INTERNATIONAL SMELTING AND REFINING COMPANY

TOOELE PLANT - TOOELE, UTAH

REPORT ON METALLURGICAL AUDIT OF COMBINED OPERATION OF TOOELE PLANT BY INTERNATIONAL SMELTING AND REFINING COMPANY AND UNITED STATES SMELTING REFINING AND MINING COMPANY

MONTH OF FEBRUARY, 1959

TIME REQUIRED FOR AUDIT

E. C. Jacobsen — April 11, to 21 and 24, to 27, 1959, inclusive

Audit of the combined operation of the Tooele Plant by the International Smelting and Refining Company and the United States Smelting Refining and Mining Company included review of all data applicable to combined operations which would not normally be reviewed in metallurgical audits previously established.

Inasmuch as the operation is covered by contract, a synopsis of metallurgical accounting provisions is included, with notations on revisions which have been made to the original agreement.

As the contract is a toll contract providing for treatment cost based on accurate weights, sampling and assaying of materials treated, the Auditor deemed it advisable to audit receipts of ore for U. S. Company account. This was done to the extent of 25% of lots taken into treatment.

Statement of combined operations (Exhibit A in contract) for February 1959 was audited in detail. This statement is prepared from customary statements of "Treatment, Production and Losses" but allocates the entire data between the two companies according to contract. All prorations based on Exhibit B were audited in detail.

In instances where products were sold under one set of terms, examinations of the allocation of proceeds between the companies were made and entries verified to the Journal. In the case of lead bullion, in which actual ingots were returned to each company, audit was made of the entire U. S. Company bullion as to weights shipped, assay comparisons and metal content computation.

Provisions of the contract relative to charges and credits for diluents and fluxes were checked in detail and traced to applicable cost statements.

No inventories were observed and no audit of quantities was made.

The Auditor reviewed the method of presentation on the statement of Cost, Treatment, Production and Losses. Costs as used on this statement, and credit for treating U. S. Company material were checked from statements prepared by the Cost Accounting Department.

An index appears on the following page.

E. C. Jacobsen, Special Metallurgical Accountant

April 27, 1959

INTERNATIONAL SMELTING AND REFINING COMPANY

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I N D E X

INTERNATIONAL SMELTING AND REFINING COMPANY

TOOELE PLANT - TOOELE, UTAH

MONTH OF FEBRUARY, 1959

SYNOPSIS OF CONTRACT

CONTRACT

The combined operation of the Tooele Plant by the International Smelting and Refining Company and the United States Smelting, Refining and Mining Company is provided for under terms of agreement between the two companies dated August 1, 1958. In memorandum of Mr. R. B. Caples, dated June 17, 1958, concerning this agreement he states "(It) is a toll contract between the International Smelting and Refining Company and United States Smelting, Refining and Mining Company covering the treatment in the Tooele Lead Treatment Plant and Slag Treatment Plant of lead and lead-zinc smelting ores and lead concentrates, plus other metalliferous materials and fluxing materials available to the United States Smelting, Refining and Mining Company, with return of metals recovered therefrom, distributed among the products of the Tooele Plant".

Supplementing the contract is "Appendix A" establishing the methods and procedures to be followed in determining smelting costs and metal recoveries applicable to the various materials to be treated under the contract and allocation of the metals recovered among the products of the Tooele Plant. Included as supplements to Appendix A are Exhibits A, B & C.

Exhibit A is a hypothetical statement showing treatment, production, metal losses and inventories of the combined operation and allocations of same between the two companies.

Exhibit B contains hypothetical examples of various calculations relative to apportionments of tonnages and metal content of products and losses to the contracting parties. Such apportionments are incorporated into Exhibit A.

Exhibit C contains illustrations of computing fluxing and diluent costs.

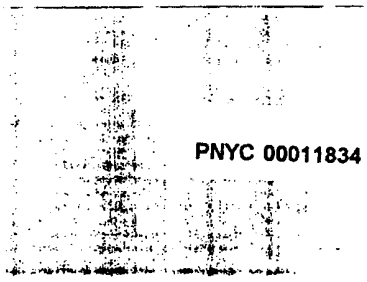
After publication of Appendix A and Exhibit A, B & C, certain changes in wording and procedure were deemed advisable and new drafts of Appendix A and Exhibits B & C were submitted. Appendix A bears the notation "Draft 9-8-58". All metallurgical accounting data for August 1958 were prepared under provisions of the original Appendix A and Exhibits A, B and C. Effective with September 1958, all data were prepared under provisions of Schedule A and Exhibits B & C per draft of 9-8-58.

Following is a brief synopsis of the August 1, 1958 agreement pertaining to metallurgical accounting provision. In the synopsis, as well as in the audit report, abbreviations will be used as follows:

International	- International Smelting and Refining Company
U. S. Company	- United States Smelting, Refining and Mining Company
Combined Companies	- International and U. S. Company
Combined Operation	- Toll operation in conjunction with International Operation
Tooele Plant	- Lead Smelter and Slag Treatment Plant

Tonnage - Material and Delivery

U. S. Company to deliver lead and lead-zinc smelting ores, lead concentrates, ores containing gold and silver, and other metalliferous material suitable for treatment up to a maximum tonnage of 9,000 dry tons per month excluding cold slag. If more than 9,000 tons are available U. S. shall offer same to International and International shall accept and treat such excess on the terms hereof to the extent of the then available capacity of the Tooele Plant. If plant capacity is not available U. S. Company may dispose of material elsewhere or hold to be delivered in subsequent months. U. S. Company allowed to store excess tonnage at Tooele for use in making up subsequent deficiencies, but to be charged for cost of storage and removal. If U. S. Company regularly has available more than 9,000 tons per month, and International can obtain more than plant capacity allows, provisions provide for mutual agreement on increase of plant capacity. Each party to retain its right, title and ownership to the metals contained in the materials furnished by it and recovered upon treatment. Delivery of ores to be made in open-top, bottom dump railroad cars, F.O.B. International, Utah, otherwise, added cost to be borne by shipper. Freight and transportation tax obligations of party for whom ore is shipped.



CONTRACT - Continued

Return of Metals

International to return to U. S. Company metals recovered from U. S. Company's materials in form of (1) lead bullion, (2) slag treatment plant fume, (3) deleaded fume, (4) deleaded plant lead fume, (5) copper matte, (6) copper speiss, (7) cadmium fume, or any other commercial products produced. Lead bullion returnable to be in form of anodes cast in U. S. Company molds. The products returnable, other than lead bullion, may contain copper, cadmium, lead, zinc, silver and gold, in addition to lesser amounts of various impurities. The recoveries of such metals and their distribution among the products (1 to 7 above) are to be estimated in accordance with procedures illustrated in Appendix A. The amount of each product belonging to U. S. Company as estimated to be returned F.O.B. cars or trucks at the Tooele Plant, or, in lieu thereof, such products may upon agreement of the parties be sold together with products of International and the proceeds of such sale distributed to the parties in accordance with such estimate. Adjustments between the parties which may be necessary as a result of differences between amounts of metals returnable to the U. S. Company and amounts actually returned in products as estimated to be made at end of each calendar year or at such other times as agreed upon.

Records and Reports

International to maintain auditable records of all transactions and matters pertaining to the contract. International to furnish monthly reports to U. S. Company on cost of operation, materials treated, recoveries of metals, metallurgical inventories, distribution of recovered metals in plant products or any other necessary reports.

Sampling

U. S. Company materials to be weighed, sampled and moisture determined by a Public Sampler, or by International at the Tooele Plant, and the weights, moistures and samples so obtained shall be accepted by both parties. If a Public Sampler is used, the cost shall be for account of the U. S. Company. Sampling of each car of U. S. Company material required, but composite samples may be used on up to 10 carloads of ore or five carloads of concentrates or other materials. Four samples required, one for International, one for U. S. Company, one for shipper and one for reserve. International required to furnish U. S. Company weights, moistures and samples of materials received for treatment for account of International.

Products produced for U. S. Company, except lead bullion, shall be weighed and sampled, and moisture determination made at destination to which such products may be shipped. Lead bullion for the U. S. Company to be weighed and sampled at the Tooele Plant. Where products returnable to U. S. Company are intermingled with those of International and sold independently of arrangements concerning sale of International's portion, International to advise U. S. Company and the receiving plant of the tonnage and analysis of the products belonging to U. S. Company, such weight and metal content to be deducted from total deliveries in order to determine International's portion. If the intermingled products are sold under one set of terms, International to submit to U. S. Company one copy of each settlement statement together with statement of amount due U. S. Company, and checks in payment thereof for U. S. Company's share.

Assaying

Each party to have its assay samples of all materials delivered or products produced, assayed or analysed and the parties shall exchange the results. The averages of both parties results to be used if assays are within designated splitting limits (see agreement for tabulation). If in excess of splitting limits umpires are to be requested and umpire's assay used if between the assays; if not between, the assay closest to the umpire's is used. Cost of umpire assay to be borne by party whose assay is further from that of the umpire.

Lead Bullion Option

U. S. Company may require International to deliver, to U. S. Company, 900 tons lead bullion, produced from International materials, per month under terms of April 1, 1938 agreement between International and American Smelting and Refining Company, except that the lead content will be paid for by U. S. Company (returnable to International in contract).

Appendix A (Draft 9-8-38) of the agreement includes both cost and metallurgical accounting procedures. Provisions directly concerned with metallurgical accounting audit, exclusive of methods of computations are as follows, quoted verbatim:

Metallurgical Inventory

An inventory of all metalliferous materials and fluxes on hand in the lead smelting and slag treatment divisions of the Tooele Plant shall be made by International and certified to by the Manager of said plant prior to the start of operations under the agreement. A similar inventory and certification shall be made as of December 31st of each year, and the adjustments referred to in paragraph 6 and 7 of the agreement and hereinafter described shall be based upon the next following certified metallurgical inventory.

CONTRACT - Continued

Materials Processed

Upon completion of the weighing, sampling and moisture determination as provided in paragraph 13 of the agreement, the materials may be commingled and put into process each month in such proportions as may be necessary to produce the desired bullion and slag analysis. A monthly weighted composite analysis of each company's materials treated or put into process will be made, with necessary sub-divisions by material classes for use in allocating smelting costs and total recoverable metals to each party's materials.

Provisional Allocations of Metals, Products and Metal Losses

The usual metallurgical accounting methods will be used to establish metallurgical input, in process, production, measured slag losses and unaccounted for losses from the treatment of materials furnished by each party and commingled as above provided.

In Process Inventory

An estimate of the in-process inventory will be made as of the end of each month during the term of the agreement.

Adjustment of Current Deliveries of Metal in Bullion

At the end of each calendar quarter, adjustments of the metal contents of bullion returned to each party during such quarter shall be made through the return of metals in bullion in subsequent shipments, if practical, or by payment for such metals in cash using the arithmetical average of the metal prices for each month of the quarter, with proper deductions from such prices for further treatment costs and transportation; provided, however, that payment to International for excess antimony in U. S. Company bullion shall be made only to the extent that it becomes necessary for International to purchase antimony for the purpose of making such specification bullion.

Final Allocation of Metals, Products and Metal Losses

Whenever a certified metallurgical inventory as described in paragraph 1 of this Appendix A shall be made, appropriate adjustments in the above described provisional allocations shall be computed for the period since the next preceding certified metallurgical inventory. All factors outlined under paragraph A above in the determination of such provisional allocations shall be followed in such computations, except that the certified metallurgical inventory shall be used in place of the estimated inventory.

In addition to the foregoing metallurgical accounting provisions, Appendix A provides for allocation of fluxing and diluent costs, computed from metallurgical statistics. Briefly these provisions are as follows:

(1) Scrap Iron - If scrap iron is needed for better furnace operation the cost of it will be included in smelting cost, but if used as a flux, the cost will be charged against the materials requiring same, and the tonnage shall be included in treatment tonnage for the party requiring such flux.

(2) Limesand or Lime Rock - A charge will be made to each party's material treated for the lime flux required for that material to produce blast furnace slag having the currently desired insoluble to lime ratio.

(3) Siliceous Flux - A charge shall be made to either party for silica required in fluxing that party's material to produce lead blast furnace slag of the currently desired analysis. Credit will be allowed to one party if excess silica is contained in that party's materials, to the extent that such excess is required for fluxing the second party's materials. The amount of this charge or credit shall be based on the lowest cost of available siliceous materials.

(4) Sulphur - The cost of elizinating a unit of sulphur is agreed to be 50% of the cost of operating the sinter plant and sinter cottrell treater, divided by the total units of sulphur contained in the materials treated, and shall be divided between the parties in the same proportion that the amounts of sulphur contained in the materials treated for each party bear to each other. The remaining 50% of the sinter and sinter cottrell costs will be divided between the parties on the basis of the total tonnage of materials sintered for each.

(5) Lead Diluent - If materials treated in the sintering and blast furnace operation exceed an average of 37% lead content, a supply of diluent will be necessary to reduce the average below 37%. If only one party's material exceeds 37% that party will pay for the diluent and have the tonnage of diluent added to his treatment tonnage. If both parties' material exceeds 37% then each will bear the cost of his own diluent and the tonnage in each case will be added to his tonnage treated.

CONTRACT - Continued

(6) Zinc Diluent - If materials, including necessary smelting fluxes and lead diluents, result in production of blast furnace slag exceeding 22% zinc oxide, a diluent will be necessary to lower the slag grade below 22% zinc oxide. The party whose material causes the excess will bear the cost of the diluent and have the material added to his treatment tonnage, or if both causes the excess then both will supply the diluent and have his own tonnage added to materials treated.

CONTRACT REVISIONS

In letter of Mr. G. A. Burt to Mr. H. L. Johnson, dated July 23, 1958, he states: "The following outline of sampling and assaying procedures attached hereto confirms our agreement covering the handling of the various smelting materials being shipped by U. S. Company to Tooele and milling ore shipped by International to the Midvale Mill. In some cases the procedures are at variance with the agreements of August 1, 1958 but in order to avoid duplication of effort and save operating costs, the parties have mutually agreed to these arrangements, subject to change at any time by mutual agreement".

Briefly, the materials covered by this letter and terms applicable thereto are as follows:

I - Midvale Lead Concentrates:
Weights - International received weights and moisture determination to govern.
Sampling - U. S. Company pipe sampling to govern.
Samples - One for International, one for U. S. Company and one reserve.
Assays - Each party to assay. Repeats when in excess of splitting limits. Exchange of samples similar to cold slag procedure.

II - Midvale Smelter Secondary Products:
Weights - International received weights and moisture determinations.
Sampling - U. S. pipe sample if possible. If crusting required U. S. Company sample to govern.
Samples - One to each party and one for reserve.
Assays - Each party to assay. Repeat and exchanged sample provisions. (See letter for exception on specific metals)

III - U. S. Company Custom Materials:
Weights - International received weights and moisture determination.
Sampling - International's pipe or mill sampling to govern.
Samples - If U. S. Company accepts smelter assays no sample mailed unless requested. Otherwise one sample to outside assay firm, one kept by International and one U. S. Company for umpire use.
Assays - If shipper accepts smelter assay, International's assays govern. If not, assays to be compared by U. S. Company using agreed limits. U. S. Company to call for umpire if needed. (See letter for metals covered, and exceptions on specific metals).

IV - U. S. Company - Battery Plates:
Weights - Tooele City scale ticket weights or from reputable Salt Lake City scales.
Sampling - International sampling will govern.
Samples - None unless requested.
Assays - International's assay to govern.

V, V-a & V-b - apply to Midvale Mill. See audit on that operation.

The provisions of Appendix A, Exhibit C, relative to allocation of lime flux costs have been superseded by a method reported on page 11 of the February 1959 Cost Statements entitled "Allocation of Smelting Fluxing and Diluent Costs". For comment on this revision see section of this audit "Allocation of Fluxing and Diluent Costs".

The managements of both companies have made revisions in arriving at settlement assays for U. S. Company lead bullion shipped. See comment under "Products - Lead Bullion".

INTERNATIONAL SMELTING AND REFINING COMPANY

TOOELE PLANT - TOOELE, UTAH

MONTH OF FEBRUARY, 1959

STATEMENT OF COMBINED OPERATION, INCLUDING U. S. COMPANY ORES TREATED

The "Statement of Combined Operations" is the statement referred to as "Exhibit A" in the contract. There are five main divisions in this statement, as follows:

(1) Sintering Operation
(2) Blast Furnace
(3) Slag Treatment Plant
(4) Deleading Plant
(5) Cadmium Plant

The statement is a summary of treatment, production and losses of the entire plant operation in respect to pounds of material, pounds of lead, copper, zinc, antimony, bismuth and cadmium, and ounces of silver and gold. All data were allocated between the U. S. Company and International.

In auditing the Statement of Combined Operations the Auditor assumed that statistics on receipts, shipments, and inventories, were regularly covered on periodic metallurgical accounting audits and for that reason were excluded from this audit, except for examination of receipts from the U. S. Company. At the request of the U. S. Company, International reports monthly to the U. S. Company a statement of ores treated for its account, by lots. Inasmuch as the total of these lots enter the statement of Combined Operations, an audit of these lots was made to the extent of 25% of lots treated. The larger portion is treated at the Sintering Plant and the balance at the Blast Furnace. The audit disclosed full agreement between the totals as reported to the U. S. Company and those taken into the statement of Combined Operations.

It was noted that in the Blast Furnace section of the statement an item of "Murray Slag" was treated, and an allocation made between the U. S. Company and International. This slag was purchased by International which bills the U. S. Company for its portion of purchase cost. The allocation of slag between the companies was made on the basis of the dry pounds of sinter, ores and cadmium flue dust treated at the Blast Furnace. The basis for this allocation is not included in the contract, but was established by the local management.

Audit of the Statement of Combined Operations covered the first four plants above enumerated. The Cadmium Plant was not in operation during February 1959. All distributions on the combined operation were found to be in accordance with terms of the contract. These distributions included inventories, products, and known and unaccounted for losses. Treatment tonnages from the five main divisions of this statement were checked to Cost Statements for use in allocating costs between the combined companies.

TONNAGE

The contract provides for treating a maximum tonnage of 9,000 tons per month for the U. S. Company with certain provisions for storing excess over this tonnage, or for enlarging plant capacity. During February 1959 the following dry tons were treated for the U. S. Company:

	Dry Tons
Sintering Plant	5,757
Blast Furnace	781
Slag Treating Plant	None
Total	6,538

Total tonnages for other months of the combined operation are as follows:

August 1958	5,683
September 1958	5,532
October 1958	8,144
November 1958	6,377
December 1958	7,245
January 1959	7,398

From this tabulation it is apparent that the U. S. Company is well within the maximum tonnage limitation.

PRODUCTS

Lead Bullion

Each party shares in the production of lead bullion as determined by the agreed method of computing product allocation. During February 1959 production was 7,085,264 pounds of bullion. Of this amount U. S. Smelting Company's portion was 5,506,785 pounds and International's portion 1,578,479 pounds. Included in these weights are lead, silver, gold, antimony, and bismuth.

The contract provides for assaying by both parties, using the following splitting limits:

%	Lead	.20
%	Copper	.02
Ozs.	Silver	.30
Ozs.	Gold	.01
%	Antimony	.05
%	Bismuth	.02

This also provides for the use of an umpire when results vary by more than the above amounts. The local managements have revised this procedure as follows:

Assay determinations are made on the following metals: copper, antimony, bismuth, arsenic, tellurium, silver, gold, and other metals in total, except lead. After settlement assays are agreed upon for all metals except lead, the lead assay is arrived at by deducting the total assays of other metals from 100%. The contract does not specify splitting limits on arsenic tellurium and "Others". By subsequent agreement a splitting limit of .02% was established for each of these metals. Silver and gold assay determinations are made for each lot shipped. Assay determinations on all other metals are made from a monthly composite sample of shipments. In arriving at settlement assays for any particular metal the original assay of each party is averaged with that of the other party. If outside of the splitting limit each party repeats his assay. If not then within the limit the sample of each party is exchanged for that of the other party and an assay determination is made on each exchanged sample. If the "Exchange" assays are still outside the splitting limit, then no further assay determination is made, but the mean of International's repeat and exchange assays are averaged with the mean of U. S. Company's repeat and exchange assays. Although silver and gold are assayed in ounces per ton, a conversion is made to percentage in arriving at lead assay. For February 1959 the settlement assays for U. S. Company bullion were as follows:

Copper	.009%
Antimony	1.490
Bismuth	.113
Arsenic	.100
Tellurium	.042
Other	.020
Silver and Gold	.251
	1.985
Lead to Balance	98.015
Total	100.000

Thus, even though the contract provides for assay on lead, with provision for comparison and umpire, the above method is used as a substitute.

The contract provides for an adjustment of current deliveries of metal in bullion as follows: "At the end of each calendar quarter adjustments of the metal contents of bullion returned to each party during such quarter shall be made through the return of metals in bullion in subsequent shipments, if practical, or by payment for such metals in cash using the arithmetical average of the metal prices for each month of the quarter, with proper deductions from such prices for further treatment costs and transportation".

The contract also provides, under appendix A, for final allocations of metals, products and metal losses whenever a certified metallurgical inventory shall be made, and adjustments made for any differences brought about thereby. To date no certified inventory has been taken.

From the inception of the contract to the end of February 1959 there have been no cash payments for metals owed by one party to the other. However, payments in kind have been made. In respect to lead, a sufficient inventory has been available to meet deficiencies caused by shipping more for either party than was produced by that party. In respect to other metals, specifically bismuth, gold and silver, there have been some deficiencies. Thus, at February 28, 1959 the U. S. Company owed International 8,889 pounds of bismuth and 171,836.42 ounces of silver. International in turn owed the U. S. Company 469.829 ounces of gold.

Providing the U. S. Company is unable to pay back in kind the silver it owes International it is apparent that the contract provision should be applied requiring cash payment to International. The same would apply to the 8,889 pounds of bismuth. Conversely, International should pay for the gold owed to the U. S. Company.

PRODUCTS - Continued

Lead Bullion - Continued

Messrs. W. J. McKenna and C. A. Durt were consulted regarding liquidation of metal balances between the two companies. Both were in agreement that cash settlements should be made in the near future as it seemed unlikely that payments in kind could be made. A suggestion was made that such differences as existed on April 30, 1959 be liquidated to coincide with the expected taking of a certified inventory at that time. Mr. McKenna stated that he would consult with Mr. Hugo Johnson of the U. S. Company regarding payments for these metals.

At March 31, 1959 the balances were:

Owed by U. S. Company to International	-	Bismuth	- 11,201	pounds
	-	Silver	- 170,973.84	ounces
Owed by International to U. S. Company	-	Gold	- 913.691	ounces
	-	Lead	- 410,980	pounds

There will apparently be no difficulty for International to return any lead it may owe to the U. S. Company in subsequent months but repayment in kind by either company in respect to other metals is less certain or improbable.

On April 29, 1959 Mr. McKenna conferred with Mr. Hugo Johnson regarding cash settlements for metal owed by one company to the other. Mr. McKenna informed the Auditor that Mr. Johnson agreed that cash liquidations should be made soon, preferably after the taking of the expected certified inventory on May 1, 1959. Allowing time for the computation of revised allocations due to use of a certified inventory such cash adjustment should be made the latter part of May 1959.

Audit of lead bullion shipments was made only on shipments for account of the U. S. Company. All data were in good order and were properly recorded in "Lead Bullion Production Statement - U. S. Company Portion".

Copper Matte and Speiss

Copper matte and speiss are Smelting Plant products shipped to the Anaconda Reduction Works. Settlements are prepared at Anaconda with entry crediting International. At Tooele proper sales entries are made for each product. The Statement of Combined Operations, Blast Furnace Smelting section provides an allocation of these products to U. S. Company and International. This allocation provides a basis for computing settlements for U. S. Company's share of each product. The journal contains an entry charging sales for the U. S. Company portion and crediting that company.

Audit disclosed that proper settlement terms were used in computing the U. S. Company portion of sales according to the contract which provides that when one set of terms is used for entire shipment International is to compute the share of the U. S. Company and tender payment for same.

Deleaded Zinc Fume Sales

Deleaded zinc fume sales were made to American Zinc Company, National Zinc Company and The Anaconda Company. This fume is stored as produced and maintained as an identifiable finished inventory on plant reports. In this respect it is different than copper matte and speiss which is not carried on plant inventories as finished products, but which are considered as such only when shipped. Consequently these copper products are carried on the Statement of Combined Operations as production items and as such are allocated to the combined companies and the entire amount due the U. S. Company is settled for. Deleaded zinc fume is produced in greater quantity than is sold which requires that a first-in first-out method be applied in apportioning the sale between the companies. The sale made in February 1959 was accounted for by stock remaining from December 1958 production and a portion of January 1959 production. Each company's proportionate amount of production for these months is therefore deducted from prior inventory belonging to each to arrive at quantity remaining for sale. Bookkeeping entry is then made crediting the U. S. Company for its share and charging Deleaded Zinc Fume Sales.

The local managements have agreed that International may claim 100% of sales to American Zinc Company (toll basis) and shipments to The Anaconda Company, terms for sale to these companies being confidential. Weight and quantities of these two sales are therefore deducted from appropriate months production belonging to Anaconda when proration is made to the combined companies.

The records showing the distribution of the sale and the apportionment of the revenue were found to be in order.

Leaded Zinc Oxide Sales

Leaded zinc oxide, similar to deleaded zinc fume is sold from inventory on a first-in first-out basis relative to allocation to the combined companies. During February 1959 a sale of 3,000 pounds was made. The sale was allocated to the two companies on the basis of each one's proportionate share of September 1958 production. A portion of that month's production still remained on hand at February 28, 1959.

PRODUCTS - Continued

Leaded Zinc Oxide Sales - Continued

This material is sold on the basis of $10.00 per cwt, F.O.B., destination, from consignment stock. Freight commissions and discounts are deducted. A statement is submitted to the U. S. Company showing full detail. Inasmuch as it is sold on cwt basis, regardless of metal content, the net return is merely prorated on a dry weight basis to determine each company's portion. A detailed record is maintained, however, of metal content remaining in inventory. If sales were made on any other basis than per cwt, the information would still be available.

All records pertaining to sale of leaded zinc oxide were found to be correct, and entry crediting the U. S. account was verified.

Raw Zinc Fume

This fume is removed from the system prior to the deleading process. No inventory of this material is regularly carried, however, an order was received from the American Zinc Company of Illinois for shipment to Halliburton Oil Well Cementing Company, Duncan, Oklahoma. The material was sold at 7.32¢ per pound and was shipped collect. Similar to procedure on leaded zinc oxide sale, the net return was prorated to each company on a tonnage basis, although a net distribution is available.

The net amount due the U. S. Company for this material was noted on the same statement submitted for deleaded zinc oxide. The entry to journal was verified by the Auditor.

ALLOCATION OF FLUXING AND DILUENT COSTS

Lime and Silica

The computation of lime fluxing cost and allocation of same is reported on page 11 of the February 1959 Cost Statements. The method as herein used differs from that as illustrated in Exhibit C of the contract. Briefly the method illustrated in the exhibit takes into account the deficiency of either party's CaO content in producing a required slag grade. This deficiency is then multiplied by a cost per unit of CaO, the unit cost being the delivered cost of lime flux, the cost of sinter and cottrell and 80% of blast furnace cost, all divided by the excess units of CaO (CaO less Insol.). The method as used accounts for the smelting cost of the lime material used on a per ton basis, added to the actual purchase cost per ton.

The Auditor was advised that the managements of the U. S. Company and International agreed upon the method presently being used.

The computation of Insol., deficiency was made according to the method illustrated in Exhibit C. It was noted that the estimated cost of a unit of silica as used in the exhibit was 22¢. The same estimated cost was used in computing the February 1959 charge. Incidentally, for that month International was charged only $32.78 for its insol. deficiency and U. S. Company was credited with the same amount.

After allowing for proper charges for lime flux, the balance of the blast furnace cost was allocated to the companies on a tonnage treated basis and the total cost for each company, adjusted by the insol. charge or credit was entered on the blast furnace cost statement as the official cost to each company.

Messrs. W. J. McKenna and C. A. Burt were consulted regarding use of 22¢ per unit estimated silica credit. Mr. Burt stated that this price was as accurate as any available and that it would continue to be used as final until a more accurate one would become available.

Sulphur

The computation of the apportionment of the Sintering Plant cost based 50% on sulphur content of material treated and 50% based on total tonnage of material treated was in accordance with contract provisions as summarized in this audit. All data were checked and the cost allocation was traced to the Sintering Plant cost statement.

Lead Diluent

During February 1959 the combined sinter feed averaged 34.362%, feed of U. S. Company averaging 39.215% and International 25.427%, all excluding lead diluent added. Including some Murray slag added as diluent the respective percentages were 34.138%, 38.820% and 25.427%. It is apparent that the diluent was necessary to reduce the high lead percentage caused by treatment of U. S. materials. A settlement was prepared showing the entire value of this slag used by the U. S. Company. A portion was treated at the Blast Furnace and was included as a portion of its treatment tonnage at that plant. The portion treated at the Sintering Plant was labeled as such on the Statement of Combined Operations, indicating its use as a diluent.

ALLOCATION OF FLUXING AND DILUENT COSTS - Continued

Lead Diluent - Continued

The entire Murray Slag Dump was purchased from the American Smelting and Refining Company and is carried as an asset account on International's books, designated as "Murray Slag Dump". When removals are made for treatment at the Tooele Plant the account is credited and ore purchases debited. Under terms of schedule in effect with the U. S. Company the settlement value was credited to the International Ore Purchased Account and charged to the U. S. Company, the entire removal for the month, including that later transferred to the U. S. Company, having been charged to the ore purchase account and credited to Murray Slag Dump.

Zinc Diluent

Blast Furnace Slag for February 1959 did not exceed 22% zinc oxide and for that reason the contract provision for zinc diluent was ineffective

CADMIUM PLANT COST OF OPERATION

Appendix A states "Cost of operation of the cadmium plant shall be allocated between the parties on the basis of the total cadmium content of materials treated for each". Since the inception of the contract this plant has operated only one month, namely December 1958. For that month, the Auditor was informed that the plant cost was allocated on the contract basis.

METALLURGICAL INVENTORY

As noted in the synopsis of the contract a certified inventory should be taken at December 31 of each year. This was not done at December 31, 1958. When consulted about this contract provision Mr. McKenna stated that an inventory of this nature will be taken on May 1 or 2, 1959 with all items of inventory adjusted to 8:00 A.M., May 1, 1959.

STATEMENTS OF COST, TREATMENT, PRODUCTION AND LOSSES

The Statements of Cost, Treatment, Production and Losses are prepared in the same manner as under the prior operation except for incorporation of treatment tonnages, metal content, costs and toll revenue applicable to the treatment of U. S. Company material. In the contract between the companies certain items of expense are to be borne 100% by International, thereby being excluded from allocation to the companies on a tonnage basis. Briefly some of these excluded costs are: (1) pensions for employees retiring prior to August 1, 1958, (2) taxes on property not used in the combined operation, (3) corporation franchise taxes, (4) 25% of the salaries and expenses of International's Ore Purchasing Department in Salt Lake City, (5) all costs in connection with making settlements for ores and concentrates purchased for account of International (50% of salaries and expenses of this department to be deemed as cost of making settlements), (6) umpire assays and Tooele laboratory costs chargeable to the purchase of ores for International, (7) outside property expenses, (8) use and occupancy insurance premiums or premiums on property not used in the combined operation, (9) International Geological Department expense, and (10) legal firm retainers and other legal expenses not applicable to the combined operation.

To properly show the true cost of treating all materials the Cost Accounting Department allocates all costs, including those itemized above, to both International and U. S. Company materials. In this respect the cost data are prepared as though the U. S. Company material was a custom material absorbing its proper share of all costs. Consequently the tolls received (or the U. S. Company portion of treatment cost based on contract) are taken as credits to the cost of operation. This procedure is similar to that used in the treatment of zinc concentrates on toll at the Montana Zinc Plants of The Anaconda Company. In that operation, however, tolls are not determined on a plant tonnage basis, but on a fixed cost per ton of material treated, adjusted by labor, power and other costs.

To record the distribution of total treatment costs including the ten enumerated above, to materials of both companies, the Cost Accounting Department prepares a supplementary "Cost Basis" summary of costs for both the Lead and Slag Treating Plants. In current audit, these costs, including allocation of same to both companies were traced to respective cost, treatment, production and loss statements. As these statements are covered under work programs of metallurgical audits previously established, the Auditor did not include any further verification of data. The statement on the Slag Treating Plant showed a loss of $164.53 for February 1959. A Lead Plant estimated profit statement showed a loss of $6,231.74 for February 1959. This statement assumed sale of lead at the East St. Louis price of 11.363¢ per pound as quoted in the Engineering and Mining Journal.

ERRORS AND DISCREPANCIES

No errors or discrepancies of importance were noted during audit of the statements and work sheets used in preparation of published metallurgical reports covering the combined operation.

COMMENTS

A high degree of accuracy was evident on all reports reviewed during the audit. Each member of the Metallurgical Accounting Staff appears to be well qualified for his particular tasks. The present staff consists of Messrs. Marcellus Clark, James Loury, Eli Porter, Chester Whitehouse, Alex Rhone and Gary L. Bennett. Mr. Hinson has been informed that Mr. David Parman, a former employee of the department will return from South America and be added to the present staff, at least part time. He stated that the number of clerks at present was insufficient in case of sickness or other emergency, and that replacements for vacations are not yet available. It is hoped that Mr. Parman's return will alleviate this situation.

The initiation of the combined operation has thrown an immensely larger quantity of work upon the metallurgical accounting department. A Bruning Copy Machine has been of inestimable value in saving typist and clerical help, and may be of more use in this respect as the organization of work is perfected.

Fine cooperation on the part of the management and accounting staff was evident during the course of this audit.