17/TIV3. Movement of Coal + Coke

aL & Co ltr

10000/148/856
Jan '45
Sept '45

/elc

translation

Rome, 12.9.1945 17/24

E.N.A.C.
Direzione Generale

To the ALLIED COMMISSION
Transportation Sub-Commission
R O M E

Serv.Mov.to
Prot.N.6M/16/561/21316

SUBJECT: transports of lignite for
the Company Valdarno in Florence- and Company Mineraria d/Trasimeno

Reference is made to lettera AC/100/123/Tn 5

1.- Of request of Ufficio Autotrasporti in Florence we authorised 3 heavy trucks to carry lignite for Valdarno (temporary). Other trucks can be authorised after new request.

2.- The Mineraria del Trasimeno asked for release of 3 trucks for the transports of lignite from Pietrafitta to the railroad station Panicale. We agree to release them and asked the T.O. of Perugia either they'll provide the gasoline, because that's their business.

3.- Both transports will have to be made on basis of taxes applicated by the Transport Office in Florence and Perugia.

4.- The trucks for Florence carry all three together 60 tons. and with 2 trips daily they can transport 120 tons. The trucks for Perugia can carry 24 tons. so that 48 tons. can be transported by 2 trips daily.

THE GENERAL MANAGER
signed Eng. M.Costa

1894

F/8289
SEP 200920
OP-PRIORITY

SEP 19 NFT

AMG PLO GENOA
AFHQ COAL SECTION INFO AC HQ ACTPT

17/23

UNCLASSIFIED.

1. BUNKER fuel is urgently needed for tugs plying coastwise LIGURIA Region.

2. Essential material, coal, flour, cement can only be delivered to LA SPEZIA Via road or sea.

3. Road delivery coastly and inefficient.

4. 2000 tons flour now in GENOA for delivery to LA SPEZIA. Unable to make delivery because Major WILSON AMG LIGURIA refuses to release BUNKER coal.

5. Can 150 tons ~~BUNKER~~ BUNKER coal be made immediately available to importers group GENOA for distribution to coast wise tug operators certified by Italian Navy.

DIST

INFO_ACTION TN SC 2
INFO CHIEF COMMISSIONER
ECON SEC 2
FOOD SC 2
COAL DIV
FILE 2
FLOAT

Ralf Reed
Shipping

CPC/mb

TRANSPORTATION SUB-COMMISSION

F.O.

INTER OFFICE MEMORANDUM

11 September 1945

Tele : 478704

17/22/Tn.3.

SUBJECT : Transport of Coal by road from San Pietro in Casale or Monselice

TO : Coal Division

1. With reference to your AC/CM/104 Commerce, dated 3 Sept. '45.

2. Road transport could be made available from the points mentioned in your letter.

3. In view of the long distence hauls involved it must be pointed out that the cost of haulage would be high.

For the Director

C.F. CONSTABLE.
Major, R.E.

G1961

GFC/mb

TRANSPORTATION SUB-COMMISSION

INTER OFFICE MEMORANDUM

6 September 1945

Tele : 478704

17/21/Tn.3.

SUBJECT : Transport of Coal by Road from San Pietro in Casale or Monselice.

TO : Roads Division.

1. A movement of 500 tons of coal per month by rail to SAN PIETRO IN CASALE from Ancona or alternatively to MONSELICE from Venice is contemplated.

2. The ultimate destination from either rail head is CODIGORO (Ferrara) and the coal will have to be road hauled to that destination.

3. Please advise this office as quickly as possible that road transport can be provided to cope with this movement.

For Chief Movements Division

C.R. Worthington

for. C.R. WORTHINGTON,
Major, R.E.

2nd Indorsement
10 Sept. 1945

TRANSPORTATION SUB-COMMISSION
ROADS DIVISION

To: Movements Division (Roads)

1. Road transport will be available.

For the Director,

Gordon Franklin

GORDON S. FRANKLIN
Assistant Chief
Roads Division

HEADQUARTERS ALLIED COMMISSION
COMMERCE SUB COMMISSION
COAL DIVISION
AFO 394

17/20

FAR/bv

3 September 1945

Tel : 327

Ref : AC/CD/104/Commerce.

Subject : Transport of Coal by Road from San Pietro in Casale & Monselice.

To : Transportation Sub-Commission.

1. We have been asked to deliver 500 tons coal monthly by Rail to Codigoro (Ferrara) from Venice or Ancona for use at draining Plants in Ferrara.

2. If the coal is supplied from Ancona, the nearest Rail Station (in operation) to Codigoro is San Pietro in Casale. If the coal is drawn from Venice the nearest Rail Station (in operation) to Codigoro is Monselice.

3. Would you please inform us if you could supply Road Transport from San Pietro alternatively Monselice to Codigoro Station.

T.R. EVANS
Colonel,
Coal Division.

Padua - Monselice 8K (Prog) 5/9

0184

CFC/elc

TRANSPORTATION SUB-COMMISSION

INTER-OFFICE MEMORANDUM

25 August 1945

Tel : 478303

17/19/Tn 3

SUBJECT : Road Transport of Coke for Sugar Plant

TO : Industry Sub-Commission

1. Further to our letter 17/17/Tn 3 dated 22 Aug.

2. It is regretted that, owing to a misunderstanding this office was informed that the railway line between TERNI and RIETI was open to traffic.

3. Unfortunately this is NOT the case, and it is requested therefore that you ignore our letter on this matter, and take action in accordance with our previous letter under reference 17/16/Tn 3 dated 20 Aug.

For the Director

C.R. WORTHINGTON.
Major R.E.

1390

ACP/lml

TRANSPORTATION SUB-COMMISSION, A. C.
(Rail Division)
% TRANSPORTATION (BR) MAIN, C. M. F.

17/18

24 August 1945

Tel. 843258
Ref. AC/100/86/Tn4

SUBJECT : Road Transport of Coke for Sugar Plant.

TO : Movements Division, Rail Section.

1. Reference is to copy of your letter 17/17/Tn3 of 22 August 1945 addressed to Industry Sub-Commission.

2. The request we received from Industry Sub-Commission was in respect of section of line Pescara-Chiete and we confirmed to your Branch that this line was shown as opened and ready for operation on Priority List dated 9 August 1945.

3. We made no statement in regard to the Terni-Rieti line, and in fact we are meeting considerable difficulty in respect of the repairs of this section due to the fact that so far we have not been able to obtain essential supplies of steel. This steel is now being released, but the delay which has been caused will not permit the opening of the line before the scheduled priority date.

for Director

Copy to : Industry Sub-Commission

1889

CFC/olc

TRANSPORTATION SUB-COMMISSION

(17)

INTER-OFFICE MEMORANDUM

22 August 1945

Tel : 478704

17/17/Tn 3

SUBJECT : Road transport of Coke for Sugar plant

TO : Industry Sub-Commission

1. Reference our Letter 17/16/Tn 3 dated 20 Aug and telephone conversation today.

2. This is to confirm that the railway line between TERNI and RIETI is now open to traffic and that movement of the coke should start during the week 27 Aug - 2 Sept.

3. The firm concerned should therefore place their bid without delay to the Station Master at TERNI.

For the Director

C.R. WORTHINGTON,
Major R.E.

Copy to : Rail Division (Tn 4)
To note and ensure wagon supply for movement of 119 tons of coke from TERNI to RIETI.

1888

CFG/elc

TRANSPORTATION SUB-COMMISSION

INTER-OFFICE MEMORANDUM

Tel: 478704 20 August 1945

17/16/Tn 3

SUBJECT : Road Transport of Coke for Sugar Plant

TO : Industry Sub-Commission

Reference your letter AC/5582/IND dated 16 Aug.

1. It is agreed that this movement should take place with the least possible delay, but as there is no rail communication, it will be necessary to transport by road.

2. In this connection the EMAC tariff would normally apply, but Appendix 'B', para (d) (iii) to the official EMAC tariff provides for special rates to be established for transportation in bulk, such rates to be agreed by provincial or compartmental directors of EMAC with the parties concerned.

3. It is recommended, therefore, that the firm concerned make immediate application to the compartmental director of EMAC in KIETI (the nearest to TEZNI) for a specially reduced tariff to operate for this movement.

4. If any difficulty is encountered please advise this office.

For the Director

C.R. WORTHINGTON,
Major R.E.

Copy to : Roads Division

1887

Tel. 468

Ref. AC/5582/IND

LM/as

16 August 45

SUBJECT : Road Transport of Coke for Sugar Plant.

TO : Transportation Sub-Commission (Attn.: Roads Division).

FROM : Industry Sub-Commission.

1. The sugar plant belonging to the Societa' Italiana Industria degli Zuccheri and located at Rieti (Rieti) is scheduled to commence operations shortly.

2. A good deal of work has been done to prepare this formerly requisitioned and badly sabotaged plant for operation this season.

3. Among its requirements is coke and which has been procured from the United States. Unfortunately the rail-line between Terni and Rieti is still not in operation and the 119 tons of coke is stock-piled at Terni. The cost of shipment by EMAC is prohibitive.

4. It is kindly requested that your office investigate the possibility of having this 119 tons of coke road-hauled. If the coke does not arrive at the plant shortly all the work put into the reactivation of this sugar-beet processing plant will be lost for this year.

5. The following details are pertinent;

Tonnage of Coke	:	119
Location of stock-pile	:	Terni
To be shipped to	:	Soc. Ital. Industrie degli Zuccheri
Location	:	Rieti (Rieti)
When required	:	Immediately.

6. The need for sugar and molasses is great and your kind intervention in the immediate movement of the coke by road is required.

LOUIS MEHR, 1st Lt. A.C.

1886

for SIDNEY LAND
Acting Director,
Industry Sub-Commission.

Copy to:
Economic Section
Food S/C.

CSG/m1

File 14

HEADQUARTERS ALLIED COMMISSION
AFO 394
Transportation Sub Commission

Tel.478303

26 June 43

Ref : AC/17/14/Tn.3

SUBJECT : Coke.

TO : Lt.Col. Giles.J.A.N.
c/o Town Major
FLORENCE

1. A request has been received from Coal Division, Commerce Sub Commission, for the movement of 15000 tons of coke from

APUANIA Works
MONTECATINI Plant
Near MASSA (MR.P.9102)

to either MARINA DI MASSA (MR.U.880985) or MARINA DI CARRARA (MR.P.835023) for shipment. (Sheet 11, ITALY, 1/ 200,000).

2. A recce of the two ports is now being carried out and information is required concerning road facilities available for movement to these ports and condition of roads concerned.

3. Your early reply will be appreciated.

For the Director :

for C.N.CHRISTENSEN
Lt.Col.

Copy to : Commerce S/C(Coal Div)
Mov.Div. Rail
" " Shipping.

1885

17/13

RSC/ag

Mgl. 478090

Ref. AC/5605/IND.

31 May 1945

SUBJECT : Transfer of Lignite from Baccinello (prov. of Grosseto) to Rosignano - Solvay.

TO : Transportation Sub-Commission
(Attn.: Movement Division - Road -
Major Hait-Gardner)

FROM : Industry Sub-Commission.

1. Reference is made to your letter AC/17/12/Tn.3, dated 17 May 1945.

2. As the transportation cost of lignite by motor-trucks from the Baccinello mine to Rosignano (distance 132 kms.) would be approximately 4,000 lire per ton, this expense is to be considered prohibitive. (For your information the price of lignite delivered at the Solvay plant should not exceed 2,500 lire per ton).

W. J. MASKREY
Lt. Colonel,
Acting Director,
Industry Sub-Commission

Copy to :

Commerce Sub-Commission
(Attn.: Coal Division -
Col. Evens)
Mining Division
(Attn.: Capt. Kingery)
Economic Section

1884

CNC/fd

Tele : 478303 HEADQUARTERS ALLIED COMMISSION
APO 394
Transportation Sub-Commission

17 May 1945

Our ref.: AC/17/12/Tn 3

SUBJECT : Transfer of Lignite from Baccinello (Prov. of Grosseto) to Rosignano.

TO : Industry Sub-Commission

1. With further reference your AC/5605/IND of 13 April 45 and my 331/24/Tn 3 of 28 April 45.

2. This confirms conversation 16 May 1945 when it was stated that 3,000 Tons Lignite is still available at Baccinello and required at Rosignano.

3. There is every possibility that this movement can be accomplished by road transport direct from Mine to Rosignano commencing probably towards the end of this month.

4. Please submit bid in quadruplicate to Movements Division - Road Branch.
Five copies of Bid form are enclosed.

For the Director:

C.N. CHRISTENSEN
Lt. Colonel

1883

030/gmh.

HEADQUARTERS ALLIED COMMISSION.
APO 394.
Transportation Sub Commission.

Tele : 476303.

Our Ref : AC/17/10/Tn3. 24 April 45.

SUBJECT : Movement of Lignite.

To : Industry Sub Commission.

1. Reference is made to your AC/9605/IND dated 13 April 45 and to various conversations on the subject of transferring 3000 tons Lignite from BAGNOREGIO to ROSIGNANO.

2. This movement has been studied and could be carried out by road between BAGNOREGIO and GROSSETO and by rail from GROSSETO to ROSIGNANO.

3. The movement necessitates stockpiling the Lignite at GROSSETO. It is understood that you are investigating facilities at, or near GROSSETO Station and will communicate with this Sub Commission again in due course.

For the Director:

C.N.CHRISTENSEN.
Lt Col. R.E.

Copy to: Movements Division - Rail Branch.
Roads Division.

17/9

D/8175
APR 201445
ROUTINE

AIR

TO: IV TOSCANA REGION AMG

AICOM ROME

IN CLEAR (8)

Your 5439 road from mine to railhead not hard surfaced several detours very hilly. Distance roughly 20 miles. Military trucks only possible transport and could probably complete 2 trips per 12 hour day. No civilian or military trucks available

DIST

ACTION TN SC (2)
INFO A/PRESIDENT
CHIEF COMMISSIONER
ECON SEC
INDUSTRY SC (2)
FILE (2)
FLOAT

(175)

Copy passed to Lt Col Farmborough

Mr S Gardner is confirming in writing to Industry S/C his conversation when they informed him lot to be ... (a) ... (b) Permission from RAFK stack at Station

1881182

0194

FILE 17/8.

REGIONAL COMMISSIONER TOSCANA REGION

5439 15 APRIL 45 PRIORITY

[illegible]

RESTRICTED PD

PARA ONE PD INDUSTRY SUB COMMISSION STATE THREE ZERO ZERO ZERO TONS LIGNITE AT BACCINELLO MINE PAREN MAP REFERENCE EASY SEVEN NINE SIX NINE PAREN TO BE MOVED BY ROAD TRUCK TO GROSSETO STATION FOR RAIL TPT TO ROSSIGNANO WITHIN THREE ZERO DAYS PD

PAREN TO REGIONAL COMMISSIONER TOSCANA REGION FOR ACTION FROM HQ AICOM CITE ACTPT PAREN

PARA TWO SIGNAL URGENTLY THIS HEADQUARTERS PAREN ABLE PAREN CONFIRMATION TONNAGE AVAILABLE PAREN BAKER PAREN CONDITION OF ROAD GROSSETO TO MINE AND DISTANCE PAREN CHARLIE PAREN TONNAGE YOU CAN MOVE PAREN STATING PERIOD PAREN WITHOUT DISTURBING EXISTING PRIORITY PR GGRANNES PD

COPY TO : INDUSTRY SUB COMM
ROAD DIVISION
MOVEMENTS RAIL

TRANSPORTATION SC

JSO

1880

NICHOLAS PIOMBINO
CWO U.S.A.
Asst. Adjutant

17/7

RSO/mm

Tel. 478090

Ref. AC/5605/IND.

13 April 1945

SUBJECT : Transfer of Lignite from Baccinello (Prov. of Grosseto) to Rosignano.

TO : Transportation Sub-Commission ✓
Movements Division
Road Branch
(Attn.: Maj. Stait-Gardner)

FROM : Industry Sub-Commission.

1. The lignite mine of Baccinello (approx. 20 kms. east of Grosseto) is scheduled to be reopened as soon as 3000 tons of lignite in stock at the mine are removed.

2. The above lignite has been allocated by Coal Division to the Solvay Plant in Rosignano.

3. It is requested therefore that the above quantity of 3000 tons lignite be transported to Rosignano possibly within 30 days.

[signature] Lt.Col.
for W. S. VAUGHAN,
Director,
Industry Sub-Commission.

Copy to:-
Transportation S/C
Movements Division
Transportation S/C
(Attn. : Rail Division-
- Maj. Worthington)
Economic Section

Folio ?

(112) See Signal 5439 15 April

1 - 6 May
~~4/ 21~~

carried [illegible]
Rail 1000 T

1879

8172.

ALLIED [redacted] COMMISSION (6)

INTER-OFFICE MEMORANDUM

SUBJECT: Coal - Solvay Soda Works FILE No. AC/17/6/TN3

TO : Road Division (6) 31-MAR 1944

1/ Ref this HQ AC/17/TN3 dated 9th March 44
Rail Branch have now informed this Branch that Railway Bridge over River Fine has now been repaired and normal working will commence as from 1st April 44

2. From information received there are at present 35 Railway Trucks under load at Vada Station ~~[illegible]~~ to be delivered direct and Road vehicles scheduled for this work can now be cancelled

3 Will you please forward particulars to this HQ of what has moved together with an explanation as to why these wagons were allowed to accumulate

1878

A.H. Scott Capt
MOVEMENTS DIV. RAIL BRANCH

ALLIED [redacted] COMMISSION

INTER-OFFICE MEMORANDUM

(5)

SUBJECT: Coal - Solvay Soda Works. FILE No. AC/17/TN 3

TO : TN. S C. Roads Division. 9 May 1945.

1 Pending repairs to Railway Bridge over River Fine the Coal consigned by rail to Solvay Soda Works will continue by rail at VADA station for transhipment and delivery by road to the works at ROSIGNANO - SOLVAY.

Bridge should be repaired and direct rail delivery commence about 31 May 45.

Tonnage (approx). 300 Tons per day. 1877

Commencing (approx) 17 May 45

Finishing (approx) 31 May 45

DISTANCE 5 Kms.

2 Please confirm this and Tonnage can be made available.

[redacted]
Lieutenant Colonel
MOVEMENTS DIVISION - ROAD BRANCH.

Reduced to 100 Tons per day.
1st lot to arrive 19 Mar 45.
Roads Dw. informed

OOD

/hl

To AQMG(M).
Roads Section.

(4)

MOVEMENT OF COAL FROM LEGHORN to ROSIGNANO.

1. A request has been received for the movement of 8000 tons of coal per month from LEGHORN to ROSIGNANO, for use in the SOLVAY SODA WORKS. Movement to begin in February 1945.

2. METHOD OF MOVEMENT.

During February coal would be railed to ROSIGNANO Station - hauled by road from the station to the Soda Works. From 1 March it will be possible to rail direct to the Works.

3. The road haul would require 16 X 3 ton trucks working on 12 hr. shifts or 8 X 3 ton trucks working on 24 hr. shifts.

4. REASON FOR ABOVE MOVEMENT. (3)

(1) A.F.H.Q. letter Ref.C.54 dated 19 Jan.45; directs that "Energetic action should be taken to ensure plant is put into production at an early date". (copy of letter attached at Flag 'A')
(2) Plant cannot be activated unless coal is supplied.

5. IMPORTANCE OF THE SODA SOLVAY WORKS.

In pre-war days, this plant produced 15000 tons of Caustic Soda and 15000 tons of Soda Ash per month, the major part of Italy's requirements. At the present time these commodities are being imported from U.K. and U.S.A. in both of which countries they are in short supply. The reactivation of the SOLVAY Plant will render it unnecessary to continue importing. It is estimated that by the 1 March, the plant will be producing 3000 tons of Caustic Soda and 3000 tons of Soda Ash per month. Apart from releasing shipping, the output of this plant will make possible increased production of other commodities which are either being imported or non-existent and vitally needed. Both Caustic Soda and Soda Ash are essential for the activation of other industries [illegible] Paper, Textiles, Pharmaceutic and various

hauled by road from the station to the Soda Works. From 1 March it will be possible to rail direct to the Works.

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6. COKE

From report at Flags 'B' and 'C' it will be seen that Coke is also required for the operation of the plant. Stocks now held are sufficient for 6 weeks. Requirements from 1 March will be 1500 tons per month, but NO road transport is called for as by that time deliveries by rail will be possible direct to the plant.

7. Trucks to meet requirements shown in para 3 above, could be made available by 1 Truck Dr.

8. Personnel for unloading trains will be found from staff at the plant. It is estimated that 100 men daily should be asked for in order to ensure that neither trains nor trucks should be delayed.

9. Co-ordinated with Industry Sub-Commission.

Capt Eduss
maj.

1 Feb. 45.

1875

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8. Personnel for unloading trains will be found from staff at the plant. It is estimated that 100 men daily should be asked for in order to ensure that neither trains nor trucks should be delayed.

9. Co-ordinated with Industry Sub-Commission.

maj.

1 Feb. 45.

1875

CONFIDENTIAL

COPY

(3)

ALLIED FORCE HEADQUARTERS
G-5 Section
APO 512

Ref. G-54 19 January 1945

SUBJECT: Solvay Soda Works, Rosignano

TO : Headquarters, Allied Commission, APO 394
(Attn: Economic Section)

1. It is desired to bring to your attention the fact that letter AC/5605/IND of 29 December was favourably considered by this H.Q. and that P.B.S. have been instructed not to requisition the Solvay Soda Works at Rosignano. See H.Q. MTOUSA 1st Ind. to P.B.S. dated 3 January, reference AG 004/036 ENGRS - O, copy to you.

2. As indicated by the a/q endorsement, it is considered of vital importance that energetic action be taken to ensure the plant is put into production at an early date.

3. It is requested that this Section be kept informed of the status of reactivation.

For the Acting Assistant Chief of Staff, G-5:

/s/ J.E. Butterworth
/t/ J.E. BUTTERWORTH
Colonel, G.S.C.
Chief, Economics & Supply Div.

Copy to: G-4

1871

1873

MEETING AT A.F.H.Q. - CASERTA

Progress-report on the Solvay plant

Submitted by Dr.R.S.Opatowski - INDUSTRY SUB-COMMISSION AC-HQ - 1 Febr.45

1. Dr.Opatowski was requested by Capt.Grady A.F.H.Q. G-5 Section to call at Caserta and attend a combined meeting with a representative of G-4 Section. Subject: Solvay plant. The writer was particularly requested to give a detailed picture as to the importance of the end products (caustic soda and sodium carbonate) for the Italian essential needs as well as to inform A.F.H.Q. as to the rehabilitation work at the Rosignano plant.

2. The meeting took place on 16 January. Attending: Major Pierson, G-4 Section; Capt.Grady, G-5 Section; Dr.Opatowski, Industry Sub-Commission.

3. The main points raised were as follows:

a) Production scheduled monthly:

3,000 tons sodium carbonate
3,000 tons caustic soda

In normal time the plant produced 15,000 tons sodium carbonate and 15,000 tons caustic soda and sodium bicarbonate per month. Owing to the design of the plant, for technical reasons it is not possible either to operate it on a smaller scale than the scheduled one or to change the proportion of both products. The plant was hit by 60 bombs, but all necessary repairs have been already made and the plant is at present in working order.

b) Monthly requirements of sodium carbonate for civilian use:

Cleaning purposes - for 25 million population on the basis of 100 grams per capita	2,500 tons
Glass industry	315 "
Pharmaceuticals	40 "
Textiles	50 "
Paper industry	10 "
Softening of water in industrial plants	50 "
Various chemical industries	75 "
	3,040 tons

c) Monthly requirements of caustic soda for civilian use:

Soap production and direct use for cleaning purposes - for 25 million population on a basis of 40 grams per capita .....

sodium carbonate) for the Italian essential needs as well as to inform A.F.H.Q. as to the rehabilitation work at the Rosignano plant.

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b) Monthly requirements of sodium carbonate for civilian use:

Cleaning purposes - for 25 million population on the basis of 100 grams per capita	2,500 tons
Glass industry	315 "
Pharmaceuticals	40 "
Textiles	50 "
Paper industry	10 "
Softening of water in industrial plants	50 "
Various chemical industries	75 "
	3,040 tons

c) Monthly requirements of caustic soda for civilian use:

Soap production and direct use for cleaning purposes - for 25 million population on a basis of 40 grams per capita	1,000 tons
Olive oil refining	250 "
Textiles	30 "
Various chemical industries	20 "
Disinfectants (hypochlorite solution)	110 "
	1,410 tons

d) Salt mines

Salt which is required in the Soda Solvay process is supplied from two salt mines (Querceto and Buriano) owned by the Solvay Coy. Water is pumped beneath the surface of the earth in order to dissolve the salt. The salt solution is then pumped through 2 cast-iron pipelines (400 and 450 mm diameter) to the plant over a distance of 30 to 40 Kms. The pipelines have been broken in many places. Particularly heavy damage occured at crossing points with rivers; here the pipelines were blown up. One pipeline has been completely repaired and is at present in working condition. (24 major and 45 minor repairs have been done). Its capacity is large enough to ensure the scheduled production.

e) Pumping stations

The stations for pumping the brine are repaired and in working order.

f) Testing of the pipeline

For testing of the pipeline under pressure 35 KW electric power were required at the salt mines. This power has been allocated.

g) Transportation

Bearing in mind the necessity of movement of huge quantities of materials (8,000 tons coal, 1,500 tons coke, 15,000 tons limestone and 6,000 tons finished products per month) particular attention was devoted to transportation problems.

h) Railroad Vada - Rosignano and bridge on the Fine river

The connection of the plant by rail with the railroad Rome-Leghorn was interrupted due to damage by enemy action. The main line Rome-Leghorn has been repaired by the military as far as the station of Vada (prov. Leghorn). Between Vada and Rosignano-Solvay (distance approximately 5 Kms.) the tracks were heavily damaged; a 30 meter span bridge had been blown up.
On the initiative of this Sub-Commission and in cooperation with Transportation Sub-Commission arrangements have been made with the Italian State Railways to repair the tracks and the bridge. Many difficulties have been experienced in carrying through these works. Owing to technical difficulties at the site (flooding of the river; difficulties and delay in travel for the contractor and his technicians from Lucca - still in Army area - to Leghorn province; etc.). Main concern was the rebuilding of the 30 meter span bridge.
However, at present the situation can be considered satisfactory. The track between the Rosignano plant and the bridge has already been repaired. The track located between Vada-station and the bridge is in an advanced state of repair and is estimated will be completed by 10 Febr.
The problem of the bridge has been solved satisfactorily only a few days ago with the assistance of the Directorate of Military Railway Service who have released parts for a 30 meters span. These will be made available on 1 Febr.
The transportation, reassembling and putting into working order of the span should occupy until 25 February.

The stations for pumping the brine are repaired and in working order.

f) Testing of the pipeline

For testing of the pipeline under pressure 35 KW electric power were required at the salt mines. This power has been allocated.

g) Transportation

Bearing in mind the necessity of movement of huge quantities of materials (3,000 tons coal, 1,500 tons coke, 15,000 tons limestone and 6,000 tons finished products per month) particular attention was devoted to transportation problems.

h) Railroad Vada - Rosignano and bridge on the Fine river

The connection of the plant by rail with the railroad Rome-Leghorn was interrupted due to damage by enemy action. The main line Rome-Leghorn has been repaired by the military as far as the station of Vada (prov. Leghorn). Between Vada and Rosignano-Solvay (distance approximately 5 Kms.) the tracks were heavily damaged; a 30 meter span bridge had been blown up.
On the initiative of this Sub-Commission and in cooperation with Transportation Sub-Commission arrangements have been made with the Italian State Railways to repair the tracks and the bridge. Many difficulties have been experienced in carrying through these works. Owing to technical difficulties at the site (flooding of the river; difficulties and delay in travel for the contractor and his technicians from Lucca - still in Army area - to Leghorn province; etc.). Main concern was the rebuilding of the 30 meter span bridge.
However, at present the situation can be considered satisfactory. The track between the Rosignano plant and the bridge has already been repaired. The track located between Vada-station and the bridge is in an advanced state of repair and is estimated will be completed by 10 Febr.
The problem of the bridge has been solved satisfactorily only a few days ago with the assistance of the Directorate of Military Railway Service who have released parts for a 30 meters span. These will be made available on 1 Febr.
The transportation, reassembling and putting into working order of the span should occupy until 25 February.

i) Railroad Piombino - Stazione di Campiglia

In order to ensure regular supplies to the plant and in view of the heavy military traffic at the port of Leghorn it was considered prudent to schedule other ports than Leghorn for unloading raw materials for the Solvay plant. The port of Piombino (prov. of Leghorn) was found suitable for the purpose.
Unfortunately the railtracks between Piombino and Campiglia were heavily damaged by the enemy.

Therefore this Sub-Commission, enlisted the aid of Transportation Sub-Commission and the railroad is in course of repair. Arrangements were also made with the Military at Campiglia for changing some switches and tracks at the station. The whole is scheduled to be in working order by 15 March 45.

j) Solvay wharf and narrow gauge track

Further consideration was given to facilitating sea transportation by the use of a wharf and a narrow gauge railway linking the wharf to the Solvay plant, both belonging to the Company. The wharf, blown up by the enemy, is in course of repair and is estimated to be ready by 15 March. The narrow gauge track is also under repair and should be in working order by 1 March 45.
For the above purpose a permit was obtained from the Provost Marshal PBS - Leghorn, as the repairs effect a by-pass road on "Route 1".

k) Ammonia

Ammonia is used in the Solvay process. As there is no production of this material at present in liberated Italy, technical adaptations were made to the Solvay's plant equipment to enable ammonium sulphate to be used in place of ammonia. A 3 months' supply of ammonium sulphate has been secured and arrangements are in course for the transfer of this material to the Solvay plant.

l) Limestone

A 2 months' supply of limestone is available at the plant. The quarry at San Vincenzo (prov.Leghorn) owned by the Company is in working order and can easily produce the required quantity of limestone as soon as 300 KW electric power be supplied.

m) Coal and coke

Bids for coal and coke as well as all technical details in this respect have been supplied to the Coal Division of this Sub-Commission. The matter has been taken up with AFHQ Coal-, G-4 and G-5 Sections. At present there is no coal available at the Solvay plant, the previously existing stock of 8,000 tons (1 month's supply) having been used by PBS for production of electric power in Leghorn province. The quantity of coke available at the plant is sufficient for 6 to 8 weeks' operation.

n) Electric power

The power for operating the plant (approximately 1,500 KW) will be produced during the process by recovering steam heat. (This power requirement does not affect the 3,000 KW, produced at present for PBS, using the steam generators of the Solvay plant).
In addition to the above 1,500 KW approximately 500 Kw are required from the grid:

200 KW to operate the salt mines (at Ponte Ginori, Querceto and Buriano)
300 KW to operate the limestone quarry at San Vincenzo.

A problem still to be solved is the return to the Company of 500 KW of

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300 KW to operate the limestone quarry at San Vincenzo.

A problem still to be solved is the return to the Company of 500 KW of power from the 3,000 KW which is supplied by the Solvay to the grid. At the last meeting of AFLRS - Electric Power Committee the matter was raised by the Director of Industry Sub-Commission and a preliminary agreement was reached on the subject of 200 KW required for the salt mines.
Bids have been put in through proper channels and it is anticipated that the required power will be granted at the next meeting of the Electric Power Committee on 21 February 45.

CONCLUSIONS

1. The supply of materials (i.e. cement, ammonium sulphate, coal, P.O.L. and spares for the pipelines), of electric power, the arrangements with local military authorities, etc. and in general the coordination, control and planning with regard to the above complex work, are being carried out, even in minute details, by this Sub-Commission in cooperation with the management of the Solvay Company and with Transportation Sub-Commission with regard to transportation problems.
The general manager of the Solvay Coy Eng. Van Caubergh - a Belgian national - is very cooperative, honest in his dealings and a first class technician. The other technicians as well as the skilled and unskilled labour supplied by Solvay are also of high quality and no delay on their part has hindered the work of rehabilitation.
Much delay arose from apparently insignificant causes, i.e. difficulties in arranging movements of civilians in Army areas and from Army areas to Rome (Rosignano is still north of the Rear Army control line) and it happened that decisions which in normal times could have been taken by phone were delayed for at least a week as a result of difficulties experienced by the management of Solvay and various contractors in getting in touch with Industry Sub-Commission.

2. In spite of all difficulties it can be stated on the basis of data in hand that the plant, the salt mines, the pipeline, the bridge and the rail connection of the Solvay plant will be ready for operation by the end of February 45 or at the beginning of March 45.

3. No difficulties are anticipated in obtaining 200 KW of power by 1 March from the grid for the purpose of operating the salt mines, but it is not yet certain that 300 KW for the quarry can be supplied at the same date. (Fortunately delay in obtaining power for the quarry will not prevent the starting of the plant).

4. With regard to the coal supply it is understood from AFHQ - Coal Section through Coal Division, this Sub-Commission, coal can be provided to the extent that it can be discharged at port of arrival, transported and received by the Solvay plant. Nothing however can be stated with certitude for the future for continuing supplies.
A precise statement on the future coal situation would be highly desirable. The question will be again discussed when transportation means to the plant are available. It is, however, noted that AFHQ - Coal Section realises the importance of the plant and raises no objection to the supply of Solvay coal requirements.

5. Plans are being made to secure raw materials for an additional 6 months' requirements (1 May - 1 November 45).

6. Transportation and distribution of the end product are problems under study. It is planned to have regular weekly transports by rail from Rosignano to main depots in Rome, Naples and Bari.

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Original ~~passed~~ (sent) to the Economic Section (for the att. Mr. Harlan Cleveland) 21 Jan 45

(1)

HEADQUARTERS
ALLIED CONTROL COMMISSION
INDUSTRY SUB-COMMISSION
APO 394

WEM/ejc

5 August 1944

SUBJECT: REPORT ON SOLVAY SODA WORKS, ROSIGNANO (LIVORNO)

Submitted by Major W.E. Myrans

X 1. This plant is the largest and most fully integrated works for the production of caustic soda, soda ash and sodium bicarbonate in all of Italy. The plant is wholly owned by the Belgian Solvay Co. and its director is a Belgian national, Mon. G. Van Canbergh. He is an engineer and administrator of high quality and attends all Solvay interests in Italy, e.g., Societa' Chimica dell'Aniene and also the Solvay plant at Monfalcone.

It is possible to derive an impression of the importance of the Solvay works in Italian economy by noting that this plant, together with a much smaller one at Monfalcone (Trieste) accounted for 80% of all caustic soda production and almost all soda ash and sodium bicarbonate produced in Italy.

The products of this plant are essential to any plan for the reactivation of Italian industry. The synthetic textile industry (e.g. rayon and fiocco) alone consumed 80% of all the caustic soda produced in Italy, and the paper, chemical, glass, aluminium, soap and food processing industries may also be listed as vitally dependent upon large and continuous supplies of caustic soda and soda ash for their operations.

1869

At present there is no guard at the plant. Q

This plant at present is under guard by the 338 U.S. Engineer Regiment, Company E, under Captain Moorehead.

2. The works at Rosignano suffered no German demolitions ~~and~~ but only ~~damage~~ damage from Allied aerial bombing(x). Given essential raw materials, the plant itself is ready to resume production at relatively short notice. However, several collateral difficulties exist which make production improbable for at least four months.

a. Several railroad bridges connecting Rosignano with S. Vincenzo, the source of limestone, have been destroyed. An estimate of three to four months for the reconstruction of these bridges has

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It is possible to derive an impression of the importance of the Solvay works in Italian economy by noting that this plant, together with a much smaller one at Monfalcone (Trieste) accounted for 60% of all caustic soda production and almost all soda ash and sodium bicarbonate produced in Italy.

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2. The works at Rosignano suffered no German demolitions but only damage from Allied aerial bombing.(x) Given essential raw materials, the plant itself is ready to resume production at relatively short notice. However, several collateral difficulties exist which make production improbable for at least four months.

a. Several railroad bridges connecting Rosignano with S. Vincenzo, the source of limestone, have been destroyed. An estimate of three to four months for the reconstruction of these bridges has been advanced, but the rapidity with which this essential railway service can be restored will depend largely upon the aid and cooperation afforded by the military.

Normally, the quarries at S. Vincenzo supplied plant requirements of 2.000 m. tons of limestone per day. Present plans for restoration of production require a

(x) — 60 bombs

daily minimum, continuous supply of 500 m. tons of limestone. 36 good 40 ton rail cars for limestone transportation are available, but there appears to be a shortage of locomotives for hauling them. Explosives for the mines at S. Vincenzo are adequate for several months of operation. About 200 KW of electric power, needed at the quarries, came formerly from Larderello.

b. Two cast iron pipe lines, respectively 25 and 39 Km. in length and 350 and 400 mm. in diameter, connect Rosigna no and Ponte Ginori, where some 80 salt wells supply the brine needed for the process. About 1.6 Km of these pipe lines have been badly damaged or destroyed, especially at points where the pipes cross rivers and ravines on 10 to 12 demolished highway bridges. Further, there is extensive damage to the electrically-driven pumping units which move the brine to Rosignano. Normally, about 116,000 cu.m. of saturated brine solution was sent to Rosignano per month. The life expectancy of these salt beds is stated to be many years.

Stocks of cast iron pipe adequate to effect at least temporary repairs are reported to be available to the company, and it is believed that sufficient pumping units can be reassembled by a cannibalization program to ensure a continuous flow of brine to Rosignano in amount required by the reduced program set forth below.

(No assistance has been given in this respect by the military last to-day Electric pipe line is required and in working order). Of

About three to four months are deemed necessary for this repair program, but the time will depend very much upon aid and cooperation by the military as regards the repair of highway bridges, supply of motor transport during pipe line repair, and freedom from requisitions which may disperse the necessary pipe, valves and fittings.

c. Electric power: Sufficient electric power can be generated in modern equipment at Rosignano from Sardinian coal to meet all needs of that plant. However, 200 KW of electric power must be made available at Ponte Ginori for brine pumping (and 200 KW at the S. Vincenzo quarries). The provision of that power, formerly derived from Larderello, has been studied and it is expected that it will become available when the plant is ready to resume operations.

d. One ton of ammonia per day must be provided for continuous production of caustic soda and soda ash. This

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(No assistance has been given in this respect by the military but to-day the pipe-line is repaired and in working order). [initials]

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d. One ton of ammonia per day must be provided for continuous production of caustic soda and soda ash. This material is critically short and only enough exists in stock at the plant to ensure operation on a minimum program for 35 days. Ammonia was formerly procured from the Terni group works at Nera Montoro, and it is hoped that a resumption of production at that plant in some five to six months when electric power again becomes available will ensure a continuous supply of ammonia. In the meantime, it is proposed to meet this deficiency by

(Ammonium sulphate has been secured for additional 3 months' production.
7)

supplying 4 tons of ammonium sulfate per day.

These figures are to blow. per month
the requirements are:
8000 tons Sardinian coal
&
1500 tons coke

c. Coal requirements for a minimum program are given at 210 tons Sardinian (or 150 tons imported steam coal) and 40 tons of good coke per day. Requisitions for coal and coke are in the course of preparation. The coke is an essential in producing the necessary burnt lime and carbon dioxide, and no other material may serve as a substitute.

3. Average prewar monthly production for the three products of this works was:

Soda Ash	10,000	m. tons
Caustic Soda	8,000	" "
Sodium Bicarbonate	900	" "

During the year 1943, production was reduced considerably, wherein the able Belgian manager on the scene employed many devices to achieve a general plant slowdown with a view to minimizing the production that might become available to the Germans. In January 1944, the plant finally suspended all operations and has remained idle ever since. War damage is estimated by the management at about 10-15% of the value of the plant and is confined largely to the pipe lines, power lines, steam boilers, chimney and the like and all deemed repairable without importations from abroad.

1868

4. Management and Labor: The management of this works is of the highest quality and may be depended upon to carry forward needed repairs and return the plant to operation with the minimum of outside assistance and delay.

Normally the plant employed 2500/3000 workmen and about 250 office and administrative personnel. A modern village, replete with schools for workers' children and vocational shools for present and potential workers, churches, hospital, shops for community needs, etc., has been built by the company proximate to the works, and though now considerably damaged, stands as a model of cleanliness and order in sharp contrast to workers' villages so common elsewhere.

5. Initial program of production: As soon as repairs to the brine pipe line and the railway for limestone can be completed, an initial reduced program of production will be started.
Subsequently, the production will be expanded [illegible]

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5. Initial program of production: As soon as repairs to the brine pipe line and the railway for limestone can be completed, an initial reduced program of production will be started.

Subsequently, the production will be expanded as fast as coal, coke and ammonia can be made available. This program will result in a daily production of

This is the programme scheduled at present. → a. 100 m. tons of soda ash and
100 m. tons of fused 98/99% caustic soda

or

This is not the scheduled programme. → [b. alternatively, if the caustic soda need is more urgent than that for soda ash, 175 m. tons of caustic soda]

For program (b) there is required:

(1) 35/40 tons of high grade metallurgical coke per day. On hand is enough to permit ~~30 days~~ 6 weeks of continuous operation.

(2) Also required is 1 m. ton of ammonia per day. On hand is enough to permit operation for ~~25~~ 30 days. Ammonia for further operations will be supplied through 4 tons daily of ammonia sulfate.

(3) Coal 250/300 tons daily, with some 3000 tons on hand.

(4) Limestone 510 tons daily.

(5) Sheet steel (black plate) for caustic soda drums.

none of the coal is available, all having been used by PBS for producing electric power in the Leghorn province.

6. Stocks on Hand:

A. Raw Materials:

(1) Coal	~~3000~~ none	m. tons
(2) Metallurgical Coke	~~3000~~ 2000	" "
(3) Brine	10000	cu "
(4) Limestone	30000	" "
(5) Ammonia	~~35~~ 30	" "
(6) Paper bags for soda ash	1500	" "
(7) Black plate for caustic soda drums	200	" "

B. Finished Products:

(1) Soda Ash (in silos) approx.	~~1500~~ (a part was released)	100 tons
(2) Caustic soda	~~2350~~ (450)	" "
(3) Sodium Bicarbonate	~~90~~ (70)	"

N.B. It is important to note that 100 tons of soda ash must remain at the works to permit the plant to be restarted.

and the 70 tons sodium bicarbonate

C. [The 3000 m. tons of coal listed in A (1) above are now being consumed to produce emergency power for Livorno and that general area. At the present rate of consumption, it will be exhausted early in October.] → (Unfortunately it is exhausted)

7. Essential Plant Components:

(1) Excellent coal, coke and limestone handling equipment and all in good condition.

(2) 12 lime kilns, each processing 250/300 m. tons of limestone per day and yielding 150/180 tons of burnt lime. Two of those kilns will be required for initial program set forth in 5a. above.

(4) Limestone 310 tons daily.
(5) Sheet steel (block plate) for caustic soda drums.

6. Stocks on Hand:

A. Raw Materials:

(1) Coal	~~3000~~ none	m. tons
(2) Metallurgical Coke	2000 ← ~~3000~~	" "
(3) Brine	10000	cu "
(4) Limestone	30000	" "
(5) Ammonia	30 ← ~~35~~	" "
(6) Paper bags for soda ash	1500	" "
(7) Block plate for caustic soda drums	200	" "

B. Finished Products:

(1) Soda Ash (in silos) approx.	(a part was released) ← ~~1500~~ 500 tons	" "
(2) Caustic soda	(450) ← ~~250~~	"
(3) Sodium Bicarbonate	(70) ← ~~20~~	"

N.B. It is important to note that 100 tons of soda ash and the 70 tons sodium bicarbonate must remain at the works to permit the plant to be restarted.

C. [The 8000 m. tons of coal listed in A (1) above are now being consumed to produce emergency power for Livorno and that general area. At the present rate of consumption, it will be exhausted early in October.] → (Unfortunately it is exhausted)

7. Essential Plant Components:

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(2) 12 lime kilns, each processing 250/300 m. tons of limestone per day and yielding 150/180 tons of burnt lime. Two of these kilns will be required for initial program set forth in 5a. above.
(3) Power Plant

a. 6 Brede boilers at 38 atmos. and 20 tons steam per hour designed for Sardinian coal.

b. 2 B&W boilers at 18/20 atmos. and 15 tons steam per hour for Sardinian coal. One of these is damaged by a bomb hit.

c. 3 boilers 9/12 atmos. and 5/7 tons steam per hour. One is completely destroyed by a bomb hit and 2 are damaged but repairable.

d. A 100 m. chimney was destroyed by a bomb and is being rebuilt.

e. 3 high pressure Escher Wyss-Brown Boveri (Swiss) turbo alternators, one of which is badly damaged.

2000 KW, 220 V, 50 cycle - damaged
3000 " 6000 ", " " - good
3000 " 6000 ", " " - good

These turbines receive steam at 36/38 atmospheres and discharge steam at 9 atmospheres for plant heat processing. Also, there are two smaller low pressure type turbo generators, both in operable condition and rated each at

1000 KW, 220 V, 50 cycles

f. 3 steam reciprocating generator sets, all in operable condition and rated at

300 KW, 220 and 440 V, continuous current

Steam is used at 9 atmospheres and discharged to process heating at 1/2 atmosphere.

g. Transformer units-

(1) 2000 KW, 6000 V/220 V
(2) 2000 " 6000 V/220 V
(3) 1000 " 6000 V/500 V
(4) 1000 " 6000 V/500 V

(4) Brine storage tanks and system - brine storage capacity is about 30,000 cu.m. Treating and settling tanks for the purification of the brine are all in good order.

(5) Seven enormous "distillation" columns which produce sodium bicarbonate equivalent to about 250 m. tons of soda ash per day.

(6) Five giant steel lime slakers - all in good condition.

(7) 16 triple effect evaporators.

(8) 10 caustic soda fusion systems with a capacity for about 500 m. tons of fused caustic per day.

(9) A sodium bicarbonate plant of 40 tons per day capacity in operable condition.

(10) A barrel making plant for steel drums.

(11) Enormous steel silos for storage of soda ash.

(12) Large, well equipped machine and maintenance shops.

1000 KW, 220 V, 50 cycles

f. 3 steam reciprocating generator sets, all in operable condition and rated at

300 KW, 220 and 440 V, continuous current

Steam is used at 9 atmospheres and discharged to process heating at 1/2 atmosphere.

g. Transformer units-

(1) 2000 KW, 6000 V/220 V
(2) 2000 " 6000 V/220 V
(3) 1000 " 6000 V/500 V
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18

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(12) Large, well equipped machine and maintenance shops.

(13) Large magazine for the storage of spare equipment and replacement parts. The character of this depot spoke well for the progressive and energetic management.

8. Conclusions: The reactivation of this works is essential to restarting Italian industry and supply elemental wants of the Italian people, especially for soap and edible oils. It is the decided policy of the Industry Sub-Commission to do all possible to facilitate the reactivation of this plant with the following steps:

a. Restoration of railway service between Rosignano and S. Vincenzo for movement of limestone to the works.

b. Restoration of two pipeline and pumping equipment for salt brine from Ponte Ginori to Rosignano.

c. Supply of 200 KW electric power each to Ponte Ginori and S. Vincenzo.

d. Supply of 1 ton of ammonia or 4 tons ammonium sulfate per day.

e. Supply of about 300 m. tons of Sardinian coal per day.

f. Supply of about 40 m. tons of metallurgical coke per day.

g. Supply of steel black plate from Terni for caustic soda drums.

h. Preserve the plant, equipment and raw materials against dispersal by requisition and military occupation with attendant plant distruption as far as possible. Particularly, the cast iron pipe for pipeline repair must be preserved.

1. It is estimated that the initial program of production can make available about ~~55,000~~ m. tons of caustic soda plus ~~soda~~ during 1945, 30.000

30.000 tons sodium carbonate (soda ash)

Remarks made by A. Petrosi

30 Jun 45

A. Petrosi

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Remarks made by L. Peterson

30 June 45

L. M. Peterson

0224