

ACC CEB/18/1/1

10000/150/725

ROME
NOV.

10000/150/725

ROME, INTELLIGENCE
NOV. 1943 - JULY 1944

Società Romanandi Eletticità

*Per azioni - Sede in Roma - E.P.E. Roma N° 3277
capitale sociale L. 478.500.000 - versato*

*Roma 14, 6
VIA POLI, 14*

PRODUCTION AND EXERCISE SERVICE

S t a t e o f W o r k a t J u l y 3 1 . t h 1 9 4 4

HYDROELECTRIC PLANTS

- a) Scalelle Station. The drying up in short circuit of an alternator is going on. It is foreseen that next Monday it will be possible to begin regular production.
- b) Subiaco Station. A turbine has been reconstituted with spare parts and a "front part" obtained by welding together two damaged pieces, it is being mounted again and the work is almost finished. It is hoped that this welding will correspond to the aim and that we shall be able to put the plant into service again on Monday or Tuesday next.
- c) Ceprano Station. We are getting on with the extraction of mud from the engine-room, of which two thirds are already freed, so that one of the minor groups and the main central group have come already to the light again. To-day we will begin to dismantle the minor group which has to be transferred to Salto Vescovale at Tivoli.
We have begun to repair the sluices at S. Eleuterio's dam. The Firm Ferrobeton has been charged with the work of connecting the pressure piping with the gallery at the bottom of the piezometric well. This firm is now providing to implant its yard.
- d) Canterno Station. We are organising the prosecution of interrupted works.
- e) Farfa II. Fall Station. The satisfactory informations already given about the conditions of Farfa Second Fall Station have been confirmed

Conferenza Valfranca - 18.000 - Elettromont. Roma

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- d) Canterno Station. We are organising the prosecution of interrupted works.
- e) Farfa II. Fall Station. The satisfactory informations already given about the conditions of Farfa Second Fall Station have been confirmed by the dismantling, which is going on, of that group, it seems also confirmed that the same needs the substitution of stator winding which is however available largely at the other alternator and a third of it is to be found in reserve.
The firm M.A.T.E.R. of Rome has been charged to proceed with the winding and is going to fix its yard on the place as soon as possible.

II. TRANSMISSION LINES.

The Firm S.C.A.C. with the help of specialised workmen of our Company has been charged to put into service again a 60 000 V line through Ceperano-Colleferro-Cinecittà-Magliana.

It has been ascertained that this work will take about two months' time, held to amount to a little more than the time wanted to repair the group of Ceperano station.

On aforesaid line there will also be conveyed the 2.500 Kw at disposal at the stations of Società Cartiere Meridionali whose first 400 Kw group is being swiftly connected with Ceperano station so as to give the power necessary to execute these works.

III. STEAM STATION S. PAOLO.

Following Capt. Lowell's orders we are constructing and putting into place some overhead defences to the water pipes' entrance to the pumps from the river's side.

About the Tiber's weir plant we are purchasing materials to build an overfall.

About the steam connection between A.C.F.A. and S.R.E., having ascertained that at the Gas Works there is also a sufficient quantity of 11 m. long and 8 mm thick pipes available, as confronted with the 5 mm thick pipes already offered by the Gas works, the plan is being slightly altered as it is held best to make use of this thicker pipes where electric welding can be more safely executed.

IV. REMOVAL OF UNITS.

To-day an auction will be held for the contract of the rebuilding of part of the old engine-room at Acquoria (Tivoli) plant, where a group coming from Ceperano will be placed.

V. GENERAL CONSIDERATIONS.

The most severe obstacle to the resumption of work and therefore to formulate provisions derives from the insufficient means of conveyance, and even more from having part of those vehicles out of service on account of the hopeless conditions of their tyres.

There have also arisen difficulties for the food of workmen, we refer to the repeated requests made for San Paolo in Rome and for the yards outside of Rome.

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About the river's weir plant we are purchasing materials to build an overfall.

About the steam connection between A.C.T.A. and S.R.E., having ascertained that at the Gas Works there is also a sufficient quantity of 11 m. long and 3 mm thick pipes available, as confronted with the 5 mm thick pipes already offered by the Gas works, the plan is being slightly altered as it is held best to make use of this thicker pipes where electric welding can be more safely executed.

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3) The normal Company's staff has for the most part been already concentrated on those works, for instance the staff of Farfa First and Colonneta has been taken to Farfa Second.

In addition to normal staff there, approximately, the following men working at:

Ceprano	about	2200 men
Tivoli	"	50 "
S. Paolo	"	130 "
S.O.A.C. Firm	"	20 "
Other	"	30 "
	Total	430 men

July 13 th, 1944

24 Luglio 1944

HEADQUARTERS REGION IV

Allied Control Commission APO 394

SUBJECT : Repair of Power Station
FILE NO RA/ENG/700

A Vostra 18 luglio 1944, Vi diamo assicurazione della nostra completa collaborazione per tutte le prove che avete disposto nella centrale termica di Aurelia della Società Prodotti Chimici Nazionali. Si deve però prevedere che pochi elementi di giudizio potranno essere rilevati, finché la produzione sarà limitata dall'attuale trasformatore 2.400/2.400 Volt. - 640 KVA.

Per poter ottenere la migliore utilizzazione della centrale, a nostro avviso, non resta altra soluzione che trasformare l'energia prodotta a 30.000 Volt e per l'attuazione di questo programma noi siamo pronti a fornire il necessario raccordo di linea ed a fornire il trasformatore, richiedendovi soltanto un adatto automezzo per il suo trasporto.

Vi dobbiamo infine fare osservare che se, come ci è stato riferito, il livello delle acque non consente di funzionare con la condensazione, il consumo specifico dell'impianto, anche a pieno carico, potrebbe risultare così elevato da far considerare più conveniente l'utilizzazione del combustibile nella nostra centrale termica di Roma.

Restiamo a Vostra disposizione per quant'altro possa esservi necessario sull'argomento.

SUGGERIMENTI DI ELETTROTECNICA
DIREZIONE GENERALE

Finato 355 g. Rovelli

24 Luglio 1944

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Per poter ottenere la migliore utilizzazione della centrale, a nostro avviso, non resta altra soluzione che trasformare l'energia prodotta a 30.000 Volt e per l'attuazione di questo programma noi siamo pronti a costare il necessario raccordo di linea ed a fornire il trasformatore, richiedendovi soltanto un adatto automezzo per il suo trasporto.

Vi dobbiamo infine fare osservare che se, come ci è stato riferito, il livello delle acque non consente di funzionare con la condensazione, il consumo specifico dell'impianto, anche a pieno carico, potrebbe risultare così elevato da far considerare più conveniente l'utilizzazione del combustibile nella nostra centrale termica di Roma.

Restiamo a Vostra disposizione per quant'altro possa esservi necessario sull'argomento.

SOCIETÀ ROMANA DI ELETTROTECNICA
DIREZIONE GENERALE

Finato 355 g. Rovelli

Referring to your letter of July 18th 1944, we assure you of our complete cooperation to every test you have on hand at the steam station of Aurelia belonging to Società Prodotti Chimici Nazionali. It is however to be foreseen that few elements for judgement will be gathered, so long as production will be limited to the transformer 2.400/8.400 Volt-640 KVA now in exercise.

o/o

In order to obtain the best utilization of the station we are advised that there remains no other solution as to transform to 30,000 V the produced energy and for the effectuation of this program we are ready to build the necessary connection of lines and to provide the transfer, for which we only ask for an adapted vehicle to convey it.

We must however observe that if the water level, as it has been reported, does not allow the exercise by condensation, the specific consumption of the plant, even at full load, might result so high as to call for consideration that the fuel would be better utilized in our own steam plant at Remo.

We are at your disposal for everything else might be convenient to you about this topic.

HEADQUARTERS REGION IV
Allied Control Commission
APO 394

18 July 1944

To: Gr.Uff.Ing. Aldo Rovelli
Direttore della Società Romana d'Elettricità
Via Poli 14 ROMA

SUBJECT/ Repair of Power Station
FILE N°/ R4/EEG/700

Herewith copy of letter to Società Prodotti Chimici Nazionali" in reference to use of power plants at their factory in Aurelia.

It is desired that your full co-operation be given in the tests and utilization of these plants at Aurèlia.

Ing.PAPURELLI of your company has already done some preliminary work on this proposition.

E.J.EDWARDS ,Colonel
Regional Engineer

Copy to:
Lt.Col.W.B.Lapper-Electrical Section-Public Works-Subcommission H.Q. ACC
Società Prodotti Chimici Nazionali, Via Francesco Crispi N° 10-ROMA

HEADQUARTERS REGION IV
Allied Control Commission
APO 394

18 July 1944

To: Dr. Lodevico Mungicli
Direttore Generale della Soc. Prodotti Chimici Nazionali
Via Francesco Craspi N° 10-ROME

SUBJECT/ Repair of Power Station
FILE: R4/ENG/700

It is desired that your company proceed at once to place the two steam power plants of your factory at Aurelia in operation, in the following manner:

First: it is desired to operate the workable machinery for test purposes, utilizing the coal on hand at the factory. In cooperation with the "Società Romana Eletticità" a test will be made to ascertain whether this plant may be paralleled into their system. It is our belief that this parallel operation will be possible.

A copy of the results of this test will be forwarded to this office, signed by representatives of both companies.

Second; it is desired that all available generating capacity will be utilized. Initially, it is believed this is possible by utilization of the "S.R.E." 8,400 KV line but later it will be necessary to use ~~the~~ 30 KV line as the second unit becomes available, after repairs. 354

Due to the critical shortage of power generating capacity, it is desired that work be started on necessary repairs and tests at once.

Definite requests for coal supply should be forwarded to this office.

Copy of this letter is being sent to the "Società Romana Eletticità" requesting their full cooperation with your company in connection with the work outlined above!!

Financial details should be arranged between both companies concerned and referred to Col. W. L. Lapper, Electr. Section, Public Works and Utilities Sub. Commission, Headquarters Allied Control Commission, 8th Floor, "Cooperazione Building" for necessary action.

E. J. Edwards, Colonel
Regional Engineer.

Copies to: Società Romana d'Eletticità
Roma, Via Poli 14
Lt. Colonel W. B. Lapper - Electrical Sect. Pub. Works - Subcommis. HQ. ACC

Subject:- Electricity Supply East Coast.

Directorate of Works,
H.Q., A.A.I., C.M.F.

2057/DW

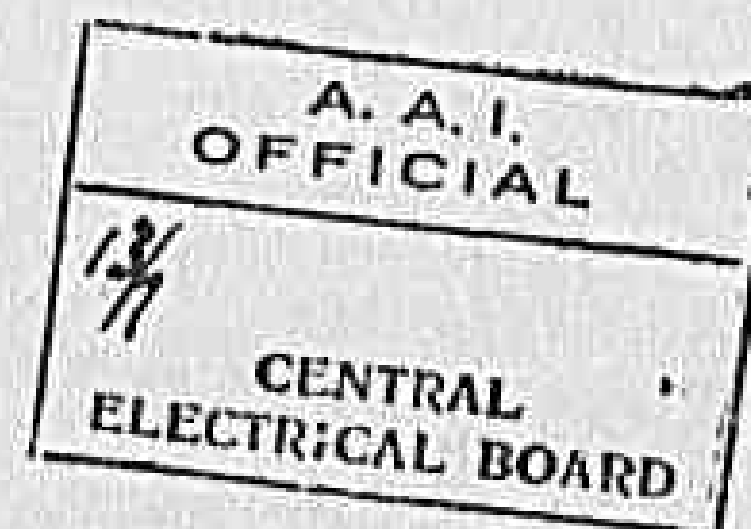
10 Jul. 44.

To:- Vice Chairman C.E.B.

1. There are a number of decisions to be made in connection with the rehabilitation of the Electricity System on the East Side from the SANGRO to ~~ORTONA~~ ANCONA
2. Enclosed are copies of reports from 2 C.E. (Works) and C.E. 2 District who are concerned with these areas.
3. It is suggested that a representative who knows the areas from personal experience might be requested to attend the next meeting of the Board.

W.A.R. Smith
W.A.R. SMITH.
Lt. Col. R.E.
for Brigadier,
Director of Works.

Encls.



353

COPY.540 E & M Coy. R.E.Report on 150 K.V. O/H Transmission Lines PRATTA - PESCARA
(Copper) and FOGGIA - PESCARA (Aluminium)

1. The section to which this report applies is from Pescara III Power Station to Guardiagrele.
2. Ref. Sheet 147 "Lanciano" 1:100,000 scale (attached herewith).
3. In the a/n sector, both lines run together, 25 yards being the most common distance apart.
4. The lines commence at Pescara III Station C 012078 and follow the line marked blue on the attached map; to pylon 68 H 180980
5. Pylons 1 to 5 are intact.
Pylons 6 to 10 are down.
Pylon 11 is intact, also one copper type pylon as well.
Pylons 12 to 67 are down.
Total amount down: 62 pylons.

The above applies to the aluminium line. The copper line which has a few more pylons has been razed to the same degree.

6. Between the sector pylon 6 to pylon 67 the copper conductor has been completely removed.
7. The aluminium conductor runs (along the ground and in damaged condition) from pylon 1 to pylon 27 C. 067048.
8. All the pylons razed have been very badly damaged.
9. The nearest road heads to the lines are:- C 065055 and the bend on the road.
Fara Filiorum Petri C 155051 at the demolished bridge.
Guardiagrele H 182982.
Beyond these points the roads are extensively cratered and practically all bridges and culverts have been demolished. These last are believed to be mined and booby trapped although none were encountered on this recce.

352

Two bridges have also been demolished at Casalinocontrade C 110101, ruling out this road as well.

21 June 44.

(Sgd.) E.J. Smith Capt. RE.
OC 2L E & M Section RE.

LIST OF ORDERS PLACED ON F.I.C.E.
-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-

Appendix to 1722/DW of 9 July, 44.

D.W.

C.E. No. 2 District. - autorizzato da Capt. Roger con lettera 27 marzo 1944. No. 1822/D.D.W.
- tonn. 1 $\frac{1}{2}$ filo avvolgimento per motori.

SCORTA CARBONE.

tonn. 25 circa ricevute da 80 E.D.W. in conto fabbisogno di circa 150 tonn. richiesto Vi per esecuzione delle ordinazioni di cui sopra. -

~~Revisare la disposizione per materiali altro da inviare.~~

~~Gen. esecuzione.~~

P.B.S.

ENGINEER SERVICE - P.B.S. - APO 782 - Mj MacDonald.
in data 11.3.44 - autorizzato da Mj Frankel
- mt. 50.000 circa filo isolato in rame.

SOCIETA' ESERCIZI TELEFONICI - ordine del 23.3.44 per conto H.Q.
5 Army - Signal Office - APO 464 - autorizzato da Mj Patterson for D.D.W.
- mt. 30.000 corone permutatori
- " 100.000 cavetto telefonico
- " 22.000 cavi telefonici multipli

UNITED STATES ARMY FORCES - H.Q. - P.B.S. - Office of the Engineer.
ordine No. 6144 B del 31.5.44 - autorizzato dal Capt. McKenzie del D.W.
- Kg. 250, = fili avvolgimento motori.

UNITED STATES ARMY FORCES - H.Q. - P.B.S. - Office of the Engineer.
ordine No. P.R. 5177 B del 19.6.44 - autorizzato dal Capt. McKenzie del D.W.
- mt. 96.500 filo isolato in rame

C.E.B.

351

SOCIETA' MERIDIONALE DI ELETTRICITA' - per conto Electric Power Mission
A.Q. - A.C.C. - APO 594 - autorizzato dal D.D.W. con lettera 21.2.44.

P.B.S.

ENGINEER SERVICE - P.B.S. - APO 782 - Mj MacDonald.
 in data II.3.44. - autorizzato da Mj Frankel
 - mt. 50.000 circa filo isolato in rame.

SOCIETA' ESERCIZI TELEFONICI - ordine del 23.3.44. per conto H.Q.
5 Army - Signal Office - APO 404 - autorizzato da Mj Patterson for
D.D.W.
 - mt. 30.000 cordone permutatori
 - " 100.000 cavetto telefonico
 - " 22.000 cavi telefonici multipli

UNITED STATES ARMY FORCES - H.Q. - P.B.S. - Office of the Engineer.
ordine No. 6144 B del 31.5.44. - autorizzato dal Capt. McKenzie del D.W.
 - Kg. 250, = fili avvolgimento motori.

UNITED STATES ARMY FORCES - H.Q. - P.B.S. - Office of the Engineer.
ordine No. P.R. 5177 B del 10.6.44. - autorizzato dal Capt. McKenzie del
D.W.
 - mt. 96.500 filo isolato in rame

C.E.B.

351

SOCIETA' MERIDIONALE DI ELETTRICITA' - per conto Electric Power Mission
A.Q. - A.C.C. - APO 394 - autorizzato dal D.D.W. con lettera 21.2.44
 - mt. 500.000 cordone flessibile
 - " 465.000 fili e corde isolate
 - " 30.000 cavi telefonici
 - " 600.000 fili avvolgimento.

SOCIETA' MERIDIONALE DI ELETTRICITA' - per conto A.C.M.F. Central
Electrical Board - autorizzato dal D.D.W. con lettera 15.3.44 No. 1882/DDW
 - mt. 90.000 filo isolato di alluminio.

D.G.M.R.

MILITARY RAILWAY SERVICE - Office of Director General.
ordine del 10.6.44 - autorizzato da Capt. Boger del D.W.
 - tonn. 75 corda di rame nudo.

COMPAGNIA NAPOLETANA D'ILLUMINAZIONE E SCALDAMENTO COL. CAS.
ordine del 12.6.44 - autorizzato dal Capt. Boger del D.W.
 - Kg. 270 = filo avvolgimento motori.

D.G.M.R.S. - APO 100 - ordine autorizzato dal D.D.W. con foglio
No. 1722/DW del 21 giugno 1944.
 - Kg. 600 filo isolato in rame.

150 tonn. richiesto Vi per esecuzione delle ordinazioni di cui sopra. -
~~Restano a disposizione per ulteriori altre ordinazioni.~~

~~Con osservato.~~

SUBJECT: F.I.C.E. Via Aren  cia
Naples.

Directorate of Works,
HQ AAI QMF

Engineer, 1722/DW
Peninsular Base Section, 9 Jul 44.
A.P.O. 782.
(attention Major MacDonald)

1. Ref your letter of 29 Jun, it is agreed that this works should be controlled by you.
2. Attached is list of orders approved by me up to date. It would be appreciated if you would contact all concerned stating priorities and completion dates.
3. Attached is a letter to F.I.C.E. for presentation by you - this letter withdraws my control.


A.H. CLENDENING
Lt.Col. RE
for Brigadier,
DW.

AME/BR.

Copy to: Central Electricity Board.
D.G.M.R.
A.A.F.S.C.

COPY.Subject:- Electricity Supply.

2 C.E. (Works)
CE 3034.
4 July 44.

D.W.
AAI.

The question of the future supply of Electricity to the area North of the River Sangro, up to the town of Macerata bounded on the West by the provincial boundary of UMBRIA has been discussed by my S.O. (E & M) in conjunction with Major-Bennett of A.M.C.O.T., Ing. BARONCINI, District Engineer of the S.M.E., and Cav. UMBERTO ANDREINI of the U.N.E.S. and the following policy is proposed

(a) The 66,000 Kv. U.N.E.S. line from ASCOLI through Teramo and Pescara to LANCIANO be put in order so that the PEDASO group of Stations can be paralleled in with the FARA group so that a 50 cycle supply is given to an area comprising the coastal strip North of Capello - AGNONE up to a line just south of Macerata and averaging about 30/40 miles in depth.

There is available at present from the serviceable stations approx. 3,400 Kw with another 1,250 Kw available when repairs at present in hand at the DE Ceccho station FARA, and at Farindola are completed (about 2 weeks), whilst an additional 2,500 Kw will be available when the wet weather season starts (October) from the increased run-off.

(b) The 150,000 Volt, S.M.E. line from FOGGIA which is now complete through to approx GUARDIGRELE, to be finished through to PESCARA III, and there passed through the existing connecting station to TERNI in order to give a supply to the central zone of AQUILA and TERNI which as far as I know at present have no alternative supply left intact.

The line from GUARDIGRELE to PESCARA III has unfortunately been deliberately demolished so that at least two months will be required to complete the repairs. Considerable difficulties exist, as not only is there the usual lack of transport but the area is thickly sown with mines and all roads and tracks leading along the line have been thoroughly obstructed. This line can then feed SCAFA - POPLI - SUMONA - AQUILA and TERNI districts with the possibility of extending further North if required.

(c) The question of supply to ANCONA can not be settled yet; there are hopes of a 2,000 Kw station at TOLENTINO being left intact, but as at present it is near enemy territory it cannot be inspected. Failing that source, a limited supply could be transmitted North from PEDASO through existing small-section 30,000 volt line.

Do these suggestions meet with your approval? Preliminary work has

350

Pescara to LANCIANO be put in order so that the PEDASO group of stations can be paralleled in with the FARA group so that a 50 cycle supply is given to an area comprising the coastal strip North of Capello - AGNONE up to a line just south of Macerata and averaging about 30/40 miles in depth.

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(b) The 150,000 Volt, S.M.E. line from FOGGIA which is now complete through to approx GUARDIGRELE, to be finished through to PESCARA III, and there passed through the existing connecting station to TERNI in order to give a supply to the central zone of AQUILA and TERNI which as far as I know at present have no alternative supply left intact.

The line from GUARDIGRELE to PESCARA III has unfortunately been deliberately demolished so that at least two months will be required to complete the repairs. Considerable difficulties exist, as not only is there the usual lack of transport but the area is thickly sown with mines and all roads and tracks leading along the line have been thoroughly obstructed. This line can then feed SCAFA - POPLI - SUMONA - AQUILA and TERNI districts with the possibility of extending further North if required.

(c) The question of supply to ANCONA can not be settled yet; there are hopes of a 2,000 Kw station at TOLLENTINO being left intact, but as at present it is near enemy territory it cannot be inspected. Failing that source, a limited supply could be transmitted North from PEDASO through existing small-section 30,000 volt line.

Do these suggestions meet with your approval? Preliminary work has already been started on both lines, but can easily be stopped if other arrangements are being made. Temporary arrangements are being made to supply the towns of PESCARA, CHIETI TERNO and ASCOLI with E.L. within the next two weeks.

(Sgd.) V.A. Lindsay.
Col.
C.E.

A.M.I.
CENTRAL ELECTRICAL BOARD
ASO 400

REF: CIB/18/2

27 June 44.

SUBJECT:- Power Supply, SAN SEVERO - ANCONA Area.

TO:- CE HQ ANI CT

1. The power generating facilities which could be made to serve the SAN SEVERO - ANCONA area along the Adriatic coast are now in Allied possession, except a small steam plant in ANCONA and two small hydro electric plants. It is reported that all generating plants in this area, except one 40 KW hydro electric plant, have been totally destroyed by enemy action. These reports are not confirmed and it has not been possible to personally visit all the plants in the area. The transmission lines in the PESCARA area have been destroyed by demolition and removal of conductor. In other areas they have suffered only battle damage in so far as is now known.

2. It is believed that the Army will require power at ANCONA, PESCARA and SAN SEVERO and perhaps in other locations in this area and that essential civilian needs will exist at various localities throughout the entire area. The amount of power required for military and essential civilian needs is not known, but will probably exceed the amount which can be made available.

3. To supply power to the above area it is proposed :-

- (a) To continue the repair of the FOGGIA - PESCARA 150 KV transmission line to PESCARA.
- (b) Remove one 17,000 KVA 150 KV - 60 KV transformer from the Bari South substation and instal it in the vicinity of PESCARA.
- (c) Repair the essential 60 KV transmission lines serving the SAN SEVERO - ANCONA area.
- (d) Repair the existing 60 KV transformers.
- (e) Move other 60 KV transformers from Southern Italy where necessary.

4. The above reconstruction will permit transmitting, not to exceed 17,000 KVA at 150 KV. to PESCARA, of which approx 5,000 KW can be delivered to ANCONA. It is believed that military and essential civilian requirements will exceed the amount available until such time as the

349

1. The power generating facilities which could be used to serve the SAN SEVERO - ANCONA area along the Adriatic coast are now in Allied possession, except a small steam plant in ANCONA and two small hydro electric plants. It is reported that all generating plants in this area, except one 40 KW hydro electric plant, have been totally destroyed by enemy action. These reports are not confirmed and it has not been possible to personally visit all the plants in the area. The transmission lines in the PESCARA area have been destroyed by demolition and removal of conductor. In other areas they have suffered only battle damage in so far as is now known.

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3. To supply power to the above area it is proposed :-

(a) To continue the repair of the FOGGIA - PESCARA 150 KV transmission line to PESCARA.

(b) Remove one 7,000 KVA 150 KV - 60 KV transformer from the Bari South substation and instal it in the vicinity of PESCARA.

(c) Repair the essential 60 KV transmission lines serving the SAN SEVERO - ANCONA area.

(d) Repair the existing 60 KV transformers.

(e) Move other 60 KV transformers from Southern Italy where necessary.

4. The above reconstruction will permit transmitting, not to exceed 17,000 KVA at 150 KV. to PESCARA, of which approx 5,000 KVA can be delivered to ANCONA. It is believed that military and essential civilian requirements will exceed the amount available until such time as more of the generating plants in this area can be rehabilitated.

5. The power thus supplied to the ANCONA - SAN SEVERO area must be subtracted from the power supplied to the APFULLA area on the 150 KV SIIA transmission line. This can be replaced in part from the west coast area by supplying the FOGGIA - BENEVENTO Railway from MATESE and transmitting an additional supply from LATE, MATESE and TALOFE when these generating stations have been rehabilitated. The power deficiency which would exist in NEPLIS under this arrangement can be supplied by the DOGGARELLA diesel electric plant and CIPUANO steam plant in NAPLES where fuel supply is available.

6. The extent.....

-2-

6. The extent of the damage to transmission lines and other power distribution facilities in the SAN SEVERO - ANCONA area is not presently known and no estimate of the time required to rehabilitate these facilities can be made. Based on experience in other areas, it is believed that power cannot be furnished to ANCONA in less than 60 days.

Supplied by

JAMES P. CRODON,
COLONEL CE,
Vice Chairman, AAI - C.E.B.

DISTRIBUTION:-

CAC HQ AAI

CG FBS

DT HQ AAI

HQ ACC

FLAG OFFICER, WESTERN ITALY

DCMO

Q.I.

D.G.

CE FBS

ELECTRIC POWER COMMITTEE

LT-COL W.M. LAPPER

CHDR. L.E. HOGGAN, RM.

11 CE WORKS

HQ 3 DISTRICT

CE 3 DISTRICT

FLAG OFFICER, TARANTO.

HQ 1 DISTRICT

CE 1 DISTRICT

A.A.F.S.C./M.T.O.

<u>Articles</u>	<u>Unit</u>	<u>On hand and due.</u>	<u>Consumed</u>	<u>Required</u>
Wire, three pole insulated 600 Volt 175-200 M.M.	Meter	0	0	30
Wire, three pole lead covered 30-35 M.M.	Meter	0	0	38
Wire, three pole lead covered 24 M.M.	Meter	0	0	25
Wire - two strand for illumination	Meter	0	0	115
Sockets for bulbs	Ea	0	0	10
Bulbs, 150 Watt	Ea	0	0	10

348

D.W. BASH H.Q. A.A.I.

23

DISTRICT (2) CENTRAL ELECTRICAL BOARD, APO 400 RABBIT. (by hand) ✓

ENI/2/30.

REMEMBERED (.) FOR C.E. (.) CHARGED HYDRO PLANT MAP REF 0609233 IS
 SUBJECT (.) CIVILIAN WORKING PARTY REQUIRES ASSISTANCE TWO FIRE TRAILER
 PUMPS AND TRANSPORT (.) RESPONSIBILITY NOT YET ALLOCATED YOUR DISTRICT
 BUT YOUR HELP APPRECIATED TO SPEED UP WORK. (.)

2057/DM.



347

A.A.I.
CENTRAL ELECTRICAL BOARD
APO 400

REF: CEB/18/2

4 June 1944

SUBJECT: Transmission Line Repairs.

TO:- DW HQ AAI
(Attention Lt-Col. W.A.R. SMITH RE)

1. Herewith copy of memorandum dated 31 May 44 from the S.M.E. which is self explanatory.
2. Will you please pass this information to the appropriate authority with a recommendation that the area stated may be cleared at an early date as the position is seriously effecting the rehabilitation of the MATISE - NAPLES 60 KV "Yellow" transmission line.

JAMES P. CROWDON,
COLONEL CE,
Vice Chairman, AAI - C.E.B.

SOCIETÀ MERIDIONALE DI ELETTRICITÀ

MEMORANDUM FOR COL. GROWDON

We understand that the ground on which the towers Nr. 130 and 131 of our "Yellow" 60 kV line Matese - Napoli are erected, has been enclosed by means of barbed wires. Posters have been set, which state that there is a "deadly danger on account of mines".

One of these mines has caused the outage of May 25th inst.

The repairs of the line near these towers are rendered very difficult and dangerous.

We ask to kindly see what it may be done in order to remove the mines.

Naples, 31st May 1944
GC/DM

345

SOCIETA MERIDIONALE DI ELETTRICITA

MEMORANDUM FOR COL.GROWDON

On May 3rd inst. the 60 kV line Tusciano-Fratta tripped out at 13,30. The fault was located between Pomigliano and Tusciano.

On account of lack of trucks (one truck of Fratta was already out for the patrolling of the Fratta-Torre-Tusciano line and Tusciano had two trucks out of service and a third truck out on job) the patrol men were sent on the line by means of cars that had to start from Naples.

In the meantime, a British Officer called to our office and said to us that an aircraft standing in the Vesuvius airfield had exploded while being loaded with bombs. As the aircraft was standing under our line, the same had ^{been} damaged.

In fact the three conductors and some elements of insulators had been broken between towers nr.111 and nr.112. As a fire had taken place, the high temperature had damaged some length of conductors, which it has been necessary to substitute.

The work has been accomplished with the help of a military truck that has been lent us for the work.

The repair crew arrived on the airfield at about 18,10; the repair has been finished at 2,18 of the 4th.

We have to point out that not less than two and a half hours have been missed by the crew. In fact the truck that had been sent back to Frattamaggiore (at 18,30) to take some conductor (as above said the fire had rendered it necessary to substitute greater lengths than it had been ^{preseen}) did not go directly to Frattamaggiore, but it went to other different places. It seems that the gasoline was not sufficient and that the driver had not the permit to be out during curfew hours. So the crew had to await idle for about two and a half hours.

Naples, May, 5th 1944
GC/DM

SOCIETA MERIDIONALE DI ELETTRICITA

MEMORANDUM FOR COL. GROWDON

On May 2nd (at 18,58) and on May 5th (at 3,33) the 60 kV Tuscianno-Torre-Fratta tripped out.

The patrol men found the following damages:

- May 2nd: One of the dead end strains of insulators of tower Nr.55 cut in two parts. The conductor was hold by the other strain of insulators.

The repair has been done during the night from 3rd to 4th. The line was again a line by 6,09 of the 4th.

- May 5th: Conductors broken and stranded between towers nr.33 and Nr.34

The repair has been accomplished by 14,30, and the line was again in service by 15,22.

It seems that both faults have been caused by rifle bullets shot by some military people.

Naples, May 5th, 1944

GC/DM

SOCIETÀ MERIDIONALE DI ELETTRICITÀ

Memorandum for Col. GROWDON

Between Tusciano and Eboli there is an area in which on account of danger of shells, civilians are not admitted.. Therefore:

- 1) Our workmen cannot repair the first section of the second 30 KV line Tusciano-Tanagro.
- 2) The first 30 KV line Tusciano-Tanagro and the 150 KV line Sila-Tusciano are in danger.

We have spoken of the above matter with Capt. Coban (Nr.3 District) pointing out the opportunity of some precautions in order to keep the route of our lines out of the zone of shelling.

Naples, the 19th May 1944

TM/pz

342

A.A.I.
CENTRAL ELECTRICAL BOARD
APO 400

REF: CEB/18/2

5 May 1944.

SUBJECT:- Repair of Damaged Transformer Case

TO:- Superintending Electrical Engineer, R.N.

1. Enclosed is a copy memorandum from the S.M.E. relative to the repair of a 60/12 KV transformer case.
2. It is believed that this work can be done before much of the work referred to in my letter to you, CEB/18/2 dated 3 May 44, can be put in the shop.
3. The repair of this transformer case is necessary to supply increased military demands for power in the TORRE- CASTELLAMARE area. It should have first priority over any other work in which the AAI Central Electrical Board has an interest.

JAMES P. GROWDON,
COLONEL CE,
Vice Chairman, AAI -C.E.B.

SOCIETÀ MERIDIONALE DI ELETTRICITÀ

MEMORANDUM FOR COL. GROWDON

We have sent in the last week to the Navalmeccanica the damaged case of the 60/12 kV transformer of Torre Annunziata. We beg you to consider the opportunity of obtaining the necessary permission and priority for the above work.

We thank you

Annex 1

Naples the 5th May 1944
TM/DM

341

A.A.I.
CENTRAL ELECTRICAL BOARD
APO 400

REF: CEB/18/2

3 May 1944.

SUBJECT:- Priority of Tasks Assigned to Works Under Control of R.N.

TO:- Superintending Electrical Engineer, Royal Navy.
(Commander L.E. HOGGAN, RN)

1. Reference your letter dated 1 May 1944. It is requested that the following priorities be given to the work to be done by Navalmeccanica :-

(a) Repair of the No 1 hydroelectric generating unit at CALORE power station

(b) Repair of the No 2 hydroelectric generating unit at CALORE power station. (This task has not yet been allocated. It is intended to request the Superintending Electrical Engineer, Royal Navy, to assume complete responsibility for repair of this second unit.)

(c) The manufacture of a Pelton type hydraulic turbine for the ENTE AUTONOMO VOLTURNO to be installed at the CAPO VOLTURNO hydroelectric power station.

2. Complying with your suggestion, all requests for work to be done under the direction of the Royal Navy will be sent to you by the AAI Central Electrical Board with the relative priority indicated thereon.

JAMES P. GROWDON,
COLONEL CE,
Vice Chairman, AAI - C.E.B.

340

SOCIETÀ MERIDIONALE DI ELETTRICITÀ

MEMORANDUM FOR COL. GROWDON

Yesterday the 150 kV line Sila Bari tripped out at 11.28 a.m.

Immediately two trucks started, from Bari and Palagiano substations. They were two of the military trucks with a loading capacity of 3 Tons that have been given us from the British Army in Apulia.

At 1300 the fault was located between Bari and Palagiano, near Gioia del Colle where some military people had caused a mine to explode, between towers 992 and 993.

In two hours (at 15.00) the line had been repaired.

At 15.15 the line was alive again.

The fault was cleared up in less than 4 hours owing to the prompt disponibility of trucks in the places where they were necessary.

May, 3rd 1944

GC/CS

SOCIETÀ MERIDIONALE DI ELETTRICITÀ

Memorandum for Col. GROWDON

On the 25th of April, on account of the air raid, Torre-Frattra and Agnano I-Frattra 60 KV lines were faulted. To speed the work:

- 1) Fratta crew was charged of the patrolling and repair of the Fratta-Agnano line.
- 2) Torre patrol crew was charged of the patrolling on the Torre-Frattra line.
- 3) In the meantime Tusciano crew was sent in Torre and kept waiting for the results of the above patrolling.

In this manner there would have been the possibility of repairing both faults in the same day.

Fratta crew repaired the Agnano line without any trouble.

Torre crew, remained without truck since many weeks, was sent on the line on foot and by means of Circumvesuviana Railway and found the faults at about 11.30 hours. It must be pointed out that on some occasions of faults Circumvesuviana is not supplied and stops its service.

Tusciano crew reached the place of faults only at 1600 hours on account of troubles of transportation means and begun the repair. As the truck was no more available the crew was compelled to remain during the night on the place without proper lodging and food.

In this situation and on account of the many bracken conductors was decided that on the 26th Tusciano crew would have been helped by Fratta crew. But during the night there was the outage of the Tusciano-Pomigliano-Frattra line. Fratta patrolling crew was sent on the faulted section Pomigliano-Cava with a small truck (0.3 Tons) and the repair crew was sent in Torre with another truck. This truck broke near Naples and the

SOCIETA MERIDIONALE DI ELETTRICITA

2)

crew was kept waiting for another truck that we asked to our Distribution. and that we obtained as soon as available. Line was repaired and energized at 19.15. Work was also delayed because patrols were handicapped by the rainfall and bad ground (Vesuvio ashes).

On the Torre-Fratta section the repair had to be finished at 1300 but was delayed until 17.05 because men after a lost night with poor food without proper waterproof clothing were not in normal conditions. We shall add that this crew lost another night and the day after on the place because other two transportations means sent on the place broke on the road.

Naples, the 2nd May 1944

TM/pz

337

COPY OF THE LETTER N. 455-46 WRITTEN BY SME TO NAVALMECCANICA ON
THE 1st MAY 1944

CN/CS

Prat. B 2 c
Torre A.

SOC. AN. NAVALMECCANICA
OFFICINE MECCANICHE E FONDERIE

N A P O L I
Via Benedetto Brin n. 71

Ordinazione

A seguito degli accordi verbali e del sopralluogo effettuato dal vostro tecnico Sig. Iannicelli nella nostra SS/ne di Torre Annunziata, vi passiamo regolare ordinazione per la riparazione del cassone, con relativo carrello, del trasformatore n. 2 da 5 MVA 60/12 kV di detta Sottostazione.

Il lavoro, comprensivo di materiali e mano d'opera, consiste nella rimessa in efficienza, a regola d'arte, del cassone, che dovrà essere a perfetta tenuta d'olio caldo, da controllarsi a lavoro ultimato nelle vostre officine mediante una prova idraulica a pressione.

Il cassone rimesso ad pristinum e completato esternamente di verniciatura ad olio con minio di piombo, ci sarà consegnato nelle vostre officine entro 20 giorni lavorativi dalla data in cui vi è stato recapitato.

Il pagamento vi sarà effettuato su presentazione di fattura, redatta di comune accordo in base ai dati consuntivi del lavoro, ed entro 30 giorni dall'avvenuta consegna del cassone. V'impegnate fin d'ora ad eliminare a vostre spese le eventuali deficienze, imputabili alla qualità del materiale da voi impiegato od all'esecuzione del lavoro, che dovessero eventualmente manifestarsi nella messa in servizio del cassone.

Vogliate restituirci, firmata per accettazione, copia della presente.

F.to Brun - Masturzo

Alleg. 1

336

Translation

NAVALMECCANICA COMPANY

N A P L E S

Via Benedetto Brin, 71

After the spoken agreements and the investigation made by your Mr. Iannicelli at our Torre Substation, we give to you regular order for the repairing of the case, with his own

2.

truck, of transformer n. 2, 60/12 kV, in the above named substation.

The work, included materials and labour, consists in the restoration of the case, wich must be perfectly oil tight, to be controlled, at your workshop when the work will be finished by means of an hidraulic proof.

The case, restorated and completed externally of minigm with oil warnishing, will be delivered in 20 days from the date in wich you will receive it.

The payement will be made on presentation of bill , made by mutual consent on the base of the final balance of the work, in 30 days by the delivery of the case.

You engage yourselves, from now on, to eliminate at your expenses the eventual deficences (imputables to the quality of materials employed or to the execution of the work) that would be eventually revealed whewe the transformer will be put in operation.

Please, return signed for ecception copy of the present.

APPROVED

J. P. Growdon
J.P.GROWDON
Vice-Chairman AAI - CEB

O Rq. 2574

From: Superintending Electrical Engineer Royal Navy
To: Col. J.P. GROWDON , Vice Chairman, AAI - C.E.B.
Date: 1st May 1944

With reference to your letter dated 20th April 1944, regarding the proposed construction of Pelton wheels for CAPO VOLTURNO, it is observed that no objection is seen to acceptance of this work by Navalmeccanica who are being informed accordingly.

It is observed , however, that the S.M.E. have written indipendently to Comander Bonney R.N., Outside Productions Officer, requesting that approval be given for Navalmeccanica to accept work in connection with CALORE.

This request has beenreferred back to me for a ruling as to the relative priority of the two generating stations, as at the present time conditions are such that both works cannot be undertaken simultaneously on a basis of equal priority.

Your comments in this connection would be appreciated, and on receipt of your reply in indicating the desired priority arrangements will be made for immediate commencement of work.

It would appear in event of it being desired to employ Navalmeccanica in the future in connection with any other Generating plants, that time would be saved if S.M.E. referred the matter to you first, for settlementof priority, the requirement then being passed to me for action.

If you concur in the above, it is suggested that S.M.E. should be instructed accordingly.

E. H. G. G. G. G.
Electrical Commander R.N.
Superintending Electrical Engineer.

334

000T V LRAE 4324 -IMPORTANT

0001

FROM 11 CE 4K5 2615158

TO ACC HQ CENTRAL ELECTRICITY BOARD

TO

INFO DDWD FLAMEO

QQY

1506/1

FOR COL C R O W D E N . POWER LINE P I E D E M O N T E NAPLES TESTED
WITH AND WITHOUT NEUTRAL TO POGGIOREALE 1710 HRS 25TH .

BREAKERS TRIPPED ON BOTH TESTS . TESTED TO VILLA S MARIA UT ///// OR AND
SUPPLY RETAINED . FAULT VILLA S MARIA TO POGGIOREALE . TESTING AGAIN AT
1200 HRS TO 1215 HRS APR IF ~~///~~ UNSUCCESSFUL AGAIN AT 1300 HRS

TO 1310 HRS SAME DAY

THI 1940

SENT RR 0320 AR TERU

RECD PMP ///// 0320 JFF AN

ACC LIST 333

ACTION - CENTRAL ELECTRICITY BOARD

INFO - DECC

ECON SEC

FILE

PLANT

Memorandum for Com. (E) BONNY

Outside Production Officer R.N.
c/o Navalmeccanica S.A.

Via Benedetto Brin 71

In order to increase the output of hydraulic power it is very urgent the rehabilitation of the generating station at S.Mango, about 25 Km east of Avellino.

Besides other works, there are some mechanical repair works for which it is necessary applying to Navalmeccanica.

Works concern mainly:

- 1 - The sliding gate at the intake of the penstock.
- 2 - The mechanically operated butterfly valve at the above said intake.
- 3 - A trunk of the penstock and another of the discharge pipe.
- 4 - Some trunks of the cast-steel branches of the penstock.
- 5 - Some cast-iron and cast-steel pieces for the runner.
- 6 - Some repair works for the damaged gates and valves.

We beg you to give kindly authority to Navalmeccanica to make the above said works.

33231

Naples, the 27th April 1944

MCu/ps

914

Memorandum for Col. LESTER HENSLEY

Region III Allied Control Commission

The undersigned Soc. Meridionale di Elettricità has been requested to accelerate the rehabilitation of Calore Hydroelectric generating Station at S. Mango, about 25 Km east of Avellino.

In order to do this work, it is planned besides other things:

- 1) To utilize about 50 skilled electricians now working in our Capuano Plant in Naples, and 20 skilled mechanics of Navalmeccanica and Ceren Co.s, displacing them from Naples to S. Mango.
- 2) To increase the civil crew up to 40 laborers who now live near S. Mango Plant, 7 ÷ 10 Km far from it.

To get these purposes, i.e. displacing skilled workmen from Naples to S. Mango, and laborers of S. Mango from agriculture-works to masonry works, it is necessary assure them meals on the place, by the organization of a mess. On account of the impossibility for us to get food on the place for such an increase of manpower, we would appreciate receiving sufficient rations for our workers.

According to the above said we need a total of 110 (50 + 20 + 40) midshift rations and 70 (50 + 20) normal rations, that can be distributed under control of the Allied Officer, displaced at Calore Plant.

We are anxious to begin work at Calore Plant, but are unable to, since there is no food for our workers.

We point out that Calore Plant stands isolated in the country, far from inhabited centres.

33130
E. Maglione Masturzo

Naples, the 25th Aprile 1944

MCu/pz

Memorandum for Lt.Col. COOLEYDELAYS AND LOST TIMES IN LINE WORKS

We have employed for the works on the 60 KV lines:

2 (and in the last weeks 3) hired trucks type Fiat 18 BL - this type is of the year 1915, for usual service has an average speed of about 15 Km per hour - when in order can carry about 3 - 4 Tons - not suitable for line works on account of the low speed and the impossibility of going on narrow roads.

3 trucks type Fiat 507 of our Co.: one of the Bari crew - one of our Distribution - one of the Sila crew. The truck of our Distribution has been available only until the 20th of november (on account of a fault and, after, because it was needed in Naples). This type of truck has in usual service an average speed of about 30 Km and carries 1,5 Tons. It is suitable for line works.

1 hired truck type OM - this truck was in very bad conditions and has been available only for 7 days.

1 truck type Fiat 1100 of our Co. - This truck has been employed for only 8 days and then sent back to the Tusciano because the other truck of the Plant was requisitioned by the R.A.F.

1 hired car - type 508 Fiat - for the engineer.

We have been also helped by trucks of the Army (specially for 330 work of the Tusciano - Pomigliano - Pratta line).

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A.A.I.
CENTRAL ELECTRICAL BOARD
APO 400

REF: CEB/18/2

20 April 1944

SUBJECT:- Priority at NAVALE MECHANICA Shops

TO:- Commander L.E. HOGGAN, RN.

1. It is understood that the workshops of the NAVALE MECHANICA operate under the sponsorship of the ROYAL NAVY and that all work undertaken by these workshops must have a priority assigned to it by the Royal Navy.
2. The CAPO VOITURNO hydroelectric plant formerly supplied power to the NAPLES area. This plant has been destroyed by enemy action and is now inoperative.
3. It is possible to rehabilitate this plant so that it can generate 1000 KW and later increase its generation to 2500 KW, which would be a most useful addition to the power supply in the NAPLES area. This will require the manufacture of ONE 1000 KW Pelton turbine, and later THREE 500 KW Pelton turbines. The generators to be direct connected to these turbines are now available in NAPLES.
4. I am informed that the NAVALE MECHANICA can complete the first turbine in four months and the others at intervals of approximately one month thereafter.
5. Inquiry is made as to whether the demands on these workshops are such that they can be authorized to undertake this work with a priority adequate to assure its completion within a reasonable time.

JAMES P. GROWDON,
COLONEL CE,
Vice Chairman, AAI - C.E.B.

18/2
~~13~~
A.A.I.
CENTRAL ELECTRICAL BOARD
A.P.O. 400.

Ref: CEB/1/2

1 April 1944.

SUBJECT:- Repairs to CALORE Plant.

TO:- D.D.W., HQ AAI (Adm Echelon).

1. The attached copies of S.M.E. memorandum, dated 21 March 44, are forwarded to you for information, with a suggestion that a copy be forwarded by you to CE No 3 District.

JAMES P. CROWDON,
COLONEL CE,
Vice Chairman, AAI - C.E.B.

SOCIETÀ MERIDIONALE DI ELETTRICITÀ

Memorandum for Col. GROWDONCALORE WORKS

Presently in the Calore Plant work:

an operation crew of about 13 men - this crew has been employed for some works on electrical equipments (some repairs of the first 60/30 KV transformer - drying of its oil - etc.).

a contractor crew of about 28 men - this crew has been employed for civil works (restoring of the building).

For the repair works of one unit and penstock we plan:

to displace in Calore plant some electrical crews now in the Capuana steam plant (as soon as they will end their present job). The number of men will reach at full development of works a maximum of 50;

to send in Naples every equipment or part of machinery which can more easily and completely be repaired in a factory (Navalmeccanica - Ocren);

to send in Calore at the right moment crews of Navalmeccanica and Ocren for some special assembly works (damaged sections of penstock - damaged valve between forebay and penstock - alternator, etc). Between skilled and unskilled we estimate a maximum of 20 men;

to increase the civil crew up to 40 men as soon as it will be possible to have sufficient quantities of cement;

to employ the operation crew (13 men) for some works on electrical equipment (inspection, maintenance, drying of the oil of transformers, etc.).

328

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SOCIETA MERIDIONALE DI ELETTRICITA

2)

The most essential requirements are:

80 Tons of cement from the Salerno factory or from Ilva Bagnoli. For the next month of April an allotment of 40 Tons at least is required.

two good 3 Tons trucks on the place of works for at least 12-14 hours/day (from 6.00 until 18.00 - 20.00). We could provide drivers;

oxygene and acetylene bottles (we estimate about 100 of oxygene and 60 of acetylene);

rations of food for workmen (500 gr. of flour - 200 gr. of dried legumes - gr. 25 of fats - gr. 60 of soup).

Naples, the 21st March 1944
TM/pz

327

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 394

R
PS

1 February 1944

SUBJECT: Removal and Reinstallation of Thermal Generating Facilities.

TO : Colonel James P. Growdon.

The removal and reconditioning of the two turbines at Ilva Steel Works 5625 KVA each - 80% Power Factor, with the necessary piping and auxiliary apparatus including control equipment will take about 3 months. Condenser service pumps no reconditioning required 1 week for removal.

Two Condensers dismantle, replace water boxes and doors 10 weeks. Removal of two boilers rated at 170 lbs. 800 F with 2152 sq. ft. heating surface and auxiliary equipment with controls will require approximately $3 \frac{1}{2}$ months.

The time required for installation at some other location will be approximately five months from the date foundations are completed. This is based on single shift operation.

EDMUND J. BARRY
Major C.E.

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 394

R Ps

22 January 1944

SUBJECT: Inspection Generating Facilities Ilva Steel Works.
TO : Col. J.P. Crowdon

1. On 20th January, a preliminary inspection was made of the generating facilities at the Ilva Steel Works.

2. Demolition is very extensive and thorough, throughout the entire works rubble and debris is piled over practically all equipment preventing an accurate determination of the actual condition of the major portion of the equipment.

3. Three turbines were installed here in 1940 of Brown-Boveri manufacture with following rating: 5625 KVA 3 Phase 45 cycles 5200 Volts 80% power factor 625 Amperes. 2700 R.P.M.

- #1. Slight damage apparent to control devices.
- #2. Generator very slight damage turbine completely wrecked.
- #3. Generator completely wrecked, turbine apparently OK, with slight damage to control equipment.
4. Steam supply at turbine badly damaged but may be easily replaced by using material available at plant. Water boxes and on condensers damaged.
5. Electric control room badly damaged. Some of this equipment may be salvaged if debris is carefully removed.
6. Condensing water supply from the sea approximately 1 Km from Turbine. Room by two series of pumping stations. Everything in connection with this equipment in good operating condition. No demolition.
7. 5 Kv. substation in basement of turbine which operated in parallel with line supply from S.M.E. in very good operating condition no demolition.
8. 30 Kv substation with feeder from S.M.E. adjacent to machine shop demolished. Some equipment is salvaged.
9. 60 Kv substation at south end of plant completely demolished. Very little salvage possible. Transformer damage has been very severe and at the present time it is not possible to determine what may be repaired.
10. Two modern boilers 7 years old adaptable to oil firing are apparently in good operating condition with some minor repairs. Control panels completely wrecked. Forced and induced draft fans in good operating condition. Boiler feedwater pumps damaged and will need replacement along with their adjoining filters and piping.
- Oil storage capacity inadequate. Only 16 ton and will require approximately 800 to 1,000 Ton for month for each boiler. Producer gas was formerly used as fuel source, no longer available.
11. The above boilers are rated at 170 lbs. pressure at 800 F. 2152 sq. ft. heating surface.

This inspection trip was made with the assistance of Engineer Thomas assisted by Signor Luciano of the Ilva Company. They informed the writer that the work of reconstruction has been hampered by the lack of acetylene for cutting purposes and it would probably take four ~~months~~^{months} to recondition the equipment for service.

The roof should be replaced on the boiler house to protect equipment.

As the roof of the turbine room has been completely demolished with the trusses a temporary house should be provided for the turbines.

Edmund J. Barry

EDMUND J. BARRY
Major C.E.

RPS

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 512

Electric Power Mission

3 January 1944

SUBJECT: Repairs to Generators, Timpagrande and Calusia Stations,
Sila Development.

TO : Col. JAMES P. GROWDON

1. On 22nd and 23 December, an inspection was made of the generators out of service at the Timpagrande and Calusia Stations in the Sila development.

2. At Timpagrande a 15000 Kva generator of Brown Boveri manufacture has been damaged while in service due to failure of stator coils or bars. About one third of the coils show the effect to a greater or lesser degree of the phase to phase short circuit. Normally, all of the damaged coils would be replaced. This would require about 150 bars of which 30 are on hand. Mica insulation is used. The S.M.E. has had a local Naples electrical repair shop inspect the condition and a report has been submitted. This proposes, in part, that expedient repairs could be made by using the bars on hand and such quality of mica insulation as is locally available. These repairs would require about 90 days as the shop has a limited number of qualified personnel to do this kind of work. If such a plan is followed due to the uncertainty of the life of the repairs or failure of the other coils, a set of replacement bars should be on order. It is doubtful that these could be obtained outside of the U.S. or U.K. It is understood that the S.M.E. will go ahead with the repairs outlined and has asked for assistance in obtaining a set of replacement bars as well as personnel for making such repairs.

3. At Calusia a 22000 Kva generator of General Electric manufacture has been damaged while in service due to failure of stator coils. The extent of the damage is not nearly as extensive as that at Timpagrande and can be repaired much more readily and quickly. However, it is more important to repair the Timpagrande unit as one unit now being made ready for service at Calusia will take care of most of the discharge from Timpagrande and there is not enough repair personnel to carry on the two jobs simultaneously. It is proposed to do this after finishing the more urgent unit.

*Copy made and sent
to Assistant Adjutant General
Feb 9, 1944 as result of report from
MGS. A. P. H. vsk*

Walker Cisler 323
WALKER L. CISLER
Lt. Col., AUS,
Electric Power Mission.

-2-

All the above trucks are old and have tires and tubes in very bad conditions. They are frequently out of service and cannot be repaired quickly on account of lack of spare pieces on the market. On some days we have had only 1 or two trucks in service.

We had on the work an average of 5 crews and 70 men (skilled and unskilled). It would have been necessary to have:

1 truck for every crew in order to displace them from the lodging to the work place in the shortest time.

1 truck for going all around to find food.

On a total of 6 needed trucks we had an average of about 3 available. Then two or three crews had to be transported by the same truck. On account of that the loss of time of the second crew can be estimated at 0140 hours/day (on morning and evening travel). The average loss on the total of working men has been then of 70×0050 men x hours for every day.

According to the conditions of trucks, also when in service, they had frequently some stops (change of a tire, trouble to the motor, etc.). We consider an average loss for every day of about 70×0010 men x hours.

Low speed of Fiat 18 BL has also procured delays. With an average distance between lodging and work place of about 15 Km (30 Km/day) there is a delay of about 0020 hours/day. As 18 BL have made about the 50% of transportations the average loss of time can be estimated in 70×0010 men hours for day.

The total loss per day has been then of 70×0130 men hours.

The work of the first 60 KV line (54 Km) was begun on the 6th of october and ended on the 3rd of november. On a total of 70 men x 9 hours x 28 days = 17640 men hours we have lost:

322.

about 1900 men hours (3 days of delay) on account of bad weather
70 x 1,5 x 28 = 2940 men hours (4 1/7 days of delay) on account of
transportations.

Net requirement for the work:

$$17640 - 1500 - 2940 = 12800 \text{ men hours}$$

For every Km we have had:

Total time 326 men hours = 36 men days

Total time 326 min 26 sec
Net time 236 " " = 26 " "

Net time 236

The work of the second 60 Kv line (75 Km) was begun on the 23rd of November and ended on the 2nd of January. On a total of 70 men x 9 hours x 39 days = 24570 men hours we have lost:

of bad weather

about 4400 men hours (7 days of delay) on account of bad weather

70 x 1,5 x 39 = 4095 men hours (6,5 days of delay) on account of transportations

Net requirement for the work:

$$24570 - 4400 - 4095 = 16075 \text{ man hours}$$

For every Km we have had:

Total time 328 men hours = 36,5 men days

Total time 320 " " = 24 " "

Net time 215 " " = 24 " "

For next works it must be pointed out that:

-4-

we are now remained only with the 3 Fiat 18 EL

the experience of the last weeks has shown that it is impossible to obtain from Consorzio trucks disposed to remain all the time out of Naples. On the other side it is absolutely necessary to keep during the night the truck in the same place where workmen lodge to avoid any loss of time on the morning and on the evening.

also the direct hiring of trucks is now very difficult. On account of bad conditions of tires and motors the owners do not like to send the trucks out of Naples for long periods.

Naples; the 14th January 1944

339

320

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 512

26 December 1943.

SUBJECT: Inspection of Sila Hydroelectric Development.

TO : Col. JAMES P. GROWDON.

1. On 22 and 23 December 1943, an inspection of the Sila Hydroelectric Development was made. This development is, under present conditions the main source of electric power for use in the Italian Mainland now occupied. Aided by steam and diesel generating now being made serviceable and some additional hydro capacity, it must carry essential power loads for areas not yet occupied when these loads are beyond capacity of emergency power equipment available. There is a limit, however, to the extent of the area which can be served from facilities presently or contemplated in use.

2. There are three generating stations and one pumping station, namely, ORICHELLA, TIMPAGRANDE, CALUSIA, and SAVUTO. The respective capacities for generating are about 55,000 kw, 75,000 kw, and 30,000 kw, making a total of about 160,000 kw. Water is stored in two reservoirs formed by damming the Arvo and Ampollino rivers. These two reservoirs are connected by a tunnel. The water to the generating stations is mostly taken from Ampollino though there is considerable generation at TIMPAGRANDE and CALUSIA from run of river flow of the NOTO river thru a tunnel joining with the discharge from ORICHELLA. Estimates prepared by others show a storage capacity equivalent to approximately 300,000,000 kw hours.

3. At ORICHELLA all three generating units are available. At TIMPAGRANDE three units are in service and one 15,000 kva is unavailable due to failure of generator stator coils which may require extensive repairs and an extended outage. At CALUSIA both units are out of service, one for reassembly after overhaul, and the second due to failure of generator stator coils. It is expected that the overhauled unit will be ready for service in about fifteen days. The damaged unit will be unavailable for some time depending upon facilities and effort made in effecting repairs. Lack of operation of these units results in a wastage of water discharged from TIMPAGRANDE.

4. At SAVUTO pumping station two of the three pumping units are out of service due to lack of motor replacement parts. The unavailability of these units will result in the loss of water which would normally be pumped into storage.

5. Observations of the AMPOLLINO reservoir indicate that the present storage is considerably below capacity. Whether or not this condition is normal for the time of the year should be determined immediately as water now being used may seriously affect the availability of power during the dry season.

6. It was observed that there is available timber in the region suitable for transmission line poles.
7. There are two - 10,000 kva, 150 to 60 kv transformers located at FEROLETO not now in use. The 150 kv line from TIMPAGRANDE is being repaired.
8. It is highly important that the operation of the available generating capacity be so coordinated on a system basis so as to utilize the equipment to the best possible extent.

Walker Cisler

WALKER L. CISLER
Lt Col., AUS
Electric Power Mission.

*Copy made and sent to Assistant Adjutant General
Feb 9, 1944, As result of request from M.G.S., AFITG.*

WLC

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 394

R

gvl

1st. February 1944

TO : Electric Power Subcommittee

SUBJECT: Repairs to Sila Power generating Equipment.

1. One generating unit at Calusia, capacity 17600 KW, has been repaired and is ready for operation. The penstock supplying this unit will be repaired and operating 4 February 1944. The operation of this unit will conserve the water stored in the reservoirs above this plant. The second generating unit at Calusia will not be repaired for some time but its non-operation will not cause any loss of K.W.H.

2. The damaged unit at Timpegrande is being repaired and will be ready for operation in about six weeks. Its non operation does not cause any loss of KW. or Kwh.

JAMES P. CRONSON
COLONEL CE
Chief, Electric Power Mission.

317

318

ENGINEER SERVICE
PENINSULAR BASE SECTION
A.P.O. 782

File Naples

OUTLINE OF RESTORATION OF ELECTRIC POWER SUPPLY TO CITY OF NAPLES 1943

3/10 - All power supply interrupted, except 100 Kw from a power plant of the Cirio Company (a cold storage and packing firm). This was connected to cables of the electric distribution system to supply power to the Solla water pumping station, to supply water to a portion of the city. Power was allocated 12 hours/day for water pumping and 12 hours/day for operation of cold storage plant.

Damage from previous bombing to the Volturno diesel station were being investigated. 2-3500 Kw and 3-1000 Kw, installed. Air cooling, water cooling systems severely damaged. Work started to repair water cooling system and 1-3500 Kw unit.

Damage to Capuana from German mines being investigated--clear debris and start repairs to 1-15,000 Kw, etc.. Repairs to one (1) Tusciano penstock (both penstocks blown by German mines) being made.

Repairs to 30 Kv Tanagro-Tusciano lines, 1-30 Kv Tusciano-Salerno-Torre Annunziata line and 1-60 Kv Tusciano-Torre-Fratta-Poggioreale circuit started. (these damaged by shell fire and bombs). Repairs to 150 Kv Sila-Tusciano line being made.

17/10 - Three (3) Italian submarines, each having 220 volt DC generators, connected in series, 2-1-conductors temporary cables ran approximately 2,000 feet to a tramway cable line which was connected to the Aronaccia tramway sub. A 1000 Kva, 9 Kv synchronous motor--600 volt DC generator was used in reverse, establishing 9 Kv service to important water pumping stations which supply the NW quarter of City on 17/10 (this was 2 days after completion of aqueduct repairs bringing water into the city).

20/10 - Temporary 30/9 Kv 2000 Kva transformer at Poggioreale placed in operation by 30 Kv Tusciano-Torre line and (60 Kv) Torre-Fratta-Poggioreale line operating at 30 Kv. Repairs to lines completed this date.

22/10 - 1-3500 Kw diesel at Volturno tested out. Generator air-cooling system damaged and out of service. Generator being dried out.

29/10 - The 3500 Kw diesel began operation, carrying 1600 Kw. (~~much concern regarding electrically-operated mines~~).

31/10 - Finance Building energized O.K.

1/11 - Coastal Zone energized after evacuation of populace. No trouble experienced. Total load on system 2700 Kw.

4/11 - Tusciano-Torre Annunziata 60 Kv line repairs completed and 60 Kv brought into Poggioreale for first time; improved voltage regulation.

4/11 - Investigated Matese I hydro station. 1-5000 Kw unit operating with slightly bent shaft. The other 5000 Kw unit had bent shaft, broken bearings and turbine bucket. Repairs being initiated and shaft to be brought to Naples and straightened.
7/11 - Tanagro-Tuscano 30 Kv line repairs completed, increasing power supply to Naples by approximately 1000 Kw, under present conditions.
10/11 - Calore Hydro station (damage by German mines) investigated—serious damage—repairs to power plant would require several months.
13/11 - Begun repairs to one (1) Matese-Frattamaggiore 60 Kv line. Naples load reached 7000 Kw; limited by power station capacity.
17/11 - Sila-Tuscano 150 Kv line repairs completed and power capacity to Naples increased. (There have been 7 interruptions to 60 Kv line, of from 6 to 24 hours, since 1/11/43. An investigation was made to determine causes and remedies. The causes of only two faults of the ~~same~~ could be determined. It was found that an over-sensitive instantaneous ground relay with low current setting at Tuscano, was tripping out the 60 Kv circuit. This was changed and operation improved with no trip-outs of consequence to date (7/12). Relays set at transformer rated load at Foggiorale, were set up to prevent trip-outs from overload as two had occurred.)
23/11 - 60 Kv line, Fratta to Agnano I, energized and Agnano started carrying load.
1/12 - 60 Kv Fratta-Sta. Maria line energized and power supplied to Caserta.

8/12 Peak load Naples approx 15,000 Kw -
 No tramways or Railways in operation

ENGINEER SERVICE
PENINSULAR BASE SECTION
A. P. O. 782

19 November, 1943

MEMORANDUM TO:

Colonel BURNS.

1. The present power situation is as follows:

a. Since 17 November the Sila-Tusciaco 150 KV line has been repaired and is in service capable of supplying all anticipated loads for next several months, at least.

b. The 245 Km Sila-Tusciaco 150 KV and 75 Km Tusciaco-Torre-Naples 60 KV line are subject to interruptions of long duration. (There have been 7 interruptions to the 60 KV line of from 6 to 24 hours duration in the first 18 days of November).

c. During the periods when the 60 KV transmission line is interrupted the Volturno diesel can at present supply but 2500 KW which is allocated to the Port, hospitals, water pumping, S.O.N. Oxygen-acetylene factory and miscellaneous important military loads.

2. Steps being taken to improve conditions:

a. Investigation of past failures of 60 KV line. This involves study of corrective measures and reorganization of S.M.E. to effect more rapid patrolling, inspection and repair.

b. Expediting repairs to Volturno diesel station to increase capacity. Principal delay has been due to necessity for obtaining new castings for cooling systems.

c. Repairs to 2nd 60 KV Tusciaco-Naples line. This will firm supply from Tusciaco increasing reliability from that source. S.M.E. now working on this. Estimated completion date 20 December 1943.

d. Repairs to Matese No. 1 hydro-station and one Matese-Naples 60 KV line. This will provide from 5000 KW to 10,000 KW additional power. This will tend to firm power supply to Naples and provide power not now available to military installations North of Naples.

313

314

S.M.E. and approximately 20 men under 345th Engineer General Service Regiment working on this. Estimated completion date 1 January, 1944.

e. Repairs to one 15,000 KVA unit and associated boilers, switch gear, etc. at Capuana Steam Electric Station, Naples. This will firm hydro power and be most reliable reserve in Naples. S.M.E. and units of Royal Navy working on this. Principal delay due to large castings required for condenser doors. Estimated completion date ~~15 January~~ 1944. *2nd 15 000 by 15/2/44*

3. Local loads both military and civilian are now being connected as rapidly as possible with priority to military loads. Many repairs to primaries, secondaries and transformers are required but progress is considered reasonably satisfactory.

G. COOLEY,
Lt. Colonel, Corps of Engineers,
Construction Branch.

REPAIRS GENERAL

12/21

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