# APPENDIX

# **Processing Agreement for Joint-Ownership Refinery**

Operation of a joint-ownership refinery requires that the companies enter into a proper agreement on the procedures to be employed for establishing the ownership of stock and sharing the operating costs of the refinery. Also, the processing agreement defines the procedure for day-to-day running of the refinery, the split of processing unit and storage tanks capacity between the participants for processing their crude and storing inventory. It must, however, be emphasized that there is no physical split of processing unit or tankage capacities in the refinery. The split exits only in the refinery linear programming (LP) models and accounting procedures.

For proper operation of the refinery, a joint operating company (JOC) is formed. The JOC is responsible for the day-to-day operation of the refinery. Coordination between the refinery and the participants is through a Process Coordination Committee (PCC). The PCC has at least one member representing each participant and a member from the JOC. The structure of JOC is shown in Figure A-1.

Most refineries export their products from a marine terminal, the operation of which is closely controlled by the refinery. As the participating companies load their product from the marine terminal, close coordination between the participants and between the refinery and the participants is required. Processing agreement lays down the procedure for coordination and smooth operation of the marine terminal.

Presented here is an outline of an agreement used successfully for operation of a joint-ownership refinery which can serve as a model for other joint-ownership refining ventures, elsewhere.

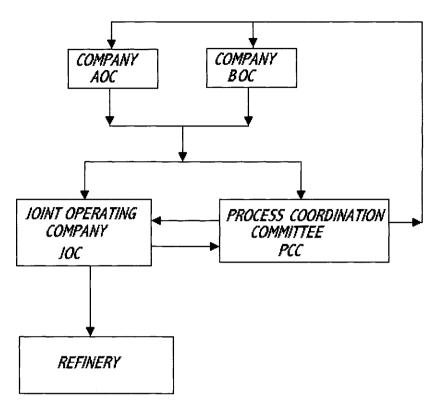


Figure A-1. Organizational structure of joint-ownership refinery.

# PROCESSING AGREEMENT (PRO FORMA) BETWEEN COMPANIES AOC AND BOC FOR OPERATION OF A JOINT-OWNERSHIP REFINERY

Whereas the companies AOC and BOC have entered into a participation and operating agreement, setting out the basis of their relationship with respect to their jointly owned refinery and;

Whereas this is intended to be a participation and operating agreement, referred to as the Processing Agreement and executed by AOC and BOC on (DD/MM/YY).

Therefore, in consideration of the premises and mutual agreement hereinafter set forth, the parties agree as follows:

## **1. EFFECTIVE DATE**

This agreement shall be effective from (DD/MM/YY) unless modified or terminated in accordance with Paragraph 11 and shall continue until (DD/MM/YY).

## 2. CAPACITY RIGHTS

- 2.1. During any operating period, each participant shall have the right to process feedstocks to a natural yield through any or all of the processing systems that constitute the total refining facilities ("Systems") available during each Operating Period in proportion to its equity share in the refinery ("Basic Capacity Right"). If either Participant elects not to use its share in one or more of the Systems available during an Operating Period, such spare capacity shall be made available to the other participant and, if used or finally accepted by the other participant, shall be treated as part of that participant's Basic Capacity Right, for the period of time agreed on.
- 2.2. Subject to the rights of the other participant and ability of the refinery to process it, each participant may deliver to the refinery for processing within its Basic Capacity Right, any feedstock approved in accordance with Paragraph 2.3.
- 2.3. At any time, either participant may give to the JOC, a detailed analysis of any feedstock not until then approved for processing in the refinery and request data on the yield and refining characteristics of that feedstock. The test run shall be made by the JOC to obtain such data, provided an allocation of the related cost is made to the participant requesting that test run and such test does not impair the JOC's ability to meet the Definitive Operating Program (DOP) of the other participant. The JOC shall provide the results of the test run to the Process Coordination Committee (PCC) established pursuant to Paragraph 9 of this agreement. If approved by both participants, the feedstock in question may be delivered by either participant for processing in the refinery and the yield and any capacity limitations encountered shall be included in the Basic Data Book of the refinery.
- 2.4. If either participant wishes to store, blend, or process stocks in refinery facilities, without requiring use of its Basic Capacity Rights, it may do so on the following terms:

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- a. The PCC first determines that
  - i. JOC's ability to meet the DOP of the other participant will not be impaired by this action.
  - ii. That such stock and any of its derivatives is compatible with other stocks with which they may comingle.
- b. JOC shall ensure that
  - i. An allocation of related cost is made to the participant supplying such stock to cover all expenses directly attributable to processing of this stock.
  - ii. Such participant shall cause such stock or its derivatives to be lifted in accordance with a preagreed-on schedule between the participants and the JOC.
- 2.5. Slop from external sources shall be processed at the JOC's discretion and credited to a reduction in overall refinery losses.

## **3. BASIC DATA BOOK**

The basic data shall be agreed on by the participants and contain the information, procedures, and other parameters that govern the operation of the refinery. This includes the following:

- a. Refinery stock balance data sheets.
- b. Feedstock assays.
- c. Product equivalencies and conversion factors.
- d. Product specifications.
- e. Refinery and shipping terminal tankage summary.
- f. Schedule of shipping facilities.
- g. Port information.

All revisions, updates, and addition of new data shall require the approval of both participants through the PCC.

### 4. REFINERY PROGRAMMING PROCEDURE

4.1. The Process Coordination Committee shall develop the Definitive Operating Programs for each operating period in a manner established in the Refinery Programming Procedure. Under such procedure, each participant shall have the right to process feedstocks and receive back products according to latest Definitive Operating Program. The objective shall be for the JOC to operate the refinery as close as possible to the combined DOPs, which incorporates each participant's DOP.

- 4.2. This procedure shall allow each participant to exercise its primary right to obtain a natural yield of products from that share of the refinery system which corresponds to its Basic Capacity Right during a given operating period.
- 4.3. This procedure shall also provide for a programming cycle during which all relevant information, including spare unit capacity, offtake requirements, feedstock availability, and overall refinery operating constraints, is provided by the JOC to the PCC so that the PCC can make alterations to the operating program to benefit the participants.
- 4.4. The manner in which the PCC will exchange information and evaluate shipping slates to establish an agreed-on definitive offtake program for each participant shall also be included in the procedure. The product offtake program shall meet, as closely as possible, the requested shipping slate for each participant. A combined definitive product offtake program for both participants shall be developed, which will allow performance of each of participant's agreed-on DOP, taking into account the required minimum and maximum inventory levels in the refinery.
- 4.5. In practice, it will be desirable from time to time to update the operating program, to utilize spare capacity or take advantage of unforeseen developments. Either participant may request the PCC to consider modifications at any time, and to the extent practical, the operating program shall be modified.
- 4.6. If any unforeseen event, not caused by one or both the participants, occurs (such as but not limited to an unscheduled shutdown) and in the JOC's opinion will prevent it from meeting a participant's DOP and product offtake program, the JOC shall promptly inform the participants through the PCC and take necessary action to minimize the disruption to planned refinery operations. The JOC shall also propose the necessary revisions to such programs and any further action that needs to be taken, and such programs shall be modified by the the PCC to the extent necessary.
- 4.7. If, during an operating period, a participant fails to deliver the feedstock required to meet its Definitive Operating Program or remove products in accordance with its definitive product offtake program and if such failure prejudices the right of the other

participant under this agreement or prevents the JOC from operating the refinery to meet the agreed-on combined DOP, the JOC shall immediately inform both participants through the PCC and take necessary action to minimize disruption of the nondefaulting participant's program. The JOC shall also propose necessary provisions to the defaulting participant's DOP and its product offtake program shall be modified to the extent necessary. A revision to the nondefaulting participant's program may be made only if absolutely necessary for operational reasons or if such participant agrees. In any case, all additional cost incurred by the JOC as a result of the default shall be allocated to defaulting participant to the exclusion of any further claim by one participant against the other arising from such failure.

4.8. All communication related to the refinery programming procedures between the JOC and the participants shall be through the PCC.

# 5. ALLOCATION OF FEEDSTOCK AND PRODUCTION

- 5.1. When the volume of feedstocks actually processed during an operating period and or the actual volumes of product manufactured differs from the volumes estimated in the DOP, the actual volumes shall be allocated to the participants in the following manner, after taking into account all adjustments under Paragraphs 4.5, 4.6, and 4.7.
- 5.2. Actual feedstock processed for only one participant shall be allocated entirely to that participant. Actual feedstock processed for both participants shall be allocated so as to achieve in total the same overall ratio of the total feedstock as utilized in the final DOP.
- 5.3. The final DOP for each participant shall be modified in such a manner that the production of fixed grades and process stocks in the combined DOP is made equal to the actual production of fixed grades and process stocks. Also, the crude run in the combined DOP should equal the actual refinery crude run during the month. Such reworked program shall be called the "retro DOP," or retrospective operating program for the participants.
- 5.4. The retrospective DOP is compared with actual refinery production during the month. The deltas remain only in the balancing grade products and losses. These are allocated to the participants in the ratio of their retro DOP productions expressed in balancing grades.

The procedure for allocating the balancing grades is described in Attachment 3.

- 5.5. Sulfur produced shall be allocated to the participants in proportion to their respective quantities of feedstock actually processed during the operating period.
- 5.6. Stocks handled or processed for participants in accordance with Paragraph 2.4 shall be allocated entirely to the participant supplying such stocks.

# 6. QUALITY OF PRODUCTS

The products manufactured and delivered by the JOC to each participant shall conform to the Product Specifications set out in the product specifications book.

## 7. PRODUCT MOVEMENT AND MEASUREMENT CONDITIONS

The terms and conditions that shall apply to vessels, loading or discharging products or crude oil at the refinery marine terminal, as well as measurement, testing, and related responsibilities of the participants are contained in the Attachment 2 of this agreement.

# 8. OWNERSHIP, RISK, AND LOSSES

- 8.1. Ownership of the feedstocks and other stocks delivered to the refinery by each participant or such entity or entities for whom such participants are processing ("Designee") and of process stocks and finished products derived from them shall remain vested in participants or entities as the case may be.
- 8.2. The JOC shall submit monthly account statements to each participant showing quantities of its various feedstocks received, products manufactured, and products shipped during the month and quantities in process and in inventory at the end of each month. Such statement shall also show products transferred by agreement from one participant to the other.
- 8.3. Normal operating losses or gains of feedstocks and other delivered stocks, process stocks, and finished products shall be apportioned to participants or their designees as a part of allocations made in accordance with Paragraph 5.

- 8.4. Other losses shall be separated from normal operating losses and allocated to participants as follows:
  - a. For all stocks that can be identified as property of one participant or its designee, the losses shall be allocated entirely to that participant or its designee.
  - b. For all stocks that cannot be so identified, such as comingled stocks, the losses shall be allocated in proportion to the respective ownership of such stocks determined in an equitable manner at the time of the incident that caused the loss.
- 8.5. All stocks delivered by each participant, process stocks, and finished products derived from them shall be in the JOC's care and custody from the time
  - a. Crude and other stocks obtained locally pass the line of refinery fence.
  - b. Pipeline crude passes the refinery fence.
  - c. Feedstocks and other stocks pass the flange connecting the ocean tanker loading lines to the shore hose or unloading arm at the wharf until the time the products derived from them passes through the flange connecting the receiving line of the ocean tankers.

# 9. PROCESS COORDINATION COMMITTEE

The Process Coordination Committee (PCC) shall coordinate the implementation of this agreement between the participants and the JOC. The PCC shall be established as follows:

- a. Each participant shall appoint one representative and up to two alternatives.
- b. The refinery shall appoint the third representative, who shall be fully qualified in scheduling of the refinery operations.
- c. The JOC shall appoint the secretary for all meetings and shall act as secretariat for the PCC, supplying all secretarial services the PCC may require.
- d. The representatives shall meet in the refinery as often as required. The representatives of the JOC shall act in an advisory capacity. In all matters, decisions shall be made only by agreement between the representatives of both participants.

## **10. ALLOCATION OF REFINERY OPERATING COSTS**

Allocation of refinery operating costs between the participants shall be calculated in accordance with the procedure described in Attachment 4.

The essence of this procedure is to achieve a fair and equitable allocation of refinery costs. This procedure shall continue until a new or revised procedure of allocating refinery operating costs is available and put in use by the agreement between the participants.

#### **11. TERMINATION OF AGREEMENT**

This agreement can be modified or terminated, in whole or in part, by agreement in writing, duly executed by participants.

(signatures)

For the Company AOC

For the Company BOC

## **ATTACHMENT 1. DEFINITIONS**

*Feedstocks*. Feedstock includes any feedstock to the refinery's crude distillation facilities excluding slops.

*Natural yield*. The natural yield is any balanced yield of finished products that the JOC is able to obtain from feedstock processed, taking into account the capability of total refining facilities at its disposal.

*Operating period*. The operating period consists of one calendar month according to Gregorian calendar.

*Operating program.* The operating program is the JOC's best estimate of the quantity of finished products that will be produced for a participant when specified quantities of feedstocks and other stocks are processed through the refinery in a manner consistent with the product pattern desired by each participant. The JOC shall report the operating conditions for major refinery units and other relevant conditions in such programs.

*Product offtake program.* The product offtake program is a schedule of the volume quantities of each product grade to be lifted by a participant during an operating period. It shall indicate the scheduled vessel arrival at

the refinery's loading terminal, cargo sizes, makeup of each cargo parcel, and lifting dates. It shall also include product delivery schedule via pipeline.

# ATTACHMENT 2. LOADING AND DISCHARGE CONDITIONS

- 1. It is the responsibility of each participant to ensure that regulations and instructions issued from time to time by port authorities or the JOC contained in this attachment relating to the use of the port or its approaches are advised to the masters of vessels or their representatives nominated to offtake or discharge oil cargoes at the port.
- 2. Each participant, with respect to the vessel nominated for offtake or discharge of products or crude oil, shall arrange with vessel's masters or their representative to give three notices by radio to the JOC via independent channels, of the estimated time of arrival (ETA) at the loading port: the first notice approximately 72 hours, the second notice approximately 48 hours, and the third notice approximately 24 in advance of the ETA. Failure to give any notice, at least 24 hours in advance of arrival will increase the laytime allowed by the JOC by an amount equal to the difference between 24 hours and the number of hours prior to the arrival of the vessel that notice of ETA is received.
- 3. Vessels arriving on the dates or within the period established by definitive product offtake programs to lift or discharge cargoes shall be accepted by the JOC for loading or discharging in their order of arrival. Exceptions can be made by the JOC if
  - a. In the JOC's opinion a suitable berth is not available.
  - b. Safety would be jeopardized.
  - c. The product or products are not available.
  - d. Ullage in receiving tanks is not available.

If a participant requests that one of its nominated vessels be given priority over another of its nominated vessels, the JOC, will decide whether such priority could be given, taking into account the other participant's rights. Vessels lifting or discharging cargo shall take priority over vessels lifting bunkers unless, in its sole discretion, the JOC decides otherwise. The JOC shall not be held liable for deviation from the preceding provisions whenever, in its opinion, circumstances warrant such deviation.

- 4. The vessels shall be assigned to suitable berths by the JOC. However, if, in the opinion of the JOC, a vessel is not suitably sized and equipped so that it can be safely handled, moored, loaded, or discharged and unmoored or it is unsafe in any other respect, the vessel shall not be accepted and the nominating participant shall be advised accordingly.
- 5. Determination of the suitability of vessel's cargo tanks to load the nominated cargo shall be the responsibility of vessel's master or representative. Participants may request the services of an independent inspector to assess the suitability of the vessel's tanks. All costs or fees so incurred shall be on the account of participant requesting such inspection services.
- 6. Each participant shall arrange with the master or representative to give the JOC notice that the vessel is ready to receive or discharge products (hereinafter referred to as vessel's "notice of readiness," or NOR). The NOR shall be given to the JOC on arrival at the port by any available means followed by written confirmation as soon as practical. Except as provided in Paragraph 2, laytime for loading or discharge shall commence after a berth is available upon:
  - a. Expiration of 6 hours after giving NOR.
  - b. Commencement of loading or discharging, whichever occurs first.

However period of delay in the commencement or actual loading/ discharging of vessel caused by or due to action or deficiencies of the vessel shall be deducted from the calculation of lay-hours used.

7. In the event of a participant's vessel arriving outside the period or on a date other than the one scheduled by Definitive Operating Plan and product offtake program, such vessel, notwithstanding the order of arrival, shall await the berthing of other vessels scheduled for and arriving during that period or date. The JOC shall decide when such vessel may be berthed, taking into account the product availability and the other participant's rights. In such a case, the laytime shall not commence until the subject vessel commences loading or discharging.

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- 8. Subject to Paragraphs 6 and 7, the JOC shall allow as laytime that amount of time which could be required for loading or discharging the cargo (including ballast, slops, and water) at such rates as established by the JOC from time to time. The JOC shall be allowed a minimum of thirty-six hours laytime for discharging any fully loaded vessel or loading a full cargo load. Adjustments for partly loaded vessel shall be done accordingly. Used laytime shall cease when loading/discharging line has been disconnected.
- 9. The JOC shall have the right of shifting vessels from one berth to another, in and out of berth, and shall pay all charges and expenses incurred in connection with shifting except when it is done for reasons of safety or *force majeure*. Each vessel shall vacate her berth as soon as practicable after loading or discharging is complete. Any loss or damage incurred by the JOC as a result of a vessel's failure to vacate the berth promptly, including any demurrage incurred due to the resulting delay to other vessels awaiting turn to load or discharge, shall be paid to JOC by the participant nominating such vessel.
- 10. If, in any case whatsoever reasonably beyond its control, the JOC is delayed, hindered, or prevented from furnishing the product required or any part thereof or from loading or discharging the vessel, the time so lost shall not be counted as laytime.
- 11. When the time is used in loading or discharging and the time counted as laytime exceeds the allowed laytime pursuant to the preceding paragraphs, JOC shall, if satisfied by the validity of the claim, pay the participant demurrage at the rate applicable to the size of the vessel used for the cargo concerned and based on the Worldwide Tanker Nominal Freight Scale (Worldscale) as amended from time to time by the London Tanker Broker Panel Average Freight Rate Assessment (AFRA) applicable to which shall be added any premium that may be applicable from time to time and in effect at the date the vessel tenders its notice of readiness to load or discharge or, if applicable, at the demurrage rate being paid under the charter for the vessel in question, whichever is less. Should Worldscale be cancelled and or AFRA cease to be promulgated, the demurrage rates shall be determined by reference to such voyage rate or scale as is generally deemed to be substituted by the trade from the time Worldscale or AFRA cease to exist as the industry standard. In no event, however, shall the JOC pay demurrage if not incurred by the participant.

12. If the actions or deficiencies of a participant's nominated vessel cause delay to a following vessel or vessels (not to exceed three) resulting in payment of demurrage to a third party by the JOC, such participant shall reimburse to JOC the amount paid in demurrage.

## 1. MEASUREMENT, SAMPLING, AND TESTING

- a. The JOC shall measure all feedstocks either by means of shore tank gauges or by metering devices as necessary and appropriate. Such quantities and, in particular, API gravity and density shall be calculated net of sediment and water at 60°F or at such temperature as otherwise agreed by the participants from time to time. Regular daily samples of feedstocks and other stocks shall be taken by JOC from incoming supply line or from receiving tank or both for quality checks. Significant variation in quality shall be advised to participants by the JOC. When recommended by the JOC and approved by the PCC, representative samples of feedstocks shall be evaluated by competent outside agency to verify or recommend the correctness of assay data of such crudes shown in the basic data book.
- b. The JOC shall measure all other stock quantities by means of shore tank gauges, metering devices, or weigh bridges as necessary and appropriate. Such quantities shall be calculated at 60°F or at such temperature as shall be agreed on by participants from time to time. Exceptions can be made, however, in case of certain products, such as LPG, sulfur, or bitumen, where vessels measurements can be accepted.
- c. The quality of product shipped shall be determined by testing of shore tank samples prior to loading. The JOC's obligation to test shall be limited to those tests that guarantee product quality.
- d. The JOC's responsibility for the quality of the product shall cease after the product passes the flange connecting the shore hose or loading arm to the receiving vessel, pipeline, or tank truck.
- e. Each participant shall have the right, at its own expense, to have an independent inspector verify the quality and quantities of feed-stocks, other stocks, and products.
- f. The JOC shall retain the ship's composite samples of each discrete product shipment for a period of 6 months together with a spot sample of products from sea line taken during loading. Samples of products such as LPG and asphalt need not be retained.

- g. All measurement, sampling, and testing shall be in accordance with pertinent ASTM or API standards. Modifications, if necessary to meet locally established practices, may be made with the participant's approval.
- h. The JOC, on completion of loading each vessel, shall undertake the following on behalf of each participant or its designee:
  - i. Prepare and sign for each vessel the loading certificate stating the quality and quantity of each product delivered on board or discharged from the vessel and analysis of each product.
  - ii. Prepare and sign the bill of lading for each cargo.
  - iii. Prepare and sign each vessel's time sheet.
  - iv. If required by the participants, provide a certificate of origin.
  - v. Furnish to each participant the number of copies of the certificates relevant to its shipment as it may require.
  - vi. Advise participants promptly of the quantities loaded.

# ATTACHMENT 3. ALLOCATION OF DIFFERENCES BETWEEN ACTUAL PRODUCTION AND THAT IN THE RETROSPECTIVE DOPS

- 1. The actual amount of each product manufactured in an operating period will be different from planned production of those products according to retrospective operating program (retro DOP) because of estimating inaccuracies and changes to operating conditions in actual practice. This appendix describes how these differences, which will normally be small, are to be allocated to the participants.
- 2. As a first step, the total delta for each product is allocated to the participants in proportion to their respective shares of production in the combined retro DOP for the operating period in question. Deltas for products that only one participant planned to make is allocated 100% to that participant. Deltas for products that neither participant planned to make are allocated to the participants in proportion to their respective share of total feedstock input in the combined retro DOP for the period in question.
- 3. By the nature of calculations described in Paragraph 2, the sum of each participant's delta allocation will be imbalanced between participants but equal in amount and of opposite plus and minus signs, since the sum of such imbalances shall equal zero.

Accordingly, a further step is required to eliminate these imbalances. This is done by "reverse allocation" as follows:

- a. The total delta, for each product that both participants had planned to make are numerically added, without regard to its plus or minus sign, resulting in absolute values of combined total delta.
- b. The ratio of total delta for each product, without regard to its plus or minus sign, divided by the absolute value of combined total delta is multiplied by the total imbalance (sum of delta allocations) with negative sign to obtain the reverse allocation for each participant.
- 4. The total product available to each participant for the operating period in question (composite allocation) is the amount of that product available to each participant from its share of the combined retrospective DOP plus the sum of allocations for such products made to it according to Paragraphs 2 and 3.
- 5. A pro forma example of the calculation procedure described is enclosed (Table A-1).

# ATTACHMENT 4. ALLOCATION OF REFINERY OPERATING COSTS

## **1. UNUSED CAPACITY CHARGE**

- 1.1. After each operating period, the JOC shall establish the amount of total Basic Capacity Right to crude distillation capacity that had been available to each participant during such operating period (after adjusting any such capacity offered to the other participant and accepted or finally used) but that was unused in practice by the participant or other participant.
- 1.2. After each operating period, the JOC shall determine per barrel charge to be applied to payable unused capacity. This charge shall be the total current operating expenses (with some adjustments described later) divided by the total crude distillation capacity that had been available during such period.
- 1.3. After each operating period, the JOC shall calculate each participant's payable unused capacity charge for such operating period by

Table A-1									
Pro Forma	Example of	Product	Allocation	(ml)					

	RETROSPECTIVE				<i>FIRST</i> <i>STEP</i> , SPLITTING TOT. DELTA		REVERSE ALLOCATION		SUM OF ALLOCATION DELTAS		COMPOSITE FINAL ALLOCATION			
BALANCING GRADE PRODUCTS	AOC (1)	BOC (2)	TOTAL (3)	ACTUAL PROD. (4)	TOTAL DELTA (5)	AOC DELTA (6)	BOC DELTA (7)	AOC (8)	BOC (9)	AOC (10)	BOC (11)	AOC (12)	BOC (13)	TOTAL (14)
I-180 (LPG)	20	6	26	20	6	5	-1	1	-1	4	-2	16	4	20
I-210 (NAPHTHA)	1045	260	1305	899	-406	-325	-81	36	-36	-289	-117	756	143	899
I-397 (MOGAS)	310	242	552	851	299	168	131	27	-27	194	105	504	347	851
I-440 (KERO)	733	223	956	1035	79	61	18	7	-7	68	11	801	234	1035
I-888 (DIESEL)	1650	870	2520	2540	20	13	7	2	$^{-2}$	15	5	1665	875	2540
I-981 (FUEL OIL)	2028	1020	3048	2974	74	-49	25	7	-7	-43	-31	1985	989	2974
LOSS	54	39	93	181	88	51	37	8	-8	59	29	113	68	181
TOTAL	5840	2660	8500	8500	0	-86	86	86	86	0	0	5840	2660	8500

NOTES:

ABSOLUTE VALUE OF COMBINED TOTAL DELTA IS 972

(1) RETROSPECTIVE AND ACTUAL TOTAL OPERATING PROGRAMS MUST HAVE SAME CRUDE RUN AND TOTAL PRODUCTION.

(2) TO MAKE THE SUM OF COLUMNS 6 AND 7 EQUAL TO ZERO, THE TOTAL IMBALANCE (86) IS SPREAD OVER ALL PRODUCT GRADES IN THE RATIO OF THEIR PRODUCTION AND DEDUCTED FROM THEM.

(3) AVCTD IS THE ABSOLUTE VALUE OF COMBINED TOTAL DELTAS IN COLUMN 5.

(4) COLUMN12 = COLUMN 1 + COLUMN 10.

(5) COLUMN13 = COLUMN 2 + COLUMN 11.

multiplying the barrels of payable unused capacity for such participant by the per-barrel charge for such participant as described and charge such participant accordingly. The sum of these amounts shall be deducted for the operating period in question prior to allocation of current operating expenses in Paragraph 2.

## 2. ALLOCATION OF OPERATING COSTS

- 2.1. The total operating expenses shall be computed by the JOC for each operating period and allocated to the participants as outlined here.
- 2.2. The portion of current operating expenses relating to major maintenance and repair items, such as unit shutdowns, emergency repairs, and large expenditure on replacements and renewals that do not extend the life of fixed assets, will vary in amount from month to month depending on the nature of the work. Such expenses shall be segregated and spread over a 12-month period by including in the operating expenses for each operating period, an agreed monthly amount based on 1/12th the estimated amount of such expenses for the ensuing 12-month period adjusted from time to time to recover actual expenditure incurred.
- 2.3. All current operating expenses adjusted in accordance with Paragraph 2.2 involved in the processing of feedstocks in the refinery and relating to general and administrative services, excluding the expenses defined in Paragraphs 1.3, 2.4, 2.5, and 2.6 shall be allocated to the participants in the ratio of their equity in the refinery.
- 2.4. All operating expenses involved in the shipping of products over the marine terminal in each operating period shall be segregated and allocated to all products so shipped during such period in the same ratio that the TSRV of each product so shipped bears to the total TSRV of all such products. The unit TSRV of a product shall be the simple arithmetic average of the prices per barrel in effect for that product, as posted or published for export products during the period in question by AOC and BOC. The total cost thus allocated to each product shall be to the account of each of the participants on the basis of their respective shares of actual product shipped.
- 2.5. All operating expenses involved in receiving feedstocks and other stocks in each operating period shall be segregated and allocated to the participants on the basis of the particular feedstock and other stock received by each in such period.

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2.6. All operating expenses involved in the manufacture and shipping of solid products, such as asphalt sulfur, in each operating period shall be segregated and allocated to the participants on the basis of their respective shares of the shipment of such products in that period.

## 3. CAPITAL CHARGE FOR CEDED CAPACITY

Should one participant agree to cede a portion of its Basic Capacity Rights for a period in excess of 2 months, the participant utilizing such ceded capacity shall pay to the other participant an agreed-on charge to compensate it appropriately for depreciation and amortization of its investment in the refinery.