIVISOR — Barrels	397142		2958400		767146		8137627		18367000	
CAPACITY — Barrels	401500		2920000		837500		9380500		18250000	
Direct Variable Charges										
Fuel @ $1.00										
Direct Fuel	—	—	.062	183800	—	—	.023	183300	—	—
Fuel in Steam	.257	101873	.008	22396	.172	131801	.001	9712	.006	101675
Fuel in Power	—		—		—		—		—	
Fuel in Water	.002	1096	—	754	.001	1220	—	980	—	172
Fuel in Auxiliaries	—		—		—		—		—	
Total Fuel	.259	102969	.070	206950	.173	133021	.024	193992	.006	101845
Miscellaneous — Fuel Only (1)									—	
Purchased Power	.084	33291	.008	23704	.036	27820	.006	55181	.003	60102
Purchased Water	.033	12895	.003	8361	.019	14550	.001	10652	—	2925
Purchased Utilities in Auxiliaries			—						—	
Chemicals										
Acid	—	—	—		.243	186300	—		—	
Hydrobon Catalyst	—	—	—		—		.001	4000	—	
Other Catalyst	.146	57800	.020	59800	—		—		—	
Chemicals — Auxiliaries	—	—	—		—		—		—	
Other Chemicals	.032	13000	.002	4750	.008	5850	—	100	—	4500
Total Chemicals	.178	70800	.022	64550	.251	192150	.001	4100	—	4500
Royalties (Running Royalties)	—		—		—		—		—	
TOTAL DIRECT VARIABLE CHARGES	.554	219955	.103	303565	.479	367541	.032	263925	.009	169372
SEMI-VARIABLE CHARGES										
Operators — (ex T&I)	.135	53700	.018	53700	.070	53900	.007	53700	.010	186000
Test and Inspection — Labor	—	—	.001	2400	.012	9000	.001	9300	—	—
Maintenance — Labor	.097	38700	.009	27700	.027	20500	.002	17400	.007	131300
Test and Inspection — Contract Work	—	—	.006	16800	.007	5000	.002	16800	—	—
Maintenance — Contract Work	.012	4800	.005	15200	.006	4800	.001	4800	—	6100
Test and Inspection — Material	—	—	.002	6000	.004	3000	.001	4000	—	—
Maintenance — Material	.056	22400	.008	23400	.024	18200	.003	23600	.005	84300
Employe Benefits										
Indirect Plant — Labor										
Indirect Plant — Other										
Steam — Charges Other Than Fuel	.134	53140	.004	11682	.090	68751	.001	5066	.003	53036
Power — Charges Other Than Fuel & Purch. Power	—	179	—	119	—	42	—	407	—	490
Water — Charges Other Than Fuel & Purch. Water	.023	9278	.002	5673	.012	9096	.001	7769	—	1600
Auxiliaries—Other Than Fuel, Chemicals & Purch. Util.										
Miscellaneous — Other										
Rentals and Royalties										
TOTAL SEMI-VARIABLE CHARGES										
NON-VARIABLE CHARGES										
Depreciation										
Insurance & Taxes Related to Investment										
General Office and General Overhead										
Auxiliaries (F&OH)										
Rentals and Royalties										
TOTAL NON-VARIABLE CHARGES										
TOTAL EXPENSE										

WA-TEX 008940

Notes: (1)

WA-TEX008940

PSP
Thru June
CRU 1-4/1-10 Heater Kpr
HTU & " 5-6/5-15 Catalyst Regen
AIKY 2-27/3-12 Pressure Relief Valves

Puget Sound
R-1211-F Data
1965

WJD
WFH

WA-TEX 008941

WA-TEX008941

WSH

T E X A C O

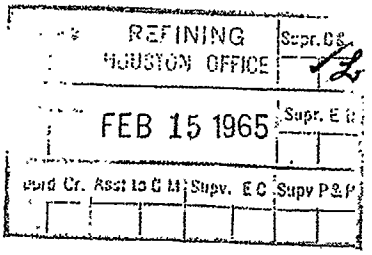
Anacortes, Washington 98221, February 11, 1965

FORM R-1211-E
ESTIMATED OPERATING EXPENSES
PUGET SOUND PLANT
YEAR 1965

AIR MAIL

PERSONAL

MEMORANDUM



Mr. J. R. Lemmer

Houston, Texas

We are submitting herewith Estimated Crude Refining Expenses, Form R-1211-E, Schedules 1, 2, 3, 4 and 6.

The activities shown on the attached statement are in agreement with those shown in the Annual Budget, Form R-1259, as approved. No new equipment is to start up and none of the present equipment is to be shut down during the year.

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

FCCU-Credit for Steam	(1,017,536)	
Subtotal Direct Plant		(1,017,536)
Charge Steam Dept. for above item	1,017,536	
Purchased Power	474,800	
Purchased Water	118,300	
Total SP&W		1,610,636
Vacation Pay	136,700	
A&S Benefits	23,840	
Telephone	13,100	
Telegraph	2,400	
Contributions & Donations	200	
Memberships & Subscriptions	30	
Postage	1,300	
Traveling & Personal	11,300	
All Other Expense	11,770	
Marine Dept.-Rentals & Services	(10,800)	
Sales Dept.-Electric Sign	(800)	
Rentals	8,430	
Subtotal Indirect		197,470
GRAND TOTAL MISCELLANEOUS EXPENSE		790,570

Included in Material Operating is an estimate of $7,280 for Printing and Stationery, and excluded from Material Operating is an estimate of $2,200 for Hydrogen which has been included with Chemicals.

WA-TEX 008942

WA-TEX008942

Labor costs are based on the following manpower:

	No. Men	Cost
Calendar Personnel and Other Staff	6	0
Construction and Outside Charges	3	20,000
Plant Expense-Form R-1259	257	2,016,440
Total Labor	266	2,036,440
Less: Vacation Pay		136,700
A&S Benefits		23,840
Construction and Outside		20,000
Labor Distributed on Form R-1211-E as Labor		1,855,900

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

	FCCU
M Lbs. Steam	2,494,330
BTU's/Lb.	1,323
MM BTU's	3,200,000
Total Steam Cost basis Unit Cost previous report	.31798
Credit for Steam	1,017,536
Component Costs:	
Labor	222,230
Material	40,092
Contract Work	712
Fuel-Bbls.	559,036
Fuel-Cost	689,482
Transfers of Steam	(24,421)
Transfers from Power	75,501
Transfers from Water	13,940
	1,017,536
MISC OTHER	328054

G. V. Carroll

G. V. CARROLL

WWC-JPE

JRL(2)

LHB (Bookkeeping)

Attachments

WA-TEX008943

PLANT LABOR
ESTIMATED CRUDE REFINING OPERATING EXPENSES - YEAR 1965
PUGET SOUND PLANT
( ) Indicates Ref Figures

R-1211-E
Exhibit 1
Sheet 1 of 2

Line No.	Activities Barrels	LABOR Number Operators	Operators Ex T&I Man Hours	Operators Ex T&I Amount	T&I Operating Man Hours	T&I Operating Amount	Other Operating Man Hours	Other Operating Amount	T&I Repairs Man Hours	T&I Repairs Amount	Routine Repairs Man Hours	Routine Repairs Amount
	~~18,990,000~~ (X)											
1 VPS	~~18,367,000~~	14.0	29,000	105,200	300	1,000	4,950	17,500	705	2,500	8,030	27,400
2 Decarbonizer 100% VPS	-	(1)					2,890	10,200			5,430	18,500
3 FCCU	7,547,923	18.0	39,000	141,300			11,750	41,600			15,110	51,500
4 Poly (Bbls. Polymer)	397,142	7.0	14,800	53,700			6,390	22,600			4,720	16,100
5 Catalytic Reforming	2,958,400	7.0	14,800	53,700	350	1,200	5,770	20,400	360	1,200	2,130	7,300
6 Alkylation (Bbls. Alkylate)	767,146	7.0	14,850	53,900	1,988	6,800	3,730	13,200	662	2,200	2,130	7,300
7 Hydrotreating	8,137,627 (4)	7.0	14,800	53,700	1,300	4,400	3,100	11,000	1,435	4,900	1,880	6,400
8 Shipping - Bulk	~~7,765,406~~	(2)					8,250	29,200			2,120	7,200
9 RP&S		30.0	42,670	186,000			16,090	57,000			11,100	37,900
10 BS&W 100% VPS		0.5	1,040	3,600								
11 Waste Oil Recovery 100% VPS		0.5	1,040	3,600								
12 Total Direct		81.0	172,000	654,700	3,938	13,400	62,920	222,700	3,162	10,800	52,650	179,600
13 SP&W	18,367,000 *	13.0	47,200	93,500			18,760	66,500			15,590	53,200
14 Indirect Plant		14.0 (3)	29,500	108,300			106,960	421,860			9,220	31,340
15 GRAND TOTAL		108.0	228,700	856,500	3,938	13,400	188,640	711,060	3,162	10,800	77,460	264,140

(1) Operated by VPS Personnel
(2) Included in RP&S & Dock Forces
(3) Includes 13 from Laboratory and 1 from Effluent Treating
(4) See Exhibit 5 for proration of Indirect Labor

7,765,406 Unf Sa'Gas
217,935 Diesel Fuel
156,256 FC 4000
4 8,137,627

* 18,367,000 Crude
625,000 Cat. Feed 71,000 HCO Diesel (Pt. Bridge)
(X) 18,990,000 TOTAL

GVC-JPE 2-11-65
JRL (2)
LHB (Bookkeeping)

WA-TEX 008944

WA-TEX008944

R-1211-E
Exhibit 2

CONTRACT WORK, MATERIAL & MISCELLANEOUS EXPENSES
ESTIMATED CRUDE REFINING OPERATING EXPENSES - YEAR 1965
PUGET SOUND PLANT
( ) Indicates Red Figures

Line No.		CONTRACT WORK					MATERIAL						
		Operating		Repairs		Total	Operating		Repairs		Expense	Total	Miscl.
		T&I	Other	T&I	Other	Contract	T&I	Other	T&I	Other	Estimate	Material	Expense
1	VPS	10,000		20,200	5,200	35,400	1,900	15,200	3,100	12,200		32,400	
2	Decarbonizer				4,800	4,800		11,500		9,400		20,900	
3	FCCU				15,200	15,200		42,300		34,200		76,500	(1,017,536)
4	Poly (Bbls. Polymer)				4,800	4,800		12,400		10,000		22,400	
5	Catalytic Reforming	10,000		6,800	15,200	32,000	500	12,800	4,500	10,600		28,400	
6	Alkylation (Bbl.Alky)	3,700		1,300	4,800	9,800	900	10,100	2,100	8,100		21,200	
7	Hydrotreating	10,000		6,800	4,800	21,600	500	13,000	3,500	10,600		27,600	
8	Shipping Bulk				6,100	6,100		7,500		6,100		13,600	
9	RP&S							39,000		31,700		70,700	
10	BS&W							500		500		1,000	
11	Waste Oil Rec.							600		500		1,100	
12	Total Direct	33,700		35,100	60,900	129,700	3,800	164,900	13,200	133,900		315,800	(1,017,536)
13	SP&W				1,600	1,600		29,800		24,500		54,300	1,610,636
14	Indirect Plant		49,200		21,500	70,700		130,800		100,900		231,700	197,470
15	GRAND TOTAL	33,700	49,200	35,100	84,000	202,000	3,800	325,500	13,200	259,300	-	601,800	790,570

GVC-JPE 2-11-65
JRL(2)
LHB (Bookkeeping)

WA-TEX 008945

WA-TEX008945

100 cu ft/bbl CHG HYDRO

CHEMICALS AND FUEL CONSUMED
ESTIMATED CRUDE REFINING OPERATING EXPENSES - YEAR 1965
PUGET SOUND PLANT
( ) Indicates Red Figures

R-1211-E
Exhibit 3

See note attached

Line No.		CHEMICALS: Hydrogen Cu.Ft.	Hydrogen Amount	Acid Tons	Acid Amount	Catalyst Tons	Catalyst Amount	Other Chemicals Amount	Total Chemicals Amount	FUEL CONSUMED: Gas(2) Std Bbls	Liquid Std Bbls	Total Fuel Amount	Line No.
1	VPS							$7,800	$ 7,800	361,500	11,200	676,843	1
2	Decarbonizer									16,300	200	30,026	2
3	FCCU					1387.5	$555,000	5,400	560,400	67,000	67,100	207,342	3
4	Poly (Bbls. Polymer)			99.1	$ 57,800			13,000	70,800				4
5	Catalytic Reforming	140,400	$2,100			5.4	59,300	2,650	64,550	171,100	12,700	327,774	5
6	Alkylation (Bbls. Alky)			7927.7	186,300			5,850	192,150				6
7	Hydrotreating	15,600	100			2.5	4,000		4,100	183,300		335,584	7
8	Shipping - Bulk												8
9	RP&S							4,500	4,500				9
10	BS&W												10
11	Waste Oil Recovery												11
12	Total Direct	156,000	2,200	8026.8	~~244,100~~ 186,300	1395.4	~~618,600~~ 676,600	39,200	904,300	799,200	91,200	1,577,569	12
13	SP&W									58,311	381,063	541,897	13
14	Indirect Plant									3,000		7,734	14
15	GRAND TOTAL	156,000	2,200	8026.8	~~244,100~~ 186,300	1395.4	~~618,600~~ 676,600	39,200	904,300	860,511	472,263	2,127,200	15

(1) See Exhibit 6 for Detail
(2) Gas Consumed, 828,111 bbls, plant production, 32,400 purchased
(3) Total Fuel at FCCU used at CO Boiler for Steam Production

GVC-JPE 2-11-65
JRL(2)
LHB (Bookkeeping)

* Start-up? too low for

Note 1
3-15-65
GAB says PSP switched to use of more of cheaper Catalyst in 1965
Usage = 5.5 Tons
Day 365 days
2007.5 tons/yr
@ $250.00 = Avg Cost
$ 501,875

Fuel Distrib O.K.

599,036 = Bbls equiv from Co'd Waste Heat Boiler

-8,311
381,063
990,410 = SP&W Fuel Total

WA-TEX 008946

WA-TEX008946

64.7% Prod Gas @ 1.65
29.9% Hi Vis Lqd 1.16
5.4% Purch. Gas 2.50

1,332,774

862,305 @ 1.65 = 1422803
398500 @ 1.16 = 462260
71969 @ 2.50 = 179923

2,064,986

3.9.68
40.54

WA-TEX008947

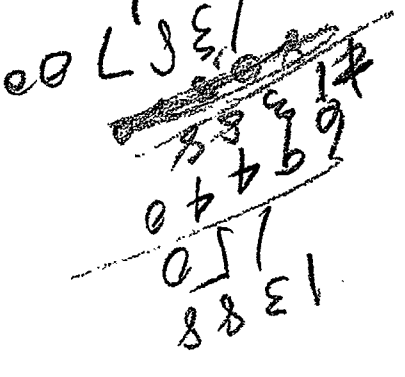
860,511

71,969 @ 2.50 179923

~~788,542 @ 1.16 914709~~ 165 301094

472 263 @ 1.16 547,825

1388
150
69440
~~[illegible]~~
1387 00



WA-TEX008948

DETAILED DISTRIBUTION OF CHEMICALS CONSUMED
ESTIMATED CRUDE REFINING OPERATING EXPENSES - YEAR 1965
PUGET SOUND PLANT

F-1211-E
Exhibit 6
Sheet 1 of 2

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	Acid, Alky Sulfuric							17770000	$186300				
2	Anti-Foam DC #200	575	$1500										
3	Catalyst:-												
4	HDS-2 Hydrotreater									5000	4000		
5	Filtrol-Gr. 800			2775000	555000								
6	UOP #1 Poly					198200	57800						
7	UOP-R-5 Platinum												
8	Caustic Soda			166000	5400	158000	5200	82500	2650				
9	Monoethanolamine					25000	7600						
10	Nalco 537-D	*2300	6300										
11	Sodium Chloride					13000	200	212000	3200			295000	$4500
12	Hydrogen									15600	100		
13	TOTAL		$7800		$560400		$70800		$192150		$4100		$4500

* Gallons

GVC-JPE 2-11-65
JRL(2)✓
LHB(Bookkeeping)

WA-TEX 008949

WA-TEX008949

DETAILED DISTRIBUTION OF CHEMICALS CONSUMED
ESTIMATED CRUDE REFINING OPERATING EXPENSES - YEAR 1965
PUGET SOUND PLANT

R-1211-E
Exhibit 6
Sheet 2 of 2

Line No.	Chemical	CAT. REFORMING Quantity	CAT. REFORMING Amount	TOTAL Quantity	TOTAL Amount
1	Acid-Alky Sulfuric			15855319	$186300
2	Anti-Foam DC#200			575	1500
3	Catalyst:-				
4	HDS-2 Hydrotreater			5000	4000
5	Filtrol Gr.-800			2775000	555000
6	UOP #1 Poly			198200	57800
7	UOP #R-5 Platinum	10800	$ 59800	10800	59800
8	Caustic Soda	82500	2650	489000	15900
9	Monoethanolamine			25000	7600
10	Nalco 537 D			* 2300	6300
11	Sodium Chloride			520000	7900
12	Hydrogen	140400	2100	156000	2200
13	TOTAL		$ 64550		$904300

* Gallons

WA-TEX 008950

GVC-JPE 2-11-65
JRL(2)
LHB (Bookkeeping)

WA-TEX008950

DETAILED PLANT DISTRIBUTION OF
STEAM, POWER AND WATER
ESTIMATED CRUDE REFINING OPERATING EXPENSES - YEAR 1965
PUGET SOUND PLANT

R-1211-E
Exhibit 4
Sheet 1 of 3

Line No.		STEAM MM BTU	Fuel Consumed Barrels	Fuel Consumed Amount	Purchased Power Amount	Purchased Water Amount	Other Cost Amount	Total Amount	* % K.W. Demand
1	VPS	485,000	96,126	118,555	5,678	1,040	50,141	175,414	7.18
2	Decarbonizer	247,000	48,955	60,378	2,892	529	25,536	89,335	9.07
3	FCCU	1,967,000	389,854	480,823	23,034	4,214	203,357	711,428	15.57
4	Polymerization	514,000	101,873	125,645	6,019	1,101	53,140	185,905	6.27
5	Catalytic Reforming	113,000	22,396	27,622	1,323	242	11,682	40,869	4.18
6	Alkylation	665,000	131,801	162,556	7,787	1,425	68,751	240,519	1.47
7	Hydrotreating	49,000	9,712	11,978	574	105	5,066	17,723	14.30
8	Shipping Bulk	43,000	8,522	10,511	504	92	4,445	15,552	3.79
9	RP&S	470,000	93,153	114,889	5,504	1,007	48,591	169,991	13.39
10	BS&W	43,000	8,522	10,511	504	92	4,445	15,552	.82
11	Waste Oil Recovery	59,000	11,694	14,422	691	126	6,100	21,339	
12	Total	4,655,000	922,608	1,137,890	54,510	9,973	481,254	1,683,627	76.04
13	SP&W								
14	Indirect Plant	332,000	65,802	81,156	3,888	711	34,324	120,079	23.96
15	GRAND TOTAL	4,987,000	988,410 ✓	1,219,046	58,398	10,684	515,578	1,803,706	100.0

@1.2333 Bbb.

Fuel Volume checks

* 1965 POWER BILLS W
based on KW Demand rathe

GVC-JPE 2-11-65
JRL(2)
LHB (Bookkeeping)

WA-TEX 008951

WA-TEX008951

T E X A C O

Anacortes, Washington 98221, February 23, 1966

FORM R-1211-E
ESTIMATED OPERATING EXPENSES
YEAR 1966

AIR MAIL

PERSONAL

MEMORANDUM

Mr. J. R. Lemmer

Houston, Texas

We are submitting herewith Estimated Crude Refining Expenses, Form R-1211-E. Exhibits 1, 2, 3 and 4.

The activities shown on the attached statement are in agreement with those shown in the Annual Budget, Form R-1259, as submitted except, Labor was increased by $88,490 and Contract Work was increased by $18,200 because of the 4½% wage increase which became effective after the budget was submitted. No new equipment is to start up and none of the present equipment is to be shut down during the year.

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

FCCU - Credit for Steam	(894,700)	
Sub-total Direct Plant		$ (894,700)
Charge Steam Dept. for above item	894,700	
Purchased Power	285,600	
Purchased Water	117,200	
Total SP&W		1,297,500
Vacation Pay	149,500	
A&S Benefits	25,510	
Telephone	13,100	
Telegraph	2,400	
Contributions & Donations	200	
Memberships & Subscriptions	30	
Postage	1,300	
Traveling & Personal	8,000	
All Other Expense	9,370	
Marine Dept-Rentals & Services	(11,200)	
Sales Dept.-Electric Sign	(800)	
Rentals	6,315	
Sub-total Indirect		203,725
Grand Total Miscellaneous Expense		$606,525

Included in Material Operating is an estimate of $6,980 for Printing and Stationery and excluded from Material Operating is an estimate of $3,000 for Hydrogen which has been included with Chemicals.

WA-TEX 008952

WA-TEX008952

Labor costs are based on the following manpower:

	No. Men	Cost
Calendar Personnel & Other Staff	6	0
Construction & Outside Charges	4	31,400
Plant Expense - Form R-1259	258	2,054,730
Total Labor	268	2,086,130
Less: Vacation Pay		149,500
A&S Benefits		25,510
Construction & Outside		31,400
Labor Distributed on Form R-1211-E as Labor		1,879,720

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

	FCCU
M Lbs. Steam	2,211,000
BTU's/Lb.	1,326
MM BTU's	2,932,000
Total Steam Cost basis Unit Cost previous report.	.30516
Credit for Steam	$ 894,700
Component Costs:	
Labor	199,071
Material	28,809
Contract Work	626
Fuel-Bbls.	427,747
Fuel-Cost	629,332
Transfers of Steam	(14,315)
Transfers from Power	39,725
Trnasfers from Water	11,452
	$ 894,700

Signed: G. V. CARROLL

G. V. CARROLL

WWC-JPE

JRL(2)

LHB (Bookkeeping)

Attachments

WA-TEX008953

Form R-1211-E
Exhibit I

PLANT LABOR AND CONTRACT WORK
ESTIMATED OPERATING EXPENSES - YEAR 1966
PUGET SOUND PLANT

Line No.		Activities Barrels	LABOR Operators-Ex. I&T Number Employes	Operators-Ex. I&T $ Amt.	I&T $ Amt.	Maint. $ Amt.	Total $ Amt.	Contract Work I&T	Contract Work Maint.	Contract Work Total
1	VPs	21,493,000	14.0	110,500		58,100	168,600		43,400	43,400
2	Decarbonizer		(1)			26,700	26,700		5,300	5,300
3	FCCU	7,918,135	18.0	148,400	56,900	79,300	284,600	287,400	6,700	294,100
4	Poly (Bbls. Polymer)	516,058	7.0	56,400		34,000	90,400		5,300	5,300
5	Catalytic Reforming	3,096,000	7.0	56,400		23,700	80,100		5,500	5,500
6	Alkylation (Bbls. Alkylate)	702,189	7.0	56,600		30,800	87,400		9,500	9,500
7	Hydrotreating	9,660,611	7.0	56,400	17,100	13,500	87,000	37,600	5,500	43,100
8	Shipping Bulk	20,068,494	(2)			33,800	33,800		6,700	6,700
9	RP&S		20.0	195,300		81,400	276,700		36,100	36,100
10	BS&W		0.5	3,800			3,800			
11	Waste Oil Recovery		0.5	3,800			3,800			
12	Total Direct	20,445,000	81.0	687,600	74,000	381,300	1,142,900	325,000	124,000	449,000
13	S.P. & W.		13.0	98,200		115,400	213,600		2,100	2,100
14	Indirect Plant		14.0(3)	113,700		409,520	523,220		28,800	28,800
15	GRAND TOTAL		108.0	899,500	74,000	906,220	1,879,720	325,000	154,900	479,900

(1) Operated by VPS Personnel
(2) Included in RP&S Dock Forces
(3) Includes 13 from Laboratory and 1 from Effluent Treating

GVC-JPE 2-23-66

JRL (2)

LHB (Bookkeeping)

WA-TEX 008954

WA-TEX008954

R-1211-E
Schedule II

MATERIAL, MISCELLANEOUS EXPENSE AND FUEL CONSUMED
ESTIMATED OPERATING EXPENSES - YEAR 1966
PUGET SOUND PLANT

Line No.		Material			Miscl. Expense	Fuel Consumed		
		I&T	Maint.	Total		Total Gas Std. Bbls.	Liquid Std. Bbls.	Total Fuel Amount
1	VPS		26,500	26,500		426,759	10,058	797,700
2	Decarbonizer		17,100	17,100		21,554	0	39,600
3	FCCU	225,000	62,800	287,800	(894,700)	60,300	60,300	177,400
4	Poly (Bbls. Polymer)		18,400	18,400		-	-	-
5	Catalytic Reforming		19,200	19,200		199,729	21,554	390,100
6	Alkylation (Bbls. Alkylate)		14,900	14,900		-	-	-
7	Hydrotreating	8,000	19,400	27,400		241,399	0	440,500
8	Shipping Bulk		11,200	11,200		-	-	-
9	RP&S		58,100	58,100		-	-	-
10	BS&W		900	900		-	-	-
11	Waste Oil Recovery		900	900		-	-	-
12	Total Direct	233,000	249,400	482,400	(894,700)	949,741	91,912	1,845,300
13	SP&W		44,600	44,600	1,297,500	196,022	196,225	577,100
14	Indirect Plant		187,250	187,250	203,725	3,000	-	5,305
15	GRAND TOTAL	233,000	481,250	714,250	606,525	1,148,763	288,137	2,427,705

	Std. Bbls.	$/Bbl.	Amount
Gas Produced	1,123,263	1.820	2,044,338
Liquid Fuel	288,137	1.107	319,087
Purchased Gas	25,500	2.521	64,280
TOTALS	1,436,900	1.690	2,427,705

GVC-JPE 2-23-66

JRL (2)

LHB (Bookkeeping

WA-TEX 008955

WA-TEX008955

Form R-1211-E
Exhibit III
Sheet 1 of 2

DETAILED DISTRIBUTION OF CHEMICALS CONSUMED
ESTIMATED CRUDE REFINING OPERATING EXPENSES - YEAR 1966
PUGET SOUND PLANT

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
1	Acid, Alky Sulfuric-Tons							8,740	205,600
2	Anti-Foam DC-200-Lbs.	585	1,300						
3	Catalyst: -								
4	HDS-2 Hydrotreater-Lbs.								
5	Davison F-1-13-Tons			1299.8	447,600				
6	UOP #1 Poly-Lbs.					53,000	14,700		
7	UOP-R-5 Platinum-Lbs.								
8	Caustic Soda - Lbs.			156,000	4,800	147,000	4,400	78,500	2,300
9	Monoethanolamine-Lbs.					33,000	9,400		
10	Nalco 537-D-Gals.	4,890	11,400						
11	Sodium Chloride - Lbs.					15,000	200	263,000	4,000
12	Hydrogen - Cu. Ft.								
13	TOTAL		12,700		452,400		28,700		211,900

GVC-JPE 2-23-66

JRL(2)

LHB (Bookkeeping)

WA-TEX 008956

WA-TEX008956

Form R-1211-E
Exhibit III
Sheet 2 of 2

DETAILED DISTRIBUTION OF CHEMICALS CONSUMED
ESTIMATED CRUDE REFINING OPERATING EXPENSES - YEAR 1966
PUGET SOUND PLANT

Line No.	Chemical	HYDROTREATING Quantity	HYDROTREATING Amount	RP&S Quantity	RP&S Amount	Cat. Reforming Quantity	Cat. Reforming Amount	Total Amount
1	Acid, Alky Sulfuric-Tons							205,600
2	Anti-Foam DC-200-Lbs.							1,300
3	Catalyst: -							
4	HDS-2 Hydrotreater-Lbs.	4,062	3,300					3,300
5	Davison F-1-13-Tons							447,600
6	UOP #1 Poly-Lbs.							14,700
7	UOP-R-5 Platinum-Lbs.					11,200	39,400	39,400
8	Caustic Soda - Lbs.					78,500	2,300	13,800
9	Monoethanolamine-Lbs.							9,400
10	Nalco 537-D-Gals.							11,400
11	Sodium Chloride - Lbs.			370,000	5,600			9,800
12	Hydrogen - Cu. Ft.	20,000	300			180,000	2,710	3,000
13	TOTAL		3,600		5,600		44,400	759,300

GVC-JPE 2-23-66

JRL(2)

LHB (Bookkeeping)

WA-TEX 008957

WA-TEX008957

STEAM, POWER, & WATER EXPENSES
ESTIMATED OPERATING EXPENSES - YEAR
PUGET SOUND PLANT

Line No.		Barrels	Amount	Purchased Power	Purchased Water	Other Cost	Total SP&W	Total Plant
1	VPS	133,100	195,800	20,500	22,100	85,300	323,700	1,372,600
2	Decarbonization	65,700	96,700	25,900	3,800	42,100	168,500	257,200
3	FCCU	255,900	376,300	44,600	36,700	164,000	621,600	1,223,200
4	Polymerization	63,300	93,100	17,900	15,300	40,600	166,900	309,700
5	Catalytic Reforming	16,700	24,600	12,000	8,900	10,700	56,200	595,500
6	Alkylation	118,300	174,000	4,200	11,500	75,800	265,500	589,200
7	Hydrotreating	10,900	16,100	40,800	11,800	7,000	75,700	677,300
8	Shipping Bulk	4,600	6,800	10,800	400	3,000	21,000	72,700
9	RP&S	67,800	99,700	38,200	1,700	43,400	183,000	559,500
10	BS&W	4,600	6,800	2,300	600	3,000	12,700	17,400
11	Waste Oil Recovery	7,700	11,400		600	5,000	17,000	21,700
12	Total	748,600	1,101,300	217,200	113,400	479,900	1,911,800	5,696,000
13	S.P. & W.						(2,134,900)	0,000
14	Indirect Plant	71,394	105,132	68,400	3,800	45,768	223,100	1,171,400
15	GRAND TOTAL	819,994	1,206,432	285,600	117,200	525,668	0,000	6,867,400

WA-TEX 008958

WA-TEX008958

STEAM, POWER & WATER EXPENSES
ESTIMATED OPERATING EXPENSES YEAR 1966
PUGET SOUND PLANT

Distribution	Steam	Power	Water	Total
Fuel - Barrels	814,135		5,859	819,994
Fuel - Cost	1,197,813		8,619	1,206,432
Purch. - Power	36,139	187,897	61,564	285,600
Purch. - Water	10,323		106,877	117,200
Other Cost	462,161	2,500	61,007	525,668
TOTAL COST	1,706,436	190,397	238,067	2,134,900
Avg. Steam Cost / M Lbs.	$.262857			
Avg. Power Cost / KW		$.005238		
Avg. Water Cost / M Gals.			$.058939	
Purchased Utility Rates				
* Last Increment of Power /KW		$.000000		
- Last Increment of Water /M Gal.			$.039000	

SP&W Fuel Summary

Total SP&W Fuel From Exhibit II	Barrels	392,247
Plus FCCU Waste Heat Fuel Credit	Barrels	427,747
TOTAL SP&W FUEL TO DISTRIBUTE	Barrels	819,994

* PSP has a power contract based on a peak demand of 8010 KW. No additional payment is required unless demand exceeds 8010 KW, and if demand exceeds 8010 KW the monthly charge will be increased by $2.31 per KW in excess of 8010.

GVC-JPE 2-23-66

JRL (2)

LHB (Bookkeeping)

WA-TEX 008959

WA-TEX008959