



Photo by Johnston & Johnston, Inc.

After the bauxite deposits are found and analyzed for alumina content, a dynamite blast loosens the ore so that the steam shovel can lift it easily. The grade of each deposit is indicated on a tag attached to the ore car.



Photo by Margaret Bourke-White.

Not all bauxite is removed by surface or "strip" operations. Many of the beds, being far underground, are mined as coal. Some of the underground mines are near enough to the surface to be reached by inclined shafts, others require vertical shafts.

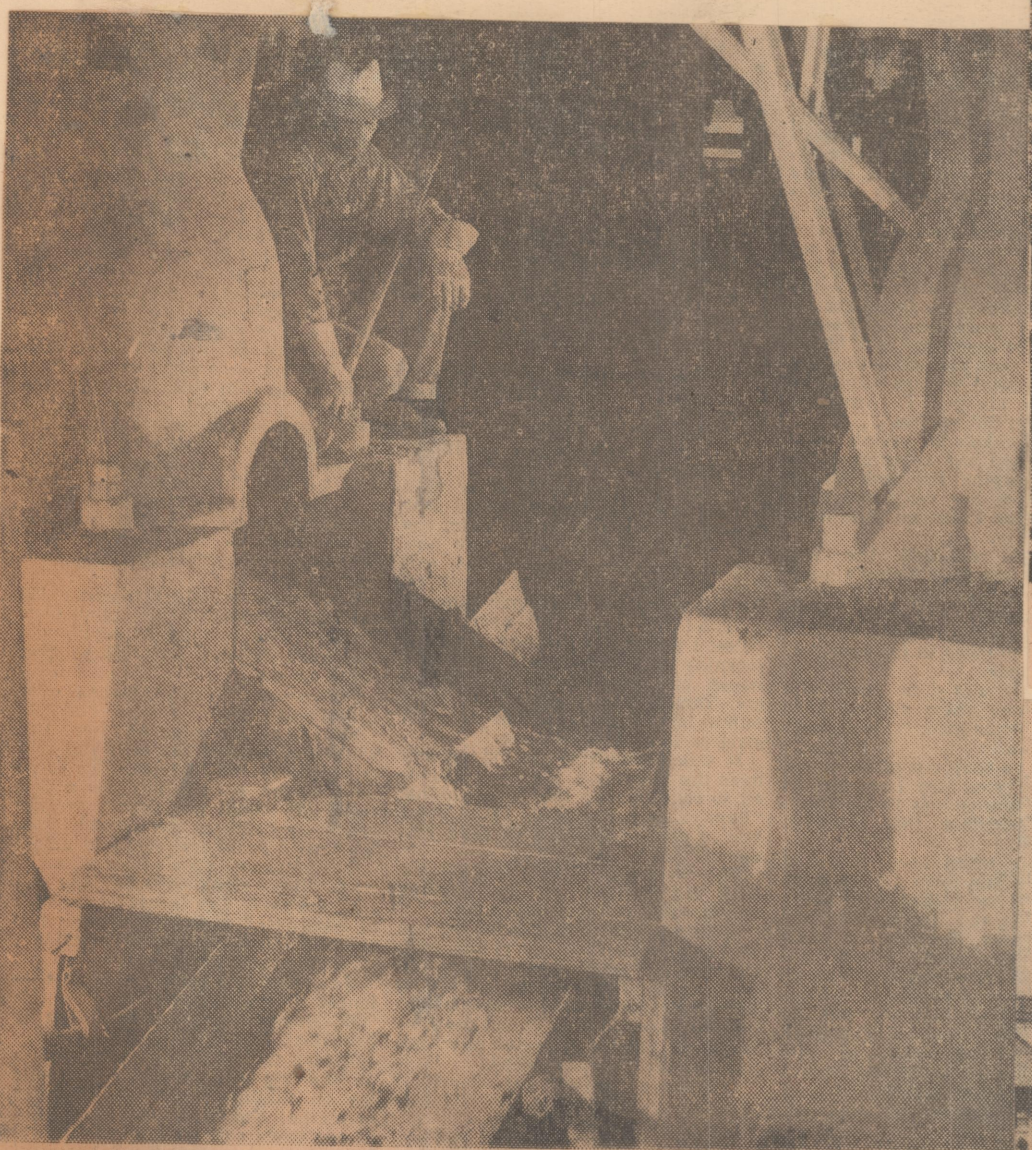
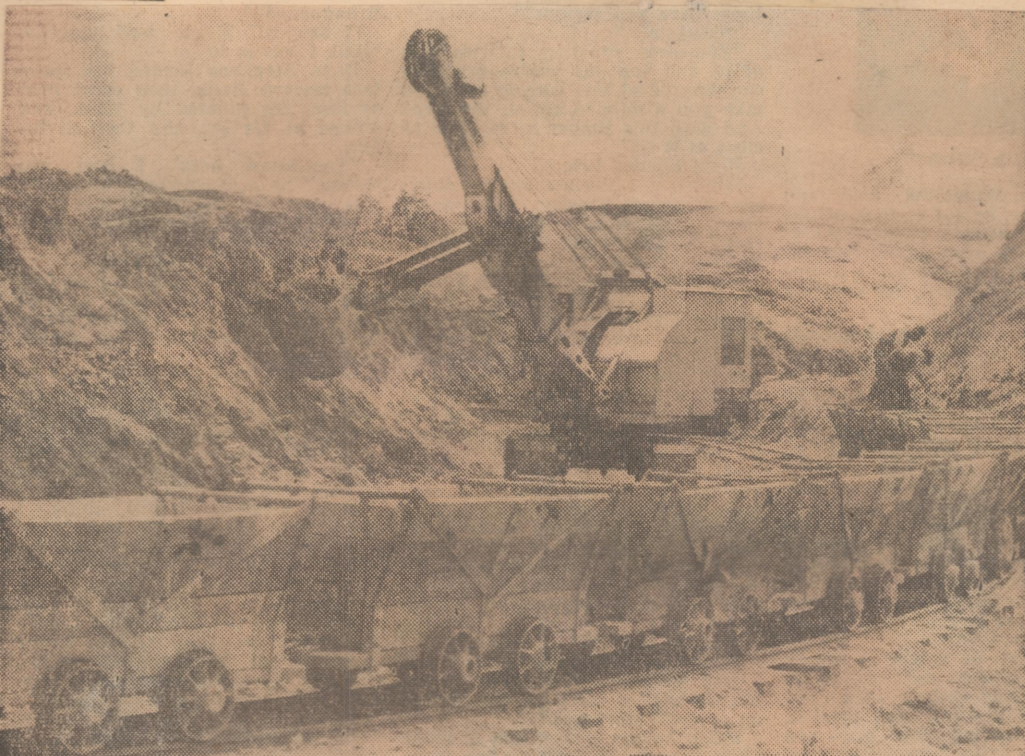


Photo by Johnston & Johnston, Inc.

The ore is washed and then dried in mammoth kilns heated with gas to temperatures ranging from 800 to 2,800 degrees F., depending upon future use of the ore. The man in the picture tends the washing apparatus. At the right is a view of the huge Republic plant at Bauxite.

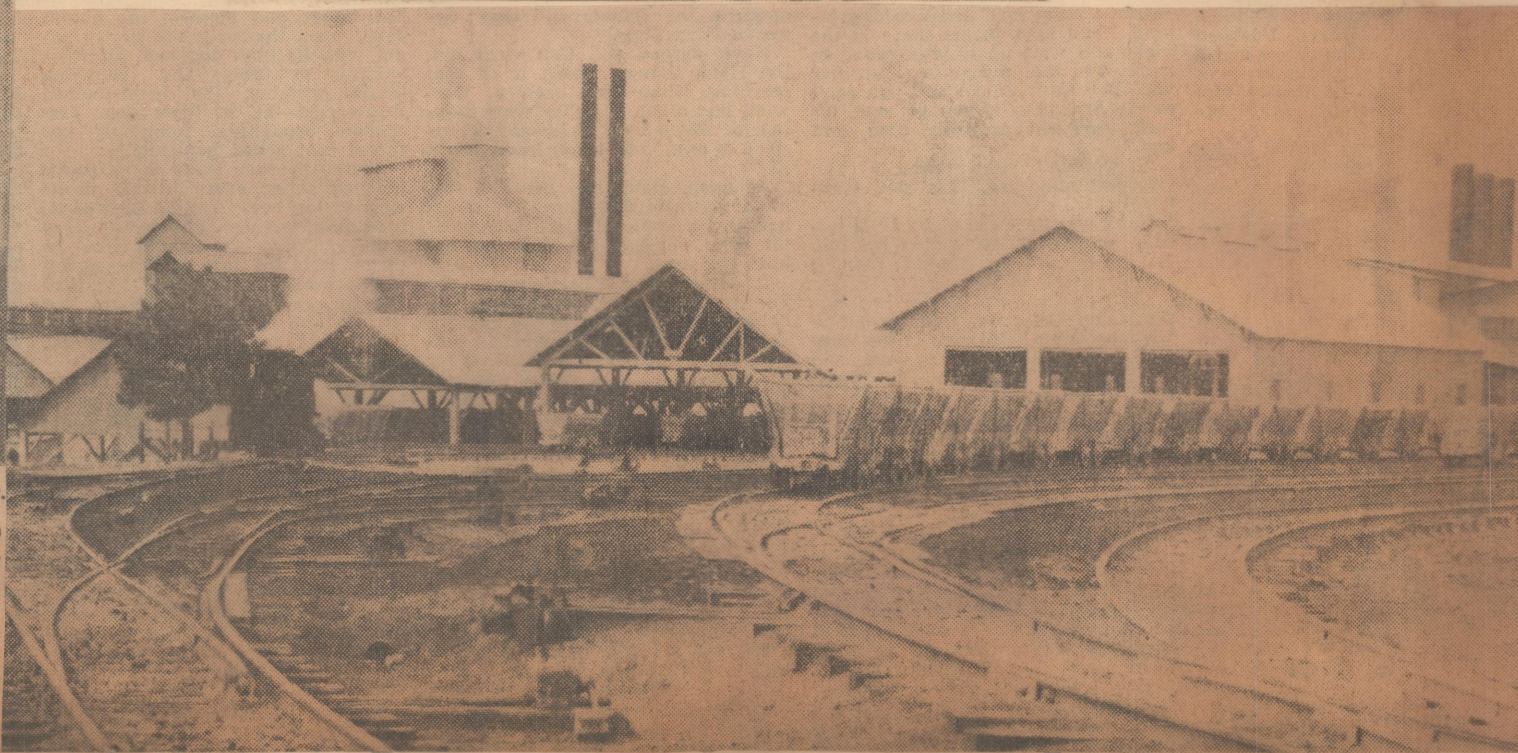
Each ton of aluminum requires 3.7 tons of bauxite. Other requirements for a ton of aluminum are 22,000 cubic feet of natural gas and 24,000 KWH of electricity, plus (figures in tons): soda ash .2; acid .1; coal .3; limestone .3; fluorspar .2; carbon .8, and cryolite .1.



The shovel loads two tons of ore into each car, while workmen remove foreign matter. A diesel engine pulls the cars over the narrow gauge road to the drying plant.



A negro miner hops off a string of ore cars being pulled out — at terrific speed — of an inclined shaft by a cable.



Governor Sees Representative Of Aluminum Company.

Gazette 4-2-41
Governor Adkins discussed the establishment of a processing plant in Arkansas with officials of the Aluminum Company of America at New York yesterday and "felt mighty good over the results," Lawson H. Simpson, the governor's executive secretary, said last night. The governor went to New York to deliver the Reconstruction Finance Corporation's check for \$90,000,000, paid for the first issue of highway refunding bonds dated April 1, to the Chase National bank. Holders of outstanding 1934 bonds will turn them in to the Chase National for redemption.

Mr. Simpson said the governor conferred with Aluminum Company officials later in the day. The governor was scheduled to interview War Department officials concerning the location of another manufacturing plant in Arkansas today and tomorrow. He probably will return Friday night.

Adkins Seeks Bauxite Process Unit

Gazette 4-4-41

Washington, April 3 (AP).—Gov. Homer M. Adkins left for Arkansas tonight hopeful, he said, over prospects of obtaining defense industries for Arkansas.

He conferred this afternoon with "key" figures in the National Defense Council and the War Department to whom he suggested the need for an aluminum processing plant in the vicinity of bauxite deposits in the Saline county area.

"I'm going to call industrialists together from all parts of the state soon to see if we can't co-ordinate our efforts toward obtaining defense construction for the state," Mr. Adkins added.

He said most of his conferences here were for the purpose "of exploring all possibilities for Arkansas participation in the preparedness program."

Bauxite Production Will Be Increased.

Bauxite 4-5-41

Bauxite properties of the Arkansas Bauxite Company in Saline county which were taken over by the American Cyanamid and Chemical Corporation last August will be placed in capacity production immediately, W. L. Powers, manager of the corporation, said yesterday.

The mines, which have been idle for several months, will be operated in conjunction with the Pulaski and Saline county properties of the corporation, Mr. Powers said.

Between 280 and 300 persons will be employed at the mines, Mr. Powers estimated. All properties under control of his firm will be on a 24-hour operations basis.

The corporation is a subsidiary of the American Cyanamid Company and has offices at the Pulaski county properties on the Arch Street pike.

Arkansas May Get Aluminum Plant

Gazette 4-11-41

Washington, April 10 (AP).—The Standard Aluminum and Alloy Company wants to locate in Arkansas if it can obtain sufficient government orders to justify the necessary expenditures for establishing an aluminum processing plant.

Representative W. F. Norrell, whose district includes Saline county, site of immense bauxite reserves, has been working two years to get a processing plant established in the county.

With the co-operation of Senator Caraway and former Senator Miller, and Mr. Miller's successor, Lloyd Spencer, Mr. Norrell has been exerting all possible efforts within the last few weeks to obtain War Department sanction.

A few days ago, the two senators, Gov. Homer M. Adkins and representatives of the Arkansas

Agricultural and Industrial Commission went into the prospectives thoroughly with the defense site officials.

The Arkansans argued that arrangements should be made for the Standard Aluminum and Alloy Company to begin operations on a conservative scale immediately and to carry on their further investigations.

"In view of the fact that the area has been established and proved a site for bauxite there is no reason why operation should be deferred until further investigation could be made to ascertain if there were bauxite in such quality and quantity as to make it a paying proposition," Mr. Norrell told inquirers.

The congressman said he understood the Bureau of Mines had made a favorable report.

"We in Arkansas feel that inasmuch as we provide to the defense program approximately 90 per cent of the bauxite mined in the country a complete processing plant should be located at the mines," he said.

He said in a letter to the defense officials "there appears to be a shortage of bauxite and Arkansas is the only probable place where it can be produced," and the Defense Council should "see to it that a processing plant for bauxite is located in Saline county."

NEW EXPLOITATION OF BAUXITE AWAITS REPORT OF SURVEY

Gazette 4-13-41

Exploitation of bauxite in Pulaski and Saline counties possibly will be advanced by test drilling being conducted in these counties, officials of two companies mining ore in the state said yesterday.

The Bauxite Mining Corporation, a subsidiary of Reynolds Metals Co., is concentrating on test drilling in the two counties, an official of the company said. If bauxite of commercial grade is found in large enough quantities, large scale mining operations will follow, he said. Drilling operations have not progressed far enough for results, he said.

The official said most of the known bauxite in the state is owned or leased by processing companies. State Geologist George C. Branner has said there are millions of tons of bauxite that have not been prospected.

Says Power Lacking For Reduction Plant.

The official said his company and the Reynolds company plan no aluminum plant because there is not enough electric power to operate one.

"Any talk of the establishment of a reduction plant is foolish at this time," he said. "The power situation is an absolute stumbling block to any such establishment."

He said his company along with others has been conducting extensive research in the utilization of low grade ore but any results obtained have been kept confidential.

The American Cyanamid and Chemical Corporation is operating a calcining and drying plant south of Little Rock on the Arch street pike. None of the bauxite mined is reduced into aluminum by the company but is used in chemicals, abrasives, and oil filtration plants. W. L. Powers, manager, said. A small portion of the bauxite which is being mined in Pulaski and Saline counties is being shipped to the Reynolds reduction plant in Sheffield, Ala.

The American company is also conducting test drilling operations in the two counties but is not ready to announce results.

BAUXITE SUPPLY ENOUGH TO FILL PRESENT NEEDS

Five-Fold Jump In Output Possible.

Gazette 4-24-41

Washington, April 23 (AP).—United States production of Bauxite could be stepped up in two months to supply the entire present demand if imports were cut off, the Office of Production Management reported today.

A new survey by the Bureau of Mines showed domestic production of the ore from which aluminum is made could be increased three-fold in two months and five-fold in four months.

About 60 per cent of this country's bauxite now comes from Dutch

NEW EXPLOITATION OF BAUXITE AWAITS REPORT OF SURVEY

shipping remained available imported ore would be used in about the same proportion as in recent years. This policy is designed to conserve the limited domestic supply.

State Bauxite Supply Ample, Branner Says

Democrat 4-24-41

Arkansas bauxite deposits could supply the entire United States need for bauxite ores, plus that needed for defense contracts, for the next nine or 10 years, George C. Branner, state geologist, estimated today in disagreeing with the U. S. Bureau of Mines statement that Arkansas could supply the entire domestic bauxite needs for only "a very few years."

Exclaiming "we know what we're talking about," Dr. Branner added "we heartily disagree" with the Bureau of Mines report quoted in a press dispatch from the Office of Production Management as saying that the Arkansas supply would last only a short time.

Dr. Branner's estimate added that on the basis of the entire United States consumption for the five-year period ending in 1939, Arkansas reserves would last about 29 years.

The known reserves of mined and dried bauxite in Arkansas having an alumina content of 50 per cent or more, are estimated to be in excess of the total requirements for bauxite pointed out.

"Assuming that the production objective (of the advisory commission to the Council of National Defense) of 825,000,000 pounds of metallic aluminum annually is reached," the geologist continued, "the production of metal will require approximately 1,620,000 long tons of bauxite."

Demand 1,800,000 Tons.
Pointing out the annual average consumption of bauxite, used for abrasives, chemicals and other items totals 179,000 tons, Dr. Branner said the total requirements for bauxite in this country would be approximately 1,800,000 long tons per year.

"At this rate of consumption, the Arkansas deposits would last between nine and 10 years," Dr. Branner added.

Dr. Branner added his figures did not take into consideration the "probable or possible tonnage of reserve which is undoubtedly large." The estimates were based only on known reserves, he said.

Mine Openings Easy.
"Part of the known reserves have not been opened up for mining, but it usually does not require more than a few weeks to get a deposit into production on a wet basis," he added.

"If necessary it would be shipped elsewhere for the drying process," the geologist explained.

In reference to the Bureau of

Mines statement that if it hadn't been for the imports of bauxite ores, Arkansas deposits would be nearly exhausted, Dr. Branner estimated that Arkansas could furnish the entire ordinary consumption for 29 years.

Approximately 60 per cent of the ore consumed is imported.

He pointed out that the Bureau of Mines' figures show that the annual United States consumption for the five years closing in 1939 was 609,038 tons annually. If Arkansas continued at its average production noted during the same period, when it was producing almost 40 per cent of the bauxite used, the known reserves would last about 53 years, Dr. Branner said. Arkansas produced most of the domestic bauxite during the period.

In reference to the Bureau of Mines statement, E. Smith Reed, engineer of the Arkansas Agricultural and Industrial Commission, commented "it depends upon what they mean by 'a very short time.'"

Want No "Boom."
"If they mean 10 or 15 years, they may be right," he added.

"However, it was never our intention to seek to close all imports in an attempt to furnish the entire output ourselves. We would rather the imports continue as long as possible and continue our bauxite production along approximately the same level as we are now."

"We don't want to boom the mining industry, mine all the ore out and then have to close up the mines," Mr. Reed continued.

Dr. Branner also explained that a statement on how long the bauxite reserve would last would have to be very flexible.

A variance in processing methods might utilize many more tons of ore, while a better price on ores might make it feasible to mine many tons which could not be mined under present price levels, he continued.

Geologist Disagrees With OPM Report.

Gazette 4-25-41

State Geologist George C. Branner said he "heartily disagreed" with a statement attributed to the United States Bureau of Mines and the Office of Production Management that Arkansas could supply the entire domestic bauxite needs for only a short time.

Asserting his office was in a position to "know what we are talking about," Dr. Branner said Arkansas bauxite deposits could supply the entire United States need for bauxite ores, plus what was needed for defense contracts, for the next nine or 10 years.

The geologist estimated, on the basis of United States consumption for the five-year period ending in 1939, that Arkansas reserves could for normal purposes fill the country's needs for 29 years.

"The known reserve of mined and dried bauxite in Arkansas having an alumina content of 50 per cent or more, is estimated to be in excess of 17,500,000 tons," he said.

Pay Increases For Bauxite Employees

Gazette 4-23-41

Pittsburgh, April 22 (AP).—The Aluminum Company of America announced today a general wage increase, amounting to eight cents an hour for most of its 40,000 hourly rate employees in 19 plants.

The increase, designed to bring wage increases granted since October 1, 1939, to a total of 10 cents an hour, will be eight cents an hour except in three plants. In those plants, at East St. Louis, Ill., Garwood, N. J., and Mobile, Ala., smaller wage adjustments will be made to attain the 10-cent total.

The company announced that pay of salaried plant employees would be increased but the amount was not announced.

Minimum pay varies in the different plants. At New Kensington, Pa., the increase lifts the minimum to 73 cents an hour. The company estimated the general increase would add more than \$7,000,000 a year to the pay roll.

The increase for five of the plants was negotiated by the C. I. O. Aluminum Workers Union at a conference yesterday. They are the plants at New Kensington, Edgewater, N. J., Badin, N. C., Detroit and Alcoa, Tenn.

L. R. Branting, superintendent of the mines at Bauxite, operated by the Republic Mining and Manufacturing Company, said here last night that there are approximately 525 employees at Bauxite who will be affected by the pay increase of eight cents an hour. There also are 40 employees at the

Sweet Home mines, he said. The increase will become effective Sunday.

Mr. Branting said that there had been no labor trouble at the plant. The employees may or may not be members of a union, he said.

Our Bauxite Supplies. Democrat 4-27-41

Somewhere, somehow, some expert on the United States Bureau of Mines, got the idea that Arkansas bauxite supplies were very limited, in fact so small that if it hadn't been for imports of bauxite ores, they would be nearly exhausted.

Furthermore, this person, or persons, informed the Office of Production Management that Arkansas could supply the entire domestic bauxite needs for "only a very few years."

Naturally, a Democrat reporter turned to George C. Branner, State geologist, to find out what he thought about the statement. He didn't falter when he said, "We heartily disagree" and "We know what we're talking about."

Dr. Branner pointed out that at the average rate of consumption Arkansas could supply the total requirements for bauxite between nine and 10 years, not taking into consideration the "probable or possible tonnage of reserve which is undoubtedly large." He said his estimates were based on known reserves.

Engineer E. Smith Reed, of the Arkansas Agricultural and Industrial Commission, says, "It depends upon what they mean by 'a very short time.' If they mean 10 or 15 years they may be right."

It is wisest for the layman in such discussions to let the experts contest. It seems that the Bureau of Mines experts were not exactly clear in their statement. But if knowledge of mineral desposits is the issue, a lot of Arkansas folks will be willing to "go along with" Dr. Branner, as against the Bureau of Mines whose information, for the most part, is gotten from State geologists.

Arkansas folks are willing to admit this State has no world monopoly on bauxite. But they don't like inferences that the deposits are mere "surface traces."

Proposes Effort to Secure Aluminum Plant Here.

Gazette 4-29-41

To the Editor of the Gazette:

There should be an effort made to procure a plant to make aluminum for the preparedness program, and if gone to explain why he has placed men at right now and in the right way, it like Harry Hopkins, Leon Henderson could be done. At least \$50,000 could son and cabinet members in charge be donated by the citizens of Little Rock and surrounding bauxite holdings.

One hundred business men and firms could donate from \$100 to \$500 each and help themselves, not hurt them. Another 500 business and professional men could give \$50 each, and I would be one of them. There could be enough that ought to give \$10 to \$25 to make \$50,000, or as much as was needed to buy a site.

The legislature should have made some effort to interest some company to come here for that purpose.

Who knows but what if the right effort were made that the federal government would not aid. Arkansas hasn't got her share of such benefits as have other states. At least it wouldn't hurt for our congressmen to try it.

We have the ore and cheap labor. No doubt sheet aluminum could be produced almost as cheaply as the difference in the freight on the ore to other distant localities, where labor is twice as high as here. After the preparedness program was over it could be turned into a plant to make cooking ware. Stamping machines could use up a surplus, if there were any, and go on making all kinds of aluminum utensils.

This would create a permanent pay roll, and possibly the largest one in the city, and everybody would be benefited by it.

Little Rock.

Democrat 4-27-41

Washington.

By RAY TUCKER.

The famous Gano Dunn report, promising a sufficient supply of steel for defense and civilian needs, has blown up only a few weeks after FDR accepted its findings as economic gospel. It is another of several fresh indictments which the New Deal clique around the White House has leveled against O. P. M. industrialists. The feud is on again.

The president's advisers have insisted all along that the Dunn survey was porous with "ifs" and "buts." Events quickly demonstrated the correctness of their appraisal. O. P. M. itself has had to take drastic action to hoard steel stocks. First was the agreement to restrict production of automobiles and changing of models. It is estimated that this will save 1,500,000 tons annually. Secondly, they persuaded the ubiquitous Henry J. Kaiser to build a \$150,000,000 steel plant near Bonneville dam, where he is erecting also a magnesium factory. Now shipments of steel to Britain have been suspended indefinitely. The British need cargo space for finish-

ed weapons in preference to raw material. But a secondary consideration was our own increasing requirements for the metal.

President Roosevelt's belated discovery that the report was full of holes has not warmed him toward the original O. P. M. group. It helps the preparedness program, and if gone to explain why he has placed men at right now and in the right way, it like Harry Hopkins, Leon Henderson could be done. At least \$50,000 could son and cabinet members in charge be donated by the citizens of Little Rock and surrounding bauxite holdings.

The administration's scheme to smash the "aluminum trust" has been thwarted temporarily by O. P. M. Oddly, Mr. Dunn figured in this episode also, to the anguish of another 500 business and professional Trustbustur Thurman Arnold. Here's the inside story:

In order to break Alcoa's grip on the production of this defense metal, Mr. Arnold and his colleagues brought the R. S. Reynolds Metals Company into the field. The Reynolds interests received a \$20,000,000 RFC loan for construction of two aluminum-producing plants. The one at Sheffield, Ala., which will use TVA power, is finished and machinery has been installed. It has been designed so that it must depend on bauxite as the basic ore for the processing of aluminum. But Alcoa owns all the principal bauxite deposits in the Western Hemisphere—British and Dutch Guiana—and refuses to sell to its government-financed competitor. So the plant built with RFC funds may stand idle.

The Bonneville unit has not yet been built. As an alternative to bauxite, the Reynolds people may experiment with alunite, of which there are large deposits in Utah. But this has never been developed commercially, and there is a question whether it can be used as a substitute for bauxite. Thus the attempt to create a rival to the Mellon-controlled Alcoa has not been a shining success. Since the United States has no jurisdiction over the Guianas, it may have to ask the British and Dutch governments to force Alcoa to share the ore in that region with Reynolds.

Rivalry.
The Reynolds company has encountered another difficulty in obtaining a sufficient allocation of power from TVA, and Bonneville authorities for the operation of its proposed plants. The Mellon interests, on the other hand, have been promised all the power they need for their enterprises.

It was Mr. Dunn who wangled an additional \$65,000,000 from the House Appropriations Committee to increase power facilities at Norris Dam. His plea was the need for producing aluminum for defense work. But before it became noised abroad that there would be a shortage of the metal, most of this additional power had been turned over to Alcoa. At both Norris Dam and Bonneville only a small portion of juice has been allotted to the government's own corporate creature. Secretary Ickes, whose department supervises distribution of Bonneville hydro-electricity, has vowed that not a bit more will be assigned to Alcoa.

It is proposed to step up the annual output of aluminum from 327,000,000 pounds in 1939 to a total of 800,000,000 pounds. Of the latter amount the Reynolds Company will manufacture only about 10 per cent, with Alcoa handling the rest. As the New Dealers see it, O. P. M. is strengthening the Mellon hold on this industry, while Thurman Arnold, with monopoly prosecutions is midwifing a rival, and trying to break up the older corporation. Prestige.

Henry Morgenthau's ingenious legalities have worked out another scheme for forcing defense contractors to abide by New Deal labor laws and regulations. It appears to be an attempt to appease the extreme liberals without impeding construction of war weapons.

Like Henry Ford, numerous manufacturers have refused to sign contracts agreeing to abide by N. L. R. B. decisions before they have been passed on finally by the courts. They anticipate more labor trouble rather than less, and they do not want to bind themselves in advance. Army-Navy negotiators are inclined to side with the contractors on this issue. But the Labor element within the administration is insistent that the defense effort be made the means for expanding N. L. R. B.'s power and jurisdiction.

The new wrinkle provides that manufacturers must sign an affidavit promising to live up to all labor laws and regulations in effect now or promulgated in the future. It would not be an integral part of the contract, and would probably have no legal validity in a court test. But it would save the prestige of the Sidney Hillman element in the face of union charges that their own leaders in the administration are letting down.

REYNOLDS RUSHES PLAN TO PRODUCE VIRGIN ALUMINUM

Gazette 5-4-41

Washington, May 3 (P).—Out of an elevator in the Interior Department, office of Secretary Ickes, whose domain includes the great new Bonneville power generators, stepped a short, vigorous man recently, quizzically eyeing a chap in slacks who was carrying a bag of golf clubs. "My heavens!" he said to a companion, "are they still playing golf?"

R. S. Reynolds, president of the Reynolds Metals Company, has had no time for golf since last summer, when he tackled the job of trying to produce virgin aluminum in competition with the Aluminum Company of America, sole United States producers since the industry originated in 1886. Reynolds, with Bonneville and TVA power, expects to be turning out aluminum at the rate of 100,000,000 pounds annually by July, 1942, a little less than one-eighth of the national output at that time. A big fabricator of aluminum, he is expanding in that field too.

He has built production plants with RFC funds, yet staked his fortune. For security, he gave the with R. F. C. funds, yet staked his properties, including 30 metal fabricating plants in 18 cities, making metal foil, thermostats, sheet aluminum and metal gadgets of almost every description. The company and its subsidiaries listed total assets of \$32,055,108 last December.

R. F. C. Loans Reynolds Money to Build Plants.

The R. F. C. loaned him \$20,000,000 to build producing plants, and its Defense Plant Corporation made commitments of another \$13,000,000 for an aluminum sheet mill at Sheffield, Ala., and a fabricating plant at Louisville, Ky. Reynolds is building and will lease these two plants, while the government retains ownership.

Hearty and happy, Reynolds travels at a terrific pace, dashing into Washington for a conference with officials of the Office of Production Management, then out to the West coast for a look at some new plant, then to Washington for a conference at the Interior Department, then down to Sheffield to see how the work is going. He usually rises at 4:30 a. m. and works at home until 7 or 8 o'clock. In the early morning hours, the story goes, he writes poetry—he is the publisher of several volumes of verse.

He works 15 hours a day. His employees never know where he will turn up next. He is a great long distance telephoner, and they are

not surprised to hear his voice coming from anywhere in the nation. Recently the phone rang in the Richmond office promptly at 9 a. m., and Reynolds started talking from Portland, Ore. It was 6 a. m. in Portland.

He has four homes: Paxton, an estate near Richmond; the old Woolworth estate at Glendale, Long Island; another home in Louisville, and an apartment in New York city. An associate says he doubts Reynolds spends a month a year in all of them combined. He usually travels by train, often in a private car, otherwise in a drawing room. He works then as hard as in his offices.

Wife Familiar With Business Dealings.

Often his wife, the former Julia L. Parham of La Grange, Tenn., a woman of warm, Southern charm, mother of four sons who are all in the business, goes with him on his trips. It is said he takes her into his confidence in business matters, and she is familiar with the details of all the working of his little empire. She, too, is a poet and has published her works, and also is an artist.

Reynolds rarely takes a vacation. When he does, he is likely to go to Tucson, Ari. When he went on his last vacation, in the spring of 1940, he stopped in Louisville on the way, bought a Ford assembly plant building; on the way back he stopped in Louisville to see that the plant had been properly transformed into a Reynolds unit.

He has no hobbies except his poetry, but he enjoys bridge and poker and an occasional cocktail. He likes to hear a good story, and he knows how to tell one.

Subscribes to Most Of New Deal Program.

He is a Presbyterian and a Democrat. While he takes no active part in politics, he is a great admirer of President Roosevelt and subscribes to most of the New Deal social program. His company, which employs 7,000 persons, has never had a strike. Early this year he and 17 labor union leaders representing his employees signed a pledge of co-operation in the interest of national defense.

He got a legal education at Columbia University, after studying at the University of Virginia and King College, Bristol, Tenn., and began his business career in 1903 with his uncle in the R. J. Reynolds Tobacco Company. A young firebrand among the executives, as vice president and salesmanager he persuaded them to add smoking tobacco to the chewing tobacco which they then were making almost exclusively. He originated the blend for Camel cigarettes and introduced Prince Albert smoking tobacco.

He left the firm in 1912, and later organized the United States Foil Company, chiefly to make foil for the Reynolds tobacco packages. He turned the foil concern into a holding company, through which he controls the Reynolds Metals Company, and accumulated a number of subsidiaries—including the Eskimo Pie Corporation. He draws a salary of \$50,000 a year.

Defense Officials Plan Further Expansion For Larger Plane Output To Triple Current Monthly Production—President Asks More Heavy Bombers

But Does Not List Number

5-6-41

From THE WALL STREET JOURNAL Washington Bureau
WASHINGTON—A "substantial increase" in heavy bomber production was requested by President Roosevelt last night in a letter addressed to the War and Navy departments and the Office of Production Management.

Mr. Roosevelt's letter did not state any definite number of airplanes to be produced or the production rate to be attained under the new program. That information, according to the letter, is being transmitted in a private memorandum.

The Secretary of War was asked to take "whatever action is needed, including the procurement of aircraft, to obtain substan-

tially the production rate which I am indicating to you" privately.

The OPM is directed to take the necessary steps to provide "appropriate" priority ratings applicable to this increased bomber program.

The new program will mean a large expansion of plant facilities and the utilization of existing factories not now engaged in making munitions.

From THE WALL STREET JOURNAL Washington Bureau

WASHINGTON—Key defense officials are working on a new aluminum production program which contemplates a sharp upward revision in estimated requirements based on an enlarged airplane production.

The size of the aluminum expansion is still a defense secret but officials anticipate that within three weeks a program which may call for production of 150 million pounds of aluminum a month will be announced.

The new program would call ultimately for three times current output. Last month production was around 48 million pounds.

Conferences on power requirements necessary to take care of expanding aluminum production facilities also are being conducted. It is expected that since the aluminum estimates to meet new plane production have been about completed, officials in the defense office will be able to tell power policy framers where new plants will be located and what power they will need.

The aluminum production plants contemplated will be financed by the government and will be located at Columbia River, TVA and Boulder Dam power projects. These government projects are expanding their electric output to meet future needs.

There has been a great deal of pulling and hauling among officials over the size of the program, but it is insisted among key officials that the 150 million pound mark is what the government is now shooting at.

Heretofore, the policy has been to arrange for expansion of aluminum production as requirements are determined. But since the construction of an aluminum plant and actual production takes considerable time, officials say the new policy will be to anticipate requirements in an effort to be prepared.

Four months ago, officials stated, it was estimated that 50 million pounds of aluminum a month would be sufficient for requirements. Later this estimate was revised to 76 million pounds a month. Now efforts are directed toward 100 million pounds a month. The new program contemplates a further increase.

Meanwhile, the American aircraft program is being revamped from the light and medium sized bombers to the heavy bombers.

The program being worked out among officials contemplates production of 100-ton bombers, which will use considerable aluminum and magnesium.

Already, it was stated, the American airplanes contain much more magnesium than the German planes, which will add to their maneuvering ability. However, it is understood that the use of magnesium in airplanes may be ordered reduced, because British demands call for increasing amount of this metal for bombs and other explosives.

Aluminum Shortage Declared Unnecessary.

Gazette 5-15-41

Washington, May 14 (P).—Richard S. Reynolds, president of the Reynolds Metals Company, told a Senate Defense Investigating Committee today defense and aluminum company officials told him last fall there would be no shortage of the metal when he sought to enter the aluminum production field. He insisted there need not have been a shortage of aluminum. He estimated he could build an aluminum plant in six months with the Aluminum Company of America able to build new facilities in a shorter time.

"I proved you can do it in six months," Reynolds said, "and I did it without knowing a damned thing about it." His company is the sole competitor of the Aluminum Company of America in production in this country.

He recommended the government construct at least ten stand-by plants for manufacture of alumina, from which aluminum is made, to be used in event of emergency. Reynolds testified there are now only two large and one small plant in the United States producing alumina, and if anything interfered with them it would "dangerously interfere with and cripple the defense program."

Besides constructing new alumina plants, ready for immediate production, Reynolds proposed the government acquire large reserves of bauxite, ore from which alumina is obtained.

Federal Aluminum Plants Proposed.

Gazette 5-15-41

Washington, May 14 (P).—Government-owned aluminum plants to meet defense needs were reported in informed quarters today to be under consideration by the Office of Production Management. Secretary Ickes advised the OPM, it was learned, he would like to provide the power from the Columbia river hydro-electric project. Ickes was said to have told the OPM additional power from the Columbia river could not be made available to the Aluminum Company of America because of a law against "the monopolization thereof by limited groups."

Government plants probably would be located in the Bonneville and Grand Coulee dam areas of the Northwest and in the Tennessee river valley. It was indicated they might be operated by Alcoa, the Reynolds Metals Company or another private concern under an arrangement similar to that for a tank factory at Detroit which is owned by the government and managed by the Chrysler Corporation.

Aluminum

U. S. to Build Plant With 500 Million Pound Capacity for Defense

\$300 Million Unit Expected to Be Placed in Northwest, Near Federal Power Source

Reynolds Firm May Operate It

5-20-41

Wall Street Journal
BY ALFRED F. FLYNN

Staff Correspondent of The Wall Street Journal
WASHINGTON—The Federal government is going into the aluminum manufacturing business.

Final decision has been reached and arrangements are being made to invest \$300 million in a manufacturing program designed to produce 500 million pounds of aluminum annually.

The government's direct investment in this field was decided upon after a survey of potential requirements and sources of supply for the metal. Officials said that from 1½ billion to 1,800,000,000 pounds of aluminum will be needed in each year of the defense program to meet all military requirements, including an expanded airplane production program.

Ways and means of solving the supply problem have been under consideration for several weeks but the final decision to put the government into the business came just a few days ago, it was learned.

[Authority to engage in this type of enterprise is found in the law passed by Congress last year giving the Reconstruction Finance Corp. the right to acquire, construct and operate plants for producing essential defense materials. A special subsidiary, Defense Plant Corp., was later created for that purpose.]

Reynolds Metals May Operate Unit

Reynolds Metals Co. is expected to operate the proposed plant on a lease contract basis. The arrangement is somewhat similar to that employed by the War Department in setting up ordnance plants which are government-owned but are privately-operated. Presumably, Reynolds will lease the plant at a nominal figure, say \$1 a year, and receive supply contracts to furnish for the total output, making delivery to companies needing aluminum in the production of defense materials.

Actual production will not begin for 18 months or two years, officials estimate. The plant possibly will be located in the Pacific Northwest where Columbia River power can be utilized.

Power expansion will be undertaken at the same time that the aluminum-producing facilities are being built. In order to produce 1½ billion pounds of aluminum annually, it is estimated, total new power requirements will be around 600,000 kilowatts over present expansion plans.

No Further Manufacturing Plans

There are no plans for extending the government's manufacturing activities beyond those now contemplated for aluminum, according to officials in the production division of the Office of Production Management.

Arguments made in favor of the government entering the aluminum manufacturing business even on a limited basis could not be

made, say, for steel, officials explain. They insist that there has been a little talk of the government going into the manufacture of steel but that such a move could not be justified at this time.

Entry into the aluminum field as a plant owner is justified by officials on the grounds that the industry "needs competition" among other things. Until the defense program came along, Aluminum Co. of America was practically the sole producer in the United States. Since then, Reynolds Metals Co., whose activities were limited to the fabricating end, has gone into the business as a full-line producer from ore conversion to the finished product.

Aluminum Output May Be Boosted

Gazette 5-21-41

Washington, May 20 (P).—Possibility that the government might turn to new federally-financed plants and to Canada to meet a vastly increased new aluminum production goal was suggested today by R. S. Reynolds, president of Reynolds Metals Co.

Mr. Reynolds told a press conference that his concern, which this year will bring into production new plants with 100,000,000 pounds a year capacity, had offered to boost this to 300,000,000 pounds if granted government assistance in financing plant construction.

Mr. Reynolds said the government had asked whether his concern, a newcomer in the aluminum field, could contribute to an increased emergency production program which Mr. Reynolds said he believed amounted to 600,000,000 pounds over and above currently planned United States output estimated at 800,000,000.

He said that he understood that probably one-third of the proposed new supply might come from Canada, "where they have excess capacity."

The government, he said, should step in with financial aid for private industry to provide the rest of the increase if American production of the light metal is "going to match that of Germany and her allies." He expressed the belief that private industry could not finance further expansion.

Any enlargement of Reynolds properties, he said, would take place at the firm's existing sites at Lister, Ala., and at Long View, Wash.

Big Contract Signed.
Mr. Reynolds also announced the signing of a 12-year contract with the South American firm of N. V. Billiton Maatschappij, Dutch Guiana, to supply 6,000,000 tons of high grade bauxite, (aluminum ore) with shipments beginning January 1, 1942. The ore, capable of production 3,000,000,000 pounds of aluminum, will be delivered at Mobile, Ala., he said.

The bauxite, along with ore from Arkansas and Alabama, will be refined to alumina at Lister, and the alumina will be processed into aluminum at Lister and Long View. Reynolds said completion of the Lister plant in six months was "an industrial miracle." Aluminum has been produced in a test run, he said, and the plant is expected to reach capacity output by July.

Great Gain in Output Of Aluminum Needed

Gazette 5-22-41

Washington, May 21.—An increase in aluminum production to a rate of 1,600,000,000 pounds annually will be necessary for the defense program, William S. Knudsen, director of the Office of Production Management, said today. Production during March was approximately 48,000,000 pounds.

Knudsen said "The only place to get aluminum is where there is water power."

He mentioned the Bonneville dam area as the most likely site of new aluminum production facilities.

Road Paved With Bauxite

The First Improved Highway in Pulaski County Was Surfaced in Part With Bauxite, Making It Probably the Most Valuable Roadway of Its Length.

By Diana Sherwood

Gazette 5-25-41

Arkansas's 5,000 miles of improved highways in the past 22 years have cost \$505,390,700, and it is estimated that an additional \$200,000,000 must be spent to standardize the remaining 4,400 miles of roads which are "still in the dust."

These figures in miles and expenditure prove the original "Good-roads-for Arkansas" movement was followed through. But if the bauxite which surfaced a part of the first improved highway in Pulaski county had been worth its 1941 market quotation at the time of construction, it would have been the most valuable roadway in America. In those days, however, the word bauxite was as strange as any foreign word to the majority of people in Arkansas and the "pebbly soft gray stone" found along the pike in unlimited quantities appeared to be useless.

The first turnpike in Pulaski county, later known as Sweet Home pike, was begun in 1885 by E. N. Weigel and John N. Wherry, road building contractors of Little Rock. Their aim was to make the going easier between Little Rock markets and the large cotton plantations adjacent to the towns of Woodson, Wrightsville and Sweet Home to the south. It is claimed that the "buckshot" soil of the low land in Fourche creek bottom literally pulled the shoes off the mules when pulling heavy loads through.

W. C. Hill, Pulaski county judge from 1884 to 1890, was called the improvement-making judge. He built the old part of the county courthouse of granite found a few miles south of Little Rock; he first introduced gardens at the County hospital and raised, at a cost of \$25, about \$4,000 worth of potatoes and green vegetables—enough to last the institution for a year. And he it was who started the good roads plan for the county. In the spring of 1885 Judge Hill asked for proposals for the construction of a pike over a section of the old Pine Bluff road; it was to include portions of Road Districts 41 and 60. The legal part of the story is in Record Book M in the county recorder's office under the heading "In the Matter of a turnpike road from Oakland (cemetery) to Fourche mountain on the Pine Bluff road." * * * "It appears to the court that the bid of E. N. Weigel and John R. Wherry is most acceptable and better for the traveling public and that the said Weigel and Wherry are good and responsible bidders * * *

There follows the long proposal in which they agree to build and maintain this highway, including the iron bridge across Fourche bayou. The road was to "commence at a point at the foot of said mountain above the level of said bridge and terminating at a point of the same elevation where Oakland cemetery enters said highway, to be brought to a level, or above the present floor of said bridge—no grade to exceed three feet on 100 feet." The road was to be of Tilford pavement, a method in which the ground was rolled until solid, then paved with block stone to a depth of not less than eight inches and a width of 20 feet. This was to be covered three inches with pulverized granite stone and coated over-all with sufficient gravel and clay to hold the under stratum in position. There were further details concerning fills, drains, culverts, embankments, etc.

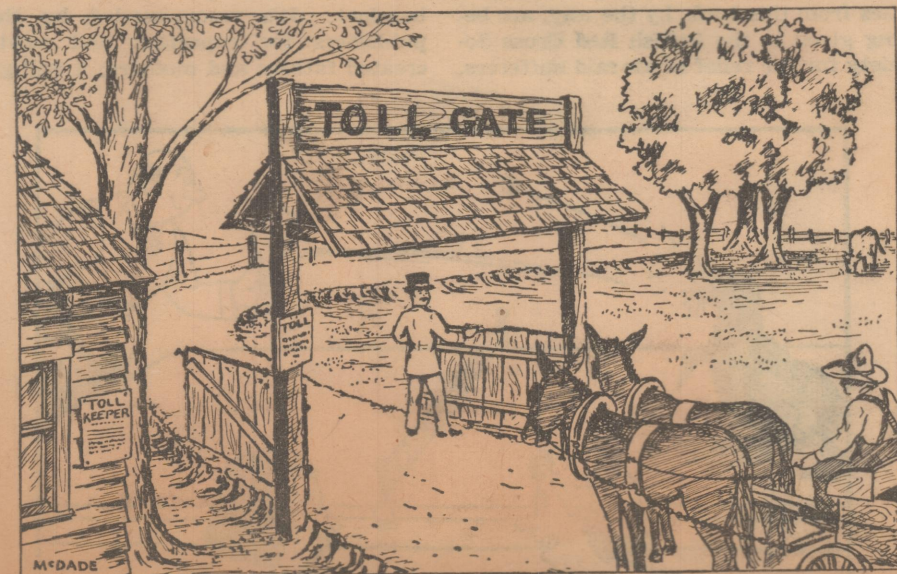
A Toll Gate. "In consideration of building and maintaining such highway," continued the Weigel-Wherry bid, "we would ask as remuneration that we be allowed exclusive privilege to collect from the traffic over such road the following rates of toll, said privilege to extend over a period of 24 years from date of



The late E. N. Weigel, one of the builders of the bauxite-surfaced highway from Little Rock to towns in the southern section of Pulaski county.

completion of said highway. Rates of toll: Footmen, free; horsemen, 2 1-2 cents; one-horse vehicle, 5 cents; two-horse vehicle, 7 1-2 cents; four-horse vehicle, 10 cents; six-horse vehicle, 15 cents; cattle, horses, sheep or hogs in flocks or droves, one cent for each animal. At the end of the 24 years all right, title and interest shall revert to the county."

The turnpike-toll gate combination



The toll gate on the old Sweet Home turnpike. Drawn by Charles McDade from a composite description given by several Little Rock residents who remember it.

another company, incorporated for the same amount. A third major turnpike was the Little Rock, Washington (Hempstead county) line from Fulton on Red river to Little Rock, via Hot Springs; this was also incorporated for \$100,000. There were also privately owned pikes with toll gates.

While each turnpike company was privileged to formulate its own governing rules and establish its own rates, there were certain regulations common to all. Rates of toll must be posted at the gates; no gate could be placed within a mile of a town; no toll could be collected from a landowner passing from one of his estates to another; persons going to and from church or from a funeral were exempt; also militiamen on the road, and electors going to and from voting places.

On some turnpikes gates could be placed every five miles. Operators with more feeling set them 10 miles apart. Each company was required to erect and maintain mile stones and to place guide posts at all cross-roads. The Little Rock-Washington company charged 1 1-2 cents for all small animals; neat cattle, 2 1-2 cents; large animals were 10 cents; two-wheeled vehicles, horse or ox drawn were 37 1-2 cents; four-wheeled carriages and wagons were 50 cents and for each "hitched" animal above four a charge of 6 1-2 cents was made.

Privately owned toll gates must have been so many flies in so much ointment. They were permitted to charge three to five cents for small animals, 12 1-2 cents for horsemen and \$1 for small conveyances, with an ascending scale. There is little if any record to throw light as to how long these incorporated turnpikes operated, or if they were ever really built. Stories of the terrible condition of roads during stagecoach days might cause doubt. But again in 1871 the Arkansas legislature was busy enacting turnpike laws just as if such elaborate preparation had not been made 33 years before.

This time the incorporators had the right to select the location, the route and the length of the pike. County courts regulated the amount of toll; to the former list of exemptions were added "a man running for the doctor and all ministers of the gospel." There was a penalty of \$10 imposed on any one trying to evade the toll by driving around the gate and a fine of \$25 for wrecking the toll gate. Money collected from such source was placed with the school fund of the county. This act was passed March 28, 1871. It is probably the law which inspired Judge Hill to provide Pulaski county with a turnpike in 1885.

Shortly after Weigel and Wherry began building the road they formed the Pulaski County Turnpike Company with Mr. Weigel as president, and reported to the County Court that the pike was completed according to specifications and asked permission to begin collecting tolls from and after August 1 and for the next 24 years.

The inspection proving satisfactory, the court ordered that "that portion of the Little Rock-Pine Bluff road between Fourche mountain and Oakland cemetery, and including the iron bridge be, and the same hereby is converted into a turnpike road, subject to all the uses, terms and stipulations of the contract between Pulaski county and the Pulaski County Turnpike Company as aforesaid."

Many Recall the Toll Gate.

There are many persons living in Pulaski county who recall the turnpike and its toll gate and most of them smile in reminiscence while telling stories, incidents and circumstances connected with it. Both men and women whose

courting days were during the 1880's remember Sweet Home pike as "lover's lane." William F. ("Bill") Hobbs, who was deputy sheriff for 32 years, was on the job at the turnpike building to keep an eye on the county prisoners who were doing the work. To establish the exact location of the gate, Mr. Hobbs says, "The road extended from the southern city limits near Oakland east to the top of the hill where bauxite was found, and south toward the Confederate Home, approximately five miles in all. The bridge across Fourche bayou was about midway of the pike and the toll gate stood about three blocks north of the (present) Rock Island railway's tracks." Mr. Hobbs recalls, with a chuckle, that every swain who could rate a horse and buggy took his girl "out to the pike." Every night the couples parked along the roadway to "spoon." Some nights Bill counted as many as 50 sets of spooners.

William E. Woodruff III has a clear mental picture of how the toll gate looked with its shed-like cover and tall posts from which the gates swung. The gatekeeper's house, built purposely for him, was near the gate. His name was Joe Taylor and his occupation, perhaps, made lasting impression on his customers; for no matter how hazy their memory may be of other matters, everyone instantly tells that Joe Taylor took up the toll. Stories are rife that after his death the word went around that much of the money collected was buried in the low ground stretching back from the road and at night the flickering lights carried by fortune hunters could be seen moving from place to place, as they went, digging, digging. Other stories are that the traveling public grew irate, and once, in the dark of the moon, assembled with a charge of dynamite to remove the obnoxious obstacle. Such stories have not been verified.

Mrs. E. N. Weigel, widow of the builder, now living at the home of her daughter, Mrs. Harry Parkin Sr., 321 North Woodrow, Little Rock, has memories of that particular work her husband did and explains that it was after he had secured the contract for continuing the road to Sweet Home in 1888 that he discovered the bauxite. At the beginning of that year Mr. Weigel was appointed superintendent of prisoners of Pulaski county. In the column of "Local Items" in the Gazette February 21, 1888, the public was informed that "Judge Hill says they are getting along nice enough in working the county convicts on public roads. There are about 30 of them at work on the Sweet Home turnpike and have already completed a good strip of road." It was while making this section Mr. Weigel found the bauxite.

James M. Dickinson, 523 West Fifteenth street, Little Rock, who was a neighbor of Weigel's at the time, recalls the story of the find as he had it from Mr. Weigel. Always with an eye to everything which could be utilized as paving material, whether gravel, clay or stone, he had used a particularly good grade of gravel from along the right-of-way for the top finish. When he reached the last mile this deposit became exhausted and the road builder could not locate similar gravel in quantities sufficient to complete the job. While walking over a near-by hill in his search he noticed a crumbly soft gray stone and stopped to investigate. Taking out a sackful he had his foreman put it through the crusher. For some reason which he did not stop to analyze he was impressed with the clay-like stone as a surfacing material and ordered enough brought from the deposit to complete the road. Mr. Dickinson goes on with the story:

"One evening Ed Weigel came over to my grocery store—just across the street from his home at Sixteenth and State streets—and said: 'Look, Jim, I've got something to show you,' and emptied some gray looking rocks out of a gunny sack. 'Jim, I bet you don't know what that is,' he said to me. It looked like rocks to me, and I said so. 'No,' he came back, 'not rocks, Jim, that's bauxite, what aluminum is made of. John Branner says some day it will make Arkansas a mighty rich state.' Then he told me how he happened to find it.

"He was curious about that peculiar formation which seemed to baffle him because he thought he was familiar with all road-making materials in Pulaski county. Besides, he fell to speculating whether or not it could withstand the heavy travel the road would have. Then it was he decided to ask the opinion of the (then) state geologist, Dr. John C. Branner."

Weigel Discovers Bauxite.

What transpired at that interview was later made public by John H. Page in an article published in 1937, "The Discovery of Arkansas Bauxite." "The story was related to me about 20 years ago while I was serving as commissioner of mines, manufactures and agriculture, by the late Ed Weigel, a resident contractor and business man of Little Rock. Mr. Weigel said Dr. Branner emptied the bag of broken pieces on his desk and after looking them over for some minutes with care and interest, turned to him and said: 'Ed, where did you get this?' Mr. Weigel replied, 'Never mind where I got it, just tell me what it is.' *** After examining the specimen a few minutes longer the geologist took them into an adjoining room and was gone for some time. When Dr. Branner returned he displayed keen interest and insisted on knowing where the rock had been found, assuring Mr. Weigel he would not violate his confidence, but would protect him in his right of discovery, if he valued it.

"Weigel then told Dr. Branner of the location and of the circumstances of his using it for road surfacing. It was then the geologist informed him the mineral was bauxite 'from which aluminum was made' and concluded by saying, 'Ed, you can always feel assured that this road you have surfaced with this material is finished with the most valuable road building material ever used on a highway in Arkansas.'"

The next day Mr. Weigel took Dr. Branner in his buggy to inspect the site of the deposit. Three years later the story of Arkansas's bauxite was given to the world.

Weigel could have had first right to the vast deposits in Pulaski county had he been interested; but because the supply seemed inexhaustible—"as common as any other rock"—he could not be convinced of its potential value. He made no investment in bauxite-bearing rock and never profited from the "crumbly gray rock" other than that he used to surface the stretch of road. This was taken from a hill on the east side of the present highway from property owned by the late Judge W. C. Ratcliffe.

In telling the story, Mr. Dickinson digresses briefly to include the interesting fact that when Dr. Branner began the development, "four of his smart schoolboy engineers lived at our house, 515 West Fifteenth street. Two of these boys became famous. Herbert Hoover became president of the United States and Horace E. Williams, from the University of Arkansas, became chief of the Brazilian Geological Survey. He still resides in Rio de Janeiro.

"Every morning bright and early they'd leave for the day's work, each swinging his paper bag filled with lunch which my mother had prepared for them. *** Hoover was but 20 years old when he came to stay in our home. *** I remember very well when he got his first salary check; it was for \$40 and that was a full month's pay. Many years later I saw that identical check in the state treasurer's office. *** I can remember how tired and dirty those fine boys would be after a hard day's work in the hills south of town. They had no horse and buggy,

so had to walk both ways. *** Later Dr. Branner sent Hoover to Fort Smith and he walked from there to Batesville, investigating the mineral deposits of the country between. *** Years later I met Mr. Hoover in Washington and he told me it took him three weeks to walk the distance, and that only in one instance would the hill folk let him pay for his room and meals. No where in the world, he said, had he ever met people who so indelibly impressed his memory as did those dwellers in the hills of Arkansas with their whole-hearted kindness to that wayfaring youth."

The name turnpike for Arkansas highways has almost disappeared. Occasionally someone is heard to speak of the "Sweet Home Pike," "Hot Springs Pike" or "Twelfth Street Pike," but modern nomenclature designates them as state and United States highways, giving to each a definite number instead of a name. The mile which was surfaced with bauxite is now a part of United States Highway No. 65.

Sources.
Records of Pulaski county, 1885-1889.
Little Rock newspapers, 1885-1900.
Arkansas Legislative Acts of 1838 and 1871.

Article, "The Discovery of Arkansas Bauxite," by John H. Page, Arkansas Gazette Magazine, February 28, 1937.

Substantial Supply Of Bauxite Assured For Reynolds Metals

Deliveries From Dutch Guiana to
Start January 1 — Contracts Run
For 12 Years

Wall Street Journal 5-26-41

Provision for six million tons of high grade bauxite (aluminum ore) for Reynolds Metals Co., was assured when contracts were signed by R. S. Reynolds, president of Reynolds Metals Co., and J. van den Broek, managing director of N. V. Billiton Maatschappij, owner of large tracts of the aluminum-bearing ore located in Surinam (Dutch Guiana). The contracts which will run for 12 years, will provide for substantial deliveries at Mobile, Ala., starting January 1. The Dutch company is installing modern bauxite mining machinery in its South American fields which are less than 2,500 miles by water from the Gulf ports. Surinam is the closest source of foreign bauxite.

The Reynolds company operates an alumina plant at Lister, Alabama (near Muscle Shoals), where bauxite is refined to alumina. This plant will feed the aluminum reduction plants at the same point and a new plant being constructed at Longview, Washington, in the Bonneville Dam power area. The Lister plant has commenced operation and is expected to reach capacity operation at the rate of 40,000,000 pounds of pure aluminum per year during July. The Longview plant will be in operation in late August of this year, climbing to a capacity production of 60,000,000 pounds per year about October 15.

The Reynolds plants are now operating with bauxite that was purchased from the same company, and imported from the Netherlands East Indies with a limited supply of Arkansas and Alabama bauxite also being fed into the reducing vats. The contracts just signed insure a steady supply of this ore for the Reynolds plants, it was said. More than a quarter of a million tons of bauxite per year will be required to keep the present Reynolds plants in operation. This provision from Dutch Surinam is in addition to a further provision covering large quantities of bauxite in Brazil.

Mr. van den Broek and the N. V. Billiton Maatschappij closed a contract recently with the Reconstruction Finance Corp. and Metals Reserve Co. to supply large quantities of tin for defense purposes, and also undertaking the construction and operation of a tin smelter in Texas.

Survey to Be Made Of Bauxite Reserves.

Gazette 5-27-41

Federal engineering and geological experts will arrive here June 1 on assignment to estimate the bauxite reserves in Arkansas, Dr. George C. Branner was notified yesterday. The state geologist said no details of the project were announced.

Dr. Branner said J. R. Thoenen, supervising engineer of the Non-metal Mining Section of the Interior Department, and Dr. E. F. Bur-

chard of the United States Geological Survey will conduct the survey.

The geologist said he completed a study of aluminum ore deposits two weeks ago which showed known reserves of 19,600,000 tons of recoverable dried ore in Arkansas, Mississippi, Alabama, Georgia and Tennessee. He said bauxite mines in Pulaski and Saline counties have been producing between 300,000 and 400,000 tons annually with a peak of 562,000 tons for war purposes in 1918.

Dr. Branner said his estimate included ores down to 50 per cent alumina content.

Will Visit Arkansas On Bauxite Study

Gazette 5-29-41

Atlanta, May 28 (AP).—J. R. Thoenen, head of the Non-Metals Division of the United States Bureau of Mines, arrived here today to look into the possibilities in Georgia of commercial production of bauxite, the ore from which aluminum is made. He said he was starting a nation-wide survey in hope of reducing the United States' dependence on foreign bauxite. He added that "there is some question as to how long we will have ships available to import it." He will spend several days in Georgia before going on to Arkansas, the principal source of bauxite in the United States.

Two Federal Officials Due To Arrive Here About Sunday.

Mr. Thoenen notified Dr. George C. Branner, state geologist, that he and E. F. Burchard of the United States Geological Survey's Non-Metals Division will arrive here about Sunday. They will examine information and materials of the state Geological Survey.

Pulaski and Saline counties have 96 per cent of the United States' domestic bauxite production.

An article on bauxite reserves in five Southern states, by Dr. Branner, will appear in the July number of the Mining and Metallurgical Magazine.

U. S. Officials Begin Getting Bauxite Data.

Gazette 6-3-41

Two officials of the United States Bureau of Mines began assembling data here and at Bauxite yesterday on Arkansas's bauxite reserves. Information compiled by Dr. George C. Branner, state geologist, during the last three years was turned over to them.

J. R. Thoenen, supervising engineer of the bureau's Nonmetal Mining Section, and Dr. Richard W. Smith of the bureau's station at Tuscaloosa, Ala., said the survey will be made in connection with a general investigation of aluminum ore deposits in Arkansas, Georgia, Alabama, Mississippi and Tennessee.

It was said they came here at the request of Secretary of Commerce Ickes. Whether the survey is associated with government requirements of 600,000,000 tons of aluminum for defense purposes was not known.

Dr. Branner recently estimated Arkansas's demonstrated reserves, on a mined and dried basis, at 19,601,000 tons of bauxite. He said reserves in the five Southern states involved in the present survey are approximately 20,319,000 tons.

The federal representatives, who will be joined this week by Dr. E. F. Burchard of the United States Geological Survey, said they will consolidate Dr. Branner's reports with those of Arkansas bauxite producing companies.

50 Pct. Aluminum Shortage Predicted.

Gazette 6-6-41

New York, June 5 (AP).—Leland Olds, chairman of the Federal Power Commission, said today if this country were to match Germany's production of aluminum it would have to produce twice as much as it was expected might be produced at the end of another year.

He said if the defense load had been anticipated seven or eight months ago, aluminum production might have been speeded enough to reach a more or less satisfactory point seven months from now. The present outlook, he said, was for production of half the amount needed 12 months from now.

OPM TO BUILD BIG ALUMINUM PLANT IN STATE

White River Area To Supply Power

Gazette 6-21-41

Washington, June 20 (AP).—Representative Clyde Ellis (Dem., Ark.) said tonight the Office of Production Management has decided to locate an aluminum plant in Arkansas "contingent only upon obtaining sufficient power."

Mr. Ellis said he and Harry Slatery, head of the Rural Electrification Administration, completed a series of conferences with OPM officials today.

"Tentative plans call for locating a plant in the area of Norfolk and other White river dams, and to acquire power immediately from the Grand River (Oklahoma) dam through the Kamo (Kansas, Arkansas, Missouri, Oklahoma) and other REA transmission co-operatives and from private power companies operating in the area," Mr. Ellis said, adding private companies had advised the OPM they could supply more than 100,000 kilowatts.

"Other power would come from the sour gas fields of Arkansas and be developed by the new Ark-La Electric Co-operative, Inc., a transmission co-operative in south Arkansas."

"Ultimately, huge blocks of power would come from Norfolk, Bull Shoals and Table Rock dams. Norfolk, now under construction, will generate 120,000 kilowatts of firm power and could be rushed to completion by December 31, 1943, army engineers advised the OPM today."

Assurance of 75,000 Kilowatts Required.

Ellis quoted OPM officials as saying they were ready to start location of the plant if they could be assured a minimum of 75,000 kilowatts by March, but preferably 110,000, "assuming a reasonable rate."

A. B. Hill, a member of the Arkansas Utilities Commission, and Jerry H. Flanders, chief engineer, continued conferences with federal officials looking to defense plants for the state based on a promise of increased power. Gov. Homer M. Adkins was said to be planning to come to Washington Sunday.

State Officials Confident Power Can Be Pledged.

Official state sources said last night the OPM announcement represented an important development in Arkansas's efforts to convince defense agencies that power for defense industries can be developed more quickly in Arkansas than in other states. They said they were confident the aluminum plant's minimum requirement of 75,000 kilowatts can be assured by March. It was believed that the amount of power available will govern the size of the proposed plant.

The Kansas, Arkansas and Missouri and Oklahoma co-operative for transmission of power, mentioned in the OPM plan, has been pending several months. The Ark-La Co-op in south Arkansas has been proposed to supply power to REA co-ops in Arkansas and Louisiana. Officials said it was possible that the new agency might obtain funds from the REA for building power generating stations in the "sour gas" fields or in the coal fields of western Arkansas. Use of both sources of energy for generation of cheap power has been suggested to the REA and Federal Power Commission.

Governor and Utilities Officials Ready to Leave.

Governor Adkins and officials of two power companies prepared last night to leave for Washington to confer with government agencies.

The governor said meetings had been scheduled Monday with officials of the Office of Production Management, the War Department and the quartermaster general of the army.

Accompanying him will be C. S. Lynch, executive vice president of the Arkansas Power and Light Company, and Frank Wilkes of Texarkana, vice president of the Southwestern Gas and Electric

Company. In Washington they will join state Utilities Commissioner Hill and E. V. Foran and A. E. Learned, engineers who recently surveyed the southwest Arkansas "sour gas" fields.

How ALCOA Grew From Barge to Armada in 2 Years

Aluminum Company Flourishes in the Shipping Business While Old Established Lines Lose Their Ships to Defense

PM 6-18-41
By EMMETT V. MAUN

The Aluminum Co. of America, which has been unable to meet defense emergency demands in its own field, has suddenly turned up as the biggest steamship operator in the U. S. A.

It has 53 passenger and freight ships under ownership or charter, equaling about 275,000 deadweight tons. It has a building program of 21,000,000 in ships by an agreement with Great Britain.

Business Boomed

While all the older steamship lines have been widely raided of tonnage by the Army and Navy to build the defense fleet, ALCOA has not lost a single ton of shipping by requisition or sale to the armed services.

How ALCOA happened to achieve this sudden maritime eminence so quietly and with virtually no experience in the complex business of big shipping remains clouded within the strange workings of both the Maritime Commission and the octopusian Mellon empire.

A part of the story dates from the Aluminum Co.'s notorious practice of buying up, leasing or otherwise controlling all the richer bauxite fields in the world. When the deposits in Trinidad and the Dutch West Indies became productive, Aluminum began chartering ships (mostly foreign tonnage) to haul ore to the United States for reduction.

Apparently ALCOA wasn't interested then in steamship operation or ownership as a going business. They had access to and probably control of the Ocean Dominion Line which acted as agent in the charters. When shipments of bauxite, designed for the U. S. A. or Canadian ports were needed, Ocean Dominion and Aluminum merely chartered such ships as were necessary and the ore was delivered.

That practice continued for a couple of decades, with other agencies under ALCOA domination also mixed up in the complex enterprise.

War Changed Policy

Along in 1939 when it looked as if war in Europe were certain, ALCOA became concerned about the certain rise in tonnage costs, the certain rise in charter rates and, of course, the booming sales of aluminum. How speedily and how quietly ALCOA moved into the picture may be noted in looking through *American Merchant Vessels July 1, 1939*, a volume published by the Department of Commerce listing all licensed vessels.

Ocean Dominion owned one piece of floating craft, a barge named the *Auditor*. Alcoa Steamship Line had not come into existence.

The Aluminum Co. of America is not listed as owning any ships.

The American Caribbean Line is not listed as owning any ships.

After that came the war, with its Neutrality Act and its lend-lease bill. Those events marked the rise of the Aluminum Steamship Line, which swallowed up the Ocean Dominion Line and made Harmon Lewis, president of the Dominion Line, the president.

The tonnage that a few months before had been available at scrap iron prices was booming on the brokers' markets. ALCOA began buying ships.

Meantime, the established lines in the United States were taking a terrific beating. The U. S. Lines was driven out of Europe except for a few unprofitable rescue missions to Channel ports. The American Export Line was forbidden to enter the Mediterranean, where the major part of its business was done. The American President Line, successor to the Dollar Line, could no longer make its round-the-world cruises.

While those great, established companies were being slowly bled to death through exigencies of war, the Aluminum Steamship Line was feasting well. The lend-lease bill demanded the transportation of vast amounts of equipment and materials to be used in fortifying Antigua, St. Lucia, Trinidad, Bermuda and the other bases gained

How ALCOA Gets the Break

The Maritime Commission, the Army and the Navy have requisitioned or purchased the following tonnage from American steamship lines:

United States Lines.....	130,901 tons
American Export Line.....	111,532 tons
Grace Line.....	40,249 tons
American President Line.....	88,496 tons
Morgan Line.....	63,354 tons
Alcoa Line.....	NONE

The Grace Line, which has had experience over more than a quarter of a century in operating ships through the very territory served by ALCOA got no part of the concessions to move all those defense materials or any part of them to the new bases. Instead, it lost 40,249 tons of requisition.

The American President Line, which has been able to operate into any or all ports of the world, has steadily seen its ships disappear in service as Army transports, surrendering 88,496 tons.

The Morgan Line, which started operating in the Gulf of Mexico and the Caribbean 106 years ago, has been forced out of business altogether. Its 10 freighters and

one passenger ship, the *Dixie*, are gone, and before long the office personnel of 2400 will be out of work.

The Alcoa Line in New York refuses to talk about the details of its spectacular rise. Its representatives gave only three answers to questions:

¶ Their office staff now numbers about 200, whereas it was said to be about 15 no more than a year ago.

¶ They now own or have under charter about 275,000 deadweight tons of shipping.

¶ None of their ships has been requisitioned by the Army or Navy.

At the Maritime Commission office in Washington another attempt was made to get the complete list of ships, but the idea was brushed off there, too.

The question was asked flatly by a commission representative:

"How are you going to treat ALCOA?"

"Critically," was the answer.

"But they haul defense materials to the new bases and bauxite back. It makes a good service."

"Don't you think the U. S. Lines is qualified for that service? It is starving to death for lack of ships."

"Don't worry about the United States Lines. It will be taken care of."

Obviously he referred to current rumors that the U. S. Lines will get about 35 of the 84 foreign ships to be taken over in American harbors and that the U. S. Lines will get the 10 Morgan freighters.

The gifts are rather hollow, however, for the Morgan ships probably will be transferred to Panamanian registry and the 35 other ships will be considered fair prey by any hostile submarines or surface raiders.

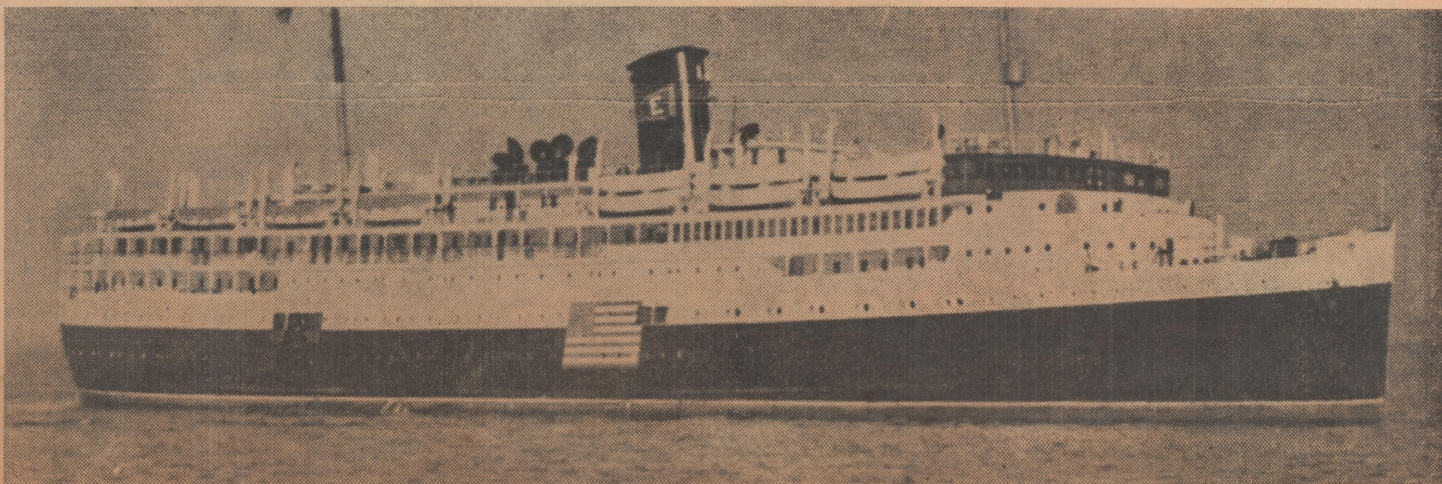
Back in the air-cooled New York office of ALCOA, an official was asked whether ALCOA expected to lose any ships to the armed service.

"No," he replied. "We have been very lucky."

"You are a subsidiary of the Aluminum Co.?"

"I should say so. Very much."

Lisbon Refugees Wanted This Ship, But ALCOA Got It



When the *Exochorda* was requisitioned for transport duty, the American Export Line asked permission to charter the *Acadia*, shown here, so that weekly passenger service might be maintained from Lisbon. ALCOA also applied for the ship to use in cruise service and got it.

Photo by Morris Gordon, PM Staff

POWER SOURCES FOR ALUMINUM PLANT PLEDGED

Allocation Expected in 10 Days.

Gazette 6-24-41

Washington, June 23 (AP).—Two groups laid before defense officials today separate pleas for the location of an aluminum plant in Arkansas.

Both Gov. Homer M. Adkins of Arkansas, who conferred with Chairman Leland Olds of the Federal Power Commission and Office of Production Management officials this morning, and a group including Representatives Harris and Ellis, Arkansas Democrats, who saw the same officials this afternoon, submitted plans to supply necessary electricity for operation of a plant.

Mr. Adkins, accompanied by C. S. Lynch, executive vice president of the Arkansas Power and Light Company, state utility officials and others, promised O. P. M. officials they had assurances that private utility groups could provide a minimum of 65,000 kilowatts of continuous power by the time an aluminum plant could be completed.

Both groups believe O. P. M. officials plan an announcement within a few days that an aluminum plant will be located in Arkansas.

Mr. Ellis and Mr. Harris, who said their plan had "full approval of the Federal Power Commission," were accompanied to their conference with William S. Knudsen, O. P. M. director, and Roger Cortesi, aluminum consultant, by Harry Slattery, Rural Electrification Administration director, and other REA officials.

Integrated System Of Co-Ops Planned.

Mr. Ellis said they told O. P. M. officials the REA would immediately build into an integrated system its four transmission co-operatives—KAMO, which would obtain power from the Grand River dam in Oklahoma, the Ark-La. Co-operative at Camden, Gilmer Co-operative in northeast Texas and Possum-Kingdom Co-operative on the Brazos river in Texas.

Under this set-up, Mr. Ellis said, they promised to deliver to any aluminum plant constructed in Arkansas by next March 1, 73,500 kilowatts of new power.

In addition, they said, they could construct with REA help two huge 90,000 - kilowatt steam - generating plants to be fueled by cheap "sour gas" from the abundant supply in southwest Arkansas.

"We were told by O. P. M. officials that if we could guarantee the power they would give us the aluminum plant, Mr. Ellis said. "They agreed to take our plans and figures under consideration."

He said Mr. Knudsen told the group a plant would be allocated "within 10 days."

OPM Impressed By Bauxite Reserves

El Dorado Daily News
Branner Shows Figures
While Before
Board 6-25-41

LITTLE ROCK, June 24.—(AP).—State Geologist George C. Branner said today officials of the Office of Production Management appeared much impressed with figures on estimated bauxite reserves in Arkansas which he submitted to them last week.

Back in his office after a trip to Washington, the state geologist said the officials had informed him that the information would be extremely valuable in planning for greatly-expanded aluminum production.

Branner appeared before the OPM at the request of G. R. Holden, consultant in charge of aluminum and magnesium for that agency.

Governor Adkins expressed belief in Washington that an early announcement would be forthcoming of a government decision to build an aluminum processing plant in Arkansas.

The OPM recently announced an objective of 800,000 tons of primary aluminum annually in this country, which would require a trebling of present production, Branner declared.

On the basis of newly-compiled figures, Branner estimated that Arkansas had 96.5 per cent of known reserves of bauxite in this country. Scattered reserves are located in Georgia, Alabama, Mississippi and Tennessee.

The state geologist said about 3,143,000 long tons of bauxite would be required annually for production of 800,000 tons of aluminum.

"If our bauxite reserves were used exclusively to make aluminum, the known reserves of the higher grade would suffice, at this rate of consumption for about three and one half years," he said. "If the lower grades were included an additional supply of about three years would be available."

Aluminum Plant Said Assured

Gazette 6-25-41

Washington, June 24 (AP).—Gov. Homer M. Adkins of Arkansas, said today the Office of Production Management had given virtual assurance that an aluminum manufacturing plant soon would be located within the state. It will utilize Arkansas's bauxite deposits. "Private utilities have agreed to supply a minimum of 65,000 kilowatts of continuous power for the operation of an aluminum plant," Mr. Adkins said, adding that OPM officials were pleased with these assurances.

Further development of power resources through public and private utility co-operation to build up an immense future supply was predicted by the governor. He said immense reserves of "sour" gas in the state could be converted into a fuel to produce electricity in abundance.

He said the plans of the Rural Electrification Administration to expand its facilities in the state, coupled with power to be produced by Norfolk and other dams, would guarantee a supply of electricity.

Bauxite Reserve Estimated At 37,000,000 Long Tons.

Arkansas has an estimated 37,000,000 long tons of known bauxite reserves, Dr. George C. Branner, state geologist, said yesterday.

At the request of the Office of Production Management, he informed the OPM at Washington last week that the state has reserves of 11,000,000 tons of high grade bauxite, 9,000,000 tons of second grade and 17,000,000 tons of third grade. It is estimated that an additional 18,000,000 tons are yet to be discovered.

From 1899 to 1940, inclusive, Arkansas bauxite minings were 9,521,783.25 long tons, valued at \$55,049,805.60.

The Arkansas information was of "material value," said Dr. C. K. Leath, consultant of the Metals and Minerals Section, Materials Branch, OPM Production Division. It was compiled at the request of G. R. Holden, consultant of the Aluminum and Magnesium Division of the Production Division.

The information was given to H. K. Thatcher, executive secretary of the state Agricultural and Industrial Commission, in connection with plans for the location of an aluminum plant in Arkansas.

If the nation reaches the OPM objective of 1,600,000,000 pounds of primary aluminum annually, about 3,143,000 long tons of bauxite would be required for this purpose alone, Dr. Branner said in an article prepared for Mining and Metallurgy magazine.

More Production Needed.

The OPM's recently announced objective of 800,000 tons of primary aluminum would require a trebling of present production, the geologist said. If reserves of Arkansas, Georgia, Alabama, Tennessee and Mississippi were used exclusively for aluminum for OPM needs, the higher-grade reserves would last

about three and one-half years. If lower grades were included, the supply would be sufficient for six and one-half years, Dr. Branner estimated.

Arkansas has an estimated 96.5 per cent of the country's known reserves.

Estimates Raised On Aluminum Needs.

Gazette 6-26-41

Washington, June 25 (AP).—Defense officials were said today to have increased their estimates of aluminum required for national defense to 1,750,000,000 pounds annually, 150,000,000 pounds above previous figures.

Members of the Senate Appropriations Committee said this new total was presented at a closed subcommittee hearing today in support of a House-approved proposal to add \$40,000,000 to the Tennessee Valley Authority's funds.

Aluminum Plant Urged By Arkansans

Gazette 6-26-41

Washington, June 25 (AP).—Governor Adkins and the Arkansas House delegation recommended to the Office of Production Management today acceptance of a plan by the Rural Electrification Administration for supplying power for an aluminum plant.

The governor repeated that he expected location of an aluminum plant in Arkansas would be announced soon.

The REA plan was endorsed at a meeting of the governor and the Arkansas representatives with REA officials. They said the plan had the approval of the Federal Power Commission.

Governor Adkins said that through interconnecting systems, the REA could furnish 73,000 kilowatts of power in nine months for the plant, and after July 1, 1942, could increase the supply monthly to 22,500 kilowatts until it reached 200,000 kilowatts.

The REA, the governor added, has two large steam plants in the vicinity of Camden, Ark., and could utilize large quantities of "sour gas" in the area. He said another plant was contemplated in Franklin county which would use coal.

Others at the meeting were A. B. Hill and Jerry Flanders of the Arkansas Public Utilities Commission and E. V. Foran of Houston, Tex., and A. G. Learned of Kansas City, engineers.

U. S. Supply Of Aluminum Far Short

Gazette 6-27-41

(By the Associated Press.)

Washington, June 26 (AP).—Cautious criticism of the defense production program was heard in the Senate today as its special Defense Investigating Committee reported a shortage of aluminum that may cause curtailment of electric power in homes.

In a bluntly-worded report on its inquiry into aluminum—essential metal for fighting airplanes—the Senate group said production of 1,600,000,000 pounds annually was needed, with only slightly more than half of that in sight immediately. Some electric power may have to be diverted from home use to production of aluminum, it was indicated.

"This situation is especially serious as we can not have confidence in our estimates of needs for aluminum, and as we may want to increase our airplane program still further," the committee reported. "Unless we proceed at once to create new facilities, we may be unable to get aluminum when we need it, or we may have to ration private consumption of electricity in the home."

Serious Miscalculation Of Needs Charged.

Asserting "swarms of airplanes" must be produced, the committee said the Defense Advisory Commission and the Office of Production Management had made "serious miscalculation" of aluminum needs,

stocks and production.

The report, prepared under direction of Chairman Truman (Dem., Mo.), criticized both OPM and the Aluminum Company of America. OPM was said to have relied on Alcoa and "discouraged anyone else from going into the business of producing aluminum" at the time the Reynolds Metal Company, now and only competitor of Alcoa, was constructing facilities at Lister, Ala., and Longview, Wash., for aluminum production.

"It is reasonable to conclude that Alcoa had convinced OPM of the adequacy of the supply in order to avoid the possibility anyone else would go into a field which they had for so many years successfully monopolized," the report added.

The committee said OPM "actually had discouraged research and experimentation" in alternate processes for production of aluminum "from low-grade bauxite or other sources such as alunite."

Cost of Transporting Bauxite From Arkansas Rapped.

Alcoa was said to have "promised to build up its stock pile of bauxite, but did not do so" and the committee estimated the present available supply of bauxite in this country would be exhausted in less than two years.

It also criticized transportation costs involved in carrying bauxite from Arkansas and the Guianas, in South America, to East St. Louis, Vancouver, Wash., California and other points.

Biggest Bottleneck Said to Be On President's Desk.

After the critical aluminum report had been explained by Senator Mead (Dem., N. Y.), Senator Brewster (Rep., Me.) told the Senate the "biggest bottleneck in our preparedness effort is on the president's desk."

He said it was "fantastic" to expect the president to handle details of national defense production along with other heavy responsibilities and urged co-ordination of all defense production under a single responsible head, similar to the War Department's industrial mobilization plan.

"Aluminum presents a tragic case history of failure to co-ordinate," Brewster said. "Today Germany is producing around two billion pounds of aluminum a year while we are unable to produce one billion. The country needs aluminum. The country get an alibi."

Bauxite Reserve Estimated At 37,000,000 Long Tons.

Dr. George C. Branner, state geologist, has estimated Arkansas has 37,000,000 long tons of known bauxite reserves. Of this amount, 11,000,000 tons is high grade ore, 9,000,000 second grade and 17,000,000 tons third grade. Dr. Branner estimated there is an additional 18,000,000 tons of bauxite yet to be discovered.

Dr. Branner estimated if the nation reaches the OPM objective of 1,600,000,000 pounds of primary aluminum annually, about 3,143,000 long tons of bauxite would be required for this purpose alone.

He estimated if reserves of Arkansas, Georgia, Alabama, Tennessee and Mississippi were used exclusively for aluminum for OPM needs, the higher-grade reserves would last about three and a half years. If lower grades were included, the supply would last six and a half years, he said.

High Grade Ore Used.

L. R. Branting, superintendent of the Republic Mining and Manufacturing Company at Bauxite, said last night his company is obtaining bauxite from a large deposit stripped and uncovered in 1936. He said the company uses only high grade ore. Possibility of using second grade ore was investigated by the company at one time, he said, but the effort was abandoned because there was no demand for the ore.

He was unable to estimate the known bauxite reserves controlled by Republic, but said he considered Dr. Branner's estimate of reserves as correct. The mines at Bauxite are operating on a 24-hour shift.

BIG ALUMINUM PLANT WILL BE BUILT IN STATE

OPM Recommends Eight Units.

Gazette 6-28-41

Washington, June 27 (AP).—Defense officials recommended today the construction of eight new aluminum plants to produce an additional 600,000,000 pounds a year, raising the national capacity to 1,400,000,000 pounds.

William S. Knudsen, OPM director general, and Sidney Hillman, associate director, sent the recommendation to Secretary of War Stimson for approval, after which it will be sent to Defense Plant Corporation, which would be asked to finance the new plants.

The areas selected and the proposed annual aluminum capacity include:

Arkansas, 100,000,000 pounds, Bonneville-Grande Coulee area, two plants, one of 85,000,000 pounds capacity and the other of 55,000,000 pounds.

Upper New York state, two plants, one of 100,000,000 pounds capacity and the other of 50,000,000 pounds.

Alabama, 100,000,000 pounds.

California, 70,000,000 pounds.

North Carolina, 40,000,000 pounds.

Power Problem Solved; Work to Start Immediately.

OPM said the problem of power had been solved and construction of all eight plants could be started immediately.

The plants are to be built and owned by the government, but will be operated by private companies under lease. The companies were not named.

The location and size of the plants, the defense agency said, were based on a joint report by the Federal Power Commission and the OPM power section, which followed a nation-wide survey of power supplies for aluminum and consultations with the Interior Department, the Tennessee Valley Authority and public and private power agencies.

OPM reported that it was formulating, in co-operation with the Power Commission, the War Department and other agencies, a specific program for permanent removal of power deficiencies which meanwhile were being met by emergency measures.

Economically Sound Locations Proposed.

The considerations in connection with the recommendations for the new plants listed by OPM were these:

1. New plants should be situated where they would be economically sound after the present defense emergency.
2. A power supply should be available as rapidly as the plants could be constructed.
3. Temporary measures to assure necessary power could be taken by improving transmission interconnections, pooling power reserves, etc.

Yesterday a Special Senate Defense Investigation Committee under Senator Truman (Dem., Mo.) had criticized both the OPM and the Aluminum Company of America in connection with what was termed a serious aluminum shortage.

It stated OPM had relied on Alcoa and "discouraged anyone else from going into the business of producing aluminum" and expressed belief that the company had represented the supply to be adequate in order to avoid competition.

Report Cites Sources Of Electric Power.

While not announcing exact locations of the plants, the OPM made public the text of the report of the Federal Power Commission and the Power Section of the OPM.

Among the recommendations were:

Arkansas—Power supply (immediate), 120,000 kw, obtained by a series of emergency transmission interconnections which could be completed in six to nine months.

This capacity will include 68,000 kw through utilization of reserves and 67,500 kw from the Brazos and Grand River hydro developments and the Gilmer (Tex.) and Arsenal Hill Diesel plants now under construction. Some curtailment of non-essential loads can be invoked temporarily if found necessary.

Power supply (ultimate)—Natural gas fired steam stations.

(The aluminum plant should be located in relation to these ultimate sources of power supply. Production of an additional 100,000,000 pounds annually will be possible when new gas-fired steam plants have been built.)

Plant May Be Built On Ouachita River.

Qualified sources said last night the 100,000,000-pound aluminum plant announced by national defense officials for Arkansas probably will be built near Camden on the Ouachita river.

The same sources disclosed that the new Ark-La Co-operative Inc., approval of which was announced yesterday, has been designated as the agency to co-operate with the Rural Electrification Administration to provide 180,000 kilowatts of permanent power for needs of aluminum and other defense plants in Arkansas.

Thomas Fitzhugh of Little Rock, former chairman of the state Utilities Commission, has been appointed lawyer for the Ark-La Co-operative. He returned from Washington last night after conferences with REA, OPM and other federal agencies.

While the natural gas to be used for production of power in a 10,000 kw capacity plant for the Ark-La will be produced in Louisiana, Arkansas's "sour gas" fields will be tapped for the two big steam plants which later will produce the 180,000 kws of permanent power, Mr. Fitzhugh indicated.

120,000 Kw Available On Emergency Basis.

About 120,000 kws will be available on an emergency basis through interconnection of private and public facilities and the Gilmer, Tex., and Arsenal Hill, La., steam plants. Under plans which the REA and OPM are expected to announce next week, the Ark-La may be designated to provide "all the permanent power needed" in the production of aluminum, manganese and other defense materials.

The site near Camden, which Congressman Oren Harris of El Dorado also said was under consideration, had not been definitely selected yesterday. But competent sources said it probably will be chosen because of adequate water of the Ouachita river. The water will be needed for the power plants and as a means of transportation under both the emergency and long-range plans, it was said.

Nearly Half of Bauxite Production Required.

Dr. George C. Branner, state geologist, estimated that a plant producing 100,000,000 pounds of aluminum annually, would require about 200,000 long tons of bauxite or about one-half of the 1939 production in Arkansas. He said the bauxite processing plant would require limestone (which might be obtained from Batesville or near Hot Springs), soda ash (probably from Louisiana) and large quantities of coal or gas for burning the limestone. He suggested the location of the plant probably would be determined on the basis of economic justification—considering proximity to power and raw materials.

About 150,000 Kilowatts Of Power Needed.

L. A. Henry, engineer-director of the State Planning Board, estimated a 100,000,000-pound aluminum plant will require about 150,000 kilowatts of firm power. It had been indicated the plant might be built in units, with the first to require about 65,000-75,000 kws.

Mr. Henry said two pounds of bauxite will produce about one pound of alumina and two pounds of the latter will yield about one pound of aluminum.

OPM PLANT AT BAUXITE MAY BE UNIT OF ALCOA

Republic Had Plans For Big Unit.

Gazette 6-29-41

The 100,000,000-pound aluminum plant assigned to Arkansas by national defense officials may be built at Bauxite and operated by the Aluminum Company of America, industrial sources at Birmingham, Ala., said yesterday.

L. R. Branting, superintendent of the Republic Mining and Manufacturing Company at Bauxite, a subsidiary of Alcoa, said he "hoped it was true."

"We have been figuring for years on the possible location of an alumina plant here," he said, "and have prepared plans for it. But I do not know what the Office of Production Management at Washington has in mind."

The Birmingham report said if the Arkansas plant includes alumina, ingot aluminum and rolling mill facilities it will cost about \$75,000,000. Without the rolling mill, it was estimated, the cost would be \$45,000,000. Mr. Branting said a plant to produce alumina only would cost about \$14,000,000. An alumina and ingot plant would employ 600 to 1,250 men, a rolling mill about 3,000.

Alumina Might Be Shipped From Bauxite.

Mr. Branting explained production of alumina is the first step after the mining of bauxite ore. He said it was possible alumina might be produced at Bauxite and shipped to an ingot plant which he suggested could feasibly be built near Camden, on the Ouachita river. Alumina is a fine white powder which can be handled and shipped in bulk like sand.

Arkansas produces most of the bauxite mined in the United States. Seven or eight companies operate in the state. The ore has never been processed in Arkansas.

Dr. George C. Branner, state geologist, said there are large known deposits of bauxite not under lease to the operating companies and predicted these fields may be developed by expanded operations.

REA Co-op Seeks Gas For Generating Stations.

Plans went forward yesterday for permanent production of power necessary to operate the aluminum plant and other proposed defense industries. The Ark-La Co-operative, Inc., which has been designated by the Rural Electrification Administration to furnish 180,000 kilowatts of power for defense purposes in Arkansas, was negotiating for control of the great "sour gas" reserves in the McKamie field near Lewisville and Stamps and the Dorcheat field nearby.

Thomas Fitzhugh, former chairman of the state Utilities Commission, who has been appointed lawyer for the Ark-La, left yesterday for Shreveport, La., to complete plans for the first 10,000-kw unit. He said two 90,000-kw steam plants using desulphurized "sour gas" are contemplated by REA and Ark-La. The sites will depend upon location of the aluminum plants, it was explained.

Governor Will Seek Chemical Plants Next.

En route home from Washington yesterday, Governor Adkins telegraphed the Gazette:

"Needless to say how gratified I am over the announcement that a large aluminum plant would be located in Arkansas. Before I left Washington last night, assurance was given me of this action. I am grateful to our entire congressional delegation for its co-operation. The members worked in complete harmony and unison.

"It is my understanding the location will be determined by governmental authorities and engineers employed by the OPM."

Aluminum Co. to Use Gas in Some Expansions to Conserve Electricity

7-12-41

BY GEORGE B. BRYANT, JR.

Staff Correspondent of The Wall Street Journal

ALCOA, Tenn. — The Aluminum Co. of America plant here is being doubled.

In making this national defense expansion, the company plans to reduce electric power consumption wherever possible without interrupting production efficiency. It will substitute gas in many operations.

Just how great a savings in power consumption can be made will depend in large measure upon the availability of gas. But, from the standpoint of company officials, any saving is important at this time, since another pound of aluminum metal can be produced with every 12 kilowatts of power saved in other operations.

The expansion program for the plant in this small East Tennessee town, sometimes referred to as the aluminum capital of the United States, will double the metal producing and sheet rolling capacities.

Part of General Program

This is a part of the general program of the Aluminum Co. to make a \$200 million addition to its facilities.

At the present time, the aluminum plant has one artificial gas plant. If plans of the Tennessee Gas and Transmission Co. are approved by the Federal Power Commission, two 16 inch pipe lines will be run into Tennessee from the Louisiana natural gas fields. This project will bring gas to the Aluminum Co. and may make deliveries to the Tennessee Valley Authority for use at some of its stand-by plants.

A. D. Huddleston, general manager of the aluminum plant, said a substantial amount of gas can be used for heating in various processing operations. It cannot be used, however, in the production of the aluminum metal itself.

Expansion of Output Pushed

Construction is well advanced on a new aluminum sheet mill which will increase rolling capacity to about 30 million pounds a month, or just about double what it is now. Another project on which work has been started will provide twelve new potrooms that double the output of the metal itself.

The new sheet mill, half again as big as any now in existence, was started last fall and will be ready for operation within a few months. It will turn out the strong alloy sheets used in the production of military aircraft. This mill is of the new high-speed variety which can process sheet aluminum fifty times faster than the commonly-used unit.

Construction has been pushed under an emergency schedule. Grading for the new sheet mill started last December, the steel work started going up in April and the brick work commenced in May.

The new mill was started several months before the announcement of the new bomber program—the first definite indication that there would be a shortage, eventually, in aluminum production because of defense requirements.

Construction Data

To illustrate the tremendous size of this plant, Mr. Huddleston gave out the following construction facts:

The mill has a floor space of about 55 acres, or over two million square feet, and the concrete in the floors alone would be sufficient to pave a two-lane highway 25 miles long.

The side walls of the buildings required 5.5 million bricks, enough to make a garden wall eight feet high and ten miles long.

The glass in the buildings would make a green-house covering 10 acres.

Approximately 24,000 tons of structural steel were used in the buildings.

Sixteen miles of water and sewer mains were installed.

The new potrooms—the industry terms for the facilities for converting aluminum into aluminum metal—will be ready for operation just as soon as there is electric power available to meet their requirements. Some of the additional potroom capacity will go into production this summer.

Emerson Radio to Curtail

Use of Aluminum

Wall St. Journal 7-12-41

A contemplated reduction of over 90% in the amount of aluminum normally used in the fabrication of its radio receivers has been announced by B. Abrams, president of the Emerson Radio & Phonograph Corp. Completion of an intensive study by its engineers, calculated to conserve the use of aluminum and thereby divert it into defense channels, disclosed numerous parts that could be made of substitute materials without sacrificing performance or efficiency.

"As the largest producer of small radio

sets," states Mr. Abrams, "large quantities of aluminum were used in our production. Desirous of cooperating with and contributing our bit to the defense demands of our country, we early tackled the problem of substituting other materials in our sets. Charged with this assignment, our engineering laboratory experimented with various materials with a view towards dispensing with aluminum wherever possible and have effected a program to accomplish this.

"We are gratified with the results which will permit us to reduce—by over 90%—the use of aluminum in our sets. Substitutions for other priority materials also have been planned and under our program we will utilize a minimum of those metals so vital for defense needs," concluded Mr. Abrams.

Aluminum Utensil Plants Seek Defense Business

Possibility of Conversion to Armament Production Will Be Investigated OPM Announces

7-12-41

From THE WALL STREET JOURNAL Washington Bureau

WASHINGTON—Possibility of converting plants in the aluminum cooking utensil industry to defense production will be investigated, the Office of Production Management announced Thursday.

This conversion problem was discussed at a conference attended by representatives of several aluminum ware companies, the Aluminum Ware Association, the American Federation of Labor and the Congress of Industrial Organizations, the OPM labor division's priorities branch and the defense contract service.

Two of the industry's engineers should be selected within the next few days to discuss conversion possibilities with government technicians, it was agreed.

Manufacturers reported at the meeting that their civilian business is now practically gone because they are unable to get aluminum for this purpose and previously acquired stocks are either exhausted or nearly so. Club Aluminum Products Co., Massillon Aluminum Co. and West Bend Aluminum Co. were represented at the meeting. They expressed the opinion that they could not use substitute materials and make pots and pans with their present equipment.

More than 3,000 persons or about one-fifth of all industry employees have been laid off or have quit their jobs as a result of the curtailment.

Several companies reported that they had received enough prime or subcontracts to keep a part of their employees. But they added, the cost of converting their plants to defense work made it difficult and often impossible to bid successfully against firms in other industries already equipped for that kind of business.

No Aluminum Shortages In Defense Industries, NAM Survey Shows

20 Manufacturing Centers Report No Production Delays Because Of Metal Pinch

Wall St. Journal 7-14-41

Despite the obvious need for aluminum in civilian non-defense industries, no real aluminum shortage has been evident in airplane and other defense producing plants, Walter D. Fuller, president of the National Association of Manufacturers, says.

A nation-wide telegraphic survey of 20 airplane and other defense production centers indicates that output and delivery of vital armament equipment has not been delayed to date by a shortage of the white metal, Mr. Fuller says.

Warnings have gone out from suppliers of a possible temporary shortage, even though those aluminum producers are optimistic and manufacturers state that there is enough aluminum either on hand or guaranteed to them to fill virtually all defense orders now in process.

Aluminum Co. of America reported to NAM that ingot production this month would total 54 million pounds, or 4,000,000 pounds over its production estimate, and forecast August production of 55 million pounds of ingot, Mr. Fuller said.

Reynolds Metals Co. has erected and fully equipped an alumina plant and two metal reduction plants, J. Louis Reynolds, vice president, reported to the NAM. During June, Reynolds' Louisville plant produced 1,500,000 pounds of aluminum alloy sheet for the aviation industry and the custom rod mill produced and shipped 1,000,000 pounds. Aluminum shipments

for all defense purposes last month exceeded 4,000,000 pounds, which will be multiplied four times by fall, Mr. Reynolds reported.

Reports were received by NAM from officials of companies in Philadelphia, San Francisco, Indianapolis, Grand Rapids, York, Pa., Pittsburgh, Youngstown, Baltimore, Newark, N. J., Los Angeles, Chicago, Hartford, Milwaukee, Buffalo, Rochester, Detroit, Kansas City, Mo., Tulsa, Cleveland, and Wichita, Kansas.

Plan for Disposition of Scrap Aluminum Collections Formed

7-15-41

From THE WALL STREET JOURNAL Washington Bureau

WASHINGTON—A new simplified plan for the disposition of scrap aluminum to be collected in a house-to-house canvass under the direction of the Office of Civilian Defense has been evolved by the Office of Production Management.

This new plan, explained in a joint telegram sent to all state governors by William S. Knudsen, director general of the OPM, and F. H. La Guardia, director of the OCD, calls for the designation by the OPM of one or more concentration points in each state. These are to be selected with a view to transportation convenience and other considerations, and will be announced by the OPM later. Once the collected aluminum has been shipped by local collection committees, the OPM will conduct competitive bidding for the sale of the aluminum to smelters having defense preference ratings.

ALUMINUM CO. WILL OPERATE ARKANSAS UNIT

100,000,000 Pounds To Be Produced.

Gazette 7-15-41

Washington, July 14 (AP).—The Office of Production Management recommended five companies tonight to operate seven new government-owned aluminum plants to increase the nation's output by 600,000,000 pounds a year.

The plants, their capacities and the sites tentatively recommended to the War Department by OPM are:

Aluminum Company of America, three plants.

One of 100,000,000 pounds capacity in Arkansas.

One of 90,000,000 pounds capacity in the Bonneville-Grand Coulee area.

A third of 150,000,000 pounds at Massena, N. Y.

Union Carbide and Carbon Company, one plant, 60,000,000 pounds at Spokane, Wash.

Reynolds Metals Company, one plant, 100,000,000 pounds at Lister, Ala.

Bohn Aluminum and Brass Company, one plant, 70,000,000 pounds, at Los Angeles, Ca.

Olin Corporation, one plant, 30,000,000 pounds at Tacoma, Wash.

Huge Production Of Alumina Planned Too.

The OPM also announced that Alcoa would operate a government-owned plant for the production of 400,000,000 pounds of alumina annually. Production of alumina from bauxite is a step preliminary to the processing of aluminum. The OPM said this plant, at an undisclosed site, would be the first ever designed for the combined treatment of both high grade and low grade bauxite ores.

The increased production, together with 200,000,000 pounds to be obtained from Canada, will boost the American supply to 1,400,000,000 pounds a year.

The plants will be financed by the Defense Plant Corporation, a Reconstruction Finance Corporation subsidiary, and will be operated by the private firms under a leasing arrangement.

Alcoa to Co-Operate On Non-Profit Basis.

An arrangement has been reached between the government and Alcoa under which that company will design and supervise the construction of the plants to be operated by the Olin Corporation and the Union Carbide and Carbon Company, OPM said. Alcoa will per-

form the service on a no-profit basis.

"This will eliminate the necessity of these two companies engaging in preliminary investigations of plant design, and therefore will speed construction," the announcement stated. Neither of these concerns has previously engaged in aluminum processing.

The Reynolds Metals Company and the Bohn concern will design and construct the plants they will operate. Alcoa, it was announced, has also agreed to co-operate in the training of technical staffs for the operation of the new plants.

No Aluminum Shortage Statement Resented.

Gazette 7-15-41

Washington, July 14 (AP).—The Office of Civilian Defense reported that President Walter D. Fuller of the National Association of Manufacturers, who declared today there was no real shortage of aluminum for defense purposes, one week ago pledged the co-operation of N. A. M. in plans for alleviating "the aluminum shortage."

Officials of the O. C. D., who will open on July 21 the "national defense aluminum collection" to salvage worn-out kitchen-ware, were irritated at the new N. A. M. release. They made no comment except to make public a letter from Fuller to F. H. La Guardia, director of the O. C. D.

That letter, dated July 7, spoke of "the aluminum shortage" and declared that N. A. M.'s National Defense Committee had "given thought to the desirability of co-operating with local plans devised to alleviate this situation." The letter promised to enlist the support of state and local associations affiliated with N. A. M. in the salvage drive.

Today's announcement by Fuller said a survey revealed that no aircraft or other vital armament production had been delayed to date by an aluminum shortage and that manufacturers had enough of the metal on hand or guaranteed to "fill virtually all defense orders now in process."

Fuller's statement added, however, that there was no assurance that a shortage "might not develop in the future as the defense program expands," and said that practically no aluminum was being obtained by non-defense industries.

Sites Of New Plants Discussed

Gazette 7-16-41

Governor Adkins and state defense officials could offer no definite information yesterday on the location of the 100,000,000-pound aluminum plant which the Office of Production Management announced Monday would be operated in Arkansas by the Aluminum Company of America.

However, there was considerable discussion of "logical sites" for the aluminum plant and the 400,000,000 pound alumina plant, plans for establishment of which was announced by OPM yesterday.

If the alumina plant is placed in the state, it probably will be located at Bauxite or Benton near the bauxite deposits, it was said. The aluminum plant probably will be located on the Ouachita river below Calion at the head of navigation, the same sources said.

It is easier to transport electricity used in the manufacture of alumina than the crude ore and therefore a site near the source of the ore is desirable, it was said.

It is a short rail haul from Bauxite or Benton to the Ouachita river where the processed aluminum could be shipped cheaply by water.

Alumina is a fine white powder made by treating crushed bauxite with purifying chemicals. It is placed in a cryolite bath and, with enormous amounts of electrical energy, electrolyzed into metallic aluminum.

These speculations were based on the assumption that the alumina plant will be located in Arkansas. Location of the plants probably will not be announced until the actual sites have been selected and appraised by the OPM. Announcement of the organization which will supply power for the aluminum plant is expected daily.

Executives Awaiting Information on Plant.

Lawrence Litchfield, New York city, vice president of the Republic

Mining and Manufacturing Company, and L. R. Branting, manager of the company's Bauxite plant, said last night they had no information in regard to establishment of an aluminum plant in Arkansas. "All we know is what we read in the newspapers," they said.

Mr. Litchfield said his visit was routine, but he hoped to receive information regarding the plant before he returns to New York.

They said they hoped the plant, authorized for Arkansas by the Office of Production Management, would be constructed for the utilization of both high and low grade ores. The Republic company has been carrying out experiments with low grade ores. If low grade ores could be used, they said, Arkansas's bauxite reserves would be greatly increased.

Aluminum Shortage Statement Defended.

Gazette 7-16-41

New York, July 15 (AP).—Walter D. Fuller, president of the National Association of Manufacturers, said tonight his statement that "there is no real shortage of aluminum for defense purposes" had been given a distorted interpretation by officials of the Office of Civilian Defense.

Asserting that the association had given full co-operation to the aluminum collection drive to begin July 21, Fuller declared in a letter to Mayor F. H. La Guardia, civilian defense director, that he regarded "careless comment" by O. C. D. officials as "certainly an obstacle to the kind of unity we want for national defense."

His letter categorically denied any relaxation of the N. A. M.'s collaboration efforts, and emphasized that the survey on which he based his statement yesterday referred only to defense supplies, not to "non-defense" supplies or civilian supplies.

Fuller said he was astonished to learn from Washington news reports that civilian defense officials had evidenced irritation at his statement. Fuller added that his statement plainly said "there is no assurance that such a shortage might not develop in the future as the defense program expands, however, and the mere finding there is no current shortage should not be interpreted as an effort to discourage collection of aluminum household utensils. . . ."

Bauxite Tests On Negro Park Site Proposed

Democrat 7-16-41

Commercial Deposits May Be Located, State Geologist Says.

The rugged 480-acre tract atop rock-bound Granite Mountain southeast of Little Rock, on which city officials apparently have decided Gillingham Park for negroes cannot be built, may develop into a bonanza for the city.

A portion of the acreage—a total of about 80 acres—may contain bauxite deposits large enough to justify commercial mining on the property, a survey revealed yesterday.

Whether the city would attempt to determine if bauxite—the ore from which aluminum is made—is present on the city-owned property could not be learned. All Mayor Moyer would say was: "We have no immediate plans for investigating the possibilities."

That part of the park site which may be "potential bauxite property" is located in the northern end of Echo Valley. The remainder is located on the mountain and previous tests have proved definitely that bauxite is not found in that type of geological formation.

Several Mines Nearby.

Several bauxite mines are operating in the immediate vicinity of the park site and outcroppings of the ore have been found in the area, one deposit being located only an eighth of a mile from the 80-acre plot of the park.

George C. Branner, state geologist, said 80 acres "may be reasonably considered to be potential bauxite property."

"I believe it should be profitable to do some drilling to see if bauxite exists on the land, and if so, what quality and tonnage exists. A small outcrop of bauxite is known to exist an eighth of a mile southeast of the property," he added.

Mayor Moyer, who has opposed the continued development of the negro park on the grounds the site is too inaccessible and the work would be too expensive, said the City Council would have the question of the park up for discussion Monday night.

"Several members of the council have been aware of the possibilities that bauxite may exist there for some time. No propositions have been filed, however, for the leasing or purchase of the land," he declared.

Tests Would Cost \$200.

Dr. Branner said the 80 acres could be tested to determine if bauxite deposits are present for about \$200. This would cover the cost of drilling test holes and analyses if any deposits were located, he declared.

Mayor Moyer said as far as he knew no plans were under discussion to have the tests made.

The park site was acquired by the city in December, 1934, for \$11,000. After two payments of \$1,500 each had been made on the property, the City Council voted to issue \$15,000 in bonds to pay the balance, with the remaining \$6,000 to be used in developing the area.

After payment of expenses only \$3,000 remained in the fund.

Last summer a WPA project for \$49,000 was approved for the development of the park. Of the amount, \$34,000 was to be provided by the WPA and the remainder to be furnished by the city, mostly in the form of equipment.

After the mayor expressed opposition to the continuation of the project, the Parks Committee of the City Council recommended the temporary stopping of work on the park until it can be determined whether the site can be transferred to a more suitable location.

Later, WPA officials informed the committee that funds remaining in the \$49,000 WPA allotment could not be transferred to another park project if the council decided to abandon the present site. A new application would have to be filed and approved before work could begin on a new federal aid project, the committee was informed.

To Confer With WPA.

Mrs. Charles J. Craig, chairman of the Parks Committee, is scheduled to have a conference this week with Floyd Sharp, WPA administrator, on the park tangle.

What disposition would be made of the 480-acre tract in the event the park project is abandoned could not be learned.

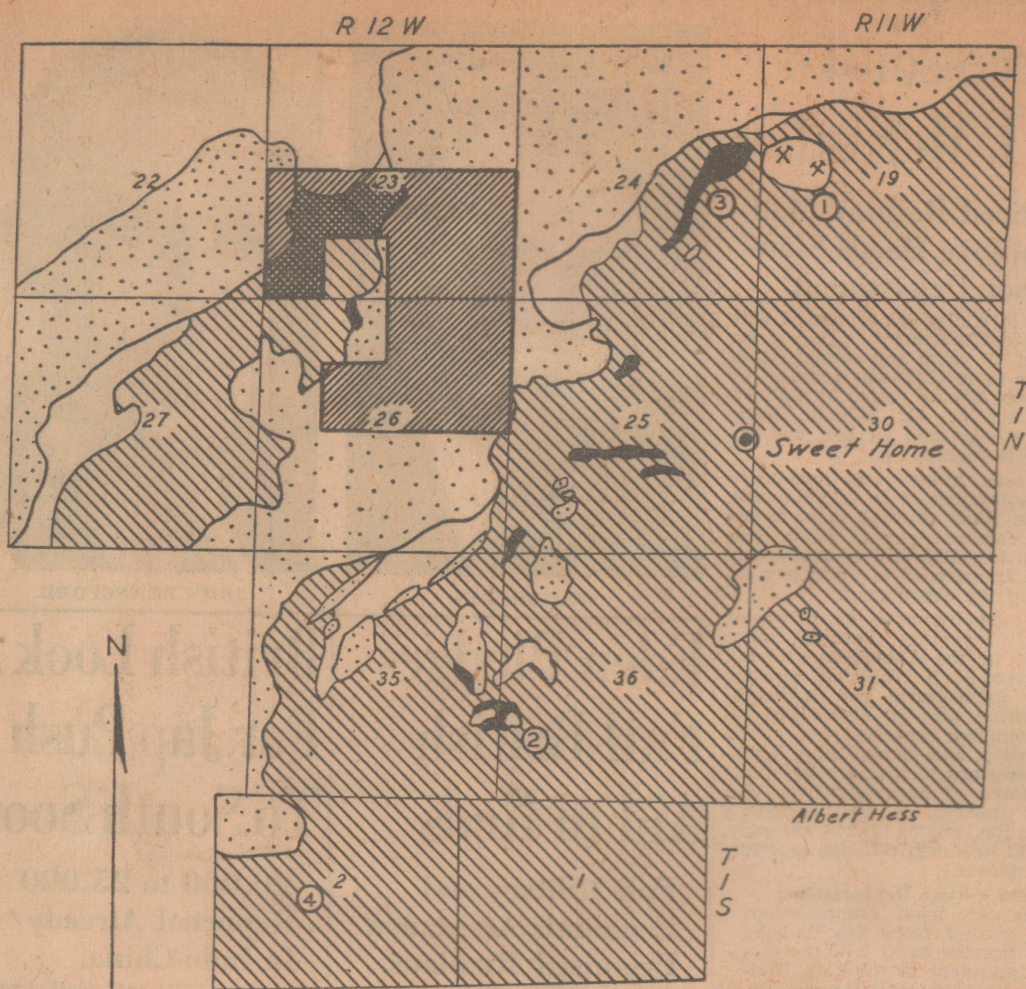
Henry H. Tucker, official of a Little Rock hardware firm, has written the mayor urging that the city investigate the possibilities of the presence of bauxite on the land before taking action to dispose of the property.

If bauxite in commercial quantities is located on the property, the city could realize additional revenue from the sale of royalty rights, he declared. The mayor said, without commenting, that he had received Mr. Tucker's letter.

Mr. Tucker pointed out that mining operations were underway in the vicinity of the property. He added that he was not taking part in the controversy over the suitability of the site for a negro park.

Mayor Moyer declared that the possible presence of bauxite on the land would have nothing to do with the decision on the proposal to abandon the project.

Negro Park Site May Contain Bauxite



- NEGRO PARK
- AREA APPROPRIATE FOR INVESTIGATION
- WILCOX FORMATION
- NEPHELITE SYENITE
- BAUXITE OUTCROP
- ⑤ BAUXITE MINES

The possibility that bauxite in commercial quantities may exist on a part of the land on which Gilliam Park for negroes is being developed is clearly shown on the above map. As shown in the legend, four deposits in the immediate vicinity of the park are being mined at the present time. Other bauxite outcroppings, one of which is located just one-eighth of a mile from the city-owned land, have been discovered in the area. Mine No. 1 is owned by the Dixie Bauxite Co. and Mine No. 3 by the Republic Mining and Manufacturing Co., and both are located a little more than a mile from the park. Mine No. 2, located one mile south of the park, is operated by the Dixie Bauxite Co. and Mine No. 4, located two miles south, is operated by the Doolin Mining Co. The outcroppings occur frequently in the immediate area, as the map clearly shows. The outcropping nearest the park, shown in the upper left, is owned by the Republic Mining and Manufacturing Co. Mining operations, however, have never been conducted there.

As the map shows, only about 80 acres of the 480-acre site—that part part marked with small dots—has been held suitable for investigation for possible bauxite mining. The other portion is of a hard-rock geological formation.

The map was prepared for the Democrat by Albert Hess, draftsman for the state geologist's office.

though the lack of aluminum has caused no substantial curtailment of defense operations, it does present a problem in getting sufficient fabricated parts needed for production of defense goods.

Citing figures to show the aluminum supply-demand situation, the OPM said, "these figures clearly show that not only will there be no new aluminum available for civilian use, but there is and will be an urgent problem involved in supplying enough fabricated aluminum parts at the places they are needed when they are needed for defense production alone."

The statement, which was issued over the signature of the director general, William S. Knudsen, and associate Sidney Hillman, was a reply to certain statements made recently relative to the availability of aluminum for defense needs. These statements, the OPM said, have been to the effect that there is no shortage of aluminum for defense requirements.

Direct military demands for aluminum from July 1 through December 31 are estimated by OPM at 344 million pounds. This does not take into account indirect military requirements, which will probably take an additional 50 million to 60 million pounds, making a probable total requirement of about 400 million pounds.

Production of virgin aluminum ingots, according to estimates furnished OPM by the producers, will amount to 327 million pounds during the same period. Ingots estimated to be produced from secondary metal may bring the total available for all purposes to 400 million pounds, though the secondary metal cannot be used widely for direct military requirements.

"Any statement which, directly or by implication, gives the impression that the supply of aluminum for military requirements does not present a critical problem, is not in accord with the facts and can only result in harm to the defense program," the statement said.

Although the OPM said that it is natural in a period of rapidly expanding production to have temporary shortages occur from time to time, it "is glad to be able to state that it has received no reports of any substantial curtailment of defense operations caused by a lack of aluminum."

A severe shortage of scrap aluminum for remelting exists at this moment, OPM said. It called attention to its current program to collect old aluminum articles to make every pound of the metal available for defense.

Replying to what he termed a "distorted" interpretation of a statement issued by the National Association of Manufacturers, Walter D. Fuller, Association president, described the "careless" comment of officials of the Office of Civilian Defense as "certainly an obstacle to the kind of unity we want for national defense."

Mr. Fuller, in a letter to Mayor LaGuardia, Director of Civilian Defense, categorically denied any relaxation in NAM's efforts to assist in the aluminum collection campaign sponsored by OCD and emphasized that the NAM survey of July 14 referred to the "defense" aluminum supply situation, not the "non-defense" or civilian supplies of the metal.

No New Aluminum For Civilian Use.

Gazette 7-17-41

Washington, July 16 (AP).—The Office of Production Management said today that "there is and will be an urgent problem involved in supplying enough fabricated aluminum parts at the places they are needed when they are needed for defense production."

There will be no new aluminum available for civilian use, William S. Knudsen, OPM director, and Sidney Hillman, associate director, asserted in a joint statement.

Direct and indirect requirements from July 1 through December 31 will amount to approximately 400,000,000 pounds, they said, and production of virgin aluminum during that period will total 327,000,000 pounds.

Production from secondary metal, they added, "may bring the total available to 400,000,000 pounds though the secondary metal cannot be used widely for direct military requirements."

So far, he statement said, the OPM "has received no reports of any substantial curtailment of defense operations caused by lack of aluminum."

Five Firms to Run U.S. Aluminum Plants Named by OPM

Alcoa, Reynolds, Bohn, Union Carbide and Olin Corp. Proposed to War Department

Wall St. Journal 7-16-41

WASHINGTON—Five companies have been selected by the Office of Production Management to run the new government-owned aluminum plants planned for the defense emergency.

These companies, recommended by OPM to the War Department, are: Aluminum Co. of America, Reynolds Metals Co., Bohn Aluminum & Brass Co., Union Carbide & Carbon Co. and Olin Corp.

Alcoa is picked to handle most of the aluminum production in three plants with a combined capacity of 340 million pounds annually. The whole program will add 600 million pounds to the present capacity of the United States, which is 800 million pounds. Besides the three aluminum plants, the Aluminum Co. is picked to operate an additional plant to produce 400 million pounds of alumina. Production of alumina from bauxite is a step preliminary to the processing of aluminum.

In announcing the details of the program, the OPM also disclosed several changes in the original plan for plant locations. Eight new plants were recommended originally. The two units designed for upper New York State have

been combined because it was found possible to make certain connections of power systems. The single plant will be at Massena. Also, because Grand Coulee-Bonneville authorities found it possible to make more power available for the aluminum program, the plant originally destined for location in North Carolina is being shifted to Tacoma, Wash.

Alcoa has agreed to design and supervise the construction, on a non-profit basis, of the plants earmarked for operation by Union Carbide and Olin Corp. This, OPM said, will eliminate the necessity of those two companies having to engage in preliminary investigations of plant design. Aluminum Co. has also agreed to co-operate in the training of technical staffs for the operation of the new plants.

Reynolds Metals Co. and Bohn Aluminum will design and construct the plants they will operate for the government.

The alumina producing plant will be government-owned, but will be constructed and operated during the emergency by Alcoa. This will be the first alumina plant ever designed for the combined treatment of both high grade and low grade bauxite ores.

As finally decided upon, the program shapes up as follows:

Plant operator	Capacity	Location
	(Millions of pounds)	
Aluminum Co.	100	Arkansas
Aluminum Co.	90	Bonneville-Grand Coulee area
Aluminum Co.	150	Massena, N. Y.
Reynolds Metals	100	Listerhill, Ala.
Bohn Aluminum	70	Los Angeles, Calif.
Union Carbide	60	Spokane, Wash.
Olin Corp.	30	Tacoma, Wash.

Wall St. Journal 7-16-41 Discounting of Aluminum Shortage by NAM Jars OCD

WASHINGTON (AP).—The Office of Civilian Defense reported that President Walter D. Fuller of the National Association of Manufacturers, who declared Monday that there was no real shortage of aluminum for defense purposes, one week ago pledged the cooperation of NAM in plans for alleviating "the aluminum shortage."

Officials of the OCD were plainly irritated at the new NAM release. They made no comment, however, except to make public a letter from Fuller to F. H. LaGuardia, director of the OCD.

That letter, dated July 7, spoke of "the aluminum shortage" and declared that NAM's national defense committee had "given thought to the desirability of cooperating with local plans devised to alleviate this situation." The letter promised to enlist the support of the state and local associations affiliated with NAM in the salvage drive.

Aluminum Supplies Analyzed by OPM

Present Problem in Producing Enough Fabricated Parts Needed in Defense—Fuller Answers OCD
Wall St. Journal 7-17-41

WASHINGTON—In a formal statement, the Office of Production Management said that al-

Mr. Adkins said the OPM's recommendation for establishment of the aluminum plant would mean "the expenditure of about \$15,000,000 or \$20,000,000 for power plants."

"Arkansas is in the spotlight of the nation because of our natural resources," he continued. "My next move will be to try to secure some chemical plants and to promote our manganese, lead, zinc, cinnabar and other strategic metals."

Adkins Says Resources Were Determining Factor.

Arkansas's "sour gas" reserves and bauxite deposits, largest in the country, are reasons for the government's decision to locate a 100,000,000 pound aluminum plant in the state, Governor Adkins said upon returning from Washington last night.

He said sour gas was the primary factor in the choice. All capital authorities influential in determining locations were in possession of information concerning the potential power-producing reserves, Governor Adkins said. He particularly mentioned data prepared by E. V. Foran, engineering firm executive of Houston, Tex., who with other experts preceded the governor to Washington.

Relying on sour gas reports, Arkansas spokesmen convinced defense officials that the state has resources for adequate power.

The Office of Production Management had given assurance that the aluminum plant would be awarded to Arkansas Friday night, after the governor would be en route home. At St. Louis yesterday, Mr. Adkins received a message of confirmation from J. A. Krug, OPM power expert.

Power Plant May Be Built on Ouachita.

A power plant for the huge industry may be built on the Ouachita river or near the aluminum plant, the governor said. The selection of sites has not been officially reported. The Rural Electrification Administration has offered to furnish power. It has designated the Ark-La Co-operative, Inc., to furnish 180,000 kilowatts for defense purposes in Arkansas.

The governor, who arrived at the Missouri Pacific Lines station, said he knew of no real developments other than those he had mentioned in earlier messages, and those previously published from Washington and other sources. His "national defense" trip lasted a week.

An Aluminum Plant For Arkansas

The people of Arkansas have always felt that their state was the natural and logical place for the production of aluminum metal, since Arkansas accounts for some 95 per cent of all the bauxite mined in the United States and has, in addition to developed hydro-electric power, the fuel for cheap production of power essential for an aluminum plant.

The plan of the Office of Production Management, which now goes before the War Department and the Defense Plant Corporation for final approval, provides for building in Arkansas a plant with an annual capacity of 100,000,000 pounds of aluminum. Its construction would mean the spending in the state of many millions of dollars for labor and materials, and after it was placed in operation its contribution to employment would not be confined to its own employees, since quantities of limestone and other materials are used in the processing of aluminum from the ore to the refined metal.

Arkansas owes this projected plant to the defense emergency. But looking beyond that emergency it seems not unreasonable to hope that at some time in the future the fabrication of aluminum articles, airplane and engine parts and other finished products might be added to the production of ingot aluminum. The first stages of general industrial development are ordinarily the hardest and slowest, and the production of a basic material might lead to the establishing of related industries.

It was necessary to impress on the minds of the Washington authorities Arkansas's unique combination of bauxite and power resources. In these last months that has been the special object of sustained and energetic effort by Governor Adkins, earnestly assisted by all the members of Arkansas's delegation in Congress.

Adkins Elated Over Defense Plant Outlook

Democrat 6-29-41
With location of a huge aluminum plant in Arkansas assured, selection of the state as site for one or more chemical plants and promotion of the state's lead, zinc, cinnabar and other strategic mineral resources is next on Governor Adkins' program for industrialization of Arkansas.

Returning here last night at 9:55, the governor declared the state's huge reserve of "sour gas" was the "deciding factor" in the decision to locate the aluminum plant in the state.

"I showed reports on 'sour gas' to almost everyone in Washington. They were very much impressed," Mr. Adkins said. Elated over announcement of the aluminum plant, the chief executive, en route home from Washington where he "closed the deal," disclosed, in a telegram to the Democrat, the next steps in his industrialization plan and declared "Arkansas is in the spotlight of the nation because of our natural resources."

"Needless to say," the governor said, "I am gratified over the announcement that a large aluminum plant would be located in Arkansas. Before I left Washington last night, assurance was given me of this action. I am grateful to our entire congressional delegation for their co-operation. They worked in complete unison and harmony."

There was no further word, meanwhile, of the exact site of the 100,000,000 pound annual capacity plant, but it was generally conceded that it would be placed either near Calion or Camden, on the Ouachita River.

Belief also was expressed that the plant might be located in or near Little Rock, possibly at Benton or Bauxite, because of the nearness to the supply of bauxite.

While the announcement did not say so specifically, it also was believed that the proposed plant would be one to reduce bauxite ore to alumina, or aluminum oxide, and then to metallic aluminum.

The chemical operation in which aluminum oxide is extracted, requires large quantities of water and the further reduction of metal by electrolysis requires approximately 14 kilowatt hours of electricity for each pound of aluminum. The Camden or Calion areas in the Ouachita River in Southwest Arkansas would be accessible both to water and the state's vast gas fields where cheap power is possible.

In Washington, Congressman Clyde T. Ellis said he was informed that the Office of Production Management plans to move as fast as possible in construction of the plant. By "fast," he added, OPM officials meant that they desire to have the project under way, at least on paper, within a period of a few days.

The plant apparently will be financed by the Defense Plant Corporation, a unit of the Reconstruction Finance Corporation. Its location will be finally decided by OPM and War Department engineers.

It is expected to be in actual operation by April 1, 1942. The initial power supply of 120,000 kilowatts has been guaranteed from reserves of private and publicly owned sources through an emergency hookup.

Ultimately, steam power plants, using cheap natural gas, and with capacity of 120,000 kilowatts, will be constructed. Whether one of those plants will include the steam generating plant for which the Arkansas Power and Light Company recently obtained a permit was not known. The company has two 60,000 kilowatt generators on order, both of which may be placed in the new plant.

Plans announced by OPM call for an aluminum plant of 100,000,000 pounds annual capacity with an additional 100,000,000 pounds capacity to be added later. Plants with a capacity of 120,000 kilowatt operated at 100 per cent capacity, an almost impossible situation, would be required for production of that much aluminum, so some power outside the two plants mentioned, apparently is necessary.

The power supply outlined for the initial plant will include sources as far away as Kansas and Nebraska. The Brazos and Grand River hydro plants and the Gilmer and Arsenal Hill diesel plants as well as private sources in Texas, Oklahoma and Arkansas, will contribute.

The initial power supply, it was estimated, can be obtained in from six to nine months. The two gas generating plants, to cost approximately \$20,000,000, could be ready in about 18 months, by which time the Arkansas plant could be increased to the full projected capacity of 200,000,000 pounds of aluminum annually.

Cost of the aluminum plant has never been estimated officially, but Alabama sources have spoken of \$75,000,000 as a possible figure for a plant of that size.

OPM to Make Aluminum Plant Survey

Democrat 7-1-41
By B. N. TIMMONS.
(Democrat Washington Bureau.)
Washington—Federal experts on aluminum production are to leave soon for Arkansas to determine the exact location for the new aluminum plant to be located in the state, it was learned today.

The government has been moving fast to get it under way and, according to Rep. Clyde T. Ellis, may build it and get it into operation ahead of the anticipated completion date of April 1, 1942.

It was reported that Arthur H. Bunker, one of the experts working to develop aluminum production for the Office of Production Management was to leave here today for Arkansas to make surveys. His office said he is unable to go now, but that he or one of the other experts will go as soon as possible. While it has been decided to locate the plant somewhere in the general section of southern Arkansas, probably in the vicinity of Camden, an exact location has not yet been selected. The decision will be made, however, while the essential paper work for the plant is being done. Both are necessary and the work here is going ahead steadily and rapidly.

Ellis and Rep. Oren Harris were at the War Department late yesterday and said the department's approval of OPM plans for the plant was being drafted at the time and would probably be submitted some time today.

Arrangements for the aluminum plant are in the hands of OPM, but War Department approval is necessary. For the most part, that approval is expected to be a formality and quick in coming.

As soon as the department approves the general plan for the plant, OPM will submit full details, and when those are approved, it will go ahead with the plant itself.

In general, three things have to be done to get construction started, and they will all be done at the same time. The exact site was to be selected, the plans have to be drawn and a contract awarded. All will be done in co-operation with the aluminum company which will get the contract for construction and operation of the plant.

Two Concerns Considered.
Right now it appears likely that either the Bohn Aluminum and Brass Co. or Reynolds Metals Co. will get the Arkansas job, with the Bohn Co. having the better chance of the two. Construction will be done under a cost-plus, fixed-fee contract and the plant will be operated by the same company either on a fee basis or lease basis.

It may be that the aluminum plant will be completed and ready for operation before the new power facilities that are planned can be constructed. If so, according to Ellis, the government will make arrangements to get additional supplies of reserve power to fill in the gap.

Democrat 7-6-41 Benton Hoping To Get Aluminum Plant

Benton—Interest has been aroused by announcement of the allocation of an aluminum plant to Arkansas by national defense officials. There has been considerable speculation about the site for such a plant. Every possible inducement toward locating the plant in Saline County has been studied by those interested in bringing the industry to the county.

Congressman W. F. Norrell, who is assisting the Chamber of Commerce, telegraphed Mayor Henry Finkbeiner and city officials of Benton, the American Legion and other interested citizens, Thursday morning from Washington as follows:

"H. W. Anderson, president, Benton Chamber of Commerce. Bauxite project for Arkansas will consist of alumina and aluminum divisions. Government may combine or separate same. Understand engineers are to inspect sites in Arkansas shortly. Much depends upon result of this investigation.

"We have furnished all available data. Am intensely interested in result of inspection by engineers. Know citizens in that section will do all possible. W. F. Norrell, M. C."

Mr. Anderson points out that the aluminum plant will be located by government engineers.

ARKANSAS BAUXITE TO TAKE RIGHTFUL POSITION AT LAST

Gazette 7-6-41

With the establishment of a 100,000,000-pound aluminum reduction plant in Arkansas, as announced by the Office of Production Management recently, for the first time in the state's history one of its richest natural resources—bauxite—may travel the complicated and expensive road from mine to metal entirely within the state.

Aluminum is the most abundant metal in the earth's crust but its availability to man is limited by the strong chemical affinity the metal has for oxygen and silica. If gold, a rare metal, had the power of chemical attraction equal to that of aluminum, it would be unknown except as a scientific curiosity in laboratories. On the other hand, if aluminum were found in its native state, as is gold, the metal would be used universally for building houses and roads, pavements and bridges, cans and telephone wires, simply because the metal would be so cheap nothing else could be used economically.

Chemically, bauxite is a compound of aluminum oxide and water, but as mined always contains impurities such as clay, iron oxide, titanium oxide and minor quantities of other substances. It occurs in a wide variety of colors and textures. It may be almost white, or buff, pink, yellow, or red, with every possible combination of these colors. It may be a hard rock or soft and earthy. The variation in color is chiefly due to relative amounts of iron oxide.

Valuable Ore Used For Many Other Purposes.

Bauxite derives its name from the old fortress and castle of Les Baux in Provence, France, near which it was first discovered and identified by P. Berthier in 1821. Until now, France has led the world in the production of bauxite.

Bauxite is best known as the ore of aluminum but it is also the basic material in other important industries. In fact, in recent years, 45 per cent of all the bauxite produced in the United States has been used for non-aluminum purposes.

In 1886, the late Charles Martin Hall, then only 22, invented the process for the production of aluminum which bears his name and on which the aluminum industry in America is founded. High grade ores containing a minimum of clay-like impurities are mined, crushed, washed and dried. The dried bauxite is refined by a chemical process into pure aluminum oxide, called alumina. Alumina is placed in a cryolite bath and electrolyzed into aluminum with enormous amounts of electrical energy.

Substantial quantities of other raw materials are required in the production of aluminum. Used in the production of one ton of aluminum are nine tons of raw materials including bauxite, coal, soda ash, limestone, fluorspar, cryolite, petroleum coke, pitch and other materials, 22,000 cubic feet of natural gas and 24,000 kilowatt hours of electric power.

Another important use for bauxite is in the manufacture of abrasives—almost as important to the defense program as aluminum. Formerly abrasive appliances were made of natural emery, an impure crystalline oxide of aluminum found in limited quantities. Artificial emery is made by fusing bauxite in electrical furnaces.

The third important use for bauxite is in the manufacture of chemicals, such as aluminum sulphate and the alums. Most water purification plants require large quantities of aluminum sulphate and the paper industry consumes substantial amounts of the chemical.

Other Countries Produce Substantial Quantities.

Bauxite deposits are widely distributed in many parts of the world. The mineral has been found in commercial quantities in Africa, Asia, Australia, Europe and North and South America. In the United States, bauxite was first found near Rome, Ga., in 1883. A few years later the ore was found in Alabama and, in 1891, the Arkansas deposits were discovered by the late Dr. John C. Branner, then state geologist. Bauxite also has been found in commercial quantities in Tennessee, Mississippi, Pennsyl-

vania and Virginia.

Arkansas produces 90 per cent of the bauxite mined in this country but only a small portion of all mined in the world. A popular misconception is that Arkansas produces a majority of the world's supply. In fact, the Arkansas deposits cannot be compared in size or extent with the enormous deposits found in other parts of the world.

France has led all nations in the production of the ore. Hungary, Italy and Yugoslavia have supplemented France in satisfying the European demand. Important deposits have been found in Russia, Spain, Greece and Rumania. Enormous tonnages have been located in India and several mines have been developed. In the Far East, bauxite has been found and is being mined in the Dutch East Indies for shipment of Japan. Reserves running into millions of tons have been found in Australia. The largest known untapped reserves have been located in Mozambique, Nigeria, French Guinea, the Gold Coast, Togoland and Nyasaland.

In South America, extensive deposits have been worked in British and Dutch Guiana. Some of these deposits are accessible to ocean-going steamers, and for many years they have supplemented the domestic supply. Without the importation of the Guiana ores, which are of higher grade than the average in Arkansas, the domestic reserves would be overtaxed. Great untouched reserves also are known in Brazil.

Geological Development Traced From Paleozoic Era.

The story of the geology and origin of the Arkansas bauxites can only be speculative. Millions of years ago, this part of the state probably consisted of a gently rolling plain of sandstone, limestones and shales of the Paleozoic era. Here and there, as in the Bauxite and Little Rock regions, these deposits had been joined by large masses of a granite-like rock called nepheline syenite. Atmospheric weathering agencies gradually decomposed the surfaces of the syenite masses, dissolving out the more soluble constituents such as lime and soda, leaving behind the alumina as relatively insoluble residue. Here and there, this residue was permitted by the slopes and hollows of the syenite to build up into substantial deposits which are the bauxite deposits as we know them today.

The Arkansas bauxite occurs as roughly horizontal beds of irregular shape, varying in thickness from a few feet to more than 20 feet. While usually relatively flat, some deposits have a pronounced dip. Where the deposits occur close to the surface, the bulk of the overburden covering the ore is removed by excavating machinery. The final stripping and cleaning of the bauxite surface is done by hand. The bauxite so stripped is mined in open pit operations.

Deeper deposits are mined through underground shafts similar to those used in coal mining. At the mine faces, the ore is blasted and then loaded into mine cars by hand.

The future of bauxite industry in Arkansas is brightened by possibility of utilizing lower grade ores.

If Bauxite's There, Little Rock Should Protect Itself.

In considering any steps that may be found desirable to obtain a more suitable location for a park for its Negro residents, the city should first of all find out whether commercial bauxite deposits exist on the Granite mountain property already purchased as a site for such a park.

Within comparatively short distances of this 480-acre tract, Henry H. Tucker, former Chamber of Commerce president, has pointed out in a letter to Mayor Moyer and the City Council, active bauxite mining operations are being carried on, and the American Bauxite Company owns two parcels of land of considerable size immediately adjoining the city-owned tract.

While the bulk of the park acreage comprises a hard rock formation practically excluding the presence of bauxite, State Geologist George C.

Branner says that 80 acres located in the northern end of Echo Valley offer so reasonable prospects that in his opinion it should be profitable to do some test drilling to determine whether bauxite underlies the surface in paying quality and tonnage. The cost of the necessary tests is put at about \$200. That would be a negligible outlay under the circumstances. As Mr. Tucker said in his letter, it would be particularly unfortunate, in case it is decided that the Negro park must be located elsewhere, to dispose of potentially valuable property that might in itself possess sufficient value in mining royalties to give Little Rock a fine and well maintained park system.

Gillam Park Bauxite Lease Offer Studied

Democrat 7-8-41

The City Council Parks Committee planned to meet late today for further consideration of questions which have arisen in connection with the Gillam Park site for negroes southeast of Little Rock on Granite Mountain.

The committee was to disclose whether a WPA project for development of the 480-acre site should be continued and whether bauxite mining operations should be allowed on part of the site.

A letter from the Smith Mining Company, Russellville, offering the city \$1 a ton royalty on any ore which might be removed from the site under a proposed lease agreement was referred to the committee. George C. Branner, state geologist, has said he believes there may be bauxite in commercial quantities on part of the site.

The committee previously had suggested transfer of the WPA project to another site because of comparative inaccessibility and other alleged difficulties, but WPA officials said this could not be done. The committee delayed further action until return to the city of WPA Administrator Floyd Sharp, who was invited to attend today's meeting.

Marble Machine Tax Reduced. The council last night repealed an ordinance passed June 23 greatly increasing tax on marble machine operators through a levy on each machine and substituted a new ordinance increasing the privilege tax from \$100 to \$250 yearly. Coin-operated phonographs, covered in the repealed ordinance, were not mentioned in the new measure.

The council granted 13 petitions for changes in the zoning ordinance to authorize remodeling of houses in multiple apartments or construction of such apartments. The council disregarded a letter from the Planning Commission asking that action be deferred because the weekly meeting of the commission wasn't held yesterday. The letter said E. F. Nelson of the Board of Adjustment on whom the commission had depended for investigation of petitions was on his vacation.

The council also received J. W. Horner as the new alderman from 4th Ward. He will succeed Tom Gulley, resigned, and will serve until next April. Judge Harb administered the oath of office.

The council also: Elected Paul Spikes, Jeff D. Lunsford and J. Paul Summers as assessors of Street Improvement District No. 561 after receiving and approving a report of commissioners of the district.

Negro Business Closed. Authorized payment of \$66.50 to remedy a deficit in the Arch Street overpass right-of-way fund.

Ordered closed as a nuisance an establishment for negroes at 1405 W. 10th. The place was scene of the city's 14th negro killing of the year.

Referred to the Utilities Committee petition of W. J. Davis for authority to operate a taxicab service with headquarters at 10th and Cross. Referred to the Street Committee protest of Rock Island Lines against a proposed ordinance to grant the Missouri Pacific railroad right-of-way for a spur track in East Little Rock.

Authorized a lease to the National Youth Administration for approximately six acres in Fair Park for establishment of additional defense training schools.

Passed an ordinance levying a tax of \$15 a year on operators of merchant police bureaus and \$1 a year on each merchant policeman.

Granted the Arkansas Louisiana Gas Company an easement for construction of a pipeline across Boyle Park.

Passed ordinances authorizing compulsory examinations for venereal diseases under certain circumstances.

Passed ordinances for improvement districts to pave W. 11th from Lewis to Washington and to pave Pierce from Y to V.

Transacted other routine business before adjourning until July 21.

May Double Aluminum Plant's Size

Gazette 7-11-41

H. K. Thatcher, Washington director of the state Agricultural and Industrial Commission, flew in from Washington last night with the announcement that national defense officials may double the capacity of a proposed aluminum plant scheduled for construction in Arkansas. Mr. Thatcher came here

for a conference with Governor Adkins. He said that the increased capacity and necessary power plants would result in expenditure of about \$190,000,000.

The Office of Production Management chose Arkansas last week as the site of a 100,000,000-pound aluminum plant which, it was estimated, would cost \$75,000,000. Two 90,000-kilowatt generating plants required by an industry of that size would cost about \$20,000,000, Governor Adkins said.

"I believe we'll get the larger plant," Mr. Thatcher said. "But, of course, it has not been officially determined."

Site Not Selected.

Mr. Thatcher said no site has been selected, but pointed out that "Fuel and water in large quantities will be required." He said the location may depend on the choice of an agency to construct the power plants.

He added that, if capacity is doubled, it may be necessary to tap the natural gas fields and to utilize coal mined in western Arkansas in addition to the "sour gas" of southern Arkansas.

"We have spotted a half-dozen likely places for steam plants that could be successfully built near the coal mines west of Russellville," he said.

New Aluminum Plant to Be Largest Unit Democrat 7-11-41 Jacksonville Project Ranks Second In Total Expenditures.

More than \$200,000,000 has been spent, pledged or recommended for spending in Arkansas under the national defense program, government sources said today.

Most of the spending is, as yet, on paper. The biggest single defense industry—a 100,000,000-pound aluminum plant with power plant auxiliaries—has only been recommended for construction by the OPM.

But James J. Harrison, state director of the Office of Government Reports, is convinced that the state not only will see the full program carried out but that many millions more will be spent in this state before the national emergency is ended.

\$30,000,000 Already Spent.

The OGR breakdown of the \$200,000,000 figure shows about \$30,000,000 has either been spent or put under contract during the year ending June 15; \$56,000,000 has been authorized for expenditure in the immediate future and steps taken on the projects involved; and the remaining sum has been recommended by government agencies.

There is some discrepancy in the figures and classifications, particularly in regard to the work being done under direction of the U. S. Engineers.

Harrison said that the OGR lists as defense projects the dams being built at Blue Mountain, Norfolk and Nimrod. The engineers list these as flood control projects. Harrison's figures on the amount of money involved in their construction is several million dollars under the contract figures released by the engineers. But, whether for defense or flood control, the dams are in the process of construction and the money is being spent in the state. Funds are being released into trade channels in large amounts by the engineers, no matter under what name.

Camp Costs \$11,000,000. The OGR lists as spent and contracted to be spent during the past year \$11,000,000 for Camp Robinson, \$14,107,530 for other War Department purposes, \$2,342,364 by the WPA, \$601,755 by the Federal Office of Education for defense training, \$863,373 by the NYA for defense training, \$151,845 in RFC loans.

It listed as authorized expenditures, \$33,000,000 for the Jacksonville detonator and fuse plant, \$8,000,000 for the Marche picric acid plant, and \$15,000,000 for the Hope munitions proving ground.

Listed as recommended but not yet authorized were \$25,000,000 for the permanent camp at Barling, near Ft. Smith, and \$100,000,000 for the as yet unlocated aluminum plant and auxiliary power plants.

Breaking down these figures further, the Camp Robinson field auditor's office reports that of the \$11,010,304 earmarked for construction there, actually \$10,916,997 has been spent. The camp also received a supplemental appropriation of \$1,525,000, of which approximately \$1,100,000 has been obligated on a lump-sum contract basis. These figures boost the total Camp Robinson authorized spending to \$12,535,304—some \$1,500,000 in excess of the flat figure used by the OGR.

The OGR said the other \$14,107,530 tabbed under War Department spending for defense represented

mostly construction of the three dams.

Dams for Power.

"We were puzzled a bit about why these dams were classed as defense projects," Harrison said, "but it now appears that this is because of their possible ultimate use as power projects. Power is the magic word in the defense program and except that it would produce needed power, Norfolk might not have been started this year."

But the OGR figures on the cost of the dams are far below the actual figures released by the U. S. Engineers. Whereas OGR lists Norfolk as a \$12,558,566 project, the engineers report \$16,500,000 has been spent or obligated on this project which is now only five per cent completed.

The engineers reported that \$3,800,000 has been spent or obligated on Nimrod Dam, which is 80 per cent completed, and \$2,628,000 spent or obligated on Blue Mountain Dam, where the tunnel is 49 per cent complete and little work has been done on the dam itself.

The engineers also reported they spent \$80,400 in connection with the leasing and rental of lands for Camp Robinson and spent \$2,100 on a recreation building at the Little Rock Airport for soldiers training there in connection with the 35th Division at Camp Robinson.

These engineers' figures give a total of \$23,010,400 for projects which the OGR lists as defense undertakings.

Manufacturers Profit. The OGR includes in its total of \$14,000,000 for War Department projects, contracts let to several manufacturing companies in Arkansas. It shows that two contracts totalling \$130,500 were let to a Paragould firm for shirts, a \$16,219 contract to a Little Rock firm for shirts, a \$16,250 contract to a Little Rock firm for tents, and a \$78,000 one to a Blytheville firm for shirts.

"There are going to be a lot more of these contracts let to Arkansas industries," Harrison said. "The truth is that some of our industries have been side-stepping government contracts. That is going to end. They can either take defense work or be denied materials for operations."

Many WPA Projects.

State Administrator Floyd Sharp said that most of the \$2,342,364 which the WPA has spent on defense projects has gone into construction and improvement of airports at Ft. Smith, Little Rock, Helena and Pine Bluff. The Ft. Smith airport is nearly completed and 200 acres of the 600 at Pine Bluff have been completed. Preliminary work has been done at Helena and the Little Rock Airport has been expanded.

In addition, Sharp said the WPA had spent funds for building roads at Camp Robinson and on a malarial control project. He said the agency probably would have considerable more work of similar nature with development of other defense plants in the state.

The money being spent by the Federal Office of Education is being handled through the State Department of Education's vocational education department for the training of youths in defense trades. This work is scheduled to be considerably expanded when the state launches its broad trade school program provided for in 1941 appropriations. No date for inauguration of the state trade school has been announced.

The National Youth Administration is using its funds for similar vocational training in schools where it has operating units.

The RFC loans were made to civilian flying schools at Conway, Little Rock and Pine Bluff.

The big defense projects at Hope, Jacksonville and Mache are just getting started. Surveys have been made by engineers and at Hope, Army officers, who will be in charge of that project, have moved in.

Private Spending Increases. None of these government reports take into consideration spending by private industry that may have been brought on by the national defense program. In this category comes the plan of the Arkansas Power and Light Company to build a 30,000-kilowatt steam power plant at Stamps, the Carter Oil Company's plan to build a desulphurization plant in the McKamie "sour gas" field, and increased activity among the zinc mines of North Arkansas and the cinnabar mines of Southwest Arkansas.

The state's lumber industry has boomed as result of vastly increased private building throughout the state and the influx of soldiers at Camp Robinson and the hundreds of friends and relatives who have established homes in and around Little Rock has pumped considerable funds into retail trade channels.

9-Foot Channel On Ouachita To Be Sought Democrat 7-11-41 Officials Discuss Larger Capacity For Aluminum Plant.

Efforts to obtain a nine-foot channel in the Ouachita River below Camden will be renewed, Governor Adkins announced today following a conference with H. K. Thatcher, director of the Washington office of the Agricultural and Industrial Commission.

The request for deepening of the present 6-1-2-foot channel in the river will be made to the War Department by Mr. Thatcher, C. S. Christian, engineer for the State Flood Control Commission, and members of the commission.

Mr. Thatcher flew in last night from Washington to confer with the governor on various matters pertaining to defense industries for the state.

Discuss Aluminum Plant Plans.

Governor Adkins and Mr. Thatcher also discussed the aluminum plant which is to be located in Arkansas. Its ultimate capacity, the governor said, probably will be determined by arrangements for a supply of electric power.

Arkansas Power & Light Company officials and representatives of the states' rural electrification administration co-operatives have been in the East conferring on that problem and are reported to have submitted a proposition to the Office of Production Management.

Arkansas has been assured an aluminum plant of 100,000,000 pounds annual capacity and the state may be given one with twice that capacity. Governor Adkins, pointing out that 10,000,000 cubic feet of gas daily is needed for each generating plant of 30,000 kw. capacity, said he believed a fuel supply of from 60,000,000 to 100,000,000 cubic feet of gas daily could be assured.

He again called attention to the additional fuel supply available in the coal region and to the state's water power possibilities. Such factors, he said, may tip the scales in Arkansas' favor in the final consideration of location of additional aluminum plant capacity.

Two Plants Possible.

Meanwhile it was reported that the proposed aluminum plant might be divided into two units. According to the reports, a unit to reduce bauxite ore to alumina or aluminum oxide, would be located in or near the city of Bauxite and the plant to process that product into metallic aluminum elsewhere. At the present time, Arkansas bauxite is shipped to St. Louis for the first processing and then to Alcoa, Tenn., for the second operation.

Location of the plant, however, still is indefinite, according to a letter from OPM, which Governor Adkins quoted at his press conference. It thanked him for his offer of the services of the various state agencies, but stated no steps for location of the plant had been taken. It did say, however, that field parties would soon be dispatched to examine the various available sites.

Renewal of efforts to obtain a nine-foot channel, the governor said, did not spring directly from the defense industry situation, but he added that there naturally was some connection.

He pointed out that if the present six and a half-foot channel was deepened, Ohio and Mississippi river barges could go directly to Ouachita river points. It would be a material benefit, he asserted, if craft from those rivers could also be used on the Ouachita.

C.I.O. SUGGESTS PLANS TO MAKE MORE ALUMINUM

Urges Expansion In Arkansas.

Gazette 7-17-41

(By the Associated Press.)

Washington, July 16. — Phil Murray, president of the C. I. O., submitted to President Roosevelt today a plan to increase vital alu-

minum production by 1,000,000,000 pounds a year.

Murray told Mr. Roosevelt that since the production of aluminum "is at the heart of the defense program," the C. I. O. Aluminum Workers of America had prepared a program to produce 1,000,000,000 pounds a year. This would be in addition to the approximately 2,000,000,000 pounds which, Murray said, was provided for in current plans.

Joint Management-Labor Council Would Be Formed.

The C. I. O. idea in brief contemplates the immediate creation of a joint management-labor council for the aluminum industry to supervise the execution of a program calling for:

1. Construction of aluminum plants with a 1,000,000,000 pound capacity.
2. Expansion of the Arkansas mining properties producing bauxite from which aluminum is made; accumulation of stockpiles of South American bauxite.
3. Rationing of non-defense uses of power and the construction of steam generating facilities to supply the power needed in the production of 1,000,000,000 pounds of aluminum.
4. The training of a labor force under union auspices for the operation of the new plants.

Huge Increase in Bauxite Production Seen.

The C. I. O. report said the U. S. Bureau of Mines had estimated that production in the Arkansas bauxite mines could be stepped up 300 per cent in two months and 500 per cent in four months.

Military requirements and essential civilian needs, the C. I. O. report stated, will absorb all of 2,000,000,000 pounds a year on the basis of current estimates. It said another 1,000,000,000 pounds should be produced to take care of the over-all demand on the aluminum industry.

Wall St. Journal 7-18-41

ALUMINUM SHORTAGE has officials speculating about forbidding sale of new pots and pans, taking metal trim off government buildings. (Justice Department has massive doors of aluminum.) OCD wants to avoid such steps, prefers to rely on collecting used ware. July aluminum estimates: supply, 59.3 million pounds; prime defense needs, 60 million; essential civilian uses, 1 million; shortages, 1.7 million.

Ickes Says Alcoa Will Operate

Gov't Owned Aluminum Plants

WASHINGTON (INS)—Secretary of the Interior Ickes revealed yesterday that the Aluminum Co. of America has agreed to operate government-constructed and government-owned aluminum plants.

Ickes said he had held conferences with Alcoa officials on plans to build several aluminum plants, including one in northern New York, one in Arkansas and two or three in the northwest. Intention to build the plants previously had been announced by OPM.

Ickes disclosed that the government would construct and own them and then lease them to Alcoa or possibly the Reynolds metal interests for operation.

"That is what is going to happen," he said, "the policy has been agreed upon."

Ickes announced that this would necessitate addition of power facilities in the west and northwest.

Alunite May Be Used To Make Alumina Gazette 7-18-41

Washington, July 17 (AP).—Discovery of a feasible process to obtain aluminum from domestic alunite deposits, partly freeing this country from dependence on foreign and limited native bauxite in meeting the metal requirements of airplane production, was reported today by the Bureau of Mines. The bureau indicated also that clays, as well as alunite, might be utilized to produce alumina, from which aluminum is made.

After a study of confidential data prepared by a private research laboratory, metallurgists of the bureau said they had reached the conclusion that by a special process the recovery of alumina from alunite ores containing 20 or more per cent of recoverable alumina was entirely feasible from a chem-

ical engineering standpoint.

Cost data, the bureau reported, indicated alumina from alunite could be produced at a price permitting competition with the alumina now used by the aluminum industry, which is derived only from bauxite.

Alunite Deposits Limited.

Approximately three-fourths of all the bauxite used for aluminum manufacture in the United States is imported, chiefly from Dutch Guiana, the report said. The United States, particularly in the West, has several large deposits of alunite.

Alunite resources of the United States, however, could not replace bauxite as the major source of aluminum ore, the bureau reported. It estimated total deposits of this mineral, if used to meet the nation's full needs for aluminum, would last less than one year.

On the possibility of obtaining alumina by treating clays of the kaolinite type and low-grade siliceous bauxite ores, of which this country has an immense supply, the bureau said: "This process for treating clays and low-grade siliceous bauxite is feasible judging merely from its chemistry, but will require further study on a pilot plant scale to prove its practicality for full-sized plant operation."

STATE BIG HOLDER OF LAND LIKELY TO YIELD BAUXITE ORE

Gazette 7-20-41

The state may share in a big way in Arkansas's anticipated bauxite mining boom, expected to result from establishment of a 400,000,000-pound alumina plant near bauxite, Saline county, as the major unit in the program of the Office of Production Management to increase aluminum for war use because:

The state Confederate Home property near Sweet Home (Pulaski county) has an estimated 325,000 tons of bauxite, of which an estimated 159,000 tons is of unusually high grade.

The state has retained mineral rights to 10,800 acres of tax-forfeited lands in Saline and Pulaski counties and in other areas where intense exploration may discover bauxite deposits.

Arkansas may be forced to triple its peacetime production of about 360,000 tons of bauxite annually if state deposits are mined to supply the big plant.

About half of the production of the alumina plant probably will be converted into aluminum at a new Arkansas plant, which will produce 100,000,000 pounds of aluminum annually. The remainder will be shipped to other processing plants.

Passage of Act 331 made it possible for the state to retain mineral rights to tax-forfeited lands. Under terms of Act 351 of 1941 the commissioner of revenue may lease mineral rights on recommendation of the state Land Use Committee.

The state has disposed of 3,549 acres in Saline county and 7,251 acres in Pulaski county, retained the mineral rights under provision of Act 331.

Big Increase In Production Likely.

About 400,000 tons of bauxite was mined in Arkansas last year. There are approximately 37,023,000 tons of "known" reserves of bauxite in the state. The probable tonnage of ore containing over 45 per cent alumina which is deeply buried and concerning which no definite knowledge now exists is estimated at 18,511,000.

has alumina content of 55 per cent. Of the known tonnage 10,890,000 or more and 8,711,000 of 50 per cent to 54.99 per cent. An estimated 17,422,000 tons has an alumina content of 45 to 49.99 per cent. The estimated 18,511,000 tons of "unknown" bauxite includes all three of those classes.

With about 600 persons now employed in the mining of bauxite in Arkansas at the present time, it is estimated about 2,000 would be needed if the output is increased sufficiently to meet war-time needs.

Sources close to the aluminum industry said it would be necessary to tap reserves which had not yet been worked and to uncover some of the bauxite deposits about which there is little definite knowledge. The same source said it was "anybody's guess" as to when the stepped-up production would start.

State Development Of Ore Advocated.

A report recently submitted to Governor Adkins and other state officials recommended Arkansas go into the bauxite business by mining large deposits of high alumina content at the Confederate Home property. According to the report, there are deposits of 325,000 tons of bauxite, of which 159,000 tons has higher than 55 per cent alumina content.

The report said the amount the state would realize from the sale of its bauxite to one of the firms controlling the bauxite market, would be "insufficient" in comparison to the amount to be realized if the ore were mined by the state.

Quoting the Bureau of Mines, the report said 182,000 tons of bauxite used by chemical industries in 1940 produced aluminum salts valued at \$12,88,578 and 26,234 tons of alumina valued at \$2,692,411. The chemicals produced from aluminum salts were ammonia alum, potash alum, liquid and crystal aluminum, aluminum sulphate, sodium aluminum sulphate and sodium aluminate.

Some of the chemicals, notably aluminum sulphate (or alum) and sodium aluminate for water treatment, can be made here as economically as in other states, it was pointed out. Their processing requires only addition of sulphuric acid or caustic soda. The former comes from Shreveport and the latter from Baton Rouge or St.

Charles, La. Development of the sour gas fields in south Arkansas will provide a closer supply of sulphuric acid.

Alum, which could be made here for about \$12 a ton, costs Little Rock and other water plants in the state \$30 a ton. Alum used in paper mills requires removal of silica which costs about \$3 or \$4 per ton.

Inexpensive Equipment Would Be Needed.

Expensive equipment and elaborate plants are not necessary to process alum and sodium aluminate, and the report said substantial chemical operations could be financed from bauxite earnings. The Confederate Home deposits, it said, are sufficient to supply such plants for 10 to 20 years.

Cost of equipment was estimated at \$10,000. Buildings at the home would not be disturbed since the greater part of the ore lies deep and must be mined through a shaft. An acre or more on the west side of the home can be stripped and mined by open pit methods.

A program for mining the ore without unnecessary delay was advocated because of the probability the government will call on the state to turn it over to one of the metal companies during the present emergency.

Two Projected Plants May Provide 1,100 Jobs and Add To Employment in Other Lines

Democrat By J. L. THOMASSON. 7-20-41

After many years of producing practically all of the new vital aluminum-bearing bauxite ore mined in the United States, only to have it shipped to other states for processing, Arkansas now apparently is on the verge of becoming a major producer of aluminum as well.

Government agencies, striving to enormously expand output of the lightweight metal, have decided to locate in the state plants to reduce bauxite to alumina, or aluminum oxide, and then to metallic aluminum.

The alumina plant will have a capacity of 400,000,000 pounds annually, and the aluminum plant a capacity of 100,000,000 pounds annually.

Back of those astronomical figures lie many stirring stories, some of which will never be written.

It is sufficient to say here that among other things, they mean that the national defense spotlight is now focused sharply on about 650 acres in Saline and Pulaski counties, where there is located 70 per cent of all the known bauxite ore deposits in the United States.

From those acres in 1940 came 437,595 tons of bauxite, or nearly one-half of all the ore consumed in the entire nation, including imports.

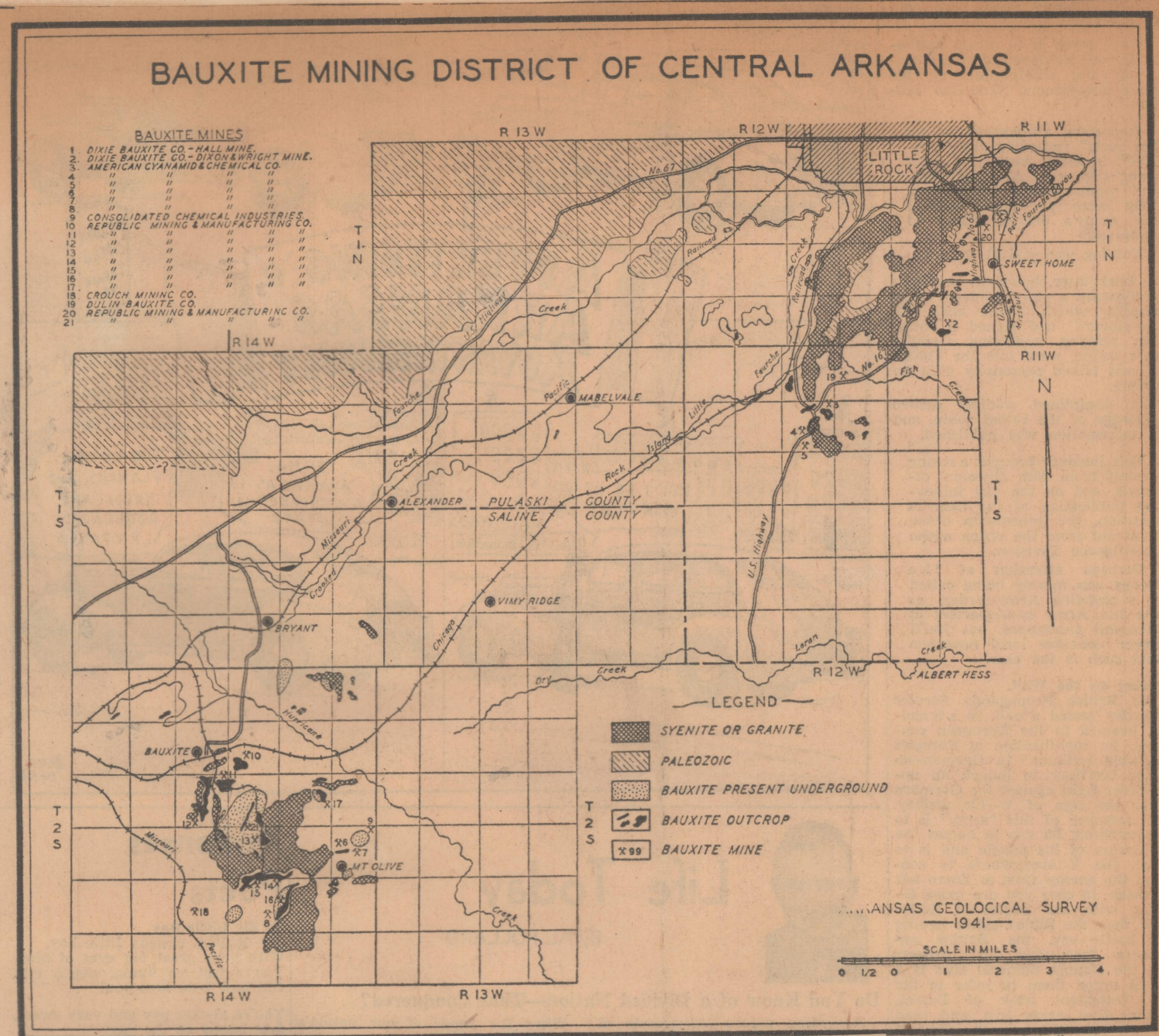
Every ton of it was shipped to other states for processing. Not all of it, of course, went into aluminum production, but that which did, was shipped first to East St. Louis, Ill., for reduction to alumina then to Alcoa, Tenn., or the Pacific Northwest for reduction to metallic aluminum; and then was shipped again to various parts of the country for fabricating.

That will end, to a certain extent, with completion of the proposed processing plants.

With the plants, to cost approximately \$200,000,000, assured, the question, "What will the plants mean to Arkansas?" naturally arises.

Much Construction Work. The most immediate and probably the most apparent benefit will be in actual construction of the two projects, through increased employment and additional business which such situations naturally create.

Of the approximate cost of \$200,000,000, a large portion will go to wages, which will in turn flow into innumerable channels of trade. Then



ducers from presently controlled properties.

If exploration and development of additional deposits are found advisable or necessary, personnel requirements will be greater.

Also, the plants will create new jobs indirectly. Aluminum plants require large amounts of power, and personnel to operate the generating stations thus becomes necessary.

Similarly, such plants use a special type of carbon product, and experience elsewhere has been that a plant to make the carbon specialty usually locates in the vicinity of the aluminum plant.

Still another angle to the employment phase is the production of limestone which will be required by the reduction processes. A quantity of Arkansas limestone, it has been indicated, will be used in the new plants.

Since the processing plants are being located in Arkansas under emergency conditions, it is only natural to wonder "what about them when the emergency ceases?"

The answer again is an academic one and brings up more questions, namely: Will there be any worthwhile Arkansas deposits remaining when the emergency ends, and could the Arkansas plants operate on imported bauxite?

Ore for Many Years.

Experiments in use of lower grades of bauxite ore indicate that usable ore is likely to be available for many years to come. If that proves to be true, testimony by Arthur V. Davis, chairman of the board of the Aluminum Company of America, before a United States Senate committee, may be significant.

"We have suggested as a very advantageous proposition that the government build, which we have agreed to design and construct and operate for the government if they want us to do so, a steam power plant in Arkansas, or near Arkansas. We chose that place because it is very close to the Arkansas bauxite deposits, and we feel that in the interest of freeing as many railroad cars as possible for other purposes that would be a very desirable place for a plant of 75,000,000 or 100,000,000 tons annually."

The quotation is from testimony before the Senate Committee Investigating National Defense. Assuming that usable ore will still be available, it is not amiss to believe the company may find that facts now contributing to freeing of railroad cars for other defense needs, also will contribute to more economical peacetime operation.

In other words, elimination of unnecessary shipping by locating plants in Arkansas now contributes to national defense, and later, wouldn't the same set of conditions

May Step Up Mining.

One authority, who asked to remain anonymous, made a rough estimate that 300 to 400 additional employees would be necessary to supply additional ore to the new plants. He pointed out that he based this on the premise that the tonnage would be supplied by existing pro-

cessing plants?

Might Use Imported Ore.

As for the other possibility, operation own imported bauxite, State Geologist George C. Branner, in commenting on the projected alumina plant, has suggested that it should be located on the Ouachita River, rather than at some point near Bauxite or Little Rock. Thus, he pointed out, if Arkansas commercial grade ore deposits become exhausted, South American ore could be water-borne to the plant.

In that connection, it should be noted that South American ore has been transported to East St. Louis by water at a lower rate than that for rail transported ore from Arkansas.

The next question presenting itself is: What of the Arkansas bauxite reserves?

There is some difference of opinion as to the actual tonnage, but the figures are so near coincidence as to give an acceptable picture of the situation.

Commercial grade ore is considered to be that of more than 55 per cent of aluminum oxide and seven cent or less of silica.

State Geologist Branner in a report on June 16, 1941, estimated the known commercial grade bauxite deposits of Arkansas to be 10,890,000 tons. He estimated that in the state, there are 55,584,000 tons of ore ranging from 45 per cent aluminum oxide up.

Incidentally, 62 per cent is considered about tops in bauxite ore, and a recent core made by a firm operating near Sweet Home, Pulaski County, tested 60 per cent.

Mr. Branner, in his report, noted that "only tonnage estimates were made of deposits for which dependable figures as to area and thickness were available and of which chemical analysis had been made."

Another View Expressed.

Somewhat less optimistic is the statement made by Mr. Davis, Aluminum Company chairman, before the Senate Committee, in which he said "the total estimated deposits in Arkansas are 5,000,000 to 6,000,000 tons of high grade bauxite, and perhaps 30,000,000 tons of low-grade bauxite." He did not specify what he considered low-grade ore.

On the other hand, the Bauxite and Aluminum report from the Minerals Yearbook Review of 1940, published by the U. S. Bureau of Mines, states that "a Republic official (Republic Mining and Manufacturing Company, Subsidiary of ALCOA, which operates the Bauxite (Ark.) properties), testified that the company owned approximately 6,000,000 tons out of about 11,500,000 tons of known commercially recoverable

bauxite in Arkansas."

In his estimate of bauxite deposits below the presently accepted commercial grade, Mr. Branner fixed 8,711,000 tons as the amount of ore from 50 to 54.99 per cent alumina, and estimated the probable tonnage of ore containing from 45 to 49.99 per cent alumina, at 17,422,000. He further estimated the probable, but now unknown tonnage of all grades, at 18,511,000.

He explains, and the statement is supported by mining men, that vaster deposits of the leaner ore or probable, since exploration operations are now discontinued when ore of less than commercial grade is found.

"Although the presence of this low grade tonnage is very largely a matter of common knowledge," he said, "little effort has been made to determine dimension figures, as the deposits of the grades have been regarded as uneconomic."

Lower Grade Ore Studied.

In recent years, numerous experiments have been carried on in various places, seeking means of profitably utilizing the lower grade ores. New developments have been reported, and at least one company has been organized to produce aluminum from lower grade ores by a new method. During emergency periods necessity spurs technological development, and all possible means of increasing aluminum production are likely to be tested now.

Thus it probably is not presumptuous to assume that profitable means will be found to use lower and lower grades of bauxite, making available larger and larger deposits of Arkansas bauxite.

A glance at present bauxite production figures is next in order.

During 1940, according to figures prepared by Mr. Branner from severance tax reports, 487,677.31 tons of green ore were produced in Arkansas. Of that production, 349,898 tons was mined by the Republic Mining and Manufacturing Co., Bauxite.

Later figures reveal that in the first five months of 1941 there were 337,913 tons of bauxite produced in Arkansas, or an increase of 95 per cent over the same period in 1940. On that basis, total production of 800,000 tons for 1941 is indicated, without taking into consideration any further speed-up in operations.

Selection of Arkansas as location for the plant to reduce bauxite to alumina, in the opinion of some authorities, means that the burden of supplying ore for that plant will fall on Arkansas producers. Thus, in their opinion, an additional 400,000 tons of ore annually will be required.

So an ultimate total Arkansas production of better than 1,200,000 tons of bauxite seems to be indicated. A much greater demand is not impossible.

Whether serious inroads are to be made upon the present Arkansas deposits of commercial grade ore de-

Gillam Park Bauxite Lease Offer Studied

Democrat 7-8-41

The City Council Parks Committee planned to meet late today for further consideration of questions which have arisen in connection with the Gillam Park site for negroes southeast of Little Rock on Granite Mountain.

The committee was to disclose whether a WPA project for development of the 480-acre site should be continued and whether bauxite mining operations should be allowed on part of the site.

A letter from the Smith Mining Company, Russellville, offering the city \$1 a ton royalty on any ore which might be removed from the site under a proposed lease agreement was referred to the committee. George C. Branner, state geologist, has said he believes there may be bauxite in commercial quantities on part of the site.

The committee previously had suggested transfer of the WPA project to another site because of comparative inaccessibility and other alleged difficulties, but WPA officials said this could not be done. The committee delayed further action until return to the city of WPA Administrator Floyd Sharp, who was invited to attend today's meeting.

Marble Machine Tax Reduced.
The council last night repealed an ordinance passed June 23 greatly increasing tax on marble machine operators through a levy on each machine and substituted a new ordinance increasing the privilege tax from \$100 to \$250 yearly. Coin-operated phonographs, covered in the repealed ordinance, were not mentioned in the new measure.

The council granted 13 petitions for changes in the zoning ordinance to authorize remodeling of houses in multiple apartments or construction of such apartments. The council disregarded a letter from the Planning Commission asking that action be deferred because the weekly meeting of the commission wasn't held yesterday. The letter said E. F. Nelson of the Board of Adjustment on whom the commission had depended for investigation of petitions was on his vacation.

The council also received J. W. Horner as the new alderman from 4th Ward. He will succeed Tom Gulley, resigned, and will serve until next April. Judge Harb administered the oath of office.

The council also:
Elected Paul Spikes, Jeff D. Lunsford and J. Paul Summers as assessors of Street Improvement District No. 561 after receiving and approving a report of commissioners of the district.

Negro Business Closed.
Authorized payment of \$66.50 to remedy a deficit in the Arch Street overpass right-of-way fund.

Ordered closed as a nuisance an establishment for negroes at 1405 W. 10th. The place was scene of the city's 14th negro killing of the year.

Referred to the Utilities Committee petition of W. J. Davis for authority to operate a taxicab service with headquarters at 10th and Cross. Referred to the Street Committee protest of Rock Island Lines against a proposed ordinance to grant the Missouri Pacific railroad right-of-way for a spur track in East Little Rock.

Authorized a lease to the National Youth Administration for approximately six acres in Fair Park for establishment of additional defense training schools.

Passed an ordinance levying a tax of \$15 a year on operators of merchant police bureaus and \$1 a year on each merchant policeman.

Granted the Arkansas Louisiana Gas Company an easement for construction of a pipeline across Boyle Park.

Passed ordinances authorizing compulsory examinations for venereal diseases under certain circumstances.

Passed ordinances for improvement districts to pave W. 11th from Lewis to Washington and to pave Pierce from Y to V.

Transacted other routine business before adjourning until July 21.

May Double Aluminum Plant's Size

Gazette 7-11-41

H. K. Thatcher, Washington director of the state Agricultural and Industrial Commission, flew in from Washington last night with the announcement that national defense officials may double the capacity of a proposed aluminum plant scheduled for construction in Arkansas. Mr. Thatcher came here

for a conference with Governor Adkins. He said that the increased capacity and necessary power plants would result in expenditure of about \$190,000,000.

The Office of Production Management chose Arkansas last week as the site of a 100,000,000-pound aluminum plant which, it was estimated, would cost \$75,000,000. Two 90,000-kilowatt generating plants required by an industry of that size would cost about \$20,000,000, Governor Adkins said.

"I believe we'll get the larger plant," Mr. Thatcher said. "But, of course, it has not been officially determined."

Site Not Selected.

Mr. Thatcher said no site has been selected, but pointed out that "Fuel and water in large quantities will be required." He said the location may depend on the choice of an agency to construct the power plants.

He added that, if capacity is doubled, it may be necessary to tap the natural gas fields and to utilize coal mined in western Arkansas in addition to the "sour gas" of southern Arkansas.

"We have spotted a half-dozen likely places for steam plants that could be successfully built near the coal mines west of Russellville," he said.

New Aluminum Plant to Be Largest Unit Democrat 7-11-41 Jacksonville Project Ranks Second In Total Expenditures.

More than \$200,000,000 has been spent, pledged or recommended for spending in Arkansas under the national defense program, government sources said today.

Most of the spending is, as yet, on paper. The biggest single defense industry—a 100,000,000-pound aluminum plant with power plant auxiliaries—has only been recommended for construction by the OPM.

But James J. Harrison, state director of the Office of Government Reports, is convinced that the state not only will see the full program carried out but that many millions more will be spent in this state before the national emergency is ended.

\$30,000,000 Already Spent.

The OGR breakdown of the \$200,000,000 figure shows about \$30,000,000 has either been spent or put under contract during the year ending June 15; \$56,000,000 has been authorized for expenditure in the immediate future and steps taken on the projects involved; and the remaining sum has been recommended by government agencies.

There is some discrepancy in the figures and classifications, particularly in regard to the work being done under direction of the U. S. Engineers.

Harrison said that the OGR lists as defense projects the dams being built at Blue Mountain, Norfolk and Nimrod. The engineers list these as flood control projects. Harrison's figures on the amount of money involved in their construction is several million dollars under the contract figures released by the engineers. But, whether for defense or flood control, the dams are in the process of construction and the money is being spent in the state. Funds are being released into trade channels in large amounts by the engineers, no matter under what name.

Camp Costs \$11,000,000.

The OGR lists as spent and contracted to be spent during the past year \$11,000,000 for Camp Robinson, \$14,107,530 for other War Department purposes, \$2,342,364 by the WPA, \$601,755 by the Federal Office of Education for defense training, \$863,373 by the NYA for defense training, \$151,845 in RFC loans.

It listed as authorized expenditures, \$33,000,000 for the Jacksonville detonator and fuse plant, \$8,000,000 for the Marche picnic acid plant, and \$15,000,000 for the Hope munitions proving ground.

Listed as recommended but not yet authorized were \$25,000,000 for the permanent camp at Barling, near Ft. Smith, and \$100,000,000 for the as yet unlocated aluminum plant and auxiliary power plants.

Breaking down these figures further, the Camp Robinson field auditor's office reports that of the \$11,010,304 earmarked for construction there, actually \$10,916,997 has been spent. The camp also received a supplemental appropriation of \$1,525,000, of which approximately \$1,100,000 has been obligated on a lump-sum contract basis. These figures boost the total Camp Robinson authorized spending to \$12,535,304—some \$1,500,000 in excess of the flat figure used by the OGR.

The OGR said the other \$14,107,530 tabbed under War Department spending for defense represented

mostly construction of the tree dams.

Dams for Power.

"We were puzzled a bit about why these dams were classed as defense projects," Harrison said, "but it now appears that this is because of their possible ultimate use as power projects. Power is the magic word in the defense program and except that it would produce needed power, Norfolk might not have been started this year."

But the OGR figures on the cost of the dams are far below the actual figures released by the U. S. Engineers. Whereas OGR lists Norfolk as a \$12,558,566 project, the engineers report \$16,500,000 has been spent or obligated on this project which is now only five per cent completed.

The engineers reported that \$3,800,000 has been spent or obligated on Nimrod Dam, which is 80 per cent completed, and \$2,628,000 spent or obligated on Blue Mountain Dam, where the tunnel is 49 per cent complete and little work has been done on the dam itself.

The engineers also reported they spent \$80,400 in connection with the leasing and rental of lands for Camp Robinson and spent \$2,100 on a recreation building at the Little Rock Airport for soldiers training there in connection with the 35th Division at Camp Robinson.

These engineers' figures give a total of \$23,010,400 for projects which the OGR lists as defense undertakings.

Manufacturers Profit.

The OGR includes in its total of \$14,000,000 for War Department projects, contracts let to several manufacturing companies in Arkansas. It shows that two contracts totalling \$130,500 were let to a Paragould firm for shirts, a \$16,219 contract to a Little Rock firm for shirts, a \$16,250 contract to a Little Rock firm for tents, and a \$78,000 one to a Blytheville firm for shirts.

"There are going to be a lot more of these contracts let to Arkansas industries," Harrison said. "The truth is that some of our industries have been side-stepping government contracts. That is going to end. They can either take defense work or be denied materials for operations."

Many WPA Projects.

State Administrator Floyd Sharp said that most of the \$2,342,364 which the WPA has spent on defense projects has gone into construction and improvement of airports at Ft. Smith, Little Rock, Helena and Pine Bluff. The Ft. Smith airport is nearly completed and 200 acres of the 600 at Pine Bluff have been completed. Preliminary work has been done at Helena and the Little Rock Airport has been expanded.

In addition, Sharp said the WPA had spent funds for building roads at Camp Robinson and on a malarial control project. He said the agency probably would have considerable more work of similar nature with development of other defense plants in the state.

The money being spent by the Federal Office of Education is being handled through the State Department of Education's vocational education department for the training of youths in defense trades. This work

is scheduled to be considerably expanded when the state launches its broad trade school program provided for in 1941 appropriations. No date for inauguration of the state trade school has been announced.

The National Youth Administration is using its funds for similar vocational training in schools where it has operating units.

The RFC loans were made to civilian flying schools at Conway, Little Rock and Pine Bluff.

The big defense projects at Hope, Jacksonville and Mache are just getting started. Surveys have been made by engineers and at Hope, Army officers, who will be in charge of that project, have moved in.

Private Spending Increases.

None of these government reports take into consideration spending by private industry that may have been brought on by the national defense program. In this category comes the plan of the Arkansas Power and Light Company to build a 30,000-kilowatt steam power plant at Stamps, the Carter Oil Company's plan to build a desulphurization plant in the McKamie "sour gas" field, and increased activity among the zinc mines of North Arkansas and the cinnabar mines of Southwest Arkansas.

The state's lumber industry has boomed as result of vastly increased private building throughout the state and the influx of soldiers at Camp Robinson and the hundreds of friends and relatives who have established homes in and around Little Rock has pumped considerable funds into retail trade channels.

9-Foot Channel On Ouachita To Be Sought Democrat 7-11-41 Officials Discuss Larger Capacity For Aluminum Plant.

Efforts to obtain a nine-foot channel in the Ouachita River below Camden will be renewed, Governor Adkins announced today following a conference with H. K. Thatcher, director of the Washington office of the Agricultural and Industrial Commission.

The request for deepening of the present 6-12-foot channel in the river will be made to the War Department by Mr. Thatcher, C. S. Christian, engineer for the State Flood Control Commission, and members of the commission.

Mr. Thatcher flew in last night from Washington to confer with the governor on various matters pertaining to defense industries for the state.

Discuss Aluminum Plant Plans.

Governor Adkins and Mr. Thatcher also discussed the aluminum plant which is to be located in Arkansas. Its ultimate capacity, the governor said, probably will be determined by arrangements for a supply of electric power.

Arkansas Power & Light Company officials and representatives of the state's rural electrification administration co-operatives have been in the East conferring on that problem and are reported to have submitted a proposition to the Office of Production Management.

Arkansas has been assured an aluminum plant of 100,000,000 pounds annual capacity and the state may be given one with twice that capacity. Governor Adkins, pointing out that 10,000,000 cubic feet of gas daily is needed for each generating plant of 30,000 kw. capacity, said he believed a fuel supply of from 60,000,000 to 100,000,000 cubic feet of gas daily could be assured.

He again called attention to the additional fuel supply available in the coal region and to the state's water power possibilities. Such factors, he said, may tip the scales in Arkansas' favor in the final consideration of location of additional aluminum plant capacity.

Two Plants Possible.

Meanwhile it was reported that the proposed aluminum plant might be divided into two units. According to the reports, a unit to reduce bauxite ore to alumina or aluminum oxide, would be located in or near the city of Bauxite and the plant to process that product into metallic aluminum elsewhere. At the present time, Arkansas bauxite is shipped to St. Louis for the first processing and then to Alcoa, Tenn., for the second operation.

Location of the plant, however, still is indefinite, according to a letter from OPM, which Governor Adkins quoted at his press conference. It thanked him for his offer of the services of the various state agencies, but stated no steps for location of the plant had been taken. It did say, however, that field parties would soon be dispatched to examine the various available sites.

Renewal of efforts to obtain a nine-foot channel, the governor said, did not spring directly from the defense industry situation, but he added that there naturally was some connection.

He pointed out that if the present six and a half-foot channel was deepened, Ohio and Mississippi river barges could go directly to Ouachita river points. It would be a material benefit, he asserted, if craft from those rivers could also be used on the Ouachita.

C.I.O. SUGGESTS PLANS TO MAKE MORE ALUMINUM

Urges Expansion In Arkansas.

Gazette 7-17-41

(By the Associated Press.)
Washington, July 16. — Phil Murray, president of the C. I. O., submitted to President Roosevelt today a plan to increase vital alu-

minum production by 1,000,000,000 pounds a year.

Murray told Mr. Roosevelt that since the production of aluminum "is at the heart of the defense program," the C. I. O. Aluminum Workers of America had prepared a program to produce 1,000,000,000 pounds a year. This would be in addition to the approximately 2,000,000,000 pounds which, Murray said, was provided for in current plans.

Joint Management-Labor Council Would Be Formed.

The C. I. O. idea in brief contemplates the immediate creation of a joint management-labor council for the aluminum industry to supervise the execution of a program calling for:

1. Construction of aluminum plants with a 1,000,000,000 pound capacity.
2. Expansion of the Arkansas mining properties producing bauxite from which aluminum is made; accumulation of stockpiles of South American bauxite.
3. Rationing of non-defense uses of power and the construction of steam generating facilities to supply the power needed in the production of 1,000,000,000 pounds of aluminum.
4. The training of a labor force under union auspices for the operation of the new plants.

Huge Increase in Bauxite Production Seen.

The C. I. O. report said the U. S. Bureau of Mines had estimated that production in the Arkansas bauxite mines could be stepped up 300 per cent in two months and 500 per cent in four months.

Military requirements and essential civilian needs, the C. I. O. report stated, will absorb all of 2,000,000,000 pounds a year on the basis of current estimates. It said another 1,000,000,000 pounds should be produced to take care of the over-all demand on the aluminum industry.

Wall St. Journal 7-18-41

ALUMINUM SHORTAGE has officials speculating about forbidding sale of new pots and pans, taking metal trim off government buildings. (Justice Department has massive doors of aluminum.) OCD wants to avoid such steps, prefers to rely on collecting used ware. July aluminum estimates: supply, 59.3 million pounds; prime defense needs, 60 million; essential civilian uses, 1 million; shortages, 1.7 million.

Ickes Says Alcoa Will Operate

Gov't Owned Aluminum Plants

Wall St. Journal 7-18-41

WASHINGTON (INS)—Secretary of the Interior Ickes revealed yesterday that the Aluminum Co. of America has agreed to operate government-constructed and government-owned aluminum plants.

Ickes said he had held conferences with Alcoa officials on plans to build several aluminum plants, including one in northern New York, one in Arkansas and two or three in the northwest. Intention to build the plants previously had been announced by OPM.

Ickes disclosed that the government would construct and own them and then lease them to Alcoa or possibly the Reynolds metal interests for operation.

"That is what is going to happen," he said, "the policy has been agreed upon."

Ickes announced that this would necessitate addition of power facilities in the west and northwest.

Alunite May Be Used To Make Alumina

Gazette 7-18-41

Washington, July 17 (AP).—Discovery of a feasible process to obtain aluminum from domestic alunite deposits, partly freeing this country from dependence on foreign and limited native bauxite in meeting the metal requirements of airplane production, was reported today by the Bureau of Mines. The bureau indicated also that clays, as well as alunite, might be utilized to produce alumina, from which aluminum is made.

After a study of confidential data prepared by a private research laboratory, metallurgists of the bureau said they had reached the conclusion that by a special process the recovery of alumina from alunite ores containing 20 or more per cent of recoverable alumina was entirely feasible from a chem-

ical engineering standpoint.

Cost data, the bureau reported, indicated alumina from alunite could be produced at a price permitting competition with the alumina now used by the aluminum industry, which is derived only from bauxite.

Alunite Deposits Limited.

Approximately three-fourths of all the bauxite used for aluminum manufacture in the United States is imported, chiefly from Dutch Guiana, the report said. The United States, particularly in the West, has several large deposits of alunite.

Alunite resources of the United States, however, could not replace bauxite as the major source of aluminum ore, the bureau reported. It estimated total deposits of this mineral, if used to meet the nation's full needs for aluminum, would last less than one year.

On the possibility of obtaining alumina by treating clays of the kaolinite type and low-grade siliceous bauxite ores, of which this country has an immense supply, the bureau said: "This process for treating clays and low-grade siliceous bauxite is feasible judging merely from its chemistry, but will require further study on a pilot plant scale to prove its practicality for full-sized plant operation."

STATE BIG HOLDER OF LAND LIKELY TO YIELD BAUXITE ORE

Gazette 7-20-41

The state may share in a big way in Arkansas's anticipated bauxite mining boom, expected to result from establishment of a 400,000,000-pound alumina plant near bauxite, Saline county, as the major unit in the program of the Office of Production Management to increase aluminum for war use because:

The state Confederate Home property near Sweet Home (Pulaski county) has an estimated 325,000 tons of bauxite, of which an estimated 159,000 tons is of unusually high grade.

The state has retained mineral rights to 10,800 acres of tax-forfeited lands in Saline and Pulaski counties and in other areas where intense exploration may discover bauxite deposits.

Arkansas may be forced to triple its peacetime production of about 380,000 tons of bauxite annually if state deposits are mined to supply the big plant.

About half of the production of the alumina plant probably will be converted into aluminum at a new Arkansas plant, which will produce 100,000,000 pounds of aluminum annually. The remainder will be shipped to other processing plants.

Passage of Act. 331 made it possible for the state to retain mineral rights to tax-forfeited lands. Under terms of Act 351 of 1941 the commissioner of revenue may lease mineral rights on recommendation of the state Land Use Committee.

The state has disposed of 3,549 acres in Saline county and 7,251 acres in Pulaski county, retained the mineral rights under provision of Act 331.

Big Increase In Production Likely.

About 400,000 tons of bauxite was mined in Arkansas last year. There are approximately 37,023,000 tons of "known" reserves of bauxite in the state. The probable tonnage of ore containing over 45 per cent alumina which is deeply buried and concerning which no definite knowledge now exists is estimated at 18,511,000.

has alumina content of 55 per cent. Of the known tonnage 10,890,000 or more and 8,711,000 of 50 per cent to 54.99 per cent. An estimated 17,422,000 tons has an alumina content of 45 to 49.99 per cent. The estimated 18,511,000 tons of "unknown" bauxite includes all three of those classes.

With about 600 persons now employed in the mining of bauxite in Arkansas at the present time, it is estimated about 2,000 would be needed if the output is increased sufficiently to meet war-time needs.

Sources close to the aluminum industry said it would be necessary to tap reserves which had not yet been worked and to uncover some of the bauxite deposits about which there is little definite knowledge. The same source said it was "anybody's guess" as to when the stepped-up production would start.

State Development Of Ore Advocated.

A report recently submitted to Governor Adkins and other state officials recommended Arkansas go into the bauxite business by mining large deposits of high alumina content at the Confederate Home property. According to the report, there are deposits of 325,000 tons of bauxite, of which 159,000 tons has higher than 55 per cent alumina content.

The report said the amount the state would realize from the sale of its bauxite to one of the firms controlling the bauxite market, would be "insufficient" in comparison to the amount to be realized if the ore were mined by the state.

Quoting the Bureau of Mines, the report said 182,000 tons of bauxite used by chemical industries in 1940 produced aluminum salts valued at \$12,88,578 and 26,284 tons of alumina valued at \$2,692,411. The chemicals produced from aluminum salts were ammonia alum, potash alum, liquid and crystal aluminum, aluminum sulphate, sodium aluminum sulphate and sodium aluminate.

Some of the chemicals, notably aluminum sulphate (or alum) and sodium aluminate for water treatment, can be made here as economically as in other states, it was pointed out. Their processing requires only addition of sulphuric acid or caustic soda. The former comes from Shreveport and the latter from Baton Rouge or St.

Charles, La. Development of the sour gas fields in south Arkansas will provide a closer supply of sulphuric acid.

Alum, which could be made here for about \$12 a ton, costs Little Rock and other water plants in the state \$30 a ton. Alum used in paper mills requires removal of silica which costs about \$3 or \$4 per ton.

Inexpensive Equipment Would Be Needed.

Expensive equipment and elaborate plants are not necessary to process alum and sodium aluminate, and the report said substantial chemical operations could be financed from bauxite earnings. The Confederate Home deposits, it said, are sufficient to supply such plants for 10 to 20 years.

Cost of equipment was estimated at \$10,000. Buildings at the home would not be disturbed since the greater part of the ore lies deep and must be mined through a shaft. An acre or more on the west side of the home can be stripped and mined by open pit methods.

A program for mining the ore without unnecessary delay was advocated because of the probability the government will call on the state to turn it over to one of the metal companies during the present emergency.

Two Projected Plants May Provide 1,100 Jobs and Add To Employment in Other Lines

Democrat By J. L. THOMASSON. 7-20-41

After many years of producing practically all of the now vital aluminum-bearing bauxite ore mined in the United States, only to have it shipped to other states for processing, Arkansas now apparently is on the verge of becoming a major producer of aluminum as well.

Government agencies, striving to enormously expand output of the lightweight metal, have decided to locate in the state plants to reduce bauxite to alumina, or aluminum oxide, and then to metallic aluminum.

The alumina plant will have a capacity of 400,000,000 pounds annually, and the aluminum plant a capacity of 100,000,000 pounds annually.

Back of those astronomical figures lie many stirring stories, some of which will never be written.

It is sufficient to say here that among other things, they mean that the national defense spotlight is now focused sharply on about 650 acres in Saline and Pulaski counties, where there is located 70 per cent of all the known bauxite ore deposits in the United States.

From those acres in 1940 came 437,595 tons of bauxite, or nearly one-half of all the ore consumed in the entire nation, including imports.

Every ton of it was shipped to other states for processing. Not all of it, of course, went into aluminum production, but that which did, was shipped first to East St. Louis, Ill., for reduction to alumina then to Alcoa, Tenn., or the Pacific Northwest for reduction to metallic aluminum; and then was shipped again to various parts of the country for fabricating.

That will end, to a certain extent, with completion of the proposed processing plants.

With the plants, to cost approximately \$200,000,000, assured, the question, "What will the plants mean to Arkansas?" naturally arises.

The most immediate and probably the most apparent benefit will be in actual construction of the two projects, through increased employment and additional business which such situations naturally create.

Of the approximate cost of \$200,000,000, a large portion will go to wages, which will in turn flow into innumerable channels of trade. Then

many other lines of business will necessarily be called upon for the various services such projects require.

The greatest long range advantage likely will spring from the fact that an industry of such magnitude has been located in the state, even though its location was under emergency conditions.

An alumina plant of 400,000,000 pounds annual capacity will employ around 300 persons, of whom about 60 will be skilled laborers. An aluminum plant of 100,000,000 pounds capacity will require about 800 employees, with some 160 of them skilled.

Thus the two plants can be estimated to create about 1,100 jobs in their immediate operation.

To supply the plants with ore, employment in the ore production end of the industry will have to be stepped up. Employment figures for the present production are not available, but on the basis of certain known facts, it can be estimated that almost 1,000 people probably are engaged in current ore production.

May Step Up Mining.

One authority, who asked to remain anonymous, made a rough estimate that 300 to 400 additional employees would be necessary to supply additional ore to the new plants. He pointed out that he based this on the premise that the tonnage would be supplied by existing pro-

BAUXITE MINING DISTRICT OF CENTRAL ARKANSAS

