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THE SOLID FUEL SITUATION IN FRANCE (1938-1941)

LV/YA

4 March 1941

Office of Coal Distribution
Secretariat GeneralFRENCH COAL PRODUCTION
(In Tons)

<u>Basins</u>	<u>Coal</u>		
	<u>1938</u>	<u>1939</u>	<u>1940</u>
Nord and Pas de Calais	28,238,192	31,938,901	24,621,707
Moselle	6,739,210	4,740,872	126,099*
Loire	3,274,102	3,618,519	4,154,804
Bourgogne and Nivernais	2,577,483	2,663,529	2,778,716
Gard and Heralut	2,140,579	2,585,163	3,210,181
Tarn and Aveyron	1,542,582	1,815,667	2,344,848
Bourbonnais	495,084	525,703	615,103
Auvergne	589,542	630,847	722,678
Creuse	13,209	13,172	15,623
Alpes	1,52,078	458,316	544,526
Vosges Meridionales	88,254	87,813	89,030
Ouest	54,140	51,425	61,735
Provence	--	--	--
Comtat	--	--	--
Sud-Ouest	--	--	--
Various	--	--	241
TOTAL	46,505,055	49,129,927	39,285,291

*Figures up to 15 June only

<u>Basins</u>	<u>Lignite</u>		
	<u>1938</u>	<u>1939</u>	<u>1940</u>
Nord and Pas de Calais	--	--	--
Moselle	--	--	--
Loire	--	--	--
Bourgogne and Nivernais	--	--	--
Bard and Heralut	--	--	--
Tarn and Aveyron	--	--	--
Bourbonnais	--	--	--
Auvergne	--	--	--
Creuse	--	--	--
Alpes	--	--	--
Vosges Meridionales	--	--	--
Ouest	--	--	--

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Lignite (Continued)

<u>Basins</u>	<u>1938</u>	<u>1939</u>	<u>1940</u>
Provence	746,371	831,514	1,211,759
Comtat	34,694	38,404	45,948
Sud-Ouest	273,157	234,540	388,999
Various	3,987	3,959	7,282
TOTAL	1,058,209	1,108,417	1,653,988

COAL PRODUCTION

MONTH OF JUNE 1940 IN THE NON-OCCUPIED ZONE

<u>Mineral Districts</u>	<u>Net Production</u> (in 1,000 tons)		<u>Stocks</u>		
	<u>Coal</u>	<u>Lignite</u>	<u>Coal</u>	<u>Lignite</u>	<u>Briquettes</u>
Ales	259.4	3.6	104.1	0.6	14
Marseilles	2	101.5	1.8	20.3	0.2
Toulouse	189	--	34.4	--	--
Saint-Etienne	317	--	86	--	5.3
Clermont-Ferrand	99.5	--	72	--	0.5
Lyon (approximately)	210	--	--	--	--
TOTAL	1076.9	105.3	298.3	20.9	20

VISIBLE CONSUMPTION OF SOLID MINERAL COMBUSTIBLES IN FRANCE

1940

French coal production	40,957,400 tons
Plus decrease in mine stocks	+ 245,300 tons
	<u>41,202,700 tons</u>

Plus excess of imports over exports:

Imports	7,792,700 tons	
Exports	<u>-140,500 tons</u>	=
		<u>7,652,200 tons</u>
		<u>48,854,900 tons</u>

Plus decrease in railroad stocks	<u>730,200 tons</u>
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Total consumption 1940	49,585,100 tons
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Consumption 1938	67,735,000 tons
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Consumption 1939	68,084,000 tons
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ANNUAL PRODUCTION OF COAL AND LIGNITE
(In Thousands of Tons)

	<u>1939</u>	<u>1940</u>	<u>1941</u>
Coal	49,129.9	39,285.3	41,840
Lignite	<u>1,108.4</u>	<u>1,654</u>	<u>2,026.3</u>
TOTAL	50,238.3	40,939.3	43,866.3

PRODUCTION OF METALLURGICAL COKE
(In Thousands of Tons)

	<u>1939</u>	<u>1940</u>	<u>1941</u>
Coking plants belonging to the mines	4,767.6	3,182.4	3,800.4
Independent coking plants	<u>3,678</u>	<u>2,133.6</u>	<u>1,216.8</u>
TOTAL	8,445.6	5,316	5,017.2

PRODUCTION OF BRIQUETTES
(In Thousands of Tons)

	<u>1939</u>	<u>1940</u>	<u>1941</u>
Plants belonging to the mines	6,045.6	5,156.4	3,645.6
Independent plants	<u>2,082.8</u>	<u>1,414.8</u>	<u>717.6</u>
TOTAL	8,128.4	6,571.2	4,363.2

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EXPORTS OF SOLID FUELS IN 1939
(In Thousands of Tons)

<u>Country of Destination</u>	<u>Coal</u>	<u>Coke</u>	<u>Briquettes</u>	<u>Total</u> (Coke converted into coal; Coke = 1.3 coal)
Germany	58.1	--	0.2	58.3
Belgium and Luxembourg	351.9	4.6	1.7	359.6
Italy	0.2	59.5	--	77.6
Switzerland	392.5	139.5	41.6	615.5
Algeria, Tunisia, Morocco	0.5	6.6	2.1	11.1
French West Africa, French Equatorial Africa (including Togo and Cameroun)	0.6	0.1	62.1	62.8
Other colonies	--	0.2	1.5	1.8
Other countries	6.2	0.1	0.4	6.7
TOTAL	810	210.6	109.6	1,193.4

EXPORTS OF SOLID FUELS IN 1940
(In Thousands of Tons)

<u>Country of Destination</u>	<u>Coal</u>	<u>Coke</u>	<u>Briquettes</u>	<u>Total</u> (Coke converted into coal; Coke = 1.3 coal)
Germany	--	--	--	--
Belgium and Luxembourg	148.7	3.1	0.6	153.3
Italy	1.1	26.9	--	36.1
Switzerland	27.7	6.3	14.1	50.1
Algeria, Tunisia, Morocco	34.9	1.3	2.1	38.7
French West Africa, French Equatorial Africa	10.8	--	9.7	20.5
Other colonies	--	0.3	--	0.3
Other countries	6.6	--	0.4	7
TOTAL	229.8	37.9	26.9	306

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EXPORTS OF SOLID FUELS IN 1941
(In Thousands of Tons)

Country of Destination	Coal	Coke	Briquettes	Total: Coke converted into coal (Coke=1.3 coal)
Germany	3.1	1	--	4.4
Belgium and Luxembourg	109.2	0.5	0.2	110
Italy	--	--	--	--
Switzerland	43	1.5	0.1	45
Algeria, Tunisia, and Morocco	567	9.1	7.9	587.5
French West Africa,	95.3	0.9	21.6	118.1
French Equatorial Africa				
Other colonies	--	--	--	--
Other countries	31	2	3.4	37
TOTAL	849.3	15	33.2	902

IMPORTS OF SOLID FUELS IN 1939
(In Thousands of Tons)

Country of Origin	Anthracite	Coal	Lignite	Total Anthracite and Coal	Coke	Lignite Briquettes	Coal Briquettes	Total: Coke converted into coal (Coke=1.3 coal)
Great Britain	667.1	5,094.9	--	5,762	18.4	--	58.4	5,844.3
Germany	229.1	2,517.4	--	2,746.5	953.3	209.9	5.4	4,201.1
Belgium	433.4	2,534.6	--	2,969	1,012.7	0.2	228.6	4,514.3
Netherlands	72.7	190.6	--	263.3	766.3	2.1	51.4	1,913
Poland	0.2	1,273.7	--	1,273.9	8	--	--	1,284.3
Russia	6.5	--	--	6.5	--	--	--	6.5
Turkey	--	71.5	--	71.5	--	--	--	71.5
Indochina	211.1	0.7	--	2,118	--	--	--	2,118
Morocco	21.3	6.4	--	27.7	--	--	--	27.7
Other Countries	0.7	4.1	--	4.8	33.6	--	--	48.5
TOTAL	1,642.1	12,294.9	--	13,937	2,792.3	212.2	343.8	16,123

IMPORTS OF SOLID FUELS IN 1940
(In Thousands of Tons)

Country of Origin	Anthracite	Coal	Lignite	Total Anthracite and Coal	Coke	Lignite Briquettes	Coal Briquettes	Total: Coke converted into coal (Coke=1.3 coal)
Great Britain	325.2	4,968.6	--	5,293.8	182.2	--	85.4	5,616.1
Germany	0.2	1.1	--	1.3	--	--	1	2.3
Belgium	209.5	966.9	0.8	1,177.2	445.8	--	198	1,954.7
Netherlands	20.3	85.9	--	106.2	231.8	0.2	8.6	416.4
Poland	--	3.1	--	3.1	--	--	0.1	3.2
Russia	--	--	--	--	--	--	--	--
Turkey	--	4.7	--	4.7	--	--	--	4.7
Indochina	15.1	--	--	15.1	--	--	--	15.1
Morocco	14.1	4.8	--	18.9	--	--	--	18.9
Other Countries	--	10.7	--	10.7	0.3	--	--	11.1
TOTAL	584.4	6,045.8	0.8	6,631.0	860.1	0.2	293.1	8,042.5

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IMPORTS OF SOLID FUELS IN 1941
(In Thousands of Tons)

Country of Origin	Anthracite	Coal	Lignite	Total Anthracite and Coal	Coke	Lignite Briquettes	Coal Briquettes	Total: Coke converted into Coal (Coke=1.3 coal)
Great Britain	5.7	68.9	--	74.6	10.6	--	27.7	116.1
Germany	1.9	228	--	229.9	36.4	0.1	5.5	282.8
Belgium	79.4	1,258.4	--	1,336.8	24.8	--	20.6	1,389.6
Netherlands	--	0.2	--	0.2	--	--	3.8	4
Poland	--	--	--	--	--	--	--	--
Russia	0.2	--	--	0.2	--	--	--	0.2
Turkey	--	0.4	--	0.4	--	--	--	0.4
Indochina	--	0.1	--	0.1	--	--	--	0.1
Morocco	--	--	--	--	--	--	--	--
Other Countries	--	--	--	--	--	--	--	--
TOTAL	86.2	1,556	--	1,642.2	71.8	0.1	57.6	1,793.2

CONSUMPTION OF COAL IN PARIS IN 1940 AND 1941

The table below gives the tonnage of coal received each month by the Grupement Charbonnier de la Seine for domestic consumption, small commerce and small industry, that is, exclusive of the tonnage used by public services, heavy industry, etc.

1940	May	52,000 tons
	June	3,000 tons
	July	28,000 tons
	August	46,000 tons
	September	40,000 tons
	October	69,000 tons
	November	91,000 tons
	December	143,000 tons
1941	January	<u>105,000 tons</u>
	TOTAL	577,000 tons

The monthly average in 1938-39 was 303,000 tons; we see, therefore, that Paris received in 9 months^a little less than double the monthly average of normal times.

SECRET**COAL SUPPLY IN THE PARIS REGION
(SEINE, SEINE ET OISE, SEINE ET MARNE)**

January 1941

	<u>Required</u>	<u>On Hand</u>
Gas plants	120,000 tons	105,000 tons
Electrical power plants	95,000 tons	96,000 tons
Industry	103,500 tons	70,000 tons
Domestic fuel and small industry	<u>161,000 tons</u>	<u>120,000 tons</u>
	183,500 tons	391,000 tons

TAR SITUATION IN DECEMBER 1940

1) Occupied Zone

Stock as of November 30	69,199 tons
Consumption in November	15,236 tons
Probable stock at the end of December	54,000 tons

2) Non-Occupied Zone

Stock as of November 30	18,094 tons
Consumption in November	9,777 tons
Probable stock at the end of December	9,000 tons

Note: The production of briquette plants is being handicapped by the lack of tar, and in November production was only about 50% of normal.

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COAL SITUATION FRANCE 1943/1944

During 1943/1944, the coal situation in France deteriorated so much that coal had to be imported from Belgium, Lorraine, and later on from Germany.

In a report by the Plenipotentiary for France (Regional Command West Paris), dated 16 October 1943, the following is stated: After many difficulties were overcome, it had been possible to contract for

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100,000 tons of coal from Belgium and Lorraine. But the types of coal and the small number of freight cars and barges available in Belgium make the usefulness of these additional quantities of coal doubtful.

Allocation of coal to French industry August-November 1943

Allocations for:

	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>Stocks and of August</u>
	<u>(in tons)</u>				
Iron industry	34,900	28,500	20,000	26,000	75,614
Mechanical industry	59,000	57,000	51,000	60,000	98,357
Chemical industry	68,050	62,250	43,700	59,000	107,134
Textiles/Leather	23,500	20,400	13,900	16,000	56,950
Cement	50,000	50,000	29,000	25,000	63,073
Other building materials	20,650	13,500	16,700	21,000	47,667
Food	60,300	57,000	41,500	51,000	112,037
Navigation and Transportation	10,250	11,250	9,600	10,300	6,421
Sugar and Alcohol	67,500	62,500	65,000	25,000	298,284
Sundry	<u>38,400</u>	<u>36,400</u>	<u>22,400</u>	<u>26,400</u>	<u>28,932</u>
	422,950	403,800	302,800	322,300	895,069
				Reserve stocks	<u>+21,910</u>
					<u>919,979</u>

The decreased allocations (allocations for September cut by 30,000 tons and for October by 110,000 tons) will have their full effect in the stock figures for October. It is calculated that with a monthly consumption by industry (excluding sugar and alcohol industry) of 340,000 tons of coal, the stockpiles on hand by the end of October will be sufficient for only 7 weeks. This quantity is considered not to be excessive, especially in view of the effects of the strike, of the heating season setting in during November (especially in the mechanical industry) and in view of the transportation difficulties in the procurement of additional coal from Belgium.

SECRETCoal deliveries from Lorraine to France, November 1943

Up to November 1943, a monthly average of about 100,000 tons of coal and other fuels was shipped to France. Because of the difficult coal situation in France, Germany had to supply the French industry with coal to an ever increasing degree. The quantities of fuel to be exported from Lorraine to France during November and December are set at about 200,000 tons. The November quota of 195,000 tons was composed of the following partial quotas:

Basic quota	55,000 tons
Coal for aluminum industry	33,000 tons
Solvay (Dombasle) quota (for production of soda)	12,000 tons
Special quota (Drying of apples for the Armed Forces)	2,500 tons
Powdered coal	4,500 tons
Extraordinary additional quota	88,000 tons

82,000 tons of the Lorraine coal deliveries for November were earmarked for the French State Railroads, but on 19 November, 7,500 tons had not yet been delivered, and on 20 December, the backlog was 18,000 tons. The delivery of 40,000 tons for the Paris gasworks was likewise slow.

During October 1943, the Saar mines delivered 11,428.7 tons of smudge coal to France.

Coal deliveries from Lorraine to France, October 1943

for:

French state railroads	20,303 tons
Aluminum industry	26,221.5 tons
Gas and electric power plants	24,014 tons
Drying of apples	1,195 tons
Roofing tile industry	1,944 tons
Other industries	10,956 tons
Solvay (Dombasle)	12,145.5 tons
Powdered coal	4,991 tons
Smudge coal	2,439 tons
<u>For quota of the Office for Raw Materials:</u>	
South-Central Industry ("Hinderer Plan")	10,335 tons

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SECRETCoal deliveries from Lorraine to France, October 1943 (Continued)

Ardennes plants	2,350	tons
Limestone quarries	886	tons
Other industries	103	tons
TOTAL	<u>117,803</u>	<u>tons</u>

Coal for raw phosphates:

German coal was delivered in compensation for French raw phosphates. During January 1944, 2,650 tons of coal were shipped to France for this purpose. During February, 3,000 tons of Saar and Ruhr coal were shipped to France in exchange for raw phosphates. 4,500 tons of this coal were allocated to the Paris gasworks, plus 1,500 tons to sundry industrial plants.

Coal to iron industry of Southern France:

During December 1943, an additional quantity of 1,890 tons of Lorraine coal was shipped to the iron industry of South Central France (Industrie Centre Midi) in order to assure deliveries to Germany ("Panzerung" program, "Hinderer" plan.)

Coal situation in France, December 1943:

The High Commander in France, von Stuelpnagel, is informed that the German authorities intend to ship 200,000 to 220,000 tons of Lorraine coal to France during January 1944, but that further help from Germany will be impossible because of the critical transportation situation. Further shipments from Belgium cannot be made because of big decrease in coal production and the critical situation of the gas and electric power plants and of the coking plants there. The improvement of the quota for French industry depends entirely on the transportation situation. 850,000 tons of coal can be delivered for the French railroads if the freight-car and barge space can be made available. By the end of December, the coal reserve of the French railroads could, therefore, be improved to last 13.5 days. But that depends on whether or not the transportation embargoes planned in the interest of the coal supply can be fully carried out.

SECRETCoal Program for January 1944:

1. The French State Railroads receive 752,000 tons of coal from new production. This corresponds to the estimated consumption for the month. The reserves are to be filled up by a delivery of 50,000 tons from mine stockpiles in Northern France.
2. Gas plants receive 230,000 tons and the electric power plants 270,000 tons.
3. For domestic fuel, 310,000 tons will be made available, including deliveries on quota backlog.
4. For the rest of industry, 274,000 tons are available, including 40,000 tons for deliveries on quota backlogs and 34,000 tons for the production of soda by Solvay (Dombasle) and other deliveries which are in the German interest. The industry quota includes 27,500 tons of coal reserved for the production of cement.

Coal and cement in France and Belgium, December, 1943:

According to information by the Plenipotentiary for Construction, the coal supplies of cement plants were practically used up.

Stocks of cement on hand at cement plants:

50,000 tons in Belgium
+8,000 tons in Northern France
+24,000 tons in the rest of France
<u>82,000 tons</u>

Supplies of cement of the Organisation Todt (OT) were estimated to be sufficient for 10 days at best. Some of the construction sites already had to be closed down. According to the cement industry and the Organisation Todt, the scarcity of cement was not due to transportation difficulties, but to the lack of coal.

Cement requirements:

Operational program of the German Armed Forces	350,000 tons
Other Armed Forces requirements	26,000 tons
Civilian requirements, including armament industries, power plants, mining, and waterways	71,000 tons
	<u>447,000 tons</u>

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The cement requirement of about 450,000 tons has to be covered by an import of 60,000 tons from Germany and new production of 390,000 tons of cement, for which about 125,000 tons of coal are needed. Plans were made to curtail the operational program by 150,000 tons of cement, reducing these requirements to 200,000 tons of cement. If Hitler would approve this curtailment, production of only 240,000 tons of cement, requiring about 75,000 to 80,000 tons of coal, would be necessary.

Coal requirements for the cement program:

For January 1944, the following coal quotas were allocated for cement production:

in Belgium	28,700 tons
in Northern France	11,000 tons
rest of France	10,000 tons
	<u>49,700 tons</u>

If the reserve of 27,500 tons of coal could have been used for this program, the total allocation of coal for cement production would have reached 77,200 tons, a quantity which would have been sufficient for the curtailed cement program. But the reserve of 27,500 tons of coal had been made available to the German High Commander for France for his industry quota. Therefore, arrangements will have to be made with him, or in case of need, the cement stockpiles of the cement plants will have to be utilized.

Lorraine coal supplies to France, March 1944:

Despite the December 1943 warning that Germany could not help out any longer by shipments of Lorraine coal, 257,000 tons were scheduled for delivery from Lorraine mines to France for the month of March. This quota was to be distributed as follows:

French railroads	122,000 tons
Gas plants	35,000 tons
Electric power plants	10,000 tons
Solvay (Dombasle)	10,000 tons
Aluminum industry	33,000 tons
Other industries	47,000 tons
	<u>257,000 tons</u>

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SECRETSoda production:

In March 1944, the raw materials office of the Reich Ministry for Armament and War Productions informs the Reich deputy for coal in the occupied areas that the reduction of the monthly coal allocation from Solvay (production of soda) is unbearable in view of the extremely critical soda supply situation in Germany and France. This plea for a quota increase for Solvay was successful as far as the scheduled quota distribution of Lorraine coal for May 1944 is concerned:

French railroads	151,000 tons from new production
	30,000 tons from stock piles
Gas plants	15,000 tons
Electric power plants	4,000 tons
Solvay	10,000 tons
Solvay	2,000 tons
Aluminum industry	33,000 tons
Other industries	8,500 tons
Powdered coal	4,500 tons
	<u>258,000 tons</u>

But the Solvay quota was later on completely cancelled, together with other quotas (s. page 14).

Coal allocation for cement production, Belgium/France, April 1944:

The central planning office in Berlin allocated in April 1944, a special quota of 30,000 tons of coal for cement production, of which 2,000 tons were delivered to the "Elsaessische Portlandzementfabrik" in Altkirchen (Alsace), and 28,000 tons were delivered to French and Belgian cement factories as follows:

Lafarge and du Teil, Limay	1,500 tons
Lambert Freres et Cie, Cormeilles	6,000 tons
Poliet et Chausson, Beaumont	2,000 tons
Ciments Francais, Couvrot (Marne)	1,500 tons
Polot et Chausson, Gargenville	8,000 tons
Lafarge et du Teil, Frangey	500 tons
Fisson et Cie, Xeuilley (M and M)	500 tons
Poliet et Chausson, Pagny sur Meuse	500 tons
Ciments Francais, Montebourg (Manche)	1,000 tons

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Poliet et Chausson, Beffes (Cher)	2,500 tons
Ciments Francais, Guerville	1,500 tons
Ciments Francais, Origny Ste. Benoite	1,500 tons
Ciments Francais, Airvault	1,000 tons

Effects of coal shortage on the iron and steel industry:

On 22 April, the special staff for the "Hinderer" plan in St. Etienne informed the High Commander for France that several iron and steel plants in the area either had to shut down operations or decrease steam pressure, because of the coal and coke shortage. The Tarascon blast furnaces had to decrease steam pressure preparatory to shutting down operations. The following operations were shut down: the sheet-rolling mill of the Marrel steel plant; the forgery of the Firminy steel plant; the three-high mill train of the Lorette plant; the intermediate rolling mill of the Assailly works; and the forgery and rolling mill of the Aubertes Duval steel works. The shut-down of the following plants was planned for the end of the month: Fumel iron works, Chasse iron works, Marrel's bar-rolling mill and Martin blast furnaces, parts of the Assailly steel plant, Bedel steel plant and the Alais steel plant. Even in February the coal shortage had its effects, as the following production statistics show:

Production February 1944:

<u>Firm name</u>	<u>Tons of pig iron</u>
Chasse	2,837
Fumel	1,588
Tarascon	1,477
	<u>5,902 tons of 12,490 tons</u> <u>capacity?</u> = 47%

<u>Firm name</u>	<u>Tons of steel pig</u>	<u>Tons of rolling mill products</u>
Marrel	2,568	1,614
Firminy	--	985
Assailly	--	1,370
Aubertes Duval	--	212
Bedel	243	--
Alais	--	--
	<u>2,811 tons of 25,539 tons</u> <u>capacity?</u> = 11%	<u>4,181 tons of 16,322 tons</u> <u>capacity?</u> = 26%

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Transportation bottleneck:

At the end of April 1944, the German raw materials office in Metz informed the German High Commander for France, mining department, that an additional quota of 10,000 tons of Lorraine coal had been set aside for the French industry of the south-central section of France ("Hinderer" - territory) and of 5,000 tons for the industry of west-central France. This quantity of 15,000 tons, which was urgently needed for important war production, could not be transported because of a transportation embargo. Intervention in favor of these transports proved to be fruitless because priority was to be given for transportation of 140,000 tons of coal from Germany for the French state railroads scheduled for May.

Coal supplies to France, May 1944:

Allocations for the month of May were set at 502,000 tons of which the French state railroads were to receive about 140,000 tons and the Paris gasworks about 60,000 tons. The following quotas which were already scheduled were cancelled: 4,000 tons for electric power plants, 33,000 tons for the aluminum industry, 15,500 tons for Solvay (Dombasle), 8,500 tons for other industries, and 4,500 tons of powdered coal.

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