

CHRONOLOGICAL REPORT

CLOSING AND SALE OF EAST CHICAGO PLANT

November 30, 1946

N11324

PNYC00008786

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OUTLINE

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I. HISTORY OF PLANT

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1. Lead Refinery

Introduction

The Parkes Process lead refinery of the International Lead Refining Company at East Chicago, Indiana was built to treat the lead bullion produced by the lead smelter of the International Smelting and Refining Company at Tooele, Utah.

Construction

The plant was designed and constructed under the direction of Mr. G. P. Hulst. Ground was broken April 16, 1912 and exactly six months later the plant was in operation and refined lead was being cast. The capacity of the plant as designed was 5,000 tons of bullion per month.

In the paper presented by Mr. G. P. Hulst before the American Institute of Mining and Metallurgical Engineers at the Salt Lake City meeting in August, 1914, Mr. Hulst acknowledged the assistance rendered by R. Ruetschi in the preparation of plans, C. W. Wilson, L. Crook and F. E. Stolte in the work of construction, and Herman Witterborg in the operation of the plant.

Operation

The lead refinery as constructed was undoubtedly the most modern of its kind at that time. Mr. Hulst and his staff were able to take advantage of the knowledge of lead refining to that date and consolidate it into a modern, well-arranged lead refinery that had been the model for lead refineries for many years since that time.

Effect of World War I

The plant was well developed into efficient operation when World War I began in August, 1914. The greatly accelerated demand for lead and the higher prices for common and antimonial lead permitted the International lead refinery to refine bullion from Mexico, Canada and various points in the United States, to its fullest capacity. In 1917 and 1918 a third softening furnace was constructed and the desilverizing kettles were increased in size from 60 tons to 135 tons. Two additional 135-ton kettle settings were also constructed. The original three residue furnaces were consolidated into one large residue furnace.

The acute shortage of antimony during the war and the genius of G. P. Hulst permitted the treatment of large tonnages of antimony ore imported from Mexico for the production of large quantities of antimonial lead.

Post War Problem

The plant passed through a rather critical period during the post war period because of the low metal prices and the consequent

declining production of lead bullion at Tooele, Utah and the construction of lead refineries in Mexico to treat the Mexican bullion that formerly had been treated at East Chicago.

Battery Plates

In the early 1920's when tonnages of Tooele bullion were low, careful study was made of the possible use and treatment of battery plates. Through the initiative of the East Chicago staff large tonnages of battery plates were treated and considerable income was derived therefrom. In the depression of the 1930's battery plates and secondary lead materials were bought in large quantities in order to obtain an income that would justify operation of the plant.

Selective Flotation Effect

The improvement in selective flotation methods for separation of zinc from lead released tremendous tonnages of high zinc lead ore that formerly had been economically unattractive because of high zinc penalties. These developments increased the tonnage of concentrates that could be treated at Tooele. The capacity of the East Chicago refinery was exceeded in 1926 and 1927, and in 1928 and 1929 substantial additions were made in the equipment in order to increase the capacity of the plant up to 10,000 tons of bullion per month.

1930 Depression

In the late 1930's the tonnages of bullion available from Tooele were not encouraging. They kept declining, higher labor costs were also experienced, culminated by the beginning of World War II with its freezing the price of lead at 6.50¢ per pound and its elements of increased cost, labor inefficiency and extreme shortages of labor. The extreme shortages of labor were in part compensated for by the employment of women in all of the plant operations for the first time in the history of the plant. They proved to be adequate to maintain production but were obviously inefficient as compared to a normal male working force.

Bismuth Recovery

In 1935, the lead refinery substantially changed its mode of operation because of the treatment of the Anaconda Roaster Residue at Tooele and the separate production of a high bismuth bullion which was desilverized by the Parkes Process. The anodes containing lead and bismuth were delivered to the white lead plant for the recovery of bismuth from all of Anaconda's operation. More will be said about this development in the history of the white lead plant.

Personnel

In addition to the personnel who built and started the operation of the plant, mention should be made that in the summer of 1918

Mr. M. W. Krejci was transferred from the Montana operations to East Chicago as Refinery Superintendent. Mr. F. P. Clark, former Chief Chemist at East Chicago was made General Foreman of the Lead Refinery and contributed a great deal in the operation of this department. He was promoted in 1925 to Lead Refinery Superintendent and remained in that capacity until his death in March, 1942.

2. White Lead

Lead Marketing Problem

In 1919, it was recognized that outlets for refined lead would be distinctly limited in the post war period. In recognition of these conditions, it was decided to look into the possibilities of producing some lead product that would form an outlet for a substantial part of the pig lead produced at East Chicago.

Under the direction of Mr. William Wraith as President of the International Lead Refining Company, it was decided to investigate the possibilities of the Sperry Process for the production of electrolytic white lead.

Sperry Process Investigation

With the help and guidance of Mr. Elmer A. Sperry and under the direct supervision of Mr. M. W. Krejci a small experimental Sperry cell for the production of electrolytic white lead was started in a special building at East Chicago and known as Building C013.

Sperry Process Development

In this small experimental plant the Sperry Process was developed into a commercial process and plans were immediately made for a 10-ton electrolytic white lead plant to be constructed at East Chicago.

White Lead Plant Construction

The appropriation request for construction of the 10-ton white lead plant was approved July 3, 1919. The plant was placed in operation January 30, 1920.

Personnel Changes

On February 1, 1920 Mr. G. P. Hulst and Mr. Milo W. Krejci resigned from the International Lead Refining Company to engage in other activities. Mr. O. M. Kuchs was appointed Manager and G. E. Johnson was appointed Acting Superintendent of the East Chicago plant which included the lead refinery and the white lead plant which had just been placed in operation.

Of the men who started in the original development of the

Sperry cell at East Chicago, mention should be made of Mr. T. E. Cook who was invaluable in the solution of the early problems of making the process practical and relatively simple for workmen to understand.

Mr. E. A. Mayhew started as a filter operator in the experimental plant. Later, by successive stages he became a foreman of the white lead plant and remained in that capacity until made General Foreman of the white lead plant which was his position when operations were discontinued in July, 1946.

Mr. R. G. Bowman contributed a great deal to the development of the Sperry Process in its early commercial operation. He was transferred from Tooele, Utah to East Chicago in May, 1920. He later became Assistant Superintendent of the East Chicago plant and continued active on the management staff at East Chicago until July, 1946 at which time he occupied the position of General Superintendent.

Mention should be made of the many years which Mr. W. J. Knox spent as White Lead Plant Superintendent. Among the research men succeeding Mr. Knox as research department heads were T. H. Donahue, S. W. Stockdale and W. W. Shropshire.

Mention should also be made of Mr. Perry S. Toney as Mechanical Superintendent. One of the important developments which he contributed was the anode washing machine which is gradually being extended in its use to all types of electrolytic washing operations.

Development of the Bismuth Plant and the recovery of all of Anaconda's bismuth through the white lead plant was in part started by Mr. T. H. Donahue when he was in the research department. It was expanded into a practical operation when Mr. Stockdale was head of the research department.

A great deal of exploratory work in the use of the Sperry Process for the refining of impure metals and the production of a superior white lead was actively studied in the 1930 period. Many possible processes were also explored in an experimental way, some of which will no doubt become commercially attractive in future years.

3. Zinc Oxide

In March, 1921 Mr. G. S. Brooks arrived at East Chicago for the purpose of building and operating an experimental zinc oxide furnace. It was proposed to produce zinc oxide from electrolytic zinc received from the Montana operations of the Anaconda Copper Mining Company. The experiments using oil as a fuel proved successful and a commercial unit consisting of Block No. 1 - French Furnace operation at East Chicago - was built. Ground was broken in July, 1922 and the unit began operating on January 1, 1923. No. 2 French Block was built and began operations in October, 1924. In addition to Mr. Brooks, Mr. F. O. Case, Mr. L. G. Duncan, Joe Mickel and Len Clark were important in the development of the zinc oxide business at East Chicago.

In 1923, to further expand the zinc oxide business, it was decided to build a plant similar to Block No. 1 at East Chicago at Akron, Ohio with the thought that this would supply zinc oxide to the large rubber companies operating in the city. Promotion of the use of French Process zinc oxide in rubber manufacture was one of the important developments accomplished by the zinc oxide department.

Mr. F. O. Case had a great deal to do with the construction of the Akron plant and its later operation and handled the sale of the production. Mr. T. R. Jones, J. F. Clark and Joe Klimek were important men in the Akron organization.

Mr. F. H. Hurlless entered the employ of the company at Akron in November, 1922 as a clerk in the office. He later assisted Mr. Case in sales work at that point and was transferred to East Chicago in 1929. He later became District Sales Manager and in 1936, Assistant Sales Manager, assuming the position of Sales Manager in 1942.

In 1925, Mr. G. S. Brooks was promoted to the position of President of the Geishe Spolka Corporation of Poland. When he left Mr. F. O. Case succeeded him as Manager of the zinc oxide department at East Chicago and Akron. At that time Mr. L. G. Duncan who had been with Mr. Brooks in the initial venture was placed in charge of the Akron plant. Zinc oxide sales reached a volume of 30,000 tons annually.

Development of Zinc Oxide Production from Scrap Zinc

It had been recognized in 1935 and 1936 that some other source of zinc might become necessary because of the uncertain supply from the west. There was also an increasing amount of scrap becoming available as die cast scrap in various forms which every one recognized would ultimately become a problem to reclaim. Therefore, in the years between 1935 and 1937 efforts were made to find some process of using scrap zinc for the production of zinc oxide. In this development, R. S. Olsen and George Anderson had a considerable part and were later granted patents for the fundamental characteristics of the muffle furnaces which have been so successfully used at East Chicago.

In 1936, Mr. Case was promoted to Manager of the Midwest District of the International Smelting and Refining Company and with that change Mr. Johnson was made Plant Manager for the East Chicago and the Akron plants. Mr. Duncan was made Sales Manager.

In 1937, the power shortage in Montana created a serious situation in the zinc oxide business at Akron and East Chicago. There was not enough electrolytic zinc available for zinc oxide production.

It was decided to discontinue the operations of the Akron, Ohio plant and it was closed down in September, 1937. A few of the Akron employees were transferred to East Chicago but most of the former Akron employees remained in Akron, Ohio.

The operations of the muffle furnaces became an increasingly important part of the zinc oxide operations at East Chicago, and at the time of the closing of the plant in August, 1946 the muffle furnaces had been developed to the point where all forms of zinc oxide produced at East Chicago such as U.S.P. quality, ceramic, paint and rubber oxides were all produced on the muffle furnaces from scrap zinc.

4. Lead-in-Oil

Substitution of other pigments for white lead in the ceramic and paint industries caused a shrinkage of sales which became quite serious. In 1930 a survey of the lead-in-oil market was made and in 1931 the production and sale of this product was begun.

That area of the country east of the Mississippi River and north of the Ohio River was actively solicited. Over 2,000 outlets were established and the tonnage of dry white lead sold as lead-in-oil amounted to over 30% of total dry lead production.

Beginning with World War II shortages of materials and restrictions on their use as imposed by WPB and CPA reduced the volume of lead-in-oil available for sale. However, production and sales were maintained on a reduced basis throughout the war and until the closing of the East Chicago plant.

II. CONDITIONS AFFECTING DECISION TO CLOSE PLANT

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1. Bismuth Problem

Ex. No.

January, 1946

The Tooele staff studied the Trail, B. C. operations in connection with the bismuth problem which had been precipitated by the purchase of the Darwin Mine by the International Smelting and Refining Company in August, 1945. This mine was supposed to have been a low bismuth mine but shortly after it was purchased it was discovered that it was very high in bismuth. This bismuth began to be an aggravation to the bismuth problems already existent in connection with the Tooele smelting operations.

February 22 to
March 20, 1946

The Trail, B.C. Betts Process plant studies were completed and reports then submitted and it was suggested that a study be made of the possibility of installing a Betts Process plant at East Chicago and also at Tooele. Approximately two weeks were required at East Chicago to prepare and check the estimated construction and operation costs at East Chicago and at Tooele. In addition, the Parkes Process costs at East Chicago were analyzed by the East Chicago staff and estimated costs submitted March 19th and 20th.

The decision was made that the amount of money involved to construct a Betts Process plant at either East Chicago or Tooele was not warranted when all factors were considered.

2. Operating Costs

A. Lead Refinery

March 16, 1946

Mr. Milne prepared a memorandum to Mr. Johnson relative to the statement of East Helena and Tooele bullion treatment costs for the years 1938 to 1945 with a supplementary tabulation showing the total metal and inventory gains over and above what we had to return to East Helena and Tooele.

The study of lead refining costs was continued at East Chicago. The bismuth problem and smelting costs at Tooele were studied as well as the effect of East Chicago refining costs on East Helena bullion.

In the study of the many factors affecting refining costs at East Chicago, it was concluded that these refining costs were high principally because of over head costs. There obviously was a hang-over of high costs from war conditions, the inefficiency of plant operations during war conditions and the use

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of a large proportion of women employees who were less efficient than men.

East Chicago also retained a number of elderly employees during the war period because of the general shortage of all classes of help. Some of these men had reached a condition where their ability to function was decidedly limited due to their age.

April 30 to
May 3, 1946

The New York office, in their discussion of Omaha treatment of by-products, recognized the possibility that Omaha might want to treat all of the Toccole bullion and the East Helena bullion as well. Discussions developed a number of possibilities. At about this time, the New York office requested that new estimates be prepared at East Chicago to see what the refining costs might be reduced to if the plants were threatened with a shutdown of their lead refining operations.

May 1, 1946

Mr. Laist received a letter from Mr. Walker of the American Smelting and Refining Company on the subject of International bullion, offering original terms for the treatment of this bullion. This was the information which Mr. Laist telephoned Mr. Bowman on May 1st. 12

May 10, 1946

A statement of the bismuth costs, showing costs at East Chicago, also charges made to Anaconda Copper Mining Company and International Smelting and Refining Company for the ten years 1936 to 1945 inclusive, was submitted by Mr. Milne and discussed with Mr. Laist. 13

May 15, 1946

The Accounting Department prepared a statement of bullion refining costs, 1936 to 1945 inclusive, which was used in anticipation of a complete discussion with Mr. Laist. 14

May 17, 1946

A statement was prepared showing the repairs to the lead refining department, how they had increased from a low of \$35,000 in 1938 to \$116,000 in 1945. 15

May 18, 1946

Mr. Bowman prepared a memorandum to Mr. Johnson on the subject of Reductions in Overhead and Fixed Expense at East Chicago. 16

May 18, 1946

The bismuth comparison between East Chicago treatment and Omaha terms was made. 17

May 18, 1946

Mr. Bowman made a note on Ventilation and Health Hazard Expenses that might be necessary at East Chicago to bring the Parkes Process plant up to a safe operating condition. Mr. Laist wanted this 18

figure as a credit to the installation cost of the Betts Process.

May 20, 1946

The East Chicago staff prepared revised estimates of the estimated complete Parkes Process refining costs, May 15, 1946 editions, which indicated a refining cost per ton of \$10.22. There were also submitted with these estimates on the same date complete Parkes Process costs at East Chicago without custom materials which brought the bullion refining cost to \$11.71 per ton, then the estimated cost of refining bullion at East Chicago only without customs or by-product treatment at \$13.20 per ton. Copies of all of this information in files at East Chicago. 19

May 20, 1946

A statement was prepared showing the cost of treating all materials, bullions and customs, based upon the 1945 total costs, adjusted to give credit for income from other sources which indicated as estimated 1946 cost of \$11.57 per ton. 20

Discussed with Mr. Laist a bullion treatment comparison which was dated May 20, 1946 showing the bullion treatment comparison between East Chicago and Omaha, which indicated a gain of \$101,760.00. 21

May 21, 1946

Mr. Laist objected to the penalty for bismuth, and these figures were later revised with the help of Mr. Case, into a new arrangement which was indicated earlier in this memorandum. 22

May 22, 1946

Mr. Miller prepared a statement of East Helena and Tooele bullion refining costs April, 1946 and year to date. 23

May 24, 1946

The bullion metal recovery statement for 1940 to 1945 inclusive was prepared showing that the metal recoveries over and above, was assumed and the cost sheets could safely be used for future metal recoveries. This statement later became the basis of the statements which were given to Mr. Case and Mr. Laist in New York on May 24th. 24

B. By-Products

April 11, 1946

A further study led Mr. Laist to the conclusion that the major portion of East Chicago refining costs was due to the treatment of the by-products. In average bullion, the by-products represent approximately 10% of the weight of the bullion treated. A large part of the by-products cost was incurred in the residue and blast furnace treatment. It was therefore deemed advisable to compare the cost of treating these by-products at Omaha or Tooele instead of East Chicago. 25

April 11, 1946

Mr. Bowman telephoned Mr. Johnson at Mr. Laist's office in New York the figures showing the savings to be realized by treatment of the by-products at Tooele as compared with sale of by-products to American Smelting and Refining Company at Omaha. These figures indicated that East Chicago was spending \$5.10 per ton for the treatment of its by-products. This memorandum later became the basis of a decision to discontinue the treatment of by-products at East Chicago, and ship them either to Omaha or Tooele.

April 25, 1946

Instructions were issued to complete treatment of all by-products at East Chicago as soon as possible to reduce the organization to a staff that could be justified on the basis of a limited operation of the desilverization kettles, softening and molding of refined lead and the retort and cupel operations.

It was also arranged to have the Omaha plant of the American Smelting and Refining Company offer terms for treatment of the lead refinery by-products from East Chicago because of the possible freight saving by shipment to Omaha as compared to shipment to Tooele. The original negotiations with Omaha were conducted between the East Chicago staff and the Omaha staff. Later the New York office handled the negotiations. It was agreed that some of the by-products which had accumulated at East Chicago might be sold to Omaha, such as the baghouse dust which would be removed from the baghouse and flues when the final residue furnace and blast furnace run was completed.

April 26, 1946

Mr. Stockdale prepared certain figures showing a comparison of the treatment of East Chicago by-products revised according to Mr. Young's letter to Mr. Laist of April 20, 1946. The calculations indicated that there would be a saving of approximately \$100,000 per year by treating the by-products at Tooele, after allowing for the freight charges for the by-products to Tooele and the freight on the bullion produced by the treatment of the by-products. It was therefore decided to discontinue the treatment of the by-products at East Chicago and begin storing them for shipment to Tooele.

26

May 20, 1946

A statement was prepared under the heading "Treatment of By-Products" basis 39,600 tons of bullion refined based on treatment at East Chicago, and the shipment of by-products to Omaha and Tooele. This comparison of treatment costs was prepared by using the depart-

mental cost at East Chicago without reference to the "Cost per Unit of Impurity Factors". These calculations show that East Chicago could treat the by-products for \$3.33 per ton as compared to a cost of \$4.45 per ton by shipment to Tooele and Omaha.

- May 22, 1946 Mr. Johnson prepared some bismuth calculations of the income to Anaconda if bismuth were refined by the way of Omaha and by the process at East Chicago. The figures indicated that \$175,500 was the income through Omaha refining the bismuth as compared to \$234,300 through East Chicago treatment. 28
- May 23, 1946 Discussed with Mr. Case rearrangement of the figures which were brought to New York to show the difference in metal payments for lead, silver and gold. 29
- May 23, 1946 B. L. Sackett and S. W. Stockdale submitted to Mr. Laist the estimated construction and operation cost for a proposed Parkes Process plant at Tooele. 30
- May 24, 1946 Gave Mr. Case and Mr. Laist a statement of the analysis of the different metal payments for lead, silver and gold, bismuth and antimony in favor of refining at East Chicago.

3. Pigment Department

- January 1, 1946 Mr. Bowman prepared a shutdown expense for the refinery, in anticipation that the refinery might be shut down. Information in connection with overhead costs at East Chicago was studied in case the refinery was shut down and the pigment plant operated. 31
- May 3 to May 15, 1946 It had been evident in our earlier studies of the lead refinery operations at East Chicago that the pigment plant operations had an important bearing on the lead refining costs and the lead refining expenses had an important part in determining the cost of operations of the pigment plant. In the analysis of overhead costs that were made early in 1946, it had been concluded that if the lead refinery were shut down the pigment plant would be faced with a rather precarious existence because of the relatively large plant and the equipment that would have to be maintained in part, at least, for use by the pigment plant. During the war years, the pigment plant had been handicapped by OPA restrictions on prices, the high labor costs and other well known elements such as WFB and CPA restrictions on the use of zinc and lead for manufacturing pigments. It was concluded that if the lead refining operations were discontinued at East Chicago, it would be inadvisable to operate the pigment plants on any satisfactory basis, even though they could justify their operation for a period of several years

in the immediate future and later might prove to be attractive enterprises as individual businesses.

One of the important elements in a study of this kind was the value of the white lead plant to the Anaconda Copper Mining Company for the recovery and refining of bismuth from Anaconda Roaster Residue. This fact had been recognized since 1935 as one of the most important reasons for continuation of the East Chicago operations. In the negotiations for treatment of Tooele bullion at Omaha, this question became a major problem because of the extremely low cost of producing refined bismuth at East Chicago as compared to any methods that were used and could be used at Omaha.

May 16, 1946

Mr. Knox prepared a memorandum to Mr. Johnson showing the comparative profit and loss per month when the zinc oxide plant was operated to produce 924 tons and 1,440 tons of muffle oxide respectively, per month. 32 These studies were made in anticipation of a discussion of the pigment plant operation at East Chicago in New York in May, 1946.

May 17, 1946

Mr. Knox prepared some figures for Mr. Johnson on pigment prices needed to maintain the same margins for metal prices increased by 1.65¢ per pound, which was the anticipated increase for lead and zinc if OPA were discontinued as of June 30, 1946. 33

May 18, 1946

Mr. Knox prepared a memorandum to Mr. Johnson outlining the white lead plant operating estimate and the time required to treat high and medium bismuth bullion available at East Chicago and Tooele as of this date. This information was in connection with the proposed shutdown of the white lead plant. 34

4. Submission of New Costs

May 15, 1946

A new set of estimated costs for refining bullion at East Chicago was presented to the New York office. These figures were not considered important because in the other discussions of the problems relating to the operation of the East Chicago plant, it had been fairly well decided that the use of the plant at East Chicago for Anaconda's purposes had been fulfilled. In addition, the difficulties at Tooele in handling the higher bismuth from the Darwin Mine were costing them \$30,000 per year and in discussions with the Omaha representatives arrangements had been developed whereby Tooele could operate without due concern about the bismuth content of Tooele bullion shipped to Omaha. About this time it had practically been decided to discontinue operations at East Chicago.

III. SHUT-DOWN PROCEDURE

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1. General

May 15, 1946

Discussions, studies and events at this stage were approaching a decision which seemed to crystallize as definitely unfavorable for the East Chicago plant.

May 22, 1946

Decision made at New York to close the East Chicago plant.

Instructions were issued to begin shutting down all operations at East Chicago.

At the same time, instructions were issued to Tocolet to store any bullion they had on hand for later shipment to Omaha.

It was understood that the main operations of desilverizing and treatment of the silver-bearing by-products should be completed in the silver room as soon as possible.

By-products from the material on hand should be treated in the residue furnace and subsequently in the blast furnace; the residue bullion to be shipped to Omaha.

The balance of the by-products left in any department were then to be shipped either to Tocolet, Omaha or disposed of elsewhere to the best advantage in order to cease operations in the lead refinery as soon as possible.

June 1, 1946

Instructions were issued to advise the trade that the International Smelting and Refining Company was to discontinue the operation of the pigment plant at East Chicago and that they were going out of the pigment business as soon as the stocks of pigments at East Chicago and in warehouses had been sold.

The salesmen were instructed to advise the customers that the International Smelting and Refining Company would do the best it could toward taking care of their requirements but that very little production would be available to take care of them beyond July.

Letters were sent to the mixed metal, white lead and zinc oxide customers notifying them that International was shutting down the East Chicago plant and permanently going out of the business of producing these products.

June 20, 1946

Similar letters sent to the lead-in-oil customers

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2. Lead Refinery

April 12, 1946	Last copper bearing lead was produced.
June 17, 1946	Desilverizing kettles shut down.
June 18, 1946	Chlorination machine shut down. Last of the low bismuth common lead was molded.
June 19, 1946	Last of the high bismuth common lead was molded.
June 24, 1946	Retorts were shut down.
July 4, 1946	Residue furnace shut down.
July 6, 1946	Caulking lead was last molded.
July 11, 1946	The last anodes were molded for the white lead.
July 12, 1946	Cupels were shut down. The last production of F-3 alloy for Anaconda Wire and Cable was molded.
July 23, 1946	Blast furnace run was ended.
August 2, 1946	The last antimonial lead was molded.
August 9, 1946	The Bismuth Plant was shut down and all bismuth produced.
August 21, 1946	The baghouse furnace was shut down which placed all departments on a shut-down basis within the lead refining unit.

3. White Lead

May 31, 1946	Request was made of Washington to permit the use of the remainder of the lead quota, available for the production of white lead to the International Smelting and Refining Company, to be used up as soon as possible in order to speed up the shutting down of the plant.
June 3, 1946	Authority was received from Washington to use the entire quota of lead as soon as possible. Operations at the white lead plant were increased to capacity.
July 16, 1946	The plant operated at capacity until 4 P.M. when the electric power in the cell room was shut off.
July 17, 1946	The Moore filter was shut down at 8 A.M.

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July 22, 1946 The Lowden Dryer was shut down at 3:30 P.M.
July 25, 1946 The Raymond Mill was shut down.
July 27, 1946 Last lot produced - Lot 6-223.

4. Zinc Oxide

June 3, 1946 It was decided to operate all the Muffle Furnaces at the plant as soon as possible in order to complete treatment of the scrap on hand in the most economical manner and in the shortest period of time. Four Muffle Furnaces were operated during most of June and until early July.

July 5, 1946 #1 Muffle Furnace shut down.

July 8, 1946 #2 Muffle Furnace shut down.

July 15, 1946 The Packer was shut down.

August 5, 1946 #3 and #4 Muffle Furnaces were shut down after treating the residue metal and producing Prime Western Zinc from such treatment. The residue metal was sold to the Inland Metal Company, East Chicago.

It should be noted that in the late operations on #1 and #2 Muffle Furnaces both furnaces were producing U.S.P. oxide and high grade zinc.

The last operation on the American Block was March 15, 1945.

It should also be noted that the last operation of the French Furnace was completed on March 31, 1945.

5. Lead-in-Oil

July 23, 1946 The Lead-in-Oil Plant was shut down.

IV. LIQUIDATION OF STOCKS AND MISCELLANEOUS AFFAIRS

PNYC00008807

1. Lead Refinery

July 27, 1946 The last common lead was shipped.
 August 22, 1946 All antimonial lead was shipped out.
 Sept. 23, 1946 The last by-products were shipped to Omaha.
 Sept. 30, 1946 The last of the by-products were shipped to Tooele.
 Sept. 30, 1946 The final clean-up of all metal in the plant was made to the U.S.S. Company.

2. Pigments and Mixed Metals

A. East Chicago

1946

	<u>June 1</u>	<u>July 1</u>	<u>Aug. 1</u>	<u>Sept. 1</u>	<u>Oct. 1</u>
Lead-in-Oil	104,310	38,555	245,259	-	-
Mixed Metals	976,163	1,000,078	986,982	-	-
White Lead Dry	262,250	1,246,300	324,850	-	-
Zinc Oxide	1,128,350	1,646,800	573,950	252,350	-

B. Warehouses

Lead-in-Oil	82,039	45,958	11,461	-	-
White Lead Dry	215,550	103,350	247,550	-	-
Zinc Oxide	369,250	269,300	446,300	51,600	-

Mixed Metals not carried in outlying warehouses.

Dates warehouse stocks were liquidated:

Akron	7/24/46
Boston	8/19/46
Brooklyn	8/29/46
Indianapolis	7/22/46
Jeannette	7/6/46
Los Angeles	9/16/46
Louisville	7/30/46
Minneapolis	7/10/46
Newark	9/3/46
Philadelphia	8/23/46
Portland	8/28/46
San Francisco	9/16/46
Seattle	8/12/46

3. Store Room

During July, a complete inventory was taken of the store-room supply accounts for purpose of giving our other plants a chance to select any surplus items that are not on the market, also for the purpose of establishing a value for sale with the property.

This listing included over four thousand items with a total of approximately \$140,000.00. This was not limited to a book inventory but listed all material and supplies that had been charged to operations and found in the storeroom with charge-out tickets. All of List 2, containing over nine hundred bolt and screw items were counted and totaled \$2,185.92. All of List 10, containing new equipment, amount \$3,471.54, was not on our books but included in the sale of the property. The plant was combed closely for such items.

All undelivered material on open purchase orders was cancelled. Some of the material was in process of fabrication and could not be cancelled. The total loss on such items will aggregate not over \$4,000.00. All miscellaneous material and supplies, including all equipment that has been received since the shut-down, have been purchased by The Eagle Picher Company. All such items, up to September 1st, were included in Sheet 9 in the general sale. All items, after September 1st, will be adjusted in our accounting procedure of debits and credits during the final accounting.

4. Miscellaneous Affairs

The accounts receivable, on September 30th, was \$23,518.96 and we expect to collect all with no bad debt loss. There is a reserve of over \$45,000.00 for bad debt losses.

All circular mail addressed to employees of the International Smelting and Refining Company, as well as to the Company, is being returned to the sender, stamped "Please remove individual and company name from your mailing list. Plant is closed". The volume of mail was 1,180 items the first week and is still of considerable quantity. All first-class mail is forwarded.

Cancellations of contracts, agreements, permits and subscriptions have been in daily progress. These include the utility, water, telephone, laundry, window cleaning, oxygen and acetylene, switching and weighing, State of Indiana on Gross Income Tax, withholding tax, personal and real estate tax.

State of Indiana contribution balance for unemployment compensation final accounting will take place when all claims are paid. This balance, around \$99,000.00 will be reduced by unemployment claims which should not exceed \$5,000.00. The refund will not include any money allocated to the "Pool Fund". These figures are available in the New York Office.

Treasury Department permit for specially denatured alcohol was full of red tape but was finally disposed of and bond cancelled.

Industrial Board of Indiana notice and arrangement for a continuation of carrying our own risk without insurance until all liability claims are paid.

There are several compensation cases pending that have been in progress of final settlement. Our reserve for this risk is down to \$14,804.54 but should be enough to take care of unsettled claims. Much time is consumed in these conferences and it will be weeks before all cases are cleared. Two hernia operations are pending.

V. DISPOSITION OF PERSONNEL

PNYC00008811

1. Accounting

July 15, 1946

Marion Haack, comptometer operator, and Dorothy Ave, ledger clerk, were laid off. Both young girls, with less than a year's service.

August 1, 1946

Adam Miller, metallurgical accountant, employed in 1925, and Omar Hager, accountant for the white lead plant, employed in 1936, accepted positions with the American Smelting and Refining Company at Whiting, Indiana, at no loss in salary.

William Ross, junior traffic clerk, accepted a position in the Traffic Department of the Superheater Company at a loss in salary. He was recommended to the Eagle Fisher Company and they have hired him as senior traffic clerk at more salary than we paid.

Vaneta Lemley, stenographer and storeroom clerk, employed in 1927, left to accept a position with Carnegie Illinois Steel Company, South Chicago.

Alice Davis, secretary to F. E. Stolte, left to accept a position with an insurance company at an increase in salary.

Florence Przespolewski, payroll machine operator, left to accept a similar position with the Sinclair Refining Company, East Chicago.

August 15, 1946

Helen Vojvoda, bookkeeping machine operator, left to take a position doing similar work with the Sinclair Refining Company at no reduction in pay.

Roy P. Fallows, secondary metals accountant, employed in 1927, left to accept a position in the purchasing department of the General American Transportation Corporation, East Chicago.

September 1, 1946

J. M. Asher, paymaster, employed in 1918, left service to go into business. He has opened an employment office in Hammond.

Helen Lukeman, FBX operator, employed in 1935, accepted similar position with the Sinclair Refining Company at a better salary.

F. W. Malen, invoice clerk, employed in 1929, left to accept position with the Calumet Iron and Supply Company, East Chicago.

Lenore Shaw, typist, employed in 1944, was released. She had several offers.

14

PNYC00008812

Sept. 15, 1946

H. G. Lund, credit man, formerly metallurgical bookkeeper, employed in 1914, left to accept position as credit man for a large furniture house in Chicago.

Lillian Findling, typist, employed in 1933, left to accept similar position with the F. B. Lanman Company, East Chicago. She left the Lanman Company and returned October 7th to help out until released for the Eagle Picher Company.

October 1, 1946

Bess Flatis, typist, employed in 1944, left to accept any one of several offers.

I. H. Jones, accountant for Lead Refining Department, employed since 1923, left to accept a position with a small concern in Gary. He declined an offer by the Eagle Picher Company.

Stacie Anoskey, consignment clerk, employed May, 1923 left for an extended vacation. He has an attractive offer from the Metal and Thermit Corporation.

A. Williams, senior traffic clerk, finished his work at the plant and was transferred to New York pension roll.

W. F. Hines, storekeeper, employed in 1918, went on Eagle Picher pay roll and has deferred his pension arrangement.

October 15, 1946

Force reduced to:

L. A. Milne, chief clerk, employed 1916, who will leave November 1st to accept a position with the Kaiser-Frazer Company in East Chicago. He declined an offer by the Eagle Picher Company.

H. J. Dedelow, accountant for the Zinc Oxide Department, employed in 1923, will leave about November 15th for another position. He declined an offer by the Eagle Picher Company.

F. F. Stolte, assistant secretary, will finish liquidating the plant.

PNYC00008813

2. Operating

May 15, 1946

A conference was held at the New York office relative to the problem of liquidation of the East Chicago organization.

It was recognized that many of the hourly employees would have no difficulty in obtaining other jobs because of the continued acute labor shortages in the area.

The question of severance allowance for the older employees was discussed and special studies were made from a number of angles. A few of the older employees with many years' service were considered for pensions.

June 1, 1946

Steps were taken by Mr. R. J. Lawson to notify the employees that every effort would be made to help them locate positions or jobs. The personnel department at East Chicago would contact all employers in the area to ascertain their needs for help of all kinds and work with them to help locate our International employees in satisfactory positions or jobs.

It should be mentioned that a special arrangement was made with the Federated Metals Division of the American Smelting and Refining Company at Whiting, Indiana for a meeting at which the understanding was reached that the personnel departments of the two plants would work together to try to locate as many of International employees as possible with their organization.

The accounting department employees were assisted in their efforts in locating positions through the efforts of Mr. F. E. Stolte and Mr. L. A. Milne as well as through the activities of the personnel department.

The employees were advised that two weeks' notice would be given them before they would be released from the International roll. They were requested to remain on the job until the work necessary to place the plant on a shut-down basis could be completed.

June 19, 1946

Notice posted stating that the zinc oxide department furnaces would cease operating July 7, 1946. After that date some men would be employed to get the plant on a shut-down basis, maintain it on that basis and to clean up.

June 19, 1946

Notice posted in the white lead department stating that the call room would cease operating July 6, 1946

June 25, 1946

Notice posted stating that after July 15, 1946 the lead refinery and blazuth plants would be on a shut-down basis. Some men would be employed to maintain a shut-down basis and to clean up.

The notice also stated that the blast furnace run would be completed about July 15th.

Many members of the staff spent a great deal of time making contacts and follow-ups for and suggestions to the employees, both salaried and hourly, to help them locate satisfactory positions. A number of them were offered transfers to other plants of the Anaconda Company but with one or two exceptions these were not accepted.

A number of special problems was encountered, particularly in the salaried group whose age was between 50 and 60. This group was difficult to handle because they were advised in many cases that younger men were desired. Special cooperation with the New York office was helpful for several of these employees. With their help they were sent to different sections of the country for personal interviews with prospective employers.

Severance allowances and vacation pay, if due, were given all employees who were entitled to these privileges. The payment of severance allowances was handled on an individual basis. While many questions were asked concerning the basis on which severance pay was allowed, no definite information was given the employees. Approximately \$60,000 was spent to give employees severance allowances.

The employees to be pensioned, few in number, were pensioned either when their services became no longer necessary or when the plant was purchased on October 1, 1946 by the Eagle Picher Company.

In retrospect it is gratifying to realize that practically all of the former International Smelting and Refining Company employees have located satisfactory positions, in many cases much more remunerative positions than they formerly held.

On October 1, 1946 all employees of the International Smelting and Refining Company, East Chicago, were notified that they were released from the International Smelting and Refining Company's payroll with the exception of a few employees in the accounting department who were needed to close out the accounts in the East Chicago office and the chemists who were needed in the general laboratory to complete the necessary assays required for settlement purposes on the metals and materials shipped out of East Chicago.

On October 1st arrangements were also made for some of the former International Smelting and Refining Company employees to be employed by the Eagle Picher Company. Special arrangements were made to have this group of salaried employees receive group insurance privileges for one year beginning November 1, 1946.

Several of the employees who had otherwise been considered for pension by the International Smelting and Refining Company were granted a leave of absence in order to be employed by the Eagle Picher Company for an indefinite period, perhaps three to five years with the understanding that at the termination of this employment by the Eagle Picher Company, they would be considered for the same privileges that otherwise might have been extended to them by the International Smelting and Refining Company.

3. Sales

Personnel Released

7/15/46	M. F. Howard	East Chicago
7/17/46	G. H. Bansch	do
7/31/46	C. D. Brownell	do
7/31/46	F. G. Engler	do
7/31/46	Ann Metikosh	do
8/15/46	Loretta Sass	do
8/15/46	L. G. Street	do
7/31/46	G. L. McRory	New York
8/15/46	V. J. Murray	do

Personnel Transferred

8/31/46	L. H. Donaldson	Transferred to Advertising Department
8/31/46	Doris McKeon	Transferred to Office at 25 Broadway
9/30/46	F. H. Hurless	Transferred from East Chicago to Chicago
9/30/46	Helen Ohr	Transferred from East Chicago to Chicago

PNYC00008816

VI. NEGOTIATIONS WITH PROSPECTIVE PURCHASERS OF PLANT

PNYC00008817

1. American Zinc, Lead and Smelting

July 5, 1946

American Zinc, Lead and Smelting Company representatives, Mr. Fide and Mr. Ammon, visited the plant to ascertain the possible value for purchase by the American Zinc, Lead and Smelting Company.

2. Calumet Iron & Supply and U. S. Reduction

August 19, 1946

U. S. Reduction Company representatives visited the plant. Mr. E. A. Bergman, President, and Dr. M. L. Kaufman, Vice President, were escorted through the plant by Mr. J. F. Clark and Mr. G. E. Johnson

August 29, 1946

A group of representatives of the Calumet Iron and Supply Company and the U. S. Reduction Company inspected the plant for the purpose of ascertaining its value with the possibility of its purchase.

Mr. Harold Weinstein, Secretary-Treasurer, Calumet Iron and Supply Company, was spokesman, Mr. Meyer Weinstein, President, Calumet Iron and Supply Company, Mr. Edward Bergman, President of the U. S. Reduction Company and Dr. M. L. Kaufman, Vice President, U. S. Reduction Company, Mr. A. A. Swartz, Allied Finishing and Specialties Company, Chicago, Illinois.

Sept. 6, 1946

Copy of plant insurance map and general write-up of the different departments of the plant were sent to Mr. Harold Weinstein by Mr. F. O. Case.

3. Chromium Mining and Smelting

August 10, 1946

As soon as these gentlemen saw the plant, they decided it was too large a plant for their purposes.

4. Eagle-Fischer

July 27, 1946

The Eagle-Fischer representatives visited the plant. They were Mr. R. L. Hallows, Assistant to the President, Mr. B. M. O'Harra, Metallurgical Engineer, Mr. J. R. Crenshaw, Superintendent of Plants, Pigment Division, Mr. G. H. Hicks, Chief Engineer and Mr. Albert Flase, Superintendent of Cincinnati White Lead Plant. Mr. O'Harra remained at the plant until August 1st.

August 1, 1946

Eagle Fischer Company representative, Mr. O'Harra, left to return to Cincinnati with his report of the inspection of the East Chicago operations and costs as well as the plant's appraisal.

PNYC00008818

August 27, 1946

The Eagleicher Company representatives, Mr. Paul Hamilton, Manager of the Zinc Oxide Department at Hillsboro, Illinois, Mr. F. Clearman, Plant Manager of the Galena, Kansas plant, Mr. H. F. Lambert, Manager of the Argo, Illinois plant, visited the plant in order to become acquainted with the plant equipment and processes used in East Chicago.

5. Employees of International Smelting & Refining

June 14, 1946

A group of employees, the spokesman elected was Mr. S. W. Stockdale, advised that they would definitely be interested in the purchase of the plant - that they represented capital who had sufficient money to purchase and operate the plant.

The employees present at this meeting were: S. W. Stockdale, W. W. Shropshire, S. H. Sachs, J. J. McKenna, B. J. Lawson and J. F. Clark.

July 8, 1946

The above group of employees advised that their backers were the Calumet Iron and Supply Company and the U. S. Reduction Company of East Chicago.

6. Gardiner Metal

June 21, 1946

Representatives of the Gardiner Metal Company, Chicago, Illinois inquired about the possibility of purchasing the plant. Representatives were Mr. Bert Gardiner and Mr. Murray. They requested that permission be granted Mr. Hart of Hart-Wheatston Company, industrial real estate firm, to inspect the plant for the purpose of advising the Gardiner Metal Company as to its value for their purpose.

June 26, 1946

Mr. Bert Gardiner telephoned that the anticipated visit of Mr. Hart of Hart-Wheatston would have to be postponed until the week beginning July 8th.

August 28, 1946

Gardiner Metal Company, Mr. Bert Gardiner, advised that he would not be able to get Mr. Hart to visit the plant until later.

Sept. 10, 1946

Gardiner Metal Company representative, Mr. Bert Gardiner, again advised he wanted to come out with Mr. Hart of Hart-Wheatston to inspect the plant. He also inquired if the price had been set at which the plant would be sold.

7. - Goldsmith Brothers Smelting & Refining

July 16, 1946

Goldsmith Brothers Smelting and Refining Company representative, Mr. Melvin Goldsmith, visited the

PNYC00008819

plant and hoped that some arrangement might have been made with the International Smelting and Refining Company to let him operate the plant of the International Smelting and Refining Company, East Chicago, before it was decided to close down. In connection with his silver operations at Chicago he would have liked to have had a contract to refine Tooele and East Helena bullion.

8. Metal & Thermit

June 5, 1946

Metal and Thermit Corporation, Mr. W. S. Lienhardt, indicated possible interest in acquisition of the white lead plant and some arrangement for hiring its trained personnel.

July 10, 1946

Metal and Thermit representatives, Mr. Wilbur Midnight, Manager, and Mr. W. S. Lienhardt, Superintendent, spent part of the day with Mr. Knox and Mr. Johnson inspecting the possibilities of Metal and Thermit purchasing the plant with the understanding that the technical staff would be available for its operation.

July 18, 1946

Metal and Thermit Corporation representatives visited and inspected the plant, namely, Mr. Smith, Vice President, Mr. Wilbur Midnight, Manager of the East Chicago Metal and Thermit Plant, Mr. W. S. Lienhardt, Superintendent of their East Chicago Plant.

They were particularly interested in the possible land acquisition for expansion purposes for their plant and also the technical advantages of the Sperry Process as a means of handling tin-lead-antimony drosses.

August 14, 1946

Metal and Thermit expressed an interest in land and outlet for some products from this plant in case some one takes it over.

9. National Lead

Sept. 11, 1946

National Lead Company representatives, Mr. Morris P. Kirk and Mr. Rupert, Assistant to Mr. Carroll. They were very much interested in the muffle furnaces and the rotary furnace for smelting battery plates.

10. Nicholson, Porter and List

June 28, 1946

Nicholson, Porter and List through Mr. Leo M. Nicholson, President, requested permission to look over the property with the hope of helping dispose of the plant.

July 29, 1946

Representatives of Nicholson, Porter and List inspected the plant. These representatives included Mr. Carl P. Wilkins, Industrial Agent for the Pennsylvania Railroad, Mr. Porter, Mr. List and the other members of the firm of which Mr. Nicholson is president.

VII. SALE OF PLANT

PNYC00008822

1. Preliminary Events

June 19, 1946

East Chicago requested to prepare description of plant and equipment for study by prospective purchasers.

June 24, 1946

Appraisal of plant started by Mr. Boschen of Wilbur Jordan office.

2. Sale to Eagle-Fisher

October 1, 1946

The plant was purchased by the Eagle Fisher Company and they took possession on this date.