Declassified E.O. 12356 Section 3.3/NND No. 785019

ACC 231/PWU

10000/150/610

ELECTRIC
SECTION
FEB. - M

Declassified E.O. 12356 Section 3.3/NND No. 785019

10000/150/610 ELECTRICAL DIVISION, ADVANCE SECTION, WEEKLY REPORTS FEB. - MAY 1945

231/PWU

ELECTRICAL DIV. - ADVANCE SECTION

WEEKLY REPORTS

Folio No. 2

3,3A to C

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Declassified E.O. 12356 Section 3.3/NND No. 785019

10000 150/610

THIS FOLDER
FEB. 45
MAY 45
CATALOGUE.

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231

231/PWU ELECTRICAL DEV. ADVANCE SECTION
WEEKLY REPORTS

Declassified E.O. 12356 Section 3.3/NND No. 785019

(3697) 36-2 Imp. ed Esp.

MINISTERO DELLE CORPORAZIONI

SERVIZI DELL'INDUSTRIA

DIV. 5 SEZ.

36-2 Imp ed Esp

307

Ditta Surfaro e Gulli S. e G.

Melito Porto Salvo

(Reggio Calabria)

Esportazione in Germania di abbozzi

di pipe e pipe in radica di erica

Declassified E.O. 12356 Section 3.3/NND No. 785019

36-2 Rmg ed 24

307

Ditta Surfaro e Gullì S. e G.

Melito Porto Salvo

(Reggio Calabria)

Esportazione in Germania di abbozzi

di pipe e pipe in radica di erica

307

La Freccia, Roma. Ord. 833. 3500

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13

ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMMISSION
ALLIED COMMISSION

RECEIVED
P.W. & U. S/C A.C.
10 MAY 1945 231

6 Via Cerretani, Florence
Telephone nº 1153
May 5th 1945

SUBJECT: Weekly Report
of Advanced Section

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394

This report covers the week ending May 5th 1945.

Field trips carried out by Lt-Col. Parker, Major Wilcox, Capt. Best during the week, and reports transmitted to Hqtrs office by phone and messengers.

Detail regarding Codigoro pumping station given to Lt-Col. Renton by phone.

Progress:

1) - Repairs Piano della Rocca and Corfino. Eng. Benetti of the Valdarno Co. was on May 4th to Garfagnana and contacted the Prefetto of the Lucca Province, the "Genio Civile" Chief Engineer and other authorities on the subject of the clearing of mines.

The Italian Lt. who is in charge for the mines clearing crew in the Province has been requested from the Prefetto to take care of the mines clearing under the line from Gallicano to Corfino. It is expected that the work will start on Monday May 7th.

The mines are of a kind that no detector can be used; the crew will be obliged to work with special bars 2 mt. length and explode each mine. The Officer in charge told Eng. Benetti that it is not possible to foresee a completion date.

Lt-Col. Cooley sent a Lt. to Pian della Rocca in charge of the mine clearing in the galleries between Castelnuovo and Gallicano. The work will start on Saturday May 5th. The same officer will take care of the cement transfer from Pian della Rocca to Castelnuovo and Gallicano. This officer plans to remain in Piano della Rocca about 8 days.

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2) - Tavarnuzze - The top joint of the 20,000 KV transformer failed and a new joint has to be made; this should be finished today, May 5th, and heating and oil preparation resumed. the static condensors are completed excepting a few joints to be made.

3) - Transmission lines -

120 KV Tavarnuzze - Chiusi - work suspended for lack of transport

60 KV Castelnuovo - Chiusi - work suspended for lack of transport

30 KV Tavarnuzze - Pontedera - not yet completed between Empoli and Santa Croce.

30 KV Pescia - Pontedera - work suspended for lack of transport.

60 KV Piano della Rocca - Gallicano - 4 days to complete. Materials waiting transportation Florence - Piano della Rocca.

120 KV Piano della Rocca - Gallicano - 10 days to complete. Materials waiting transportation Florence - Piano della Rocca.

60 KV Gallicano - Corfino ♎ See reference this report.

120 KV Rifredi - Grizzana - completed between Rifredi - Vaiano; and between San Quirico - Montepiano.

4) - Estimated spring output Piano della Rocca & Corfino. Piano della Rocca: As soon as the Serchio River can supply the above hydro plant, the estimate output will be: 5,000,000 KWH during the month of May. 2,500,000 KWH during the month of June. The max load will be 11,000 KW if one set only is operating, 22,000 KW if two sets are operated.

The water reservoir admits operation during the day peak hours only. A continuous operation may be estimated 7,500 KW during the month of May, 3,800 KW during the month of June.

Corfino: as soon as the transmission line connecting the plant with Piano della Rocca is repaired, the plant operating with one 1,500 KW unit may be operated during the 24 hours with a load near to the units capacity. 1,000,000 KWH per month may be generated during the months of May and June. In summer the generation is reduced, but the plant may be operated during some hours only at full load.

ADVANCED SECTION P.W.B. SUB-COMM OFFICIAL FILE A.C. ELECTRICAL DIVISION

A. Crowther Major
A. Crowther
Major R.E.
Officer in charge

721

ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMMISSION
ALLIED COMMISSION

12

RECEIVED
P.W. & U. SUB-C.
2 MAY 1945 231

6 Via Cerretani, Florence
Telephone nº 1153
April 30th 1945

SUBJECT: Weekly Report
of Advanced Section

Bkhan stan 1 copy

TO : HQtrs Allied Commission
Public Works & Utilities sub-commission
A.P.O. 394

also 1 copy to Maj Price, copy to Lt Col Lefler.

This report covers the period from 21st to 27th April inclusive.

April 21st.

Major Wilcox and Capt. Best introduced to engineers of the Valdarno Co. and discuss in general the power plants and transmission lines, rehabilitation plans, progress and intention.

Capt. Lowdon - Called Major Gaither ref. cement releases, but he was out. Discussed methods of obtaining releases for material with Major Wilcox and Capt. Best. Checked on release of nails for Valdarno. To transport division to arrange transport for Ing. Gebedinger to Rome with eight boxes of turbine parts. Transport division to let us know by 'phone about Wednesday.

April 22nd.

Sunday.

April 23rd.

Major Wilcox and Capt. Best visit Tavarnuzze sub-station accompanied by Eng. Errera; the present function of the station was reviewed. Transformers installed and those under repair inspected. All field report (Major Wilcox) sent to Rome under separate cover, further copy attached. (1)

Major Crowther interview with Major Gaither A.M.G. 5 Army with reference to the situation in Bologna; details given over the phone to Lt-Col. Renton and copy dispatched by courier (further copy attached). (2)

721

Declassified E.O. 12356 Section 3.3/NND No. 785019

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721

Approached G 4,5th Army, for permission to visit Bologna on inspection tour; this was turned down, with a promise to reconsider later in this week.

Capt. Lowdon - To Col. Bye S.C.P.O. 5th Army for passes for Valdarno engineers proceeding to Gallicano etc. Secured release for 4 tons cement for Sperando and arranged with Major Gaither that he would hold about 20 tons in case it was needed for the gallery of Piano della Rocca.

April 24th.

Major Wilcox and Capt. Best visit local foundries, Pignone, Galileo, Veraci, noting faculties available, check on

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work in hand for Valdarno Co., visit to Valdarno stores, materials available noted.

The stocks of insulating varnish are much higher than the quantity denounced or specified on the inventory of the stores; it is therefore proposed to supply Terni with sufficient to complete an urgent job; Major Wilcox arranging.

Capt. Lowdon - To Col. Bye, S.C.P.O. 5 Army, for more passes for Valdarno employees for Gallicano, Castelnuovo etc. All passes obtained. Releases for cement Tavarnuzze - Santa Croce transmission tower bases obtained. Arranged for better accommodation fot the Italian soldier drivers.

April 25th.

Capt. Best proceeded on field trip to Anghiari, Sperando, Sestaione, Riofreddo, accompanied by Rossettini. Copies of field report attached. (3-4-5-6)

Major Wilcox appointment with Col. Cooley at Lucca, and accompanied by Eng. Legnaioli visited:

1 Pian della Rocca
2 Gallicano
3 Castelnuovo
4 Corfino

Field reports sent 26th under separate cover; a further copy is attached. (7-8-9-10)

Capt. Lowdon - Secured release of remaining 16 tons of cement (reserved for Pan della Rocca) to be passed to Sperando for urgent works. Further permits to travel in forward areas secured from 5 Army A.M.G. S.P.S.O. in favour of Valdarno egnineers.

April 26th.

Capt. Best to 15th Army Group interview with Major Bailey Engineering Intelligence, with a view to obtaining information on the position forward relative to the Electrical situation.

The data obtained was the same as gathered from 5 Army with some additional reference to the status of the transformers and thair location.

721

Information called for by Lt-Col. Lapper: the electrical

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7213

Information called for by Lt-Col. Lapper: the electrical power position at Ferrara; 15 Army Group have very little coming through, the following extract was taken from Capt. Marshall's General Report:

"FERRARA - No electric power supply from grid or local power stations. No information on the status of transmission lines in this area. Superficial damage by shell fire to transformer station. North of town, between River Po and Ferrara, a very large factory is undamaged, may be rubber factory or allumimum."

Copy sent under separate cover on the 26th to Lt-Col. Lapper, after giving this date over the phone to Lt-Col. Renton.

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Capt. Lowdon - Contacted Major Price regarding request for tyres received from Elba Electric Co. and for materials for repairs to transformers by the Valdarno Co. requesting material from Terni.

Conference with Major Gaither regarding the future release of cement, now that 5 Army A.M.G. are moving north.

The arrangement now is that all demands will be submitted through the office of the Regional Engineer Toscana Region, liason established with Capt. Hodges, Public Works Officer to Lt-Col. Lee.

April 27th.

At 0500 hours damage to one 12,000 KVA transformer 60/30 KV in Castelnuovo dei Sabbioni was reported. The substation has no crane; one was immediately sent from Florence and should arrive during the evening. The Florence area supply now in operation is through one 12,000 KVA transformer in Castelnuovo and the two 60/30 KV transformers, one in Tavarnuzze the other in Prato. The tension is low, but there is no reduction in the load. A further report to follow.

Capt. Lowdon - Contacted Capt. Hodges for release of cement for Gallicano and Cantini (Pistoia). A further request for tiles from Cantini was dealt with by Major Crowther who wrote Provincial Commissioner Pistoia stressing the importance of the rebuilding of this factory that is employed chiefly on the repairs to plant of electrical companies,and requesting his support.

Major Wilcox with Eng. Legnaioli visited the Leghorn plant. Field report of Major Wilcox attached. (13)

Transmission line 60 KV Piano della Rocca - Corfino:
a circuit at 60 KV will be available probably by the 20th to 25th May, rehabilitated by the Valdarno Co., provided that:

1-mines are cleared
2 food for workmen is arranged
3 transportation is supplied.

The work includes the replacement of 6 towers destroyed and the replacement of 90% of the conductors. This is available from other lines in the immediate vicinity that have been canibalized in the past.

7010

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The repairs will commence with 5 squads of 12 men; this is dependant upon transport being made available.

60 KV line Corfino to Sillano has not as yet been inspected. A report covering this transmission line to Ligonchio will be submitted as circumstances permit; it is stated that some pockets of enemy resistance are active in this area.

120 KV line Tavarnuzze - Chiusi, work temporally suspended for lack of transport.

60 KV line Castelnuovo - Chiusi, work temporally suspended for lack of transport.

30 KV line Tavarnuzze - Empoli: completed.

7019

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Work in progress: Santa Croce from Empoli still in progress. Santa Croce to Pontedera completed.

30 KV line Pescia -Pontedera: work temporally suspended for lack of transport.

30 KV line Livorno - Pontedera: will be completed by May 15th.

120 KV line Rifredi - Grizzana (FF.SS.) Section Rifredi - Vaiano, completed; section Vaiano - Grizzana will be completed by the 15th May. No information Grizzana to Bologna, but it is anticipated that Società Bolognese has put on gangs working in the direction of Grizzana from Bologna. Capt. Best may be able to confirm: he is now in Bologna.

Eng. Casali, transmission eng. Valdarno, states that he has had information from Station engineer Corfino that the Centrale and sub-station ar Ligonchio I & 2 are not damaged by the enemy.

The 120 KV line Ligonchio - Florence (200 Km.) is badly damaged between FIUMALBO and PIAN DEI LAGOTTI (this is approx. 15 to 20 Km.) 40 towers are reported to be grounded.

Lt-Col. Parker and Capt. Best left this office for Bologna.

Intention: to report on the electrical situation, to note the equipment available, immediately report of damage to equipment, transmission lines, etc. It is expected that a general report will be drawn up by May 4th and forwarded immediately.

A. Crowther
Major R.E.
Officer in charge

ADVANCED SECTION P.W.B.U. SUB-COMM OFFICIAL DATE A.C. ELECTRICAL DIVISION

Enclosures:
1) Tavarnuzze sub-station
2) Information Bologna
3) Anghiari field report
4) Sperando " "
5) Sestaione " "
6) Riofreddo " "
7) Pian della Rocca "
8) Gallicano field report
9) Desertoli-Corfino trans; line

7211

Declassified E.O. 12356 Section 3.3/NND No. 785019

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A. Crowther
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Officer in charge

ADVANCED SECTION P.W.B.U. SUB-COMM. OFFICIAL DATE A.C. ELECTRICAL DIVISION

7211

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1) Tavarnuzze sub-station
2) Information Bologna
3) Anghiari field report
4) Sperando " "
5) Sestaione " "
6) Riofreddo " "
7) Pian della Rocca "
8) Gallicano field report
9) Desertoli-Corfino trans; line
10) Castelnuovo field report
11) Valdarno draft
12) Col. Cooley report on Serchio river dam etc.
13) Leghorn field report

Declassified E.O. 12356 Section 3.3/NND No. 785019

FILE 1

FIELD ENGINEERS REPORT.

TAVARNUZZE Sub-station
Selt-Valdarno
23rd April 1945

a) EMPOLI line was energized 22nd April 1945
b) 6000 KVA, 33.3 KV - 6 KV transformer has been repaired for use of 4 1500 KVA, 5 4 KV static condensers that are now being installed.
This work is expected to be completed by 10th May 1945.

c) Foundation and cooling equipment for 20,000 KVA, 120 KV to 36 KV transformer are ready. Transformer is now under oil test. Installation will be complete by 15th May 1945.

FLORENCE



7210 a
Clarence S. Wilcox
Major Ord.
Field Engineer

Comments.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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FLORENCE

7210

Clarence S. Wilcox
Major Ord.
Field Engineer

Comments.

This substation receives power at 60 KV from TERNI (120 KV) transmission line. Power is furnished to PRATO (120 KV) transmission line at 60 KV. A 6000 KVA transformer at this substation operates from 60 KV to 31.5 KV. Power is furnished at 30 KV to EMPOLI over the (120 KV) transmission line. Two 30 KV lines also lead to Florence, PERETOLA substation.

Copy to: Lt-Col. Lapper
Major Crowther
Major Wilcox
File

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ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMMISSION
ALLIED COMMISSION

Information from Engineering Intelligence, 15 A.G.
by telephone to Lt-Col. Renton

April 26th 1945

FERRARA - No electric power supply from grid or local power stations. No information on the status of transmission lines in this area. Superficial damage by shell fire to transformer station.

North of town, between River Po and Ferrara, a very large factory is undamaged, may be rubber factory or alluminium.

BOLOGNA - Battiferro - 1 3000 KVA set Diesel (1910) leaking so badly that only 500 KW is available of this 150 KW to auxiliaries 350 KW to town essentials.

Hydro plant, undamaged 400 KVA but canal badly damaged. No evidence of repairs yet started.

Transformers.

Tre Madonne Sub-station - Bologna:
1 = 120/60 - 15000 KVA in perfect order.

Battiferro:
2 x 50/15 - 6000 KVA
3 x 50/3 - 6000 KVA
1 x 15/3 - 4000 KVA
complete with oil and in good condition. Voltage reported O.K. having been mated in the past.

120 KV line north of Grizzana to Bologna; estimated more than 30 towers down; estimated 2 months to rebuild, but a more precise report is wanted.

MODENA - Confirmed that trams are running and the town is normal.

7209

PUBLIC WORKS & UTILITIES SUB-COMMISSION
Electrical Division

FIELD ENGINEERS REPORT

1) - Name of Station ANGHIARI Power Station m.r. L 4101
Name of Company STAB.IND. TOSCANA & CARTIERA CINI
Date of visit 25th April 1945

2) - Progress of work.

This power station is completely intact and the station is operating to maximum water capacity.
Installed are: 1 x 920 KVA Francis turbo-alternator
2 x 450 KVA " " "
The present output of 1000 KW is fed to the Valdarno network around Pistoia, and the paper mill consumes about 150 KW during the daytime.
The headrace canal requires some repairs needing 3 Tons of cement, but this is not urgent.

3) - Matters requiring attention.

4) - Anticipated date of completion.

ADVANCED SECTION F.W.& U. SUB-COMM OFFICIAL DATE A.2. ELECTRICAL DIVISION

Dist. FLORENCE

Signed H. Best
Rank Captain R.A.

7208

Declassified E.O. 12356 Section 3.3/NND No. 785019

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3) - **Matters requiring attention.**

4) - **Anticipated date of completion.**



H/Best.

Dist. FLORENCE

Signed H. Best 7208
Rank Captain R.A.

NOTE - **Add separate report only where necessary.**

Copy to: Lt-Col. Lapper
Capt. Best
2 FileV/4

Declassified E.O. 12356 Section 3.3/NND No. 785019

4

PUBLIC WORKS & UTILITIES SUB-COMMISSION
Electrical Division

FIELD ENGINEERS REPORT

1) - **Name of Station** SPERANDO Power Station m.r. L 4103
Name of Company SELT-VALDARNO
Date of visit 25th April 1945

2) - **Progress of work.**

The walls of the station have been rebuilt up to roof level and timbering was in progress for the roof.

The overhead crane will be erected shortly. One Pelton unit of 5500 KVA was hidden together with alternator, transformers and switchgear. This Pelton is in order, but the alternator was destroyed. A suitable alternator is dismantled at Gallicano, this alternator requires a considerable amount of insulating material before putting into service.

3) - **Matters requiring attention.**

40 workmen are employed at the present moment.
30 Tons cement required within 2 weeks to complete roof.

4) - **Anticipated date of completion.**

ADVANCED SECTION SUB-COMM. OFFICE DATE A.M.G. ELECTRICAL DIV.

Dist. FLORENCE

Signed H. Best 7207
Rank Captain R.A.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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30 Tons cement required within 2 weeks to complete roof.

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Dist. FLORENCE

Signed H. Best 2207
Rank Captain R.A.

NOTE - Add separate report only where necessary.

Copy to: Lt-Col. Lapper
Capt. Best
2 File V/8

Declassified E.O. 12356 Section 3.3/NND No. 785019

PUBLIC WORKS & UTILITIES SUB-COMMISSION

Electrical Division

FIELD ENGINEERS REPORT.

1) - Name of Station SESTAIONE Power Station m.r. L 3917

Name of Company S.E.I.A.C. (subsiadiary of Valdarno Co.)

Date of visit 25th April 1945

2) - Progress of work.

The condition of the power station is similar to that mentioned in Valdarno's report submitted immediately after its destruction on 26th Sept.1944.

Valdarno are submitting a detailed report on plans and material required for immediate rehabilitation.

The generator room is completely demolished together with 2x1775 KVA Pelton units. The Coy had previously dismantled 1x1775 KVA unit and 1x3550 KVA unit, together with sufficient transformers and switchgear for an output at 60 & 30 KV.

The top of the steel penstock has been damaged, but can be repaired with reinforced concrete. A large bridge (40 m span) on route 12 across the River Sestaione just south of the power station has been demolished, and the only by pass available is fit for jeeps or mules.

3) - Matters requiring attention.

/3/7/

The outgoing 60 & 30 KV lines have not been badly damaged.

15 workmen were clearing débris and the Coy hope to increase this number.

4) - Anticipated date of completion.

Approx. 3 months to erect 1 x 1775 KVA unit in provisional building.

Dist. FLORENCE

Signed H. Best 7206

Rank Capt. R.A.

ADVANCED SECTION P.W. & U. SUB-COMM OFFICIAL

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Dist. FLORENCE

H/Best

Signed H. Best 7206
Rank Capt. R.A.

ADVANCED SECTION · ELECTRICAL DIVISION · P.W. SUB-COMM. OFFICIAL DATE A. C.

NOTE - Add separate report only where necessary.

Copy to: Lt-Col. Lapper
Captain Marshall, 15 Army Group
Capt. Best
3 File S/1

Declassified E.O. 12356 Section 3.3/NND No. 785019

6

PUBLIC WORKS & UTILITIES SUB-COMMISSION
Electrical Division

FIELD ENGINEERS REPORT

1) - Name of Station RIOFREDDO Power Station, m.r. L 3917
Name of Company S.F.I.A.C. (Subsiadiary of Valdarno Co.)
Date of visit 25th April 1945

2) - Progress of work.

This station is situated a few hundred yards from Sestaione on the opposite side of the River Lima.
Originally installed where: 1 x 400 HP Francis turbo-alternator
2 x 200 HP " " "
Enemy demolition on 26th Sept. 1944 destroyed the building and all machinery, except one turbine of 200 HP (shaft bent, otherwise O.K.)
One governor and one exciter could be repaired if required.
Hydraulic works in order, except penstock dented by falling building. No rehabilitation work is as yet planned.

3) - Matters requiring attention.

4) - Anticipated date of completion.

ADVANCED SECTION P.W.B. SUB-COMM. OFFICIAL DATE A.G. ELECTRICAL DIVISION

Dist. FLORENCE

Signed H. Best
Rank Capt. R.A. 7205

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Dist. FLORENCE

Signed H. Best
Rank Capt. R.A. 7205

NOTE - Add separate report only where necessary.

Copy to: Lt-Col. Lapper
Capt. Marshall, 15 Army Group
Capt. Best
3 File S/1

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FILE.

7

PIANO DELLA ROCCA (map sheet 11, 02496)

SEIT-VALDARNO

25th April 1945

Plant originally contained three 14,000 KVA units. One unit had been dismantled. One unit has been repaired and the other is under repair. The turbine from the disassembled unit was used to repair the other two units. The intake canal has been damaged in five places by artillery fire.

Approximately 10 tons of cement needed for repairs. This work is being done by the P.B.S. engineers. Repairs to second unit will be completed in one month.

FLORENCE

7204

Clarence B. Wilcox
Major, Ord.
Field Engineer

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7204

Clarence S. Wilcox
Major, Ord.
Field Engineer



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Major Wilcox
2 File

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8

CALENZANO hydro-plant (map sheet 11,I.1604)
SELT-VALDARNO
April 25th 1945

This plant was badly damaged during German occupation. The diversion dam consisted of four large gates, two of which were completely destroyed. The remaining two and their lifting equipment are in good condition. Two conduits lead to the plant headworks. The entrance to the tunnels has been blocked with stone and mined. A portion of one conduit has serious breaks in a canal section. The headworks and two penstocks have been damaged by shell fire. Two overflow pipes have also been damaged by shell fire. The tail race and overflow canal are undamaged. This flow floods directly into the Pian della Rocca intake conduit. The power house was demolished; substation only slightly damaged. Power house crane can possibly be repaired. Substation crane id undamaged.
The station originally contained one vertical and three horizontal 6000

KVA units as well as one 3200 KVA unit. The vertical 6000 KVA unit appears to be undamaged. The turbine had been sealed in by wall. One horizontal 6000 KVA unit had been dismantled and hidden without being damaged. The other units had been very nearby demolished by demolition charges. Two 60-5 KV, 6000 KVA transformers had been hidden underground. One 30-5 KV, 6000 KVA transformer in good condition. One 60.30-5 KV, 6000 KVA transformer some damage. One 30-5 KV, 3200 KVA transformer in good condition.

3) - Matters requiring attention.

Valdarno Company are clearing débris from plant. P.B.S. electrical engineer has initiated work of making temporary repairs to diversion dam and hydraulic line including overflow pipes at headworks. This work

should be completed within 15 days. Present flow of Serchio that would be made available to Pian della Rocca plant is estimated as not over 8 cubic meters per second.

FLORENCE

Clarence T. Wilcox
Major Ord.
Field Engineer

7203

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Major Ord.
Field Engineer

7203

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Major Wilcox
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DESERTOLI-CORFINO transmission line

SELT-VALDARNO

25th April 1945

Two 60 KV lines are mounted on pin type insulators on one tower. This line connects Piano della Rocca, Gallicano, Castelnuovo and Corfino plants. Approximately seven towers are down and a good deal of the wire. Probably enough wire could be salvaged to rebuild on circuit.

FLORENCE

Clarence S.Wilcox
Major, Ord.
Field Engineer

ADVANCED SEC

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Castelnuovo and Corfino plants. Approximately seven towers are down and a good deal of the wire. Probably enough wire could be salvaged to rebuild on circuit.

FLORENCE

Clarence S.Wilcox
Major, Ord.
Field Engineer

7202



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Major Wilcox
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10

CASTELNUOVO Hydro plant (map sheet 11,L1409)

SELT-VALDARNO

25th April 1945

This plant was badly damaged during German occupation. The diversion dam on the Serchio River was not damaged. The hydraulic operated gates are now able to function through power supplied by the Corfino plant. The intake tunnel from the dam to the headworks has been damaged in two places and will require 10 tons of cement for repair. The headworks and penstock are undamaged. The power house and substation have been completely demolished.

The plant contained three 2400 KW vertical generating units. Unit nº 1 has sustained considerable damage to the exciter and governor, and slight damage to the alternator due to the crane falling across the unit. The turbine appears undamaged.

Unit nº 2 has been dismantled and hidden underground. The alternator, governor and turbine should be in good condition, with the exception of the alternator cover plate. The cover plate had been left in the open and was damaged by bombing. A section of the cast rim had been blown out, but as the spider and bearing were undamaged, it appears useable.

Unit nº 3 was damaged by the falling power house and other nearby demolitions. The exciter and governor were badly damaged. Bolts holding the generator and turbine shaft were sheared with possible internal damage to both machines. Crane was badly damaged. One transformer had been hidden; of other two one was slightly damaged by falling débris, the other more seriously.

3) - Matters requiring attention. Clearing up rubble is in progress. Valdarno Company is to submit a report on proposed rehabilitation schedule. This station was verbally released by P.B.S. for our action. (Lt-Col. Cooley to Major Wilcox).

FLORENCE

Clarence S. Wilcox
Major, Crd.
Field Engineer.

Copy to: Lt-Col. Lapper

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FLORENCE

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Major, Ord.
Field Engineer.

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Capt. Marshall, 15 Army Group
Major Wilcox
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7201
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Col. Tupper

12

ENGINEER SERVICE
PENINSULAR BASE SECTION
APO 782

GC/fs

27 April 1945

SUBJECT: Inspection of Serchio River Dam at Castelnuovo and Flow Lines to Piano della Rocca Hydro Electric Station.

1. Inspection was made on 25 April 1945.

2. The dam and headworks at Castelnuovo di Garfagnana which is required to divert water from the Serchio River through Gallicano to Piano della Rocca was damaged from Allied bombing. Two of the four "Tainter" gates were blown out but all piers are in good condition. Arrangements have been made to erect temporary masonry walls (11-1/2 x 32 ft) across these two gate openings. Adequate control of water diverson can be effected by operation of the two undamaged gates.

3. There are two tunnels leaving the headworks to carry water to Gallicano. The entrances to these tunnels had been blocked with stone and mined by the Germans to prevent persons from going through the lines. One tunnel having a capacity of 18 cubic meters per second (equivalent to 10,000 Kw at Piano della Rocca) is intact to Gallicano. The other tunnel opens into a canal near Gallicano. Sections of this canal have been damaged by shell fire. Arrangements have been made to block off this canal at the exit to the Gallicano forebay. The entrance to the large tunnel is being cleared.

4. The forebay and control gates at Gallicano have suffered superficial damage from shell fire which will not interfere with its operation. The two penstocks and the two spillway pipes (which can be used to by-pass the Gallicano station to provide water for Piano della Rocca) have several breaks from shell fragments. Arrangements have been made to repair the breaks in the spillway pipes.

7206

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5. It is estimated that the temporary work and repairs will be completed by 10 May 1945.

6. It should be noted that the present stream flow of the Serchio River at Castelnuovo is at present about 7 cubic meters per second which is exceptionally low. This is equivalent to an average load of but 4,000 Kw at Piano della Rocca. The temporary work and repairs will probably provide for full use of the stream flow until October by which time permanent repairs will have been made.

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

PUBLIC WORKS & UTILITIES SUB-COMMISSION
Electrical Division

FIELD ENGINEERS REPORT

1) - Name of Station LEGHORN Steam Plant
Name of Company SELT-VALDARNO
Date of visit 27th April 1945

2) - Progress of work.

a) Work on first boiler by Orlando Shipyard. Tubes nearly complete. 12 men employed on project.

b) Masonry construction on power house walls by Nicolai. 70 men employed on project. Roof over generating room not started because of lack of cement and tile.

c)Work on generating unit by Valdarno Company. 15 men employed on project. Turbine has not been brought from ANIC. No work started on damaged generator.

3) - Matters requiring attention.

a) The Al. Com. truck in use at Leghorn has been withdrawn. It is very necessary thaf transport be provided to continue work.

b) 50 tons of cement are needed for masonry construction. Request made some time ago and not filled.

c) Insulating materials needed to repair generator stator.

d) Final negotiations for manufacture of refractory brick must be completed without delay.

4) - Anticipated date of completion.

At present rate of rehabilitation this plant will not be available for at least six months.

Dist. FLORENCE

ADVANCED SECTION P.W.B.U. SUB-COMM. OFFICIAL DATE

Signed Clarence S. Wilcox
Rank Major Ord.
Field Engineer

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Dist. FLORENCE

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Signed Clarence S. Wilcox
Rank Major Ord.
Field Engineer

NOTE - Add separate report only where necessary.

Copy to: Lt-Col. Lapper
Lt-Col. Cooley
File

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P.W. & U. S.C.A.C.
25 APR 1945 231

ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMMISSION
ALLIED COMMISSION

1 - copy to Lt Col Lapsley
1 - copy maj Porter
1 - copy Lt Col Renton
1 - copy maj Boothby

Florence, 6 Via Cerretani
Telephone nº 1153
April 21st 1945

SUBJECT: Weekly Report
of Advanced Section

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394

This report covers the period from April 14th to April 20th 1945, inclusive.

April 14th.

Major Gaither requested that I interview Lt. K.E. Mc Leister 1338 Engineers Co., and gave all the information we have concerning transmission lines and power stations Bologna area.

Major Vallero - Stator for 800 HP motor (2nd) is completed except for varnishing the repaired sections. The Company does not have any insulating varnish. An MAT 10 has been submitted.

The second 2850 KVA 38/4 KV transformer is now ready at Larderello I. This transformer will be used to take extra load and also as a stand-by for the originel transformer.

April 15th.

Sunday

April 16th

Col. Renton called information re 120/60 KV transformer north of Florence. This is located at Sperando and is reported that one column of coils is damaged and the tank, but not seriously; this can be repaired within the station, and Valdarno have a spare column for this phase which can be used. It is believed this transformer may be wanted at Chiusi; repairs have not yet began.

Detail in ref to electrical system Modena and district, La Spezia called for by A.M.G. 5th Army. 7198

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Major Vallero - Phone repaired and in fair working order. Can be reached through Leghorn Long Distance - Avalance Jr. and then ask for Number 30.

Capt. Lowdon - To Engineer A.M.G. 5th Army for cement releases for transmission lines Tavarnuzze - Santa Croce. To Industry & Commerce to get a release for cement for Sperando. This has to come from A.M.G. Major Austin has given all the cement he can get to Major Gaither who gives releases. This should prove most satisfactory to us.

April 17th.

Valdarno report 60 KV supply Terni - Tavarnuzze - Prato.

Visit to Tavarnuzze substation - Major Crowther:

The 6,000 KVA transformer 60/31.5 KV (formerly in Pescia) is in operation on the line Terni - Tavarnuzze - Prato - Empoli. The 60 KV tension being 54 KV, the 30 KV supplied to the grid is very low. The average load is 3,000 to 3,100 KW, and was supplied to Peretola through two transmission lines; one 30 KV line from Castelnuovo dei Sabbioni being energized from Castelnuovo as reserve only. In the near future Empoli may be supplied at 30 KV through the 120 KV line to San Romano.

The 120/40 KV 20,000 KVA transformer has been filled with oil (18 tons); the oil treatment is to start and requires approximately 20 days. The transformer heating will be given with the 40 KW resistences supplied with the unit, ans with an additional 50 KW resistence; 1 oil filter and 1 sharpless centrifugal machine are available.

The second transformer assembling is expected to start on or about April 25th with the core and coils to be transferred from Florence. For this transformer the 120 KV bushings are available. Some 36 KV bushings must be supplied by Richard-Ginori.

The second transformer case now repaired will be used to help in the final mounting of the n° 1 unit, so that the transformers accessories may be ready when oil treatment is completed.

The 6 KV, 6,000 KVA Magrini static condenser is nearly mounted. The 30/6 KV transformer ready for operation is to be transferred to its location. The condenser is connected in 4 sections so that 4 condensers 1,500 KVA each may operate.

Rebuilding of transformmer repair shop and general ma-

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chine shop are progressing satisfactorily.

April 18th.

Major Vallero - Repairs have started on the third 800 HP motor stator.

M.A.T.E.R. estimates about 60 Kg of mice tape will be necessary to repair the windings for the generator of the second set.

The building and the first set at Larderello II are being worked on. A damaged 15,000 KVA, 120/9 KV transformer now at larderello II needs the three bushings. The Company will contact the Richard-Ginori porcelain factory to have these made. Turbine rotors and generator rotors are ready for shipment from Castelnuovo to Terni. These rotors are to be used for the second set. Need transporter.

Visited Follonica. The work on pump castings progressing. A maximum of 60 days given for both casting and machining of parts.

Capt. Lowdon - To Valdarno stores with C.S.M. 237 Coy R.E. and Eng. Benetti,where enough material to finish the Lima units was found, although Valdarno said they did not have enough. The release for the thread for making tape for Valdarno was delivered today. Getting passes for Veraci engineers to proceed to Santa Maria.

April 19th.

Major Barry phoned for information: when will the generator be moved from Gallicano to Sperando.

For the present the approaches to this area are closed to other than military forward traffic. O.I.C. E & M detachment will advise us when it is possible to visit this area. Liason is being mantained with Col. Cooley P.B.S.

Eng. Marasco Società Meridionale di Elettricità asked for assistance in obtaining release for insulators from Richard-Ginori. Major Austin, Local Resources 5 Army contacted; it is definite that insulators are blocked by G.4 5th Army and urgently required for operational needs. No release will be made while 5 Army are in this area; we will be notified when these stocks etc. are handed over to A.M.G.

Florence street cars are now running; output daily KWH 4,000, max peak 450 KW.

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Capt. Lowdon & Rag. Rossettini - To Pistoia, visit to Cantini workshop where the following works are in progress:

- turbine for Valpiana plant (Società Elettrica Maremmana)
- regulator for Valpiana
- three turbines for Ravacce
- regulator for Ravacce already completed.

In the workshop works are in progress to repair the buildings damaged and to put in operation new machinery. Roofing tiles has been released but in the brick factory the amount demanded is not available, and next week another factory will provide the tiles. Also cement is demanded, for this purpose advised the direction to prepare application.

Visit to Martinelli drawing plant. Electric power is not yet available in the plant; all the machinery to redraw wire is ready to operate. No furnaces for melting.

Visit to the substation of "Società Forze Idrauliche dell'Appennino Centrale" (S.F.I.A.C.) - Chief Eng. Vagaggini. Inspected substation for Pistoia town and surroundings. In the out-of-doors cabin are in operation:

- 1, 3000 KVA 60/5 KV transformer
- 1 2000 " 30/5 " "
- 1 2000 " 30/5 " "

and in the workshop 1 5000 KVA 60/5 KV transformer is under repair.

April 20th.

Capt. Lowdon - To chemical works at Castellina in Chianti, where the Director showed me around. They cannot make iron silicate or iron phosfate (required by all foundries). Supplies may be found at Barga, when situation allows us to visit.

Valdarno report Castelnuovo Garfagnana has been liberated. Received information by phone from Eng. Crudeli, Capo Centrale of Gallicano plant.

Corfino plant -	2 groups	1,800 KW
	1 group	1,200 KW
	total	4,800 KW

The groups of this plant are not damaged; the building is damaged. Near the plant a road bridge has been blown and also the plant building suffered some damage. Selt-Valdarno

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are giving orders to repair the 60 KV line Corfino - Pian della Rocca. Work will start as soon as possible.

Castelnuovo plant - 3 groups 2,400 KW, total 7,200 KW. The plant is damaged by bombing.

1 group is not damaged
1 group is dismounted and not damaged
1 group is damaged

- the intake in the Serchio River seems to be undamaged
- the tunnel between Castelnuovo and Gallicano is damaged and mined.



A. Crowther
Major R.E.
Officer in charge

Enclosures: Programme for second 12,000 KW Group Castelnuovo central submitted by Major Vallero.

4800
4800
9600

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ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMMISSION
ALLIED COMMISSION

April 18th 1945

Program for second 12,000 KW group Castelnuovo Central submitted by Major Vallero to this Office.

For the reconstruction of the second group of 12,000 KW at Castelnuovo, the following items are necessary:

1) - Accomplish the casting of the discharge of the turbine on the alternator side; that is the same casting already made for the first group at Terni. This casting will be done at either Terni or Pignone.

2) - Repair cylinder of the turbine.

3) - Accomplish the machine work of the turbine casting and the turbine cylinder and mount them together on the discharge of the regulator and put on the cover. Prove the fitting.

4) - Disassemble two damaged rotors of turbines and assemble one good one for the unit.

5) - Rewind one stator of the alternator. This work has already been initiated. To finish the work in progress the materials of which we spoke are necessary. Refabricate with mica insulation, the 12 bar windings. Further talks with M.A.T.E.R. in Rome are necessary.

6) - Accomplish the rectification of the blade tree of the rotor of the alternator. A lathe with a span of 6 meters, a radius of 45 cms, and a capacity of 8 tons is necessary.

7) - Fabricate the castings of the spiral of the centrifugal discharge pump (3,000 cu m/hour) and the machine work necessary for fit. The casting will be cast at Follonica. The foundry will do part and Larderello will finish it.

8) - Rewind the stator of the motor for the pump. This work is already in progress at Larderello. Rewind the rotor of this motor after the completion of these windings now under werk at M.A.T.E.R. in Rome.

9) - For this turbine-alternator group we will use the 9/120 KV transformer which is now ready at Castelnuovo. 719?

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Before the completion of this work it is necessary that State Railway repair the 120 KV lines between Larderello and Ponticino, and Larderello and Cecina.

To accomplish the above outlined work, the help of A.M.G. is asked for.

10) - Provide trucks to transport to Terni or Pignone the following pieces:

a)	One cylinder of turbine	(10 tons)
b)	One exhaust side of regulator	(10 ")
c)	One rotor of alternator	(8 ")
d)	Two damaged turbine rotors	(4 ")
e)	Cover for turbine	(4 ")

11) - Provide trucks for transportation of new and rebuilt parts from Terni or Pignone to Castelnuovo.

12) - The following materials are needed:

a)	Cambric tape	
	30 mm wide	30 Kg.
	20 " "	16 "
	15 " "	15 "
b)	Varnish, clear, air-drying	200 "
	" black, " "	30 "
c)	Tin	30 "

NOTE - In as much as it is necessary to have one group in reserve to assist the work in the two groups at Castelnuovo, it is necessary to provide a third group egual to those in service. The same work is to be accomplished for the third unit as for the first and second.

7191

dis. 2317

11

SOCIETÀ ELETTRICA SELT VALDARNO

Schema di utilizzazione

dei bacini del Serchio e del Lima

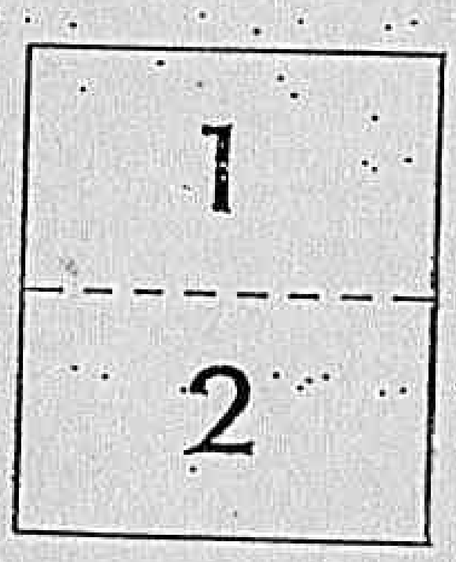
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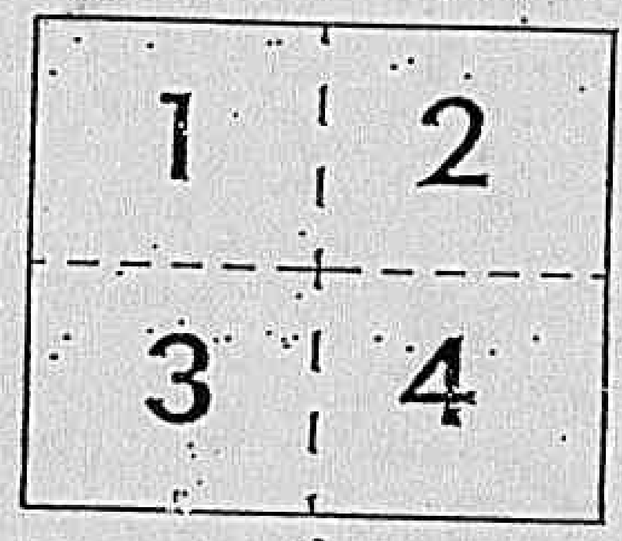
Declassified E.O. 12356 Section 3.3/NND No. 785019

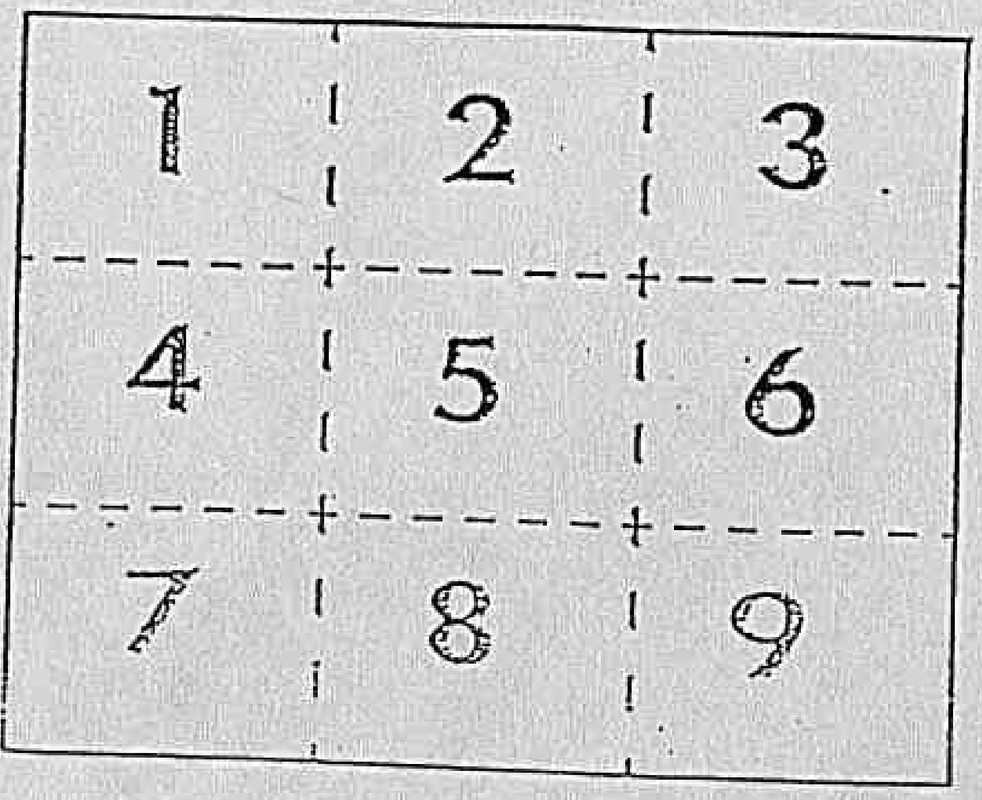
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MAPS AND CHARTS TOO LARGE TO FILM
ON ONE EXPOSURE ARE FILMED CLOCKWISE
BEGINNING IN THE UPPER LEFT CORNER,
LEFT TO RIGHT, AND TOP TO BOTTOM.

SEE DIAGRAMS BELOW.

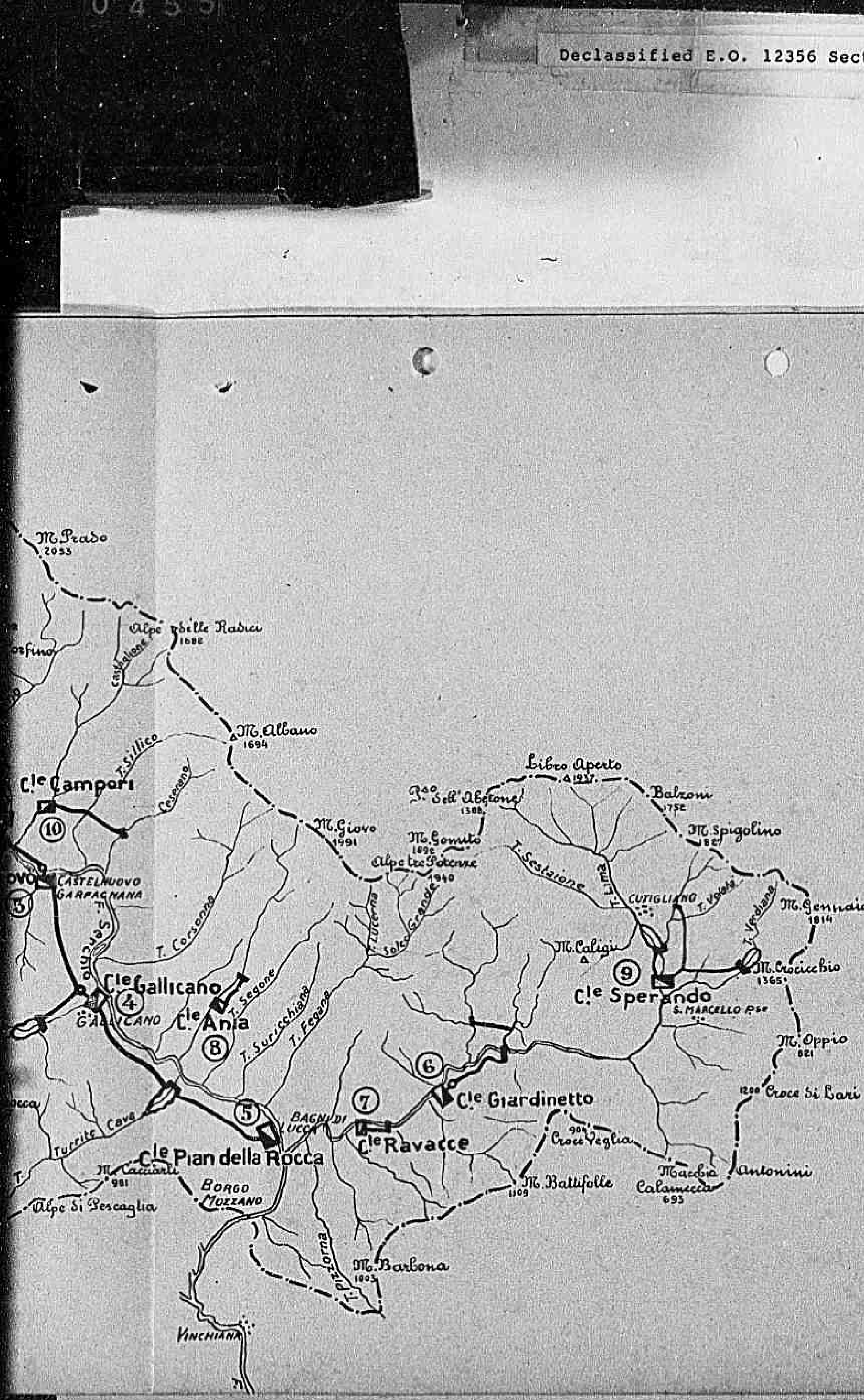






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1	SILLA
2	CORFI
3	CASTEL
4	GALLI
5	PIAN DELL ROC
6	GIARD
7	RAVA
8	ANIA

IMPIAN

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Impianti idroelettrici sul fiu

	Impianto	Corso derivato	Località di presa	Località di restituzione	Bacino imbrifero Kmq.	Portata derivata max. m³ 1"	Portata derivata media m³ 1"	Salto utile
1	Sillano	Serchio	M^no di Sillano (715.50)	Serchio di Dalli (624.10)	32.50	1.5	0,75	85
2	Corfino	Corfino	M^no di Villa (514,00)	Pianetto (331,50)	52-	4	2	160
3	Castelnuovo	Serchio	Pontecosi (511.00)	Castelnuovo (262.60)	368-	20	10	45
4	Gallicano	Serchio Turrite	Castelnuovo (262,60) Polla Gangheri (264)	Gallicano (168,80)	485-	30	16	80
5	Pian della Rocca	Serchio Turrite Cava	Gallicano (168.80)	Pian della Rocca	544-	40	18	65
6	Giardinetto	Lima	Ponte Maggio (282 00)	Fabbriche (196.50)	222-	12	6,4	75
7	Ravacce	Lima	Villa Diana (161,00)	Ponte a Mocco (149.80)	260-	5.6	4,5	10.70
8	Ania	Ania			14-	1.4	0,78	41

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...unti idroelettici sul fiume Sercio

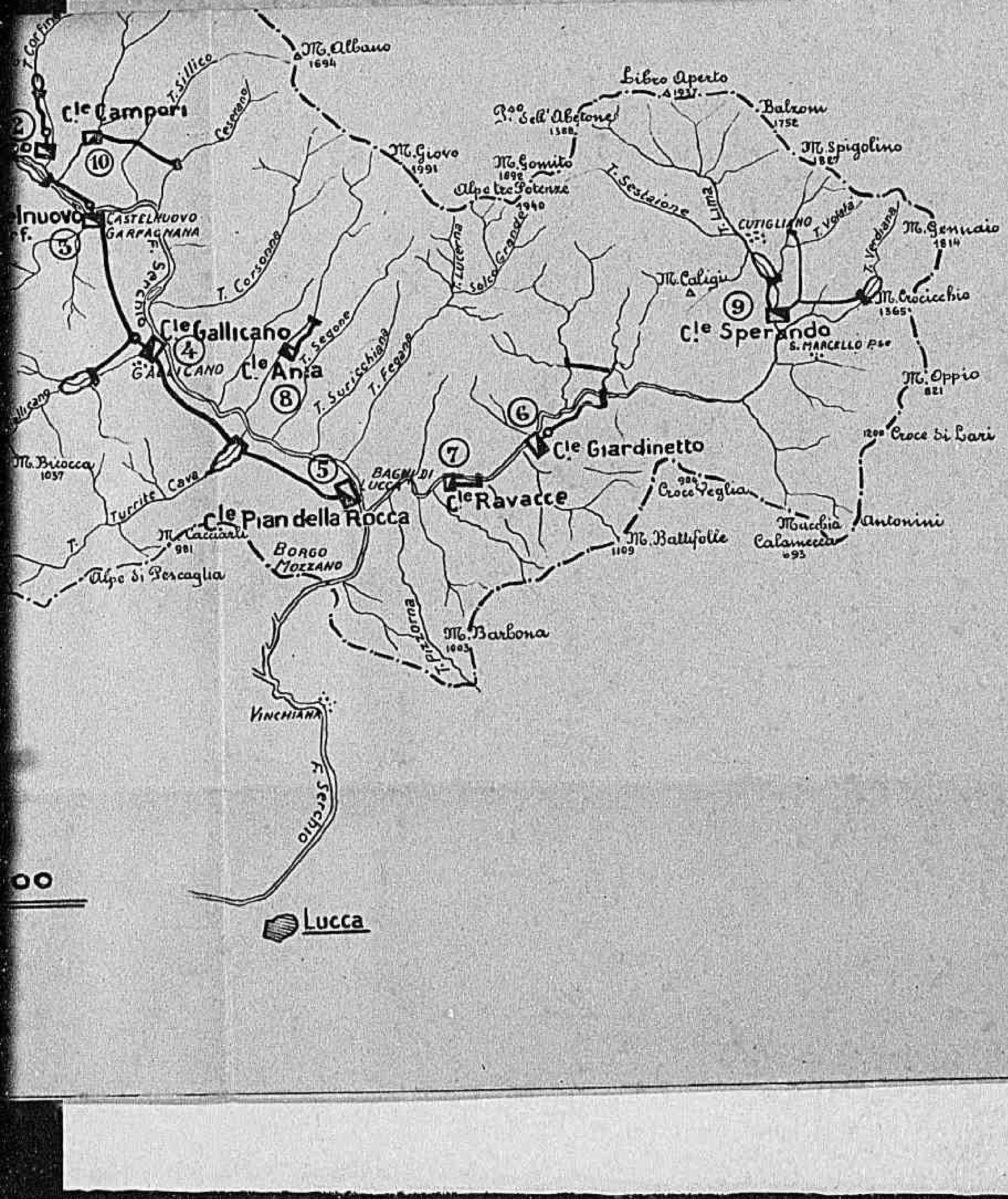
Portata derivata max. m^3 1"	Portata derivata media m^3 1"	Salto utile	Serbatoio mc.	Potenza installata gruppi HP.	Potenza max. prodotta dalla centrale in KW.	Energia producibile Mil.ni di kWh	Osservazioni
1.5	0,75	85	—	1) 500 2) 1000	1000	4	impianto pelo libero
4	2	160	800.000	1) 2500 2) 2500 3) 1750	4500	20	" in pressione
20	10	45	2.300.000	1) 2850 2) 2850 3) 2850	6400	30	" "
30	16	80	820.000	1) 6500 2) 6500 3) 6500 4) 6500 5) 3500	19500	80	" a pelo libero
40	18	65	800.000	1) 14000 2) 14000 3) 14000	20000	75	" in pressione
12	6.4	75	—	1) 1670 2) 2440 3) 2440 4) 2440	5900	30	" a pelo libero
5.6	4.5	10.70	—	1) 170 2) 340 3) 170	360	3	" "
1.4	0.78	41	—	1) 625	400	2	" "

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Scala 1:200 000

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2	CORFINO	Corfino	(514.00)	(331,50)	32-	1	2	10
3	CASTELNUOVO	Serchio	Pontecosi (511.00)	Castelnuovo (262.60)	368-	20	10	45
4	GALLICANO	Serchio Turrite	Castelnuovo (262.60) Polla Ganghen (264)	Gallicano (168.80)	485-	30	16	80
5	PIAN DELLA ROCCA	Serchio Turrite Cava	Gallicano (168.80)	Pian della Rocca	544-	40	18	65
6	GIARDINETTO	Lima	Ponte Maggio (282.00)	Fabbriche (196.50)	222-	12	6,4	75
7	RAVACCE	Lima	Villa Diana (161.00)	Ponte a Mocco (149.80)	260-	5.6	4,5	10.70
8	ANIA	ANIA			14-	1.4	0.78	41
9	SPERANDO	Lima Volata Verdiana	Diga Tistino (531.50)		70.80 20.70	6.5 4	3,5 1,1	54 270
10	CAMPORI	Sillico Ceserano	Moccolini Mol.no Cavallo	Campori	33,-	3	1	47.50

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				3) 1750				
20	10	45	2.300.000	1) 2850 2) 2850 3) 2850	6400	30	"	"
30	16	80	820.000	1) 6500 2) 6500 3) 6500 4) 6500 5) 3500	19500	80	"	a pelo libero
40	18	65	800.000	1) 14000 2) 14000 3) 14000	20000	75	"	in pressione
12	6.4	75	—	1) 1670 2) 2440 3) 2440 4) 2440	5900	30	"	a pelo libero
5.6	4.5	10.70	—	1) 170 2) 340 3) 170	360	3	"	"
1.4	0.78	41	—	1) 625	400	2	"	"
6.5	3.5	54	350.000	1) 2100 2) 2100	11000	30	"	a pelo libero con serbatoio d'accumulazione
4	1,1	270	180.000	1) 5500 2) 5500 3) 2750				
3	1	47,50	—	1) 1600	1280	3	impianto a pelo libero	

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ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMMISSION
ALLIED COMMISSION

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RECEIVED
P.W. & U. S/C A.C.
18 APR 1945 231

copy given to maj Price Lt Col Renton maj Bowen Capt Lowdon

6, Via Cerretani - Florence
Telephone nº 1153
April 14th 1945

SUBJECT: Weekly Report
of Advanced Section

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394

This Report covers the period from April 7th to April 13th, inclusive.

April 7th.

Eng. Virgili called and discussed with me his visit to Rome and the arrangements made re. castings with Terni and not Pignone. Major Vallero in attendance.

Capt. Marshall E.O. 15 A.G. called for interview with Eng. De Mari, later stated that he had racced the 60 KV line running N to Bologna, beginning near Prato on to Colena to Vergato. Iron pylons, pin type insulators, damage slight, except in the villages:

1 - around the village of Porretta
2 - through the village of Marino
3 - through the village of Riolo.

Near Losano the line runs parallel to the rail track; 10 pylons are destroyed in this area due to tunnel and bridgs demolitions.

We agreed that Rag. Rossettini should occasionally accompany Capt. Marshall on his field trips and collect information useful to this office.

Phoned Lt-Col. Renton re Giancotti Agazio of the Società Elettrica Crudo, at present in Rome waiting for a permit to travel to Florence on urgent business.

Capt. Lowdon - To Economics & Supplies for releases for fuel for Valdarno cars and Richard-Ginori kilns. Trying to find

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iron silicate and iron phosfate. To Industry & Commerce trying to get a release for steel wire. Trying to get a release for barbed wire for Valdarno.

Capt. Duran - Travel to Leghorn. Contacted R.N. O.C.N. and obtained release for brick and tiles for Leghorn Steam Plant. Mr. Rowden says that Orlando has made plans to begin boiler repairs at Centrale within the week. Mr Bellinger, Base Electrical Officer, will forward complete list of materials needed to repair alternators listing separately that available thru R.N. channels and that on which A.C. assistance is required.

Cecked with both Capo Doveri and 5th ALCOM Truck Co. to learn that truck service continues satisfactorily. It has been necessary to erect safeguards on transformer cooling water, to haul water for workmen and will be necessary also to haul water for construction. Contacted Major Foley, P.B.S. Eng. Service, who plans to run new main to provide 30 cu.m. of water required for operation by time plant is rehabilitated.

Energy will be available in a few days at A.N.I.C. to permit crane operation and removal of Valdarno machinery and equipment. Permits are in hand for workmen to withdraw condenser tubing and other material at Lucca.

General discussion with Col. Cooley re operating plans.

Arranged with 10th P. of E. and Major Mc Donald P.B.S. for passes and permits enabling I.L.V.A. Piombino to pick up and haul 44 boiler tubes and some gasket material from Cementeria di Livorno.

Travel to Piombino. Direttore Salvi was away; talked with Eng. Annunziata. Cement is received and work going well. Picked up copy of company's operating plans including dates and demands of power requirement.

April 8th.

Sunday.

April 9th.

Lt-Col. Renton called regarding power supply to Bologna, info re transformers and transmission lines. Further detail and suggestions sent along with report on the 9th courier service.

Capt. Lowdon - To Ufficio Autotrasporti for release for fuel for Valdarno trucks. To Major Gaither to get release for barbed wire for Valdarno from A.D.W. 5th Army. Lt. Davies called

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ref materials for repairs Lima II and III. Took him to Valdarno stores where most of the material is to be had. Will have to search for mica-cotton tape. Lt. Davies says Barga still under fire. He says there is iron silicate at Barga but is to confirme later.

On Sunday April 8th the Lima unit was damaged on the synchronous discharge, and had to shut down, repairs were completed by 1400 hours Monday 9th.

The Pian della Rocca group was not operating due to lack of water; the output at Turrite Cava does not provide for plant operation without a decrease of the intake basin level, P.B.S. orders of operation do non allow any decrease of the level.

April 10th.

Lt-Col. Parker arrived at this office.

Capt. Lowdon - To Pignone and Richard-Ginori with Lt-Col. Parker and Capt. Duran. Doct. Merlini and Doct. Malone showed them over the plant and explained the urgent need of either coal or oil for the stoving of the insulators already made. They have approx 100,000 insulators of all sizes ready for stoving.

Interview with Lt. Cooper O I/C Detachment of 543 E & M. Coy attached to 5th Army, rebuilding the 120 KV rail line from Rifredi north towards Bologna (ref. to my A/1 AC/ab dated 5th April). Eight line parties are employed, and have reached a point near GRIZZANA which is at times under enemy fire.

Target date, from Rifredi to Grizzana, is scheduled as May 4th. Lt. Cooper thinks task may be completed by 10th May; much depends on the military situation. In this first phase 45 iron towers were damaged and grounded, to date 36 have now been raised and bedded. Had 30 drums of aluminium conductor to start the job and thinks has sufficient to see it through to Bologna. The second phase is mapped from Grizzana North; no information other than 5 Km. north from this point, as far as can be ascertained, 5 towers are down. Information later as the military situation permits. Stated that at Pracchia Railway station within the store sheds there are stocks of 10 inch insulators and other equipment which was moved by the railway staff from wagons in the station, evidently consigned north. Details of this material will be collected by Capt. Lowdon of this office and steps taken to have it controlled and sealed.

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April 11th.

Attended conference at Lt-Col. Lee's office to discuss coal supplies and get a general picture of the possible allocations to Industries, Power plants, (Piombino) etc. In attendance Major Harris, Industry Sub-Commission (Coal Division) A.C. Hqtrs, Major Drake and Major Harris Industry & Commerce Toscana Region, Major Wooster Toscana Region (Utilities Officer).

I supported the request for coal to Richard-Ginori for the manufacture of insulators electrical; Major Harris stated that he might be able to make an allocation of 400 tons.

Major Harris had spoken to Col. Cooley regarding coal to Piombino and stated that a stock fuel of 2,000 tons had been asked for. Industry & Commerce stated that Ilva Steel would not be put into production for some months. Lt-Col. Parker left for Lucca, Leghorn in company of Capt. Duran.

Report on visit to the Tavarnuzze sub-station. Major Crowther, accompanied by Lt-Col. Parker and Capt. Duran:

120 KV Transformer; progress is dependant upon transport of oil from San Romano to Tavarnuzze. A small petrol driven pump has been traced and sent to San Romano to speed up the filling of drums which was previously done by one hand pump.

38 barrels are in circuit; to dato contents of 27 have been filtred to the transformer, the total required is approx. 19 tons thus calling for a further 60-70 barrels of oil to be transported.

120 KV transformer nº 2; arrangements are in hand to move from Florence to Tavarnuzze the core and coils and work to begin immediately - insertion of core etc. to tank (this tank is ready). Concrete beds and runners are now ready.

Power supply to Florence from Terni. Due to damage during the transportation of the 6000 KVA 60/30 transformer to Tavarnuzze, some repairs are necessary. To transfer the core and coils, to take out a part of the oil and when the case is repaired a short oil treatment will be required. It is expected that the transformer may be energized on Tuesday April 17th.

As the 60 KV supply from Castelnuovo dei Sabbioni to Prato and Tavarnuzze will require some hours of work, the Valdarno Co. will probably operate at 60 KV the transmission line Castelnuovo dei Sabbioni to Tavarnuzze and Prato on Sunday April 15th,

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and energize at 60 KV the Prato substation and 6,000 KVA 60/30 transformer. The Florence supply will be given Sunday April 15th and Tuesday April 17th through the two 30 KV Castelnuovo dei Sabbioni - Tavarnuzze lines and as soon as the 60/30 transformer in Tavarnuzze will be ready for operation it will be energized. The operation during the two days will in any case be improved as 6,000 KW will be carried on a 60 KV line from Castelnuovo to Prato instead of on the same line operated at 30 KV. And as soon as the transformer in Tavarnuzze is ready it will be energized without any appreciable interruption.

Capt. Lowdon - To Industry & Commerce for release of cement for Leghorn. This cement will have to be got by R.N. through P.B.S. Have advised Capt. Duran. To S.I.M.E. and Valdarno stores with Col. Parker and Capt. Duran, where they inspected the plant and stores. Went on to Galileo where they inspected the works.

Leghorn steam plant repairs. EngL Legnaioli visited on April 11th the plant and reports:

In addition to 90 Valdarno and contractor men, 9 men from the Orlando shipyard - with R.N. authority - are at work and the boiler repairs started. The bricks release order has been delivered - no cement release order has yet been obtained. 50 tons of cement are required. Capt.Duran is seeing this through.

The military truck did not work on April 12th. It seems that the Transport Coy may be transferred from Leghorn, but on April 11th the driver told the Valdarno, Capo Doveri, that another truck and driver was expected to be on duty starting April 12th. One truck is not sufficient for the plant requirements. Fresh water (3 tons per day for drinking, works and transformers cooling) is required; if the water-pipes could be repaired it could be supplied from the aqueduct. Capt. Duran giving attention here.

The sky-light must be rebuilt. As no glas is available, a 300 sqm corrugated steel plate supply is required.

Eng. Legnaioli wishes to recommend to Capt. Duran:

a) to obtain cement - b) to ensure the trucks availability - c) to obtain a 300 sqm corrugated steel plate release order - d) to contact the Municipal Acqueduct Engineer and recommend the aqueduct repairs.

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April 12th.

Discussion with Lt-Col. Lee regarding weapon carrier to be returned to this section, promised to have Major Vallero return this truck on Saturday 14th.

Capt. Lowdon - To Industry & Commerce ref. glasses for Galileo and belting for Leghorn steam plant. Major Drake does not hold out much hope for a release for either and I have written Major Price Rome to ask if he can secure belting.

Further report on the progress at Tavarnuzze:

The 6000 KVA 60/30 transformer (now in Tavarnuzze) case will be repaired this evening. Some bolts in the core are not insulated: the insulation is supposed to be repairable tomorrow. The oil treatment will start on April 14th and the transformer is supposed to be in operating condition on April 17th or 18th.

The Valdarno Co. has submitted to the 77 C.R.E. the request of a limited power production during the hours from 0700 to 11.30 a.m. on Sunday 15th April in order to start operation at 60 KV from Terni to Prato (through Tavarnuzze) and to energize the 6500 KVA 60/30 KV transformer in Prato. The Tavarnuzze transformer (mentioned above) will be energized as soon as ready without any more appreciable interruption.

April 13th.

Capt. Duran left for Rome.

During the two months January and February 1945 the Florence - Empoli - Prato grids have supplied:

January	KWH	5,476,010
February	"	5,918,900
Total	"	11,394,910

measured on the 30 KV bars.

The losses may be considered as or about 18%. The power supplied to customers is approx. KWH 9,340,000 during the two months. Before April 30th it will not be possible to have information on the power breakdown.

An approximate estimate may be as follows:

military	KWH	2,500,000
civilian	"	6,840,000

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When the bills are completed (April 30th) the correct figures will be checked.

Information requested by Lt-Col. Renton:

Capt. Lowdon: contact made with Major Gaither for cement supplies required for the pylon foundations on the Tavarnuzze - Santa Croce - Empoli transmission lines.

Interview with Eng. Silva, general Manager of the "C.O.N.I.E.L.". Stated that the 220 KV line Bussolengo - Rubiera - Tavarnuzze is energized between Rubiera and Bussolengo. The Po River crossing span near San Benedetto Po length is about 1100 mt (towers 150 mt high); has been damaged by bombing last February. One alluminium steel stranded wire conductor was broken and could not be replaced. The line is in operation on the above span with 2 wires and the third phase is given through one of the two ground steel wires. The damage on the section between Sperando and Rubiera are not yet known.

The Tavarnuzze - Sperando section is damaged near Tavarnuzze. The Valdarno Co., responsible for the line operation in the Toscana area, is collecting the information and planning the repairs.

GENERAL.

Lack of transport is seriously affecting progress on line rehabilitation. Valdarno Co. have had to suspend work on the following tasks:

(Monthly report refers.)

Progress at Tavarnuzze is held up. Constant liason is kept with the E/O 77 C.R.E., and other sources of transport.

This section has been without transport since Major Bell's departure. One Jeep is retained by Capt. Duran. The weapons carrier will be returned by Major Vallero to this section on Monday the 16th inst.

Monthly Reports, progress transmission lines and power plants. Pro-forma handed in by Col. Parker requested immediate completion, and thereafter submitted monthly.

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A.Crowther
Major R.E.
Officer in charge.

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF ELECTRIC GENERATING PLANT .April.15th.....

CENTRAL ITALY

NAME OF STATION and Number of Plant	Location	Nameplate size of Plant Under Repair KW	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay.
LATERINA Selt-Valdarno Co.	Laterina	1 x 600 1 x 90 1 x 60	1 x 100 June 30	(a) Buildings repairs underway 1 x 100 KW to be transfer
LEGHORN (Steam) Selt-Valdarno Co.	Leghorn Port	3 x 13,000	1 x 13000 no date	(b) lack of transportation -
LIMA Selt-Valdarno Co.	Fabbriche	3 x 1800 1 x 1200	1 in oper 1 May 31st 1 parts hid in C.nuovo	(b) for lack of insulating m to be repaired only in e Garfagnana
PIAN DELLA ROCCA Selt-Valdarno Co.	Borgo a Mozzano	3 x 10,000	1 in oper. 1 April 30	The main water supply still tion very reduced.

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF ELECTRIC GENERATING PLANT .April.15th..... 1945

CENTRAL ITALY

Location	Nameplate size of Plant Under Repair KW	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay. (c) Materials Required.
aterina	1 x 600 1 x 90 1 x 60	1 x 100 June 30	(a) Buildings repairs underway 1 x 100 KW to be transferred from stores.
ghorn ort	3 x 13,000	1 x 13000 no date	(b) lack of transportation - (c) cement and other supplies
abbriche	3 x 1800 1 x 1200	1 in oper 1 May 31st 1 parts hid in C.nuovo	(b) for lack of insulating materials - The generator to be repaired only in a provisional way. Garfagnana
Borgo a Mozzano	3 x 10,000	1 in oper. 1 April 30	The main water supply still in enemy hands - Generation very reduced.

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF ELECTRIC GENERATING PLANT April 15th 1945

CENTRAL ITALY

NAME OF STATION and Number of Plant	Location	Nameplate size of Plant Under Repair KW	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay. (c) Mat
RAVACCE Selt-Valdarno Co.	Ravacce	1 x 200 2 x 100	1 x 200 no date	(a) Repairs to building & turbine u suspended (b) for lack of insulati
SPERANDO Selt-Valdarno Co.	S.Marcello	2 x 1500 2 x 3800 1 x 2000	1 x 3800 no date (Generator hidden in Gal licano)	(a) Walls repaired - Roofing terrac (b) (c) lack of cement
SANTA MARIA Soc. Bolognese di Elettricità	Castiglion de'Pepoli	3 x 2000	no date	rehabilitation works not yet star
Castelnuovo Garfagna na Selt-Valdarno Co.	Castelnuovo Garfagnana	3 x 2000		enemy hands

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF ELECTRIC GENERATING PLANT April 15th 1945

CENTRAL ITALY

Location	Nameplate size of Plant Under Repair KW	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay. (c) Materials Required.
Tavacce	1 x 200 2 x 100	1 x 200 no date	(a) Repairs to building & turbine underway; to generators suspended (b) for lack of insulating materials.
Marcello	2 x 1500 2 x 3800 1 x 2000	1 x 3800 no date (Generator hidden in Gallicano)	(a) Walls repaired - Roofing terrace construction suspended (b) (c) lack of cement
Castiglion d'Pepoli	3 x 2000	no date	rehabilitation works not yet started.
Castelnuovo Garfagnana	3 x 2000		enemy hands

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF ELECTRIC GENERATING PLANT April 15th 194

CENTRAL ITALY

NAME OF STATION and Number of Plant	Location	Nameplate size of Plant Under Repair KW	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay. (c)
CORFINO Selt-Valdarno Co.	Corfino	2 x 1800 1 x 1200		enemy hands
GALLICANO Selt-Valdarno Co.	Gallicano	4 x 4000 1 x 2000		no man's land
SILLANO Selt-Valdarno Co.	Sillano	1 x 750 1 x 380		enemy hand
SILLICO Selt-Valdarno Co.	Sillico	3 x 500		enemy hands

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF ELECTRIC GENERATING PLANT April 15th 1945

CENTRAL ITALY

Location	Nameplate size of Plant Under Repair KW	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay. (c) Materials Required.
Corfino	2 x 1800 1 x 1200		enemy hands
Gallicano	4 x 4000 1 x 2000		no man's land
Sillano	1 x 750 1 x 380		enemy hand
Sillico	3 x 500		enemy hands

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF ELECTRIC GENERATING PLANT April 15th

CENTRAL ITALY

NAME OF STATION and Number of Plant	Location	Nameplate size of Plant Under Repair KW	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay.
RIOFREDDO Società Forze Idrauliche Appennino Centrale, S.F.I.A.C.	Cutigliano	1 x 300 2 x 150		incomplete report - no progress
SESTAIONE S.F.I.A.C.	Sestaione	3 x 1200 1 x 2800		incomplete report - no progress

ADVANCED SECTION PSYCH-WAR OFFICE ITALY

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF ELECTRIC GENERATING PLANT ..... April 15th 1945

CENTRAL ITALY

ocation	Nameplate size of Plant Under Repair KW	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay. (c) Materials Required.
igliano	1 x 300 2 x 150		incomplete report - no program
taione	3 x 1200 1 x 2800		incomplete report - no program

ADVANCED SECTION
SUB-COMM.
OFFICIAL
DISPATCH
A.G.

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF TRANSMISSION LINES ,.April..15th..... 1945

CENTHAL ITALY

NAME OF LINE	location	Voltage of Line KV	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay. (c
Tavarnuzze - Chiusi		120 KV	May 30th	Line in service - Earthing of to
Castelnuovo - Chiusi		60 KV	May 30th	Line in service - small jobs sti
Lima - Limestre		60 KV	April 20th	5 Km. repaired
Tavarnuzze - Empoli-Pontedera		30 KV	May 15th	18 Km. repaired

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF TRANSMISSION LINES ,.April..15th..... 1945

CENTRAL ITALY

tion	Voltage of Line KV	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay. (c) Materials Required.
	120 KV	May 30th	Line in service - Earthing of towers now in progress
	60 KV	May 30th	Line in service - small jobs still to be done
	60 KV	April 20th	5 Km. repaired
	30 KV	May 15th	18 Km. repaired

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF TRANSMISSION LINES ..April 15th..... 194

CENTRAL ITALY

NAME OF LINE	Location	Voltage of Line KV	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay.
Pescia - Pontedera		30 KV	June 15th	8 Km. repaired - work suspende (b) lack of transportation (c) conductors
Livorno - Pontedera		30 KV	April 10th	8 Km. repaired (b) lack of transportation
Rifredi - Grizzana-Bologna	State Railway	120 KV	No date	The last section still in enemy Section Rifredi - San Quirico d date of completion May 15th

Declassified E.O. 12356 Section 3.3/NND No. 785019

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PUBLIC WORKS AND UTILITIES SUB-COMMISSION

ELECTRICAL DIVISION

REHABILITATION PROGRESS OF TRANSMISSION LINES ..April 15th..... 1945

CENTRAL ITALY

ion	Voltage of Line KW	Expected Date of Completion	REMARKS (a) Progress. (b) Cause of delay. (c) Materials Required.
	30 KV	June 15th	8 Km. repaired - work suspended (b) lack of transportation (c) conductors
	30 KV	April 10th	8 Km. repaired (b) lack of transportation
ay	120 KV	No date	The last section still in enemy hands Section Rifredi - San Quirico di Vernio: expected date of completion May 15th

Lieut Colonel major

ADVANCED SECTION
PWB
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12 APR 1945 23

Florence, 6 Via Cerretani
Telephone nº 1153
9th April 1945

1- copy to Col Cooley
1- copy to Comm Major Drake
1- copy to Lt Col Renton
12/4/45

SUBJECT: Weekly Report
of Advanced Section

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394

This report covers the period from March 31st to April 6th inclusive.

March 31st.

Major Vallero reports that Major Drake has knowledge of a 60/9KV transformer in the Leghorn area (unknown to Col. Cooley?)

Rome office informed me that Col. Ristedt (American) is now Director of Public Works & Utilities Sub-Commission Vice Col. Jenny.

Lt-Col. Renton desires to know if it is possible for us to accuse mileage of lines repaired by Valdarno during the month of March.

April 1st.

Holiday.

April 2nd.

Col. Cooley called - desires information from FF.SS. on 120 KV steel pole structures, dimension, weights, etc. to determine if they are better than concrete structures (which weigh 3 - 4 tons) for rehabilitation. It is easy to dismantle cross arms?

April 3rd.

Lt. Davies (543 E & M Co.) called by. Anxious to get material for Lima and Pian della Rocca - willing to send truck to Rome if desirable - Lowdon to handle through Major Price.

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Capt. Lowdon - To Colle Val d'Elsa to inspect the wire-drawing and nail manufactury plant of "Società Trafilerie e Puntinerie Gonnelli". This is very small and old-fashioned, but it produces its own power and is in full operation. It is drawing some wire from 8 mmq to 5 mmq for Selt-Valdarno, but they say that this is the limit they can draw. They have no means of melting down wire and recasting.

April 4th.

Captain Marshall called. Desires:

a) Status of 230 KV transmission line Tavarnuzze to NW;

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b) Status of 2 - 60 KV lines Viane (west of Barga) to Bologna;

c) Any information we can get him on electrical services in Genova and Milan. Arranged conference with Eng. De Mari.

d) 543 E & M Co on Rifredi - Bologna line need 1 ton of coal (not coke) for forge used in straightening L I. Capt Lowdon asked to look for this. Marshall is to call Major Drake.

Capt. Lowdon - To Pignone and Galileo. Securing release for nails for Valdarno also cement for Nera Montoro. Pignone called ref. silicate. I am trying to locate some.

Rag. Rossettini - Meeting with Eng. Salmi, State Railway; information about 120 KV line Rifredi - Suviana in separate report to Major Crowther.

April 5th.

Received call from A.C. Adjutant - to report to Rome tomorrow night for further orders U.S.A.

Col.Cooley asked us to be prepared to take over Lima at any time (even II unit).

- Major Bell called to Rome handed over control of this Advanced Section to Major A.Crowther, R.E.

Valdarno ask for release of 20 tons of cement for Nera Montoro (emergency release); called for by Eng. Benetti of Valdarno Co., now in Nera Montoro.

Capt. Lowdon spoke to Major Barry who agreed to arrange release from Spoleto.

Capt. Lowdon - Discovered the cement for Nera Montoro was an emergency demand so called Rome and got Major Barry to secure the release in Rome. Valdarno have heard from Capt. Vannoy that they will get delivery April 6th 45 or April 8th 45. Larderello enquiry ref shoes made locally. Referred them to Economics & Supplies who have control of this.

Rag. Rossettini - Meeting with Eng. Salmi, State railway, and Eng. Casali, Valdarno; information about 60 KV line Vaioni - Porretta and 220 KV line Rifredi - Sperando in separate report to Major Crowther.

7175

Information obtained regarding the following:

a) Status of Power station as per list "D" submitted,

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7175

Information obtained regarding the following:

a) Status of Power station as per list "D" submitted, by Lt-Col. Renton.

b) Total Km of lines rebuilt by Valdarno during the month of March 1945.

c) Status of transmission lines, list "C"

d) Review and comments with suggestions regarding High-tension supply to Florence (Ref. to memo VSR/lam 19th March)

e) Information regarding Power plants in and around

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Bologna (Copy to Lt-Col. Smith, 5th Army engineers);

f) Capt. Lowdon inspection Tavarnuzze Sub-station.

g) Information ref. Centrale SANT'ANDREA DI ROVEZZANO on 10 KV Florence grid.

h) Information regarding 60 KV line VAIONI - VERGATO two circuits.

i) Information Re. 220 KV line N.W. to Sperando, forwarded under separate cover.

Capt. Duran to Santa Maria and Le Piane. Report to follow later.

April 6th.

We are in touch with an Engineer who recently escaped from Bologna; he is reporting here for interview. The data collected will be forwarded as early as possible.

Capt. Lowdon - Secured release of 4 tons of silicate for Pignone. Releases for Valdarno for cement, thread and barbed wire.

Phoned Capt. Marshall 15 A.G. E/O, who will discuss the Electrical system Genova District with Eng. De Mari (late of San Giorgio Co.) at 10 a.m. April 7th.

Major Hamilton called and explained that he was assigned to Region VIII. We discussed points that are relative to Region VIII.

Captain Duran left for Leghorn general inspection. Lt-Col. Renton phoned re Santa Maria stating that Galileo were anxious to start on repairs to governor; confirmed that the necessary permits can be arranged through this office.

Dr. Merlini of Richard-Ginori Co. called regarding fuel-oil and coal for furnaces, pointing out that orders from various companies total over 200,000 insulators.

Major Price is looking into the possibility of fuel release, vide 306/PWU,6/3/45; this Office has arranged an initial issue of 7,000 litres of oil for test of furnace, now converted.

120 KV line Larderello - Cascina, FF.SS. Florence office

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120 KV line Larderello - Cascina, FF.SS. Florence office state that as soon as this line is completed, the same gang will begin to rebuilt the Larderello - Ponticino 120 KV. line; rate of progress will be given in my next report.

717

A. Crowther
Major R.E.
O/I/C

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ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMMISSION
ALLIED COMMISSION

Florence, 6 Via Cerretani
Telephone nº 1153
2nd April 1945

8

SUBJECT: Weekly Report
of Advanced Section

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394

This report covers the period March 24th to 30th inclusive.

March 24th.

Report on Santa Maria station delivered to this office by Società Adriatica di Elettricità. In some respects, it is rather disappointing. Requested that they write an annex showing specifically what help they required from outside sources.

Capt. Lowdon - Journey to Fabriano with Rag. Rossettini. Report on Mucci, Via Mamiani 19, Fabriano. The above is the house address of the a/n who has a store at Via Balbo 7. Unfortunately he was in Rome and his wife took me to the store. There was very little material, but this included approx. 17 - 20 rolls cotton tape; 2 rolls presspan; a box of old "empire" tape; 2,000 electrodes and some black tape (a full list is being prepared with prices). On asking if there was any more electrical material, Mrs. Mucci assured me there was not. I then went to Capt. Johnson, Via Roma 56, (Local Ressources Officer) and had him block all electrical material which this man has. When at Via Roma, I saw a roll of paper approx 15" in width and about a mile long; I brought a sample of this, which is being submitted to Galileo for insulating test. Will visit Fabriano again as soon as transport and opportunity occur.

Eng. Errera - Visit to the "Superpila" battery factory. I visited the "Superpila" factory, Florence, Via Galluzzo 16/26, telephone nº 27341, and contacted the Director Dr. Couture. In the Superpila plant the Hq. Squadroon of the XII A.F. is now billeted, but only a part of the building is requisitioned. Normally 300 workers (200 women and 100 men) worked in the plant; now 100 workers are on the job. The factory works for military supply (radio batteries and flash light batteries) for the PBS Signal Section (Major W.R. Hart). The PBS supply will require

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nearly all the bioxide of manganese deherating capacity of the factory, so that only a very little production capacity may be available for other purposes. The Director told me that the factory stores are nearly empty of the materials required for the piles contstruction.

Through a supply of some materials (tin, naphta, wood, coal, etc.) the Superpila could start a work of batteries for telephone, the type normally required for the telephone operation of the Electric Companies. Next week they will be ready to submit a program of works for the above mentioned supply of the Electric Co.

March 25th.

Sunday

March 26th.

Capt. Rogers returned to Riccione with 25 KW power plant from Major Gaither - for use of hospital at San Marino.

Major Laughlin called regarding availability of two more power plants. Contacted Col. Lee and Major Gaither who do not desire these plants at present.

Major Kubale called - he was returning to Rome. Confirmed that Larderello - Ponticino 120 KV line is first priority. Larderello - Cascina next. He is to call me reggrding frequency converter at Riccione.

Capt. Lowdon - To Industry & Commerce for releases for Valdarno (cement). Called Major Price ref Valdarno - Corradini redrawing of wire. He asked for date of delivery of finished product which I gave him (11th March 1945) and he asked for confirmation in writing. This has been done. Got supplemantary release of gasoline for Valdarno. Secured releases for Carbide of Calcium for Pignone, Galileo & Valdarno.

Rag. Rossettini - Ing. Virgili informs that the insulation of the bars for the 800 HP motor in Castelnuovo plant may be done with mica by M.A.T.E.R. in Rome; advised Galileo plant in Florence to suspend the work with new type of insulation. Soc. Larderello request that, as soon as possible, 50 KW power be made available for the brick factory "S.A. Fornaci di Volterra" located in Saline di Volterra; this factory, when power will be available, will furnish the material to repair the electric plant in Larderello.

To dry out the 20,000 KVA transformer at Tavarnuze, a

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vacuum pump is required. Foud this pump in the Galileo plant in Florence. Taken Sig. Aterini of the Valdarno Direction, to Galileo plant. Conference with El. Eng. Di Lella; the Valdarno will have the pump at their disposal for the time requested to dry out the 20,000 KVA transformer at Tavarnuzze. The pump is for continuous service and is connected with a 260 V - 1,5 HP electric motor; needs a general revision.

Major Vallero - Ing. Virgili returned from Rome. Had extensive talks with Ing. De Gaspari of "Terni" and expressed desire to have Terni do the work for second unit instead of Pignone.

There was no official meeting at Rome to elect the department heads of the company. This meeting taking place now.

The 4th 60 KV transformer was completed and put on the line at 11.00 hours. The machine is not being fully utilized at the present time. The load drops to almost nothing during the night - beginning at 23.00 hours and picking up again at 0700 hrs.

Visited Castelnuovo. The load picked up tremendously - about 9100 KW picked up in 1½ hrs. The work is progressing smoothly with calibration of turbine and alternator rotors and also the repair of generator coils.

Called Col. Cooley regarding the load at night. He replied that a program was being developed now to utilize the machine as much as possible. Complained the relay settings at Larderello were set so close that an increase in load interrupted the system. Informed me he would be at Larderello on Wednesday with two of his engineers.

Called Major Crowther re cement at Segni. Can this shipment be expedited by Major Price. (Price initiated the action).

Second 800 HP pump motor will be ready in about 20 days. Now undergoing work at Electric Shop at Larderello. The 4,000 KVA transformer at Larderello I lacks materials. Ing. Musi submitted list of needed materials which will be given to Major Drake, Industry & Commerce Region VIII.

Are rearranging structural steel in Larderello I to accommodate a 300 KVA, direct exhausting, unit. Larderello II is being rapidly cleared up, and repairs on the overhead crane are nearing completion.

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March 27th.

Conference with Eng. Virgili. After he discussed the casting of the 8 ton turbine discharge piece with Pignone, he is of the opinion that Terni would be more satisfactory, in that the pattern is there and they have the experience of the first unit behind them. Called Major Barry regarding this, and he agreed to talk it over with Terni. Later he called back a July 30th delivering date for this casting. If this can be pushed up a month, the second unit at Castelnuovo can be ready August 15th.

Capt. Lowdon - Secured a release for Carbide of Calcium for Larderello. Remainder of clothing has arrived and truck loaded with insulators for S.M.E. on return journey.

Major Crowther - Called on Major Sowers, Regional Transport Officer re Valdarno trucks. The only scheme now available to utility Coys is to apply through Capt. Dickens, Piazza Torino, Phone nº 1870, for permission to hire transport through the Consorzio. This is being done by Dr. Harnisch; the letter to have the approval of this office.

Phoned Major Price and confirmed that the request of insulators from Richard-Ginori shoud go back to Rome on the transport which has brought the remainder of the clothing from Naples.

Requested Major Price to expedite delivery of cement from Terni to Follonica for Larderello. (Message from Vallero)

March 28th.

Ing. Tartaglia from Terni reported in for conference with Richard-Ginori Co.

Major Renton called regarding: 1) average number of Valdarno employees engaged on rehabilitation during the month of March; 2) maps showing damaged lines and ones in operation at the time the Germans left; 3) map of Valdarno system before the war. (This was forwarded by mail to Major Renton on March 29th).

Capt. Lowdon - To Capt. Jarmaine for information regarding bricks for Larderello. These have to be procured from near Siena and a release order has to be got from Capt. Shopel. Will hand this on to Major Vallero. Tried to get more gasoline for Valdarno, but failed. To Galileo ref release of two buildings

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but failed to get any satisfaction.

Major Vallero - Lt-Col. Cooley with his assistants arrived about 1000 hours. The civilian engineers and Ing. Musi arrived at satisfactory solution re the relay settings. Col. Cooley stated that plans are now underway for full utilization of Castelnuovo plant.

Suggested a trip to Rome to check on priorities for Larderello re work being done now, and also to obtain list of what M.A.T.E.R. acquired at Fabriano.

Received list of materials needed for 800 HP motor and also for 4,000 KVA transformer. Will submit them to Major Drake.

March 29th.

Col. Cooley called - Requested that I contact Lt-Col. B.B. Smith (Lightning 25) with 5th Army Engineers regarding Santa Maria project. Col. Smith is interested in keeping A.F. H.Q. informed.

Capt. Lowdon - To Pignone with Eng. Errera. The foundry is now doing more than ever and no work is held up through shortage of supplies. They are now getting 150 KW 24 hours a day, and have three shifts working.

Major Crowther - Tavarnuzze sub-station. The core will be inserted in the tank to day and final assemblies made. Unit will be moved to permanent site as soon as bed, now being prepared, is ready. Cement supplies may hold up the work. Every possible angle to expedite is being pursued. Further quantities of transformer oil are required. Transport is being arranged within the next few days.

A vacuum pump has been traced and delivered to the Valdarno Co.; after slight repair will be put to work drying out the transformer. Progress on all work is satisfactory.

Eng. Errera - With Capt. Lowdon we visited the Pignone Co., in order to contact Ing. Masera and forecast the U.N.E.S. works program, after Eng. Masera's visit to the U.N.E.S. plants. Met Eng. Tamagnini, Eng. Piazzoli, Eng. Masera.

"Gerosa": the Pignone can do the castins and the mechanical works required for the nº 2 unit rehabilitation. Many spare parts can be casted with the patterns available in the Tolentino workshop, other parts will require new patterns and

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new draftings. Pignone will send to the plantone of its Engineers with three skilled workers and one draftsman. They will send also some special roller-bearings for the rotors dynamic and static stability tests and correction. On or about April 8th, the Pignone will submit to the U/N.E.S.,in Rome,a complete schedule of the works and the cost estimate, so that a final agreement can be taken.

"Venamartello": the same Pignone crew and the same roller-bearings to be sent to Gerosa may be used to give the dynamic and static stability to the generators rotor (whose shafts is bent 0.5 mm.)

Supplies. Pignone obtained release oredrs for 20 tons of gas coke in the month of April. Cast iron scrap is available, correctives are required, but only a few quantity of them. It seems that the Pignone can do very well the works required for the Gerosa n° 2 unit rehabilitation.

Eng. Tartaglia TERNI Co. visit to Florence:

Galileo Co.: the Galileo will supply the Terni with many control instruments. Ampermeters, voltmeters, insulation meters may be supplied in short time. The Galileo at present can not supply 2 KW meters that Terni requested.

Richard-Ginori Co.: The Terni requires, for the accomplishment of its rehabilitation programm, of bushings for the H.T. transformers and insulators for special 150 KV current transformers. Ginori cannot supply the above from their stores as no insulator of such a kind is available. The insulators must be built, and the 150 KV special insulators are of such a big size that only 25% of the furnace may be filled with them. The Terni insulators supply, if all the insulators requested must be really supplied and are required for the works, will need a very big quantity of coal. The Ginori will write giving answer to the Terni and A.C., but it seems that the 150 KV insulators supply will require about 600 tons of good special coal. Complete information may be obtained on or about April 10th.

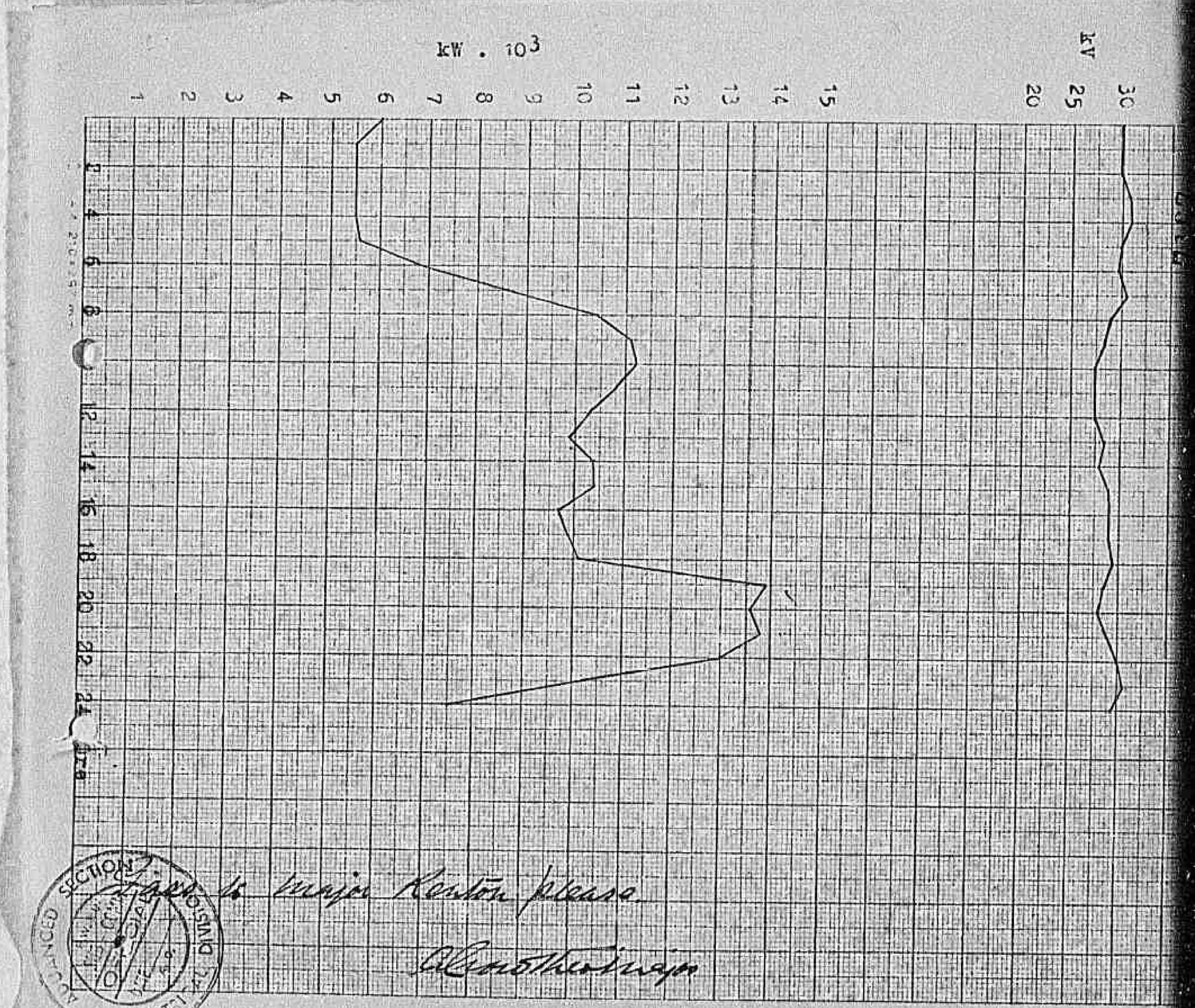
March 30th.

Holiday.

ADVANCED SECTION
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OFFICIAL
DATE
A. G.
ELECTRICAL DIVISION

Robert A. Bell
Major S.C. 7168
Officer in charge

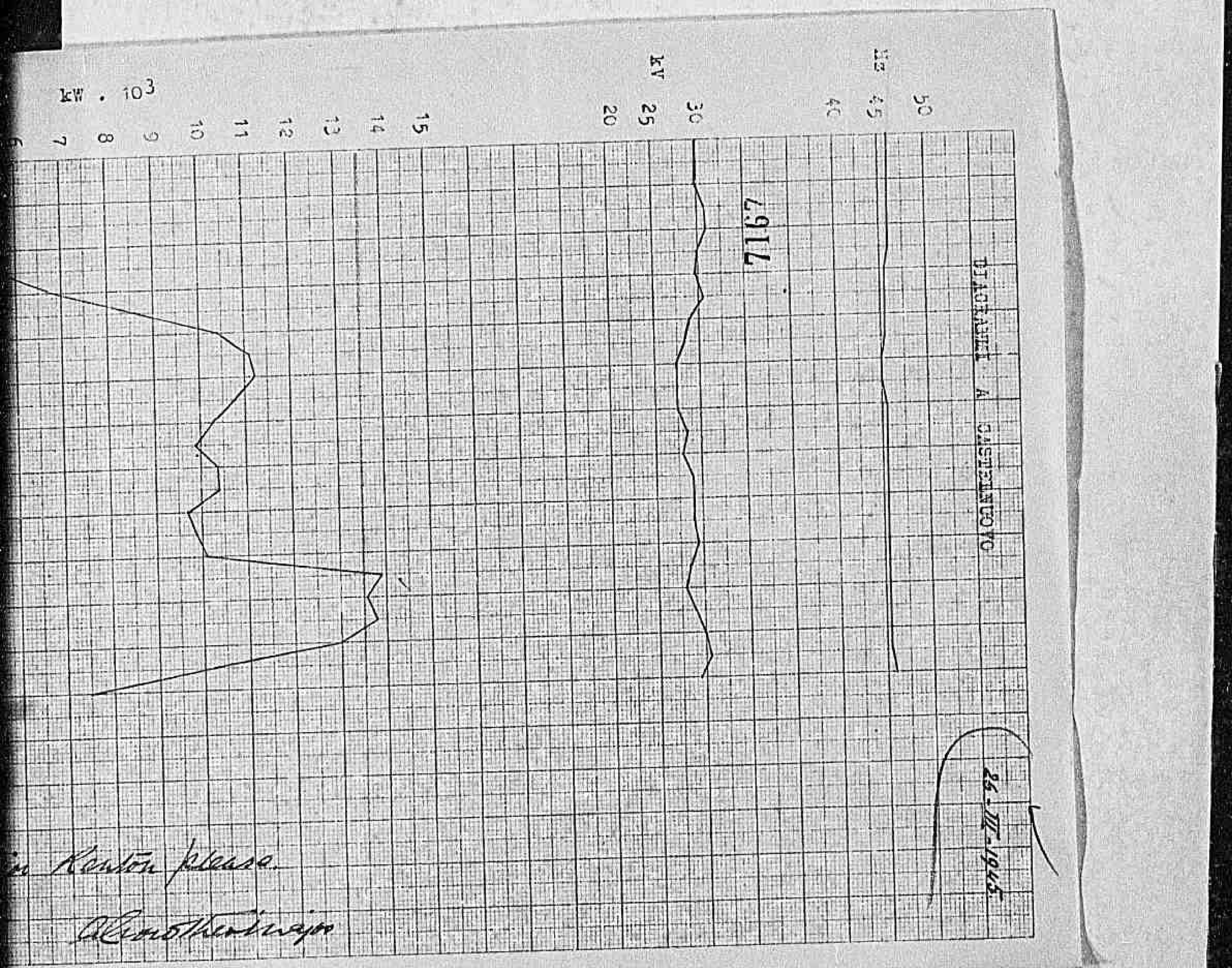
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SECTION
DIVISION
FLIGHT

Ing. Hugo Rosón Velasco.

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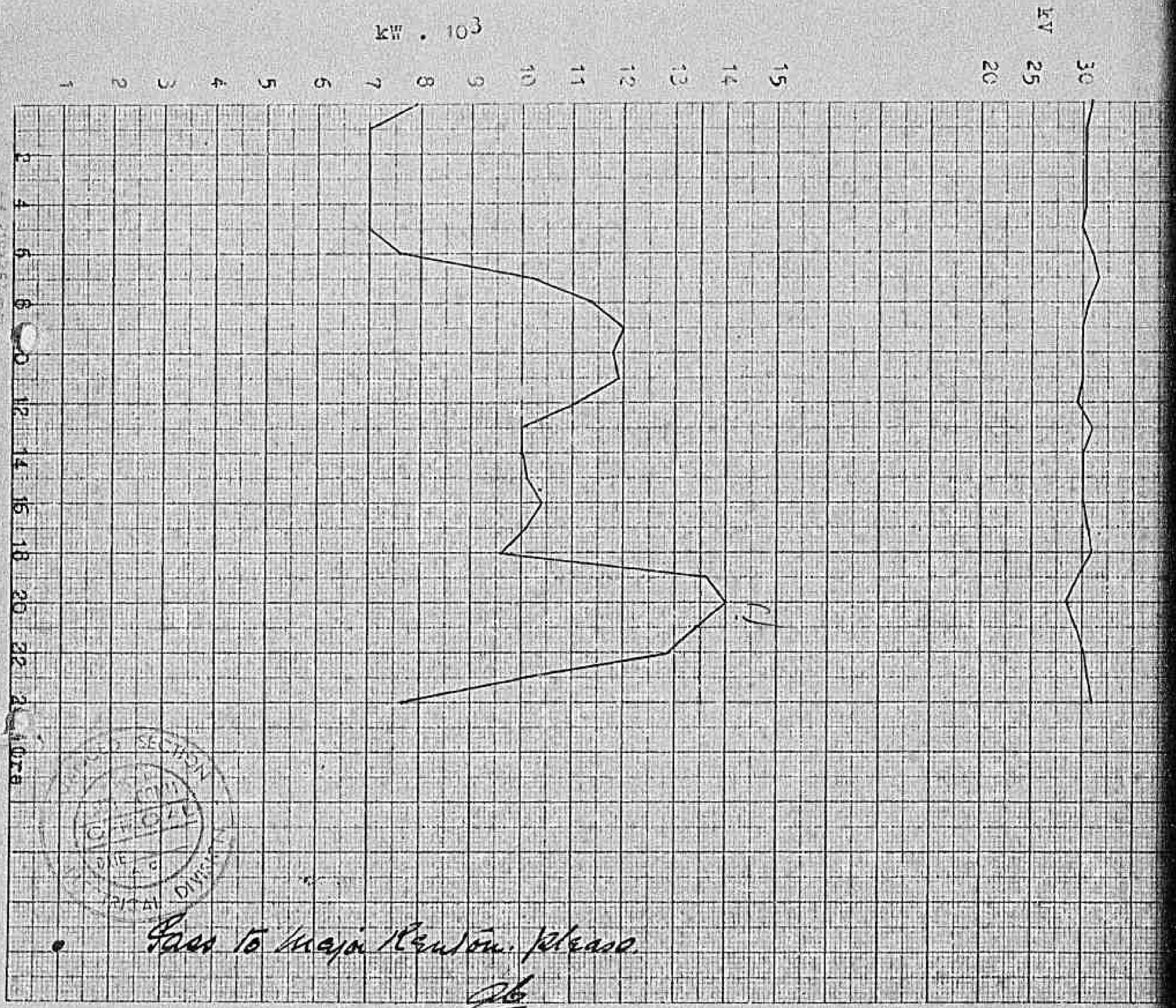


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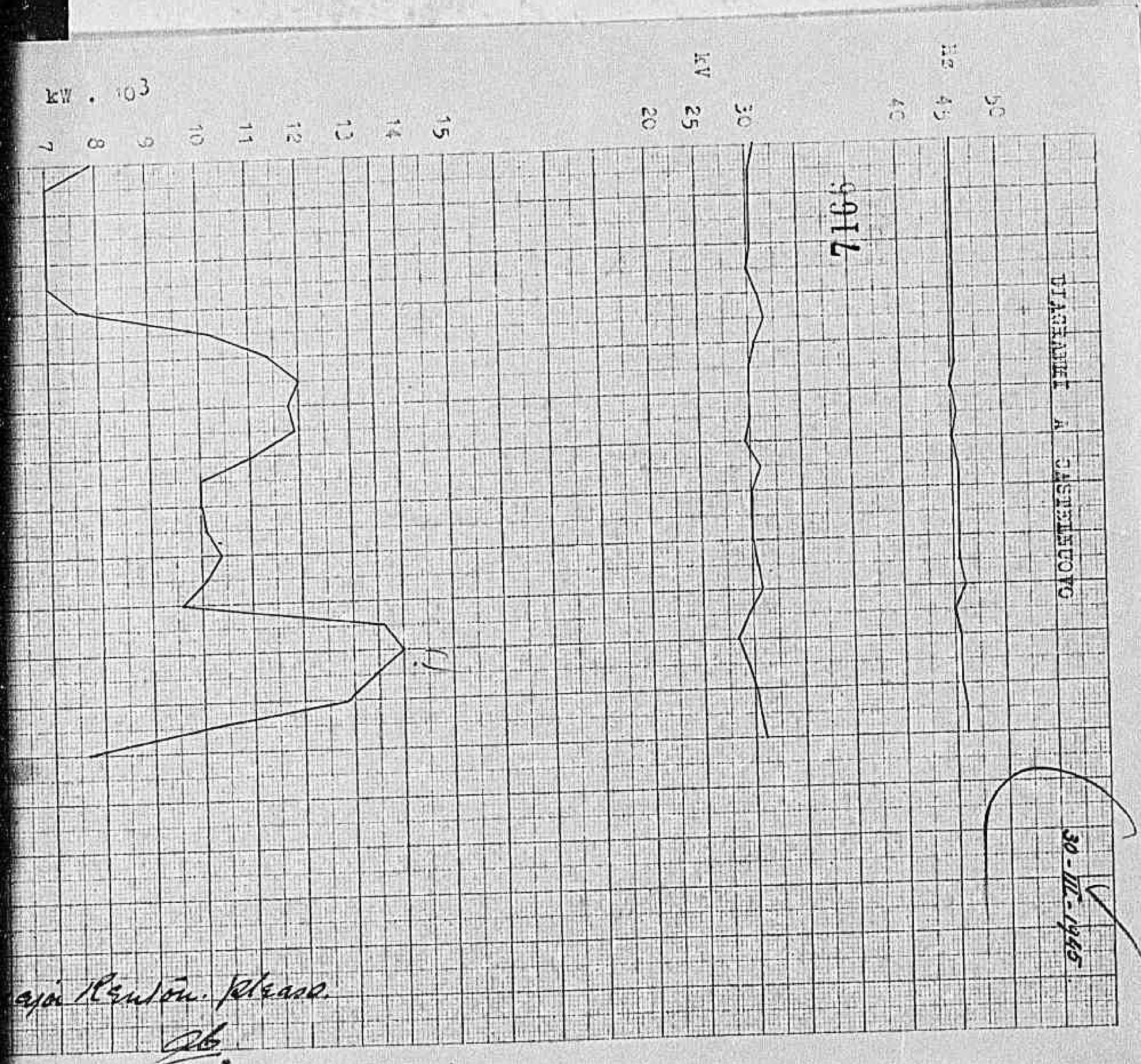
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Face to Major Section. Please.

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Ayo Kenton. Jokaad.

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28 MAR 1945 231

ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMMISSION
ALLIED COMMISSION

Florence, 6 Via Cerretani
Telephone nº 1153
26th March 1945

SUBJECT: Weekly Report of Advanced Section.

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394

Lt Col Rogers
29/3

This Report covers the period from March 17th to 23rd inclusive, except for Major Vallero.

Major Vallero - March 12th.- Took Galileo engineer to Larderello to look into prospects of possible repair of 800 HP 4000 Volt synchronous motor for Larderello. After a review of work the engineer stated that a new type of insulation material might be possible. After further tests, a suitable dielectric was found and further tests are to be made. A request of 10 specimen was asked for by Galileo and will be delivered.

A release for clothing was obtained and the electrical workers at Larderello will be supplied with such.

Meeting with Col. Kirkwood, Lt-Col. Lee, Major Drake, Major Harris, Major Bell, Major Small and myself scheduled for 15th March 1945.

Informed officials of Larderello that sale of products could be resumed if desired.

Larderello hired a truck to go to Leghorn for turbine oil at cost of 20000 lire. Is this excessive? Seems high, but?

Conference with Prince Ginori Conti.

March 15th. Conference with Col. Kirkwood et al. - Castelnuovo on the line as of this morning. - Telephone installation confirmed. - The 7 tons of soda are to be used for both boiler treatment and chemical processes.

March 16th - Confirmed that the 12 barrels of oil at Castelnuovo are now property of Larderello Co. - Have effected change in 900 KW.unit at Larderello I, and are now using the power at 50 cycles to feed Castelnuovo and Larderello.Centrale. - Checked on second unit Castelnuovo. Must send rotor of generator to Terni for straightening of shaft. Also laid plans to go to Florence for a conference with Pignone Iron Foundry for turbine and pump castings.

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March 17th.

Conference with Major Price - Corradini Co. in Naples is not controlled. In order for us to assist Selt-Valdarno with their order of wire, a private agreement should be reached between the two companies, then we will assist in securing coal, etc.

Col. Cooley called. The material requested by Selt-Valdarno for Pian della Rocca, Lima, Ravacce, and Sperando cannot all be furnished by P.B.S. Major Price to liason with Maj. Mc Donald on this.

Capt. Lowdon - The Direction of Pignone and the Gas works to the office ref 100 KW of power available to the Gas works which they cannot use, but Pignone can. Referred the whole matter to Capt. Mason-Tolby 77 C.R.E. Securing passes for "Galileo" engineers for Santa Maria. Securing permanent pass for Eng. Ambrosini for Santa Maria; securing passes for Florence for Eng. Angelini and Comm. Bottardi.

March 18th.

Journey to Florence with Eng. Errera. Capt. Stephens reported to Rome for transfer to Umbria - Marche Region.

March 19th.

Received report from Selt-Valdarno Co. on operation of synchronous condenser at Prato. This saves approx. 400 KW. Forwarded report to Major Renton.

Received following report from Selt-Valdarno Co. regarding status of transmission lines:

" 1.	Rehabilitation 30 KV line Fornace Turchi - Pontedera; 15 workmen - works supposed to be completed by April 20th	Km.	18
2.	30 KV Tavarnuzze to Empoli; 14 workers from Tavarnuzze - 14 workers from Empoli; completion date May 15th	"	23
3.	30 KV Empoli - Santa Croce; 10 workers Completion date May 15th	"	16
4.	30 KV Santa Croce - San Romano - Pontedera; 10 workers; completion date May 15	"	14
5.	30 KV Peretola - Prato (final arrangement) 12 workers near Prato; 12 workers near Sesto; 3 wires (in oper) foreseen to be completed by March 31st; 3 wires by April 20th	"	14

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6. 120 KV Tavarnuzze - Chiusi (in oper) final arrangement; 15 workers (15 Km. from Tavarnuzze) Completion date May 30 — Km. 106
7. 60 KV Castelnuovo - Chiusi (in oper) fihal arrangement; 12 workers near Castelnuovo; completion date May 30th — " 78

March 20th.

Journey to Riccione.

Capt. Lowdon - Insulators for S.M.E. Naples are not blocked; called Major Price arranging transport for them. Clothing arrived from Naples and was deposited in Valdarno stores for distribution. The truck which brought the clothing to take back insulators and vouchers for balance of clothing. To Richard - Ginori with Eng. Errera where half of all insulators were loaded.

Major Crowther to Santa Maria station with engineers of Galileo. Two copies of the result of this trip are attached. Director Manzetti has been asked to give us another annex to this report to show more clearly what help is needed from this office. He has been informed that the rehabilitation is not worth while if he expects all of the money, transport, road building and materials asked for in the original report.

March 21st.

Visited Rimini office of Alto Savio Elec. Co. Looked at plans of the Quarto power station, including mounting drawings of the Frances turbines.

Visited Quarto power station with Capt.Rogers. In my opinion, the only hope of rehabilitation of even one unit in this station is to obtain a new unit (turbine and generator) elsewhere.

Capt. Lowdon - Securing releases for Valdarno (lime, cement, wire). To Galileo with Eng. Errera, where they asked for an extension of plant for larger repairs which they are undertaking. This is to be attempted. No increase in power has been obtained, however Capt. Mason-Tolby says it has been approved.

Major Vallero - Journey to Florence. Ing. Musi and I visited Pignone Foundry and arranged for casting of turbine and machinery of pump castings (now being made at Follonica) and the turbine casting. The Pignone engineers estimate about 90 days to do the job.

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There is a reduced load on Castelnuovo between 2300 and 0600 hours. Can an allocation be made to straighten out the load curve by giving someone the power during this time? (Referred this to Col. Cooley.) The 60 KV transformer now undergoing repair at Castelnuovo will be ready for service Monday.

March 22nd.

Col. Cooley called regarding possibility of insulating materials at Fabriano. M.M.T.E.R. bought 2,000,000 lire worth there. Plan to send Capt. Lowdon to investigate.

Major Vallero reported that telephone (Army) to Larderello is now installed - Leghorn long distance - Avalanche junior - Larderello.

Forwarded correspondence regarding two Italian Army trucks to Col. Lapper. These two trucks will be picked up on March 31st unless action is taken to the contrary.

Capt. Lowdon - Investigating releases for Valdarno's Lima III Sperando plants, visited Boschi & Cinelli, Via del Romito 39 to see if they could make large bakelite rings for Lima III transformer. This is a works engaged in small stampings and would not be of any use. To Galileo with Eng. Errera ref. Quarto plant.

Captain Duran - Florence office. Major Barry called after talk with Lt. T.L. Sime, R.N., to say that work for Valdarno plant at Leghorn undertaken in Cantiere Orlando would come under direct supervision of R.N. while Valdarno would be required to furnish a responsible and capable engineer to supervise work at the plant. All correspondence to be addressed to N.O.I.C.

Conference with Ing. Legnaioli. Has appointment with Mr. Rowden, 24 March at plant to inspect job and prepare work program. As suggested, Legnaioli called on Direttore Pompei of Società Mattoni Refrattari and Capt. Wolfe, 10th Port, occupying property. It seems that Pompei could fill Valdarno's order, but in my opinion he is trying to use this requirement as a lever to get his entire plant back from military occupants.

Major Crowther - Visit and inspection of Tavarnuzze sub-station. The crane is in position but not operating. Pignone have completed repairs, these are being fitted. Crane will be able to take load within two days.

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The core of n.1 120 KV, 20,000 KVA transformer is under the crane and ready to assemble to tank. As soon as this is done, the transformer will be dried out (a vacuum pump has not yet been found).

The core of the second transformer 120 KV, 20,000 KVA will be removed to Tavarnuzze as soon as n.1 is assembled and space available.

Work in progress: a) transformer repairs; b) crane repairs and structural repairs to transformer repair house; c) assembling a static condensor battry total capacity 6000 KVA to be in service in 20 days; d) preparation for the reception of the following 30 KV lines: Ema I,-Ema II - Ponte alle Croci - Varlungo - Empoli - Prato I - Prato II. These lines are at present energized directly from the 30 KV line Castelnuovo dei Sabbioni - Tavarnuzze, but will be later energized by cable from the 120 KV transformer.

Materials: cement (very urgent), arranged to day, required to prepare foundation for: a) 120 KV transformer; b) 60 KV transformer. Oil from San Romano: a further 15 tons required (this is arranged)

Rag. Rossettini - Received information that in Colle Val d'Elsa the Gonnelli wire drawing plant is at present operating, and another drawing plant is in San Giovanni Valdarno. Selt-Valdarno Co. and Società Elettrica Maremmana have at their disposal a considerable amount of pieces of copper wire. Many firms are in condition to cast this copper, but in order to prepare wire are required laminas of electrolytic copper and the only plant which may do electrolytic copper and has a rolling mill is the Fornaci di Barga plant of Società Metallurgica Italiana. Fornaci di Barga plant is no longer under fire and is very easy to reach it because a bridge has been constructed across the Serchio river at Calavorno. When I have been in the plant in last december 1944 the plant was not damaged, only the electric substation was damaged.

March 23rd.

Major Renton called. Has letter from Romagnola Co. requesting 2,000,000 lire, permission and assistance to repair five substations (Forlì, Cesena, Ravenna, etc.) and a number of transmission lines. I inquiried about this of Maj. Stuart of 170 C.R.E. He would like a copy of their letter. It is satisfactory with him for the Company to be advanced the money, however any other assistance or approval should

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be done through 170 C.R.E.

Ing. Errera - With Eng. Tolomeo, U.N.E.S., to Pignone Foudry. Contacted Dr. Bardocci, General Manager, Eng. Tamagnini, Plant Director, Eng. Masero, Chief of the Technical office. Discussed Gerosa n.2 unit repairs (to be transferred at Venamartello). Obtained an extension to the Masero's travel permit. Eng. Masero will visit on Saturday 24th with Eng. Tolomeo the plant, in order to schedule a program. Contacted also Eng. Manzetti, Martinez, Di Lella, Caroti at Galileo, in order to have done some repairs for the U.N.E.S. At present the "Galileo" for lack of tools and for lack of insulating cylinders cannot give a real help to the U.N.E.S.

Contacted Eng. Merlini and Dr. Moloni at the Richard-Ginori factory in Doccia. Eng. Tolomeo has purchased many insulators for the U.N.E.S.

Accompanied Ing.Ambrosini and Manzetti to Major Bell. They submit their repairs program for Santa Maria Plant.

Major Crowther - Report from Selt-Valdarno Co.:

Lima - The casting and work on parts of the second 2400 HP set are in progress. The reconstruction of the winding of the alternator of above set has started, but the work can not be achieved unless materials for repairs required in report dated 13th March 1945 are obtained. Three coils of the winding of group n.1 have been reconstructed and it is hoped the group to be in service by Monday. 3rd group 1500 HP line; the scroll has been cast and work is in progress.

Pian della Rocca - The assembling of the second 14000 HP unit is in progress, while in the workshop in Florence the parts of the Michell bearing are being finished, and will be ready by Monday.

Ravacce - The three units damaged by the Germans have been dismounted and brought to Florence. The works Cantini in Pistoia have commenced the repairs of a 170 HP. turbine, while in Florence the alternator is being repaired. After the clearing of débris, the reconstruction of the building has commenced. Lime and cement are needed for this work; they have been applied for but not yet obtained.

Sperando - Work for reconstruction of the building

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are in progress; timber and bricks have been provided. 40 tons cement, applied for long time ago, and 20 tons lime are needed.

Tavarnuzze - Bitumen required for the roofing is urgently needed (arrangements are in hand).



Robert A. Bell
Major, S.C.
Officer in charge

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CONFIDENTIAL

HQ. XXII TACTICAL AIR COMMAND
Office of the Communications Officer
APO 650

HTC-CDT-mg

14 March 1945.

SUBJECT: Circuit Modification 101-E; Utilization of Split Phantom, both east and west on "B" group; Cecina Test-Target Rear, and placing in service Larderello power plant (A.C.C.) and an additional fault control circuit, Saline T.P.-Target Rear.

TO : Commanding Officer, 437th Sig. Hvy. Constr. Bn., APO 650.
Commanding Officer, Sig. Hq. Co., XII T. C., APO 650.

1. The following circuit modifications will be placed into effect upon receipt of this communication:

a. Target Rear.

(1) "B" Group, Target Rear-Cecina Test will be interrupted by repeating transformers (C-161), causing a phantom circuit to exist. This circuit will be utilized as a Target Rear-Saline T.P. fault control.

b. Cecina Test.

(1) "B" Group, Cecina Test-Target Rear will be interrupted by repeating transformers (C-161) causing a phantom circuit to exist.

(2) The phantom leg of "B" Group, Cecina Test-Target Rear, will be cross connected to side 2, "A" Group, Cecina Switch-Avalance Junior. This circuit will be utilized as a Larderello (A.C.C.)-Avalance Junior trunk.

c. Saline Test Point.

(1) "B" Group, Cecina Test-Target Rear, via Saline T.P. and Staggia T.P., will be interrupted by a split phantom (see detail "A", circuit diagram, 101-E). This causes Saline T.P. to become a west terminal for Cecina Test, and an east terminal for Target Rear.

(2) The phantom leg of "B" Group, west terminal to east terminal, will be cross connected to an existing pair, Saline-Larderello.

(3) The phantom leg of "B" Group, east to west, will be utilized as a Saline-Target Rear fault control circuit.

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d. Staggia Test.

(1) "B" Group, Cecina Test-Target Rear, both east and west will be interrupted by repeating transformers. The phantom leg of both east and west circuits will be cross connected in order to strap the phantom circuit around the CF3-A repeater.

e. All unused simplex legs will be placed at ground potential in order to cut down extraneous circuit noises.

f. This office will be notified upon completion of above modifications.

Charles D. Hamilton 1/Lt. Sig. C.
Jnr.

ROSS T. HAMPSON,
Colonel, Air Corps,
Communications Officer.

INFO COPIES TO:

Comm. Officer, XXII T.A.C. (A)
" " 62nd F. W.
✓ Major Bell, A.C.C., Florence

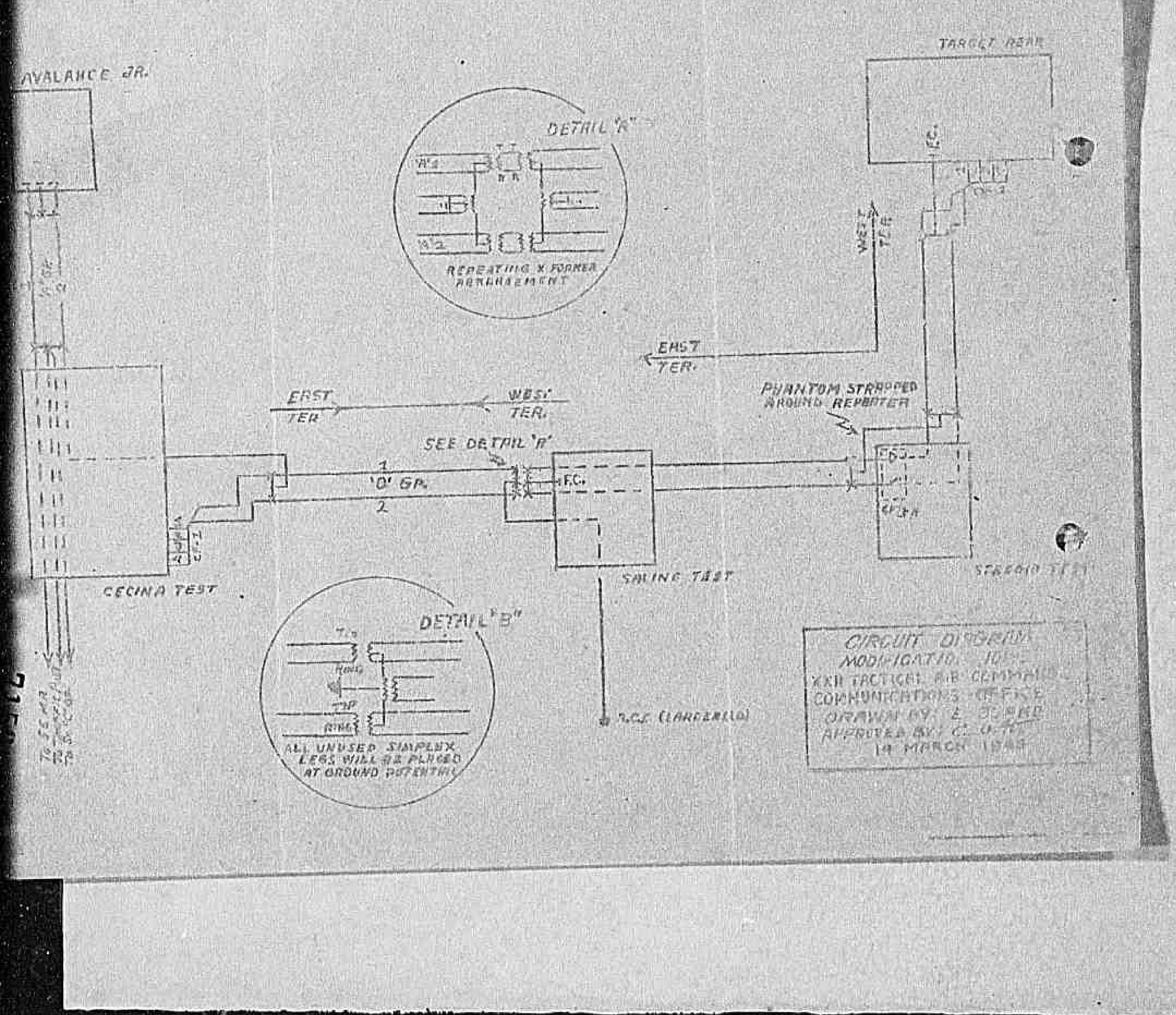
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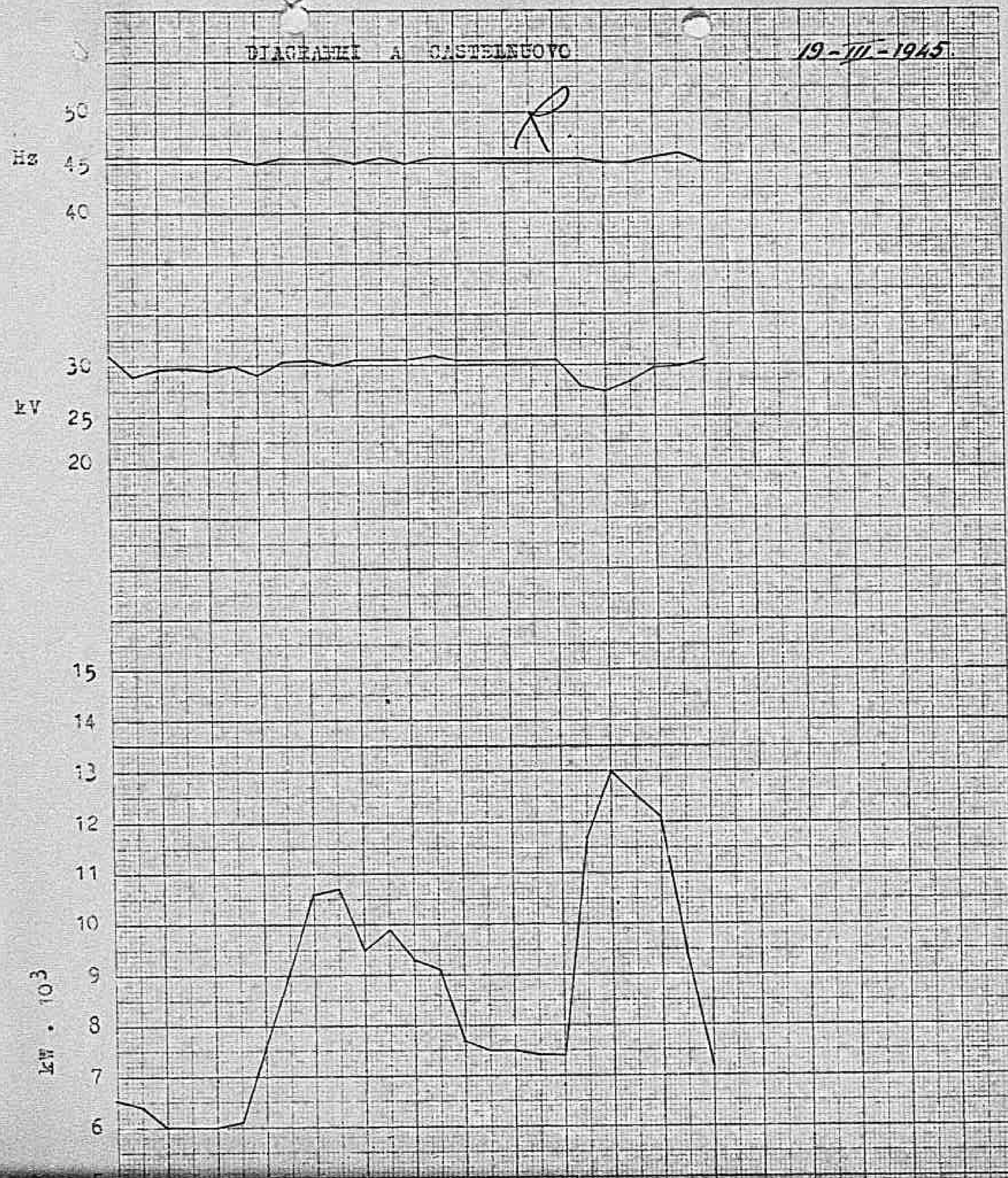
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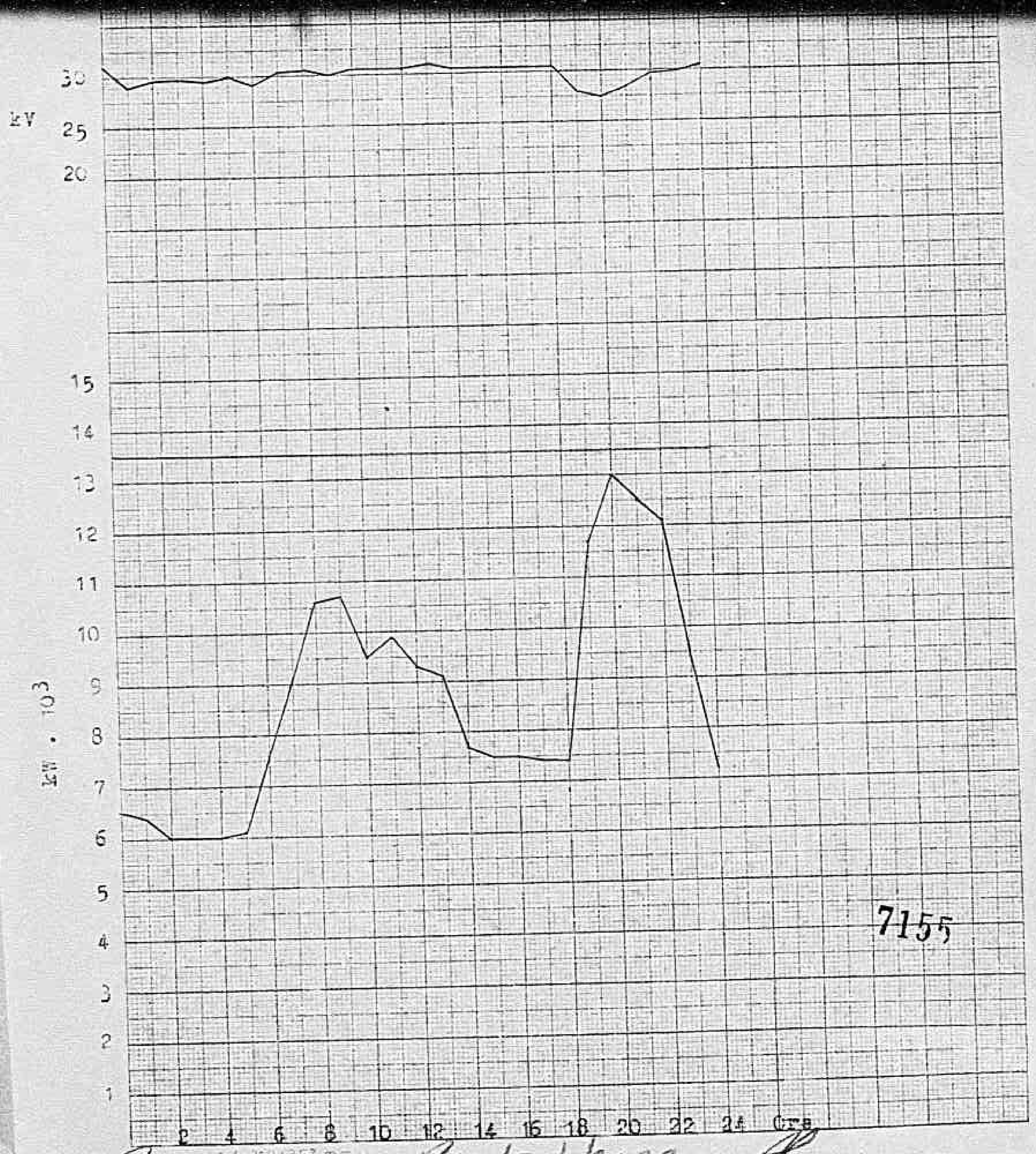


DIAGRAMMI A CASTELGUOVO

19 - III - 1945.



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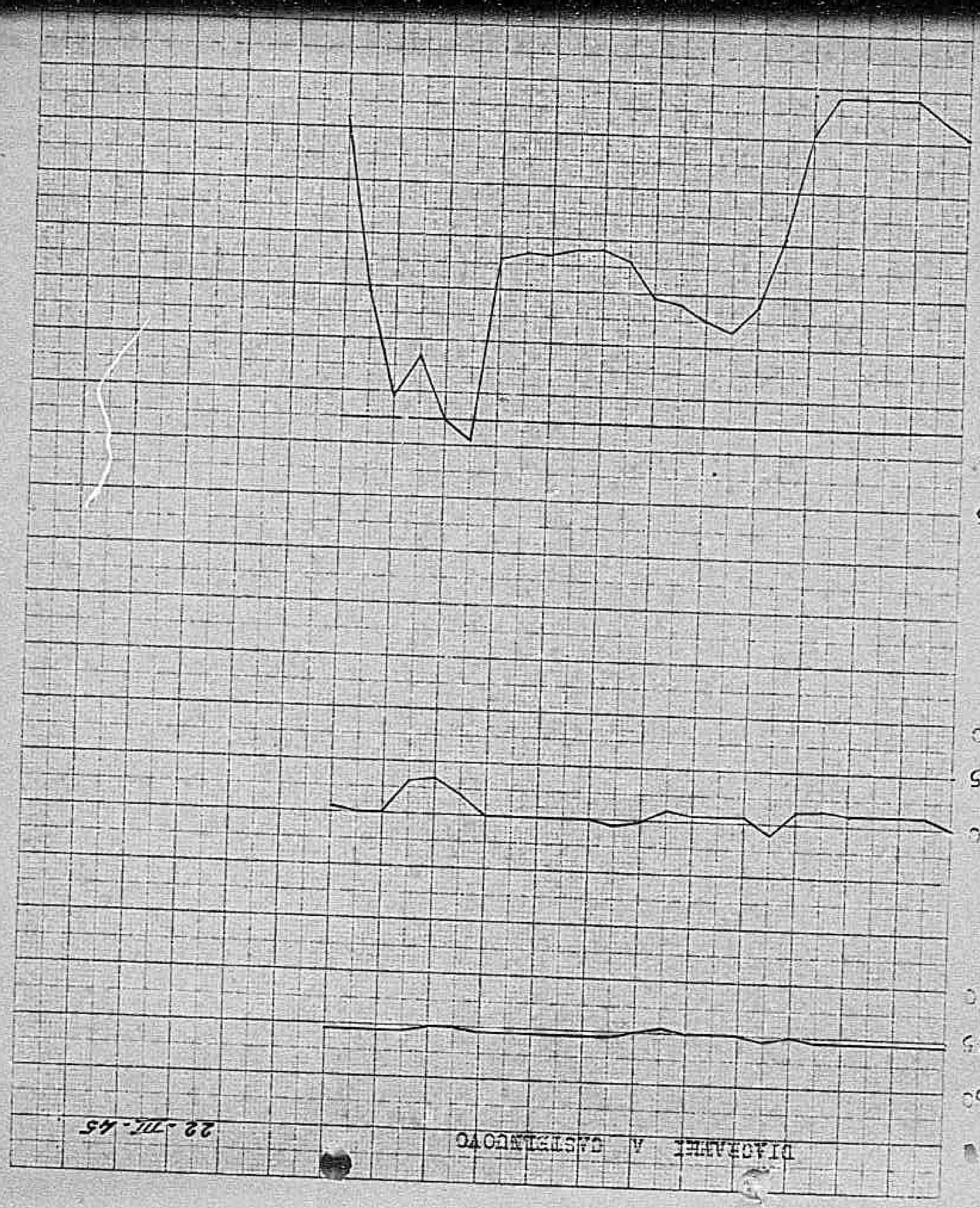


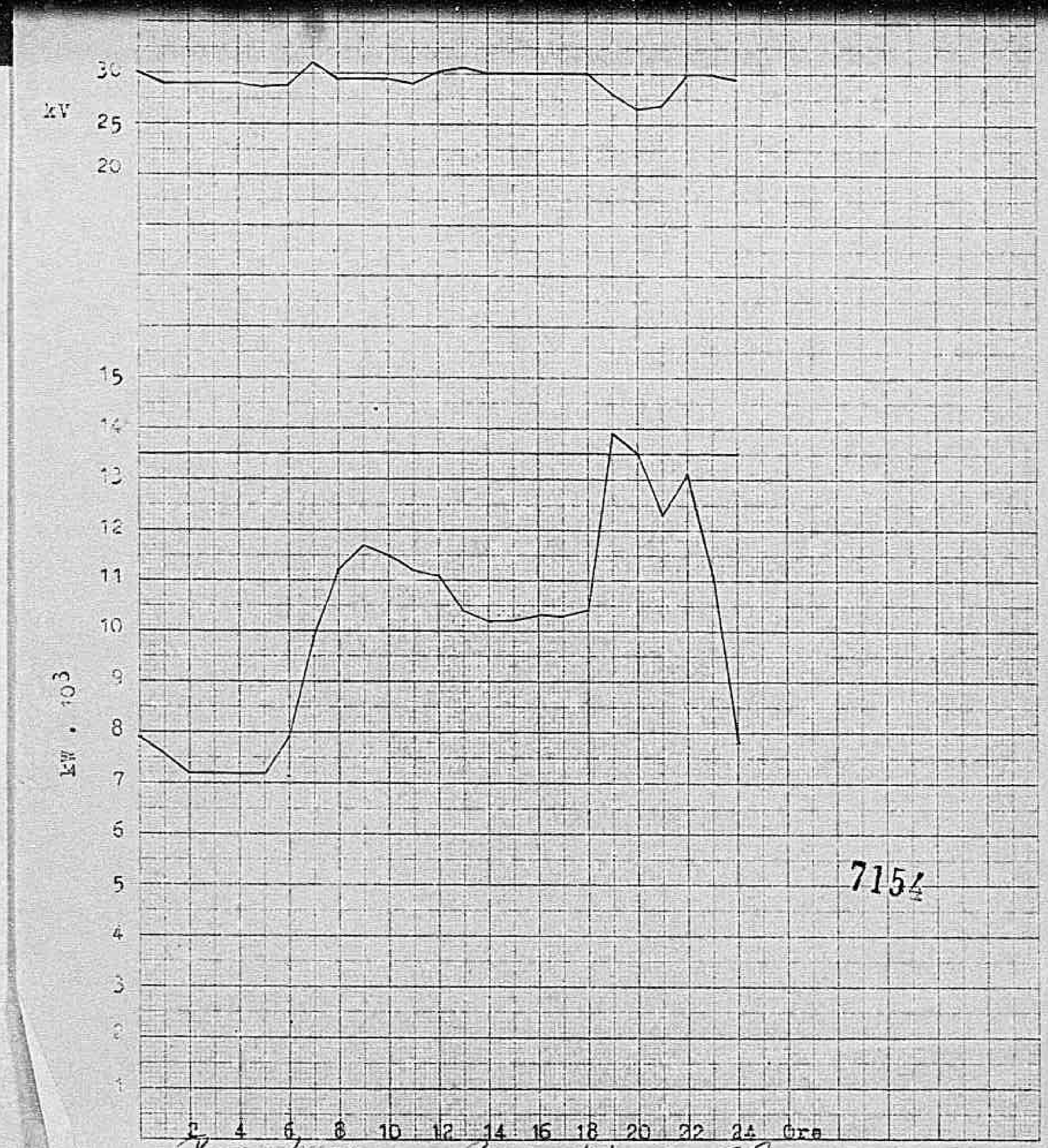
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Face la Mare Rentrée retard. RC

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7154

Face to main Road.

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P.W. & U. S/C A.C.
22 MAR 1945
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ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMM.
ALLIED COMMISSION

Florence, 6 Via Cerretani
Telephone N° 1153
19th March 1945

SUBJECT: Weekly Report
of Advanced Section

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394.

This report covers the period from March 10th to 16th inclusive.

March 10th.

Conference with Lt-Col. Lapper. Two construction teams organized as follows:

Team A. - Major Bell, Major Foden, Capt. Duran, Capt. Lowdon.

Team B. - Major Crowther, Major Wilcox, Capt. Best, Capt. Van Noy.

Capt. Lowdon - To Industry & Commerce for releases for Leghorn steam plant. Eng. Merlini (Richard-Ginori) called ref. release of coal or oil for the factory to make insulators for most of the electrical Coys. This is well in hand. Major Bell 'phoned from Rome and instructed me to ask the Valdarno dispatcher if he knew that one 15,000 KVA plant at Larderello had been put on the system. The dispatcher had no knowledge of this.

Capt. Duran - Called on Major Harris of Industry & Commerce Section Toscana Region. On 1st March he conferred with Dr. Lombardi of S.M.I. and referred him to Provincial Supply, Leghorn, for building materials. Also gave S.M.I. forms for requesting cement to be routed back through Industry Office. Advises that HQ has also been interested and is arranging for removal of civilian mess from factory. Will follow through Leghorn Province Supply in order to expedite rehabilitation of this refractory plant.

Major Barry called twice on telephone to clarify misunderstanding of work it is proposed to place into the hands of Royal Navy on the Leghorn Steam Plant - once before talking to Commander Hoggan and once after. Comdr Hoggan is in agreement and suggests that work may commence now pending written

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confirmation of agreements. Must talk again with Capt. Mc Kenzie, N.O.I.C., since in our talk we discussed only boiler repair and steam system work.

March 11th.

Journey to Florence.

March 12th.

800 HP pump motor at Larderello arced over. Sent 10 Kg varnished tape and varnish out on request of Major Vallero. Unit should be functionning in three days.

Capt. Lowdon - Major Renton wished to know if the line Leghorn - Pisa - Lucca - Pian della Rocca - San Romano - Tavarnuzze could be tied in. The answer is yes as it is open at Prato by switch. Sorting out clothing allocations between Valdarno and Larderello. To Larderello with Major Vallero trying to sort out the supplies.

Capt. Duran - Dott. Manzetti of Galileo Optical, who has been designated by Società Adriatica as responsible representative handling interests of Società Bolognese, called at office. Dr. Manzetti is going with Capt. Stephens to Rimini and Ravenna 13th. Will return as soon as possible with Eng. Ambrosini or Ing. Niccolis who will be placed in charge of work at Santa Maria. Immediately upon his return, Dr. Manzetti, this engineer and Ing. Di Lella of Galileo, will go with me to Santa Maria to plan and begin work of rehabilitation as quickly as practicable.

Major Vallero returned to me for further handling all matters pertaining to ILVA, Piombino.

March 13th.

Conference with Col. Kirkwood and Major Vallero regarding Larderello. No further orders will be given to Larderello except through Major Vallero and Regional channels. Arranged meeting at 10.30 a.m. Thursday.

Capt. Lowdon - Sorting out clothing allocations. Obtaining release for cement for Valdarno. Confirming the releases for Larderello, also investigating their P.O.L. situation. Called Capt. Mason-Tolby ref. electric supply for firm manufacturing tape; this will be connected at once.

Capt. Duran - Called Mr. Crooks of Transptn S/G to

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ask if, of his knowledge, cement had been delivered to Piombino for ILVA. Advised that, as he agreed, trucks had been laid on for plant to port haul but that he would call back with more specific information.

Travel to Leghorn. Called on Mr. Rowden, R.N. at Shipyard and Capt. R. Mc Kenzie, N.O.I.C., regarding Navy projects of Leghorn Steam Plant. Complete agreement reached, and I took in hand letter from N.O.I.C. stating conditions under which Royal Navy will undertake the project, technical details and extent of work to be determined by interested parties on the site.

Called on Col. Hensley, P.C. Leghorn A.M.G., than Maj. Frick, Prov. Supply Officer for release of building materials for Valdarno. Reported non available, all kilns and stocks frozen and controlled by various Allied agencies. Suggested I contact Royal Navy direct for release from stock at Fornaci Turchi. Inquired about building materials for S.M.I. refractory kiln, but was advised that no request had been received from S.M.I. However, Major Frick reported that he had recently investigated possibility of starting this plant but that 3601 Ord. (P.B.S.) now occupying premises would not permit its operation.

Having understood this portion to be under P.B.S. Signals and free to operate, it was determined through Real Estate Section that Ordnance is the official occupant. Called on Lt-Col. O'Keefe Exec. O, P.B.S. Ordnance, who suggests that he be contacted again in ten days after issue between Ordnance and Signals is clarified.

Called on Capt. Mc Clane in office of Major Mc Donald P.B.S. Procurement for brick and tile. Claims P.B.S. has little but have been offered stocks by Royal Navy in return for coal with which to operate kilns.

March 14th.

Checked upon 120 KV transmission lines for Major Renton - Larderello - Ponticino line. Contract has been let ans some work started. Larderello - Cascina line: no contract let. The FF.SS. office in Florence is awaiting further word from Rome office.

Capt. Lowdon - To Economics & Supply, where I saw Capt. Desmard who has charge of P.O.L. Explained that Larderello and Valdarno needed the requests made and got the assurance that in future they would get the full amount but

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no back issue would be given. Asked 77 C.R.E. for a supply of Bitumen for Leghorn.

Capt. Duran - Called on Officer in charge of Works Royal Navy to request release of brick and tile for building repairs at Steam plant. Comdr. Bishop, O.C.W., was out, but talked with S/Lt. Orgel who will present request to O.C.W. and advise by phone. If approved releases will be mailed directly to this office.

Called on Capt. Wolfe, 10th Port M. & R. Section occupying premises of "Società Mattoni Refrattari". Capt. Wolfe advises that very large stocks of products are on hand and he believes further that the establishment may be operated on a small scale to make new products without inconvenience to Military. Will have Valdarno search stocks for requirement. If not available, will try to arrange meeting of firms to negotiate for new production.

Called on Capo Doveri at Plant. Work continues satisfadtorily, truck service is satisfactory, permits are in hand to enter A.N.I.C. for recovery of certain machinery. Capo referred to Lt. Tough, Livorno A.M.G., Via Roma 1, for certain permits for personnel to travel to Lucca for Valdarno material required on job.

Called on Major Foley, Waterworks Sect., P.B.S. Engineers Servoce, and obtained list of pumps removed from power plant and placed in the water systmm. Also received another list of pumps according to actual needs in case present ones are returned to Valdarno at plant. Include copy for Public Works Division of S/C for possible assistance in locating replacements.

Travel to Florence. Discussed conditions of Royal Navy's proposal with Ing. Landucci of Valdarno. Conditions agreeable. Remains only to arrange conference of interested parties to determine extent of work.

March 15th.

Received proposed project of Nera Montoro plant from Selt-Valdarno Co. This report was promptly forwarded to Major Barry for handling.

Capt. Lowdon - To Pistoia in search of a wire drawing plant which I found, at Martinelli; full particulars in separate report. Arranged with Cpl. Goarse to proceed

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to Rome complete with papers, pick up truck at 0830 hurs Sunday, proceed to Naples on Monday, supervise the loading and bring clothing back to Florence.

March 16th.

Major Barry called - Ing. Errera to come to this office on Monday, March 19th.

Director Riccardi of "Forze Idrauliche Appennino Centrale" called in - Sestaione centrale (8000 HP) is the only centrale in their system in which we are interested. We are to contact him when it is possible to make a survey.

Capt. Lowdon - Checking on Valdarno's requests for releases. To Police A.M.G. for permits extentions for Galileo Engineers. I have heard of another wire drawing plant which is in operation at Poggibonsi.

Capt. Duran - Ing. Legnaioli will go to Leghorn to day. Gave this engineer all possible information and he will try to contact Mr. Rowden to get boiler repairs at steam plant started. Will contact Società Mattoni Refrattari for fire bricks.

Capt. Stephens will bring Ing. Ambrosini of Società Adriatica from Ravenna today. Making arrangements to get permits endorsed to allow Dott. Manzetti, Ing. Ambrosini and other Galileo engineers to go to Santa Maria 17th March to plan project of rehabilitation of hydro plant. Ing. Ambrosini will be resident engineer in charge.

Rag. Rossettini - With Major Vallero to the Galileo Plant, meeting El. Eng. Boscona. Ing. Boscona informs that it is possible to make insulation for the rotor bars for the 800 HP motor in Castelnuovo plant.

The insulation with mica on the contrary will be made with toilet-paper, insulating varnish and silk tape. The mica insulation discharges at 20.000 V; this new insulation discharges at 14.000 V.

ADVANCED SECTION P.W.B. SUB-COMM. OFFICIAL DATE A.M.G. ELECTRICAL DIVISION

Robert A. Bell
Major, C.E.
Officer in charg

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Declassified E.O. 12356 Section 3.3/NND No. 785019

Send these 2 by Courtesy request
Bob

Copy

AG 4/9
6a

PUMPS REMOVED FROM LEGHORN POWER PLANT

No	Motor	Pump	Pump Mfg.	In Service at:
2	HP 28 V 260 RPM 1450	Cap. 30 1/sec. Head 25 m.	Marelli	Stagno
1	HP 23 V 260 RPM 1450	Cap 30 1/sec. Head 25 m.	Marelli	Cisternone
1	HP 20 V 260 RPM 1450	Cap 25 1/sec. Head 24 m.	ASEA	Cisternone (This pump is not believed to have been in service at the power plant.)
1	HP 15 V 260 RPM 1450	Cap 20 1/sec/ (approx) Head 15 m. (approx)	Marelli	Calambrone
1	None	Cap 10 1/sec (approx) Head 15 m. (approx)		Stagno

PUMPS NEEDED TO REPLACE PRESENT PUMPS IF REMOVED

At	No	Pump (with proper motor)
Stagno	2	Cap 40-50 1/sec Head 45 m. or more
Cisternone	2	Cap 40-50 1/sec Head 45 m. or more
Calambrone	1	Cap 20-30 1/sec. Head 20-30 m.

Combination of smaller capacity pumps down to 15 litres per second would serve if single units of capacity indicated are not available. Present pumps actually have capacity and head too low for satisfactory service.

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6-6

Report on G.B. MARTINELLI - Pistoia

This wire drawing plant situated near the station at Pistoia has been extremely damaged, but has been salvaged and the machines are ready for operating.

Each machine needs 12 HP and 4 machines should be operating. With all machines working they would need 60 HP.

Output:max.25 quintals daily; min. 8 - 10 quintals.

Wire can be drawn sizes 1 mm to 5 mm. They have a little scrap copper in hand, but would need most of raw material (lots at Valdarno store).

The insulating D.C.C. for this wire can be done at a plant at Sesto.

I enclose leaflet and samples.

R.F. Lowdon, Capt.

15th March 1945

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Spare copies under cover

ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMM.
ALLIED COMMISSION

RECEIVED
P.W. & U. S/C A.C.
16 MAR 1945 231

Florence, 6 Via Cerretani
Telephone nº 1153
13th March 1945

SUBJECT: Weekly Report
of Advanced Section

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394

This report covers the period from March 3rd to 9th inclusive.

March 3rd.

Captain Mason-Tolby (77 C.R.E.) called to report that the voltage in Florence has been dropping to 22 KV at 8 p.m. for the past few days. One important motor has been burned out account of this. Reported the matter to Major Renton.

Capt. Lowdon - To Richard-Ginori with Eng. Morasco S.M.E. who is wanting supplies of insulators. To Capt. Bullock ref extra rations for Pignone. This is fixed. Got more information ref transformer oil at Castelnuovo. Securing releases for Larderello & Valdarno.

Major Vallero - Conference with Col. Jenny. Gave me the transfer orders and explicitely stated that my orders are to come from Col. Kirkwood only. Explained as best as possible the set-up at Larderello regarding the necessity to keep control on that plant. Col. Jenny asked a member of Industry & Commerce Sub-Commission to interview me regarding the borax and boric acid production at the plant. Will have a conference on Monady morning.

March 5th.

Major Renton visiting this office. Conference with Major Renton and Capt. Mason-Tolby regarding matters pertaining to electric service in Florence.

Major Crowther - Arranged transport to Pian della Rocca to pick up sharpless filtre and take to Tavarnuzze. Transport was provided by Major Oyler 135 M.E. Coy R.E., Major Crowther's old unit.

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NOTE: That heavy transport of this unit covers most of the areas down as far as Naples and Terni, max.load 40 Tons.

Capt. Lowdon - To Pignone Foundry and Galileo with Major Renton and Eng. Marasco. Trying to secure release for cement sacks. Getting list of more essential stocks from Valdarno. All releases asked for have now been passed, except stranded steel wire and carbide of calcium.

Capt. Stephens - Held up in Rome through weapons carrier being dead lined. Saw Major Price re release of 30 K's of tin for Larderello from Bosco's, Terni. He informed me that release order has expired on time limit, but had been forwarded to A.F. HQ for extension.

Was informed that Dott. Manzetti of the Officine Galileo was still at Taranto.

Capt. Duran - Rome office. Major Barry, myself and Doct. Berghinz of Società Adriatica di Elettricità, Ufficio di Roma, Via 4 Fontane 143, in conference re Santa Maria hydro-plant. Adriatica has complete control of Società Bolognese as a subsidiary operating Santa Maria and Le Piane. Galileo of Florence is one department of Società Adriatica. As Santa Maria and Le Piane are entirely cut off from their direction in Bologna at this time, Dott. Berghinz proposes designating Dottor Manzetti Riccardo of Galileo Works as the responsible representative of Soc. Bolognese for purposes of administration. Further, he proposes to bring an engineer from Ravenna to be placed in direct charge at the plant for planning and the actual work of rehabilitation. It is hoped that electrical repairs may be handled by Galileo shops and scroll cases for the turbines cast at Pignone foundry in Florence.

Since it will be several months Before funds will be available on loan from the Italian Government under 1946 budget, an advance will be requested from Fifth Army A.M.G. to be handled by Dott. Manzetti in order that work may begin as quickly as possible. Expect to see Manzetti and the engineer to be placed in charge, both with proper credentials in hand, at an early date.

Discussed with Major Barry the advisability of the Sub-commission making a request to the Naval Officer in charge, Leghorn (British) to make a project of boiler repairs at Leghorn Steam Plant.

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March 6th.

Journey to Cesena and return with Major Renton for conference with Major Stuart (170 C.R.E.).

Major Vallero in Rome. Arranged for ILVA to pick up 100 tons of cement.

Major Crowther contacted R.T.O. Arezzo regarding permission for Valdarno Engineer to travel by rail between Arezzo and Chiusi in connection with H.T. line repairs. Also arranged transport of 16 steel drums from Castelnuovo to San Romano, to be filled with oil and when ready transported to Tavarnuzze.

Capt. Duran - Called at Industry Section Toscana Region where it was reported that Ing. Porro of S.M.I. has not yet contacted them about rehabilitation of Refrattario at Leghorn.

Discussed situation at Santa Maria with Major Gaither and reported proposed manner of handling as worked out with Dott. Berghinz of Società Adriatica.

Major Barry called after discussing Leghorn Steam Plant boiler repairs with Navy S/C at Rome. Capt. Butler, USN, suggested that the matter be taken up diredtly with Capt. Mc Kenzie, RN, at Navy House, Leghorn. Will follow.

Capt. Lowdon - To Major Drake and Capt. Loeb reference cement sacks. These are available at Giuli, Via della Scala 101, and the price of 28 lire is not excessive. I have informed Larderello and Valdarno storekeepers of this. Checking prices of insulating material from Curradi Corradino for Valdarno Capt. Loeb says some prices are excessive and he is to have them reduced.

Capt. Stephens - Still held up for weapons carrier. Obtained from Major Price travel permit for Eng. Tolomeo of the U.N.E.S. to visit Florence. He is to travel with me.

March 7th.

Visited Valdarno dispatcher with Major Renton. Possibly a Valdarno employee to go to dispatching office in Rome later.

Lt-Col. Cooley called - interested in frequency changes - thinks that we should have some on hand for Leghorn area if and when frequency drops to 45 cycles.

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I agreed to fully investigate possibility at Riccione and Ca' di Landino. 15000 KVA unit at Castelnuovo started rotating Saturday at 7 p.m.

Capt. Duran - Telephoned Major Drake, Toscana Region Industry Section. Porro of S.M.I. has not called.

Telephoned Porro of S.M.I. who said his representative called on Major Drake who was out, so he talked to Major Harris, Commerce Section, and was referred to P.S.O. Leghorn. Will try to co-ordinate and expedite.

Received copies of correspondence reting to these requirements, indicating conference between S.M.I. and Industry and Commerce Section 28 Feb. in which S.M.I. was referred to Prov. Supply Officer Leghorn with specific instruction for procurement, and S.M.I. letter 1 March to their Leghorn plant. Will follow through Industry & Commerce to P.S.O. Leghorn.

Capt. Geo Barnes, C.A.O., Castiglione dei Pepoli called at office with certain general information and plans for rehabilitation of Santa Maria as prepared by his own engineer Inf. Fenzi. Capt. Barnes understans the functions of this office and left his report for whatever of value it might contain toward surveying of damage and planning of rehabilitation by accredited parties.

Capt. Lowdon - To Richard-Ginori, Sesto, with Major Renton, who looked over the whole plant. Also visited Rifredi and Tavarnuzze sub-stations; Major Renton made thorough inspedtion.

March 8th.

Conference with Capt. Marshall, electrical liason officer from D.W., A.F. HQ now with 15th Army Group. He is interested in the general electrical picture, at present, the service to Bologna. One platoon of 543 E & M Coy is working on Rifredi - Bologna 120 KV line under direction of Engineers, 5th Army. Capt. Marshall's office telephone Philpot 105.

Labor Officer, Toscana Region, called to inform me that Regional Commissioner had called a meeting for about the 12th March to discuss the operation of Larderello.

Capt. Duran - Leghorn. Called on Capt. Mc Kenzie, RN, Naval Officer in charge, to discuss boiler repairs

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at Leghorn Steam Plant. Since RN controls labor and facilities of Cantiere Orlando, they prefer to handle as a Naval project, in which case procurement of materials would be much simplified among other advantages. However, since ship repair is of first priority, an emergency in this line might delay the boiler repair project but the same would hold true for the firm's private contracts subject to R.N. control.

Discussed details with Mr. Rowden who will outline and forward conditions under which project will be undertaken. For matter of record and confirmation of verbal agreement, A.C. will write a letter to N.O.I.C. and receive his written approval authorizing project.

Also met Lt. T.L. Sime, R.N., Assistant to Principal Base Electrical Officer (Comdr Hoggan, Naples). Lt. Sime says that electrical work is also slack at this time and that personnel and facilities are available for alternator and transformer repair; further that he will try to interest Comdr. Hoggan in the project on the same basis and with the same personnel and means as were used in rehabilitation of Capuana at Naples. This might be advantageous in that the several phases of the work - steam, electrical and fuel-handling rehabilitation - should be more closely co-ordinate under one direction of an Allied agency.

Called on Capo Doveri at Steam Plant. Clean up work is progressing satisfactorily and as soon as certain building materials are available, building repair may be expedited.

Permits are requested to day for certain workmen to enter A.N.I.C. to restore service to a crane to aid in the loading and withdrawal of certain parts and machinery belonging to the centrale.

Capo Doveri reports that Valdarno and Cantiere Orlando are in agreement and work should start within a few days. Will check with Eng. Legnaioli; also do not believe work may start without approval of R.N. and availability of certain materials.

Capt. Lowdon - To Società Metallurgica Italiana, Campo Tizzoro, where the director, Eng. Scolastico Corrada, showed me around. It is a small arms ammunition plant with a small foundry capable of small copper, brass etc. castings

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also very small cast iron castings. In the machine shop they have rolling mills with a daily capacity of 60 Tons also some guillotine and multi-drilling machines. They are repairing three 60,000/6,000 V transformers 50 cycles, one 3,000 KVA, two 1,800 KVA, also 1 30,000/6,000 V 2,000KVA. All these transformers, property of Selt-Valdarno, should be ready for service by 31st March 1945. They have two Diesel engines driving alternators one 260 V 100 Amp one 260 V 159 Amp (last under repair). They have large stocks of copper and could make joints of any description. This is the same firm as at Barga, but there is no wire drawing plant here.

To Rinaldo CANTINI - Pistoia - which was a foundry devoted to the manufacture of hydro-turbines and regulators. Although the structure is damaged the engines and machines have been salvaged and hidden. The foundry and machine shop are partly working and on receipt of bricks to rebuild the main machine shop they can go into full production. The largest lathe has a face of 3½ m. and another has a bed length of 8 m. These are now working and other larger machines are being prepared. They are working on castings for Ravacce and other stations (Selt-Valdarno) and also Maremmana. They have about 5 tons metallurgical coke, and a fair amount of pig-iron. I attach their 1938 catalogue. (NOTE to Maj. Price: please, return catalogue to this Office) There is no wire-drawing plant.

Capt. Stephens - Lt. ~~Simden~~ Simpson was not at the steel plant at Terni, but contacted Cpl. Day and loaded the pulley wheel for Larderello. With regards to the missing governor parts for Larderello, Dir. Gasparini (Terni steel plant) informed me that a letter was written to Larderello prior to shipment stating that all material with exception of broken bronze wheel was ready for shipment. When this material was loaded up, broken wheel was loaded by mistake and sent to Larderello. Contacted Eng. Accornero of the Bosco Plant, Terni, and obtained 10 K's of tin for Larderello on strength of Major Price's statement that permit was being obtained. Eng. Accornero informed me that there was no more tin there, 600 odd K's had been stolen. Arrived Florence 18.00 hrs.

March 9th.

Journey to Larderello with Major Crowther to meet Lt-Col. Cooley. Castelnuovo unit rotating at 2800 RPM.

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Lt-Col. Cooley arranged to put on line between 3 and 4 pm to morrow. Journey to Rome.

Capt. Duran - Office. Conference with Ing. Legnaioli. Valdarno is ready to use building materials at Leghorn. Capt. Lowdon is arranging for release. Says agreement is reached with Cantiere Orlando but wants to go and discuss details. Reminded him that both Col. Cooley, P.B.S. and this office were still awaiting complete consolidated program of Valdarno work with notes as to present status of each project. He advises that work is in progress at Sperando cleaning up débris, restoring building and retrieving materials and equipment which was buried or hidden in caves.

Capt. Lowdon - To Capt. Loeb and Major Drake for release for Leghorn steam plant after conference with Eng. Legnaioli. Major Price called to say a certain amount of clothing was in Naples for Valdarno & Larderello Cos value 557,000 lire. The money to be lodged in the Bank of Naples and delivery to taken before 20th March.

Robert A. Bell
Major S.C.
Officer in charg

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Three copies under cover

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ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMM.
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P.W. & U. S/C A.C.
11 MAR 1945 231

Florence, 6 Via Cerretani
Telephone No. 1153
3rd March 1945

Lt Col Kapper
noted. A good report
Reg 12/3

SUBJECT: Weekly Report
of Advanced Section

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394

This report covers the period from 24th February to 2nd March inclusive.

February 24th.

Two transformers (2850 KVA and 4000 KVA) are out of service at Larderello I, due to breakdown. This leaves only one 2850 KVA transformer available to carry the 3900 KW output, hence it is important to repair at least one of these immediately. One of these can be ready in approximately 20 days, the other to take approximately 2 months provided materials can be obtained. Gave this list to Major Barry for transmittal to Major Price. This office is also trying to procure.

Visited Prince Ginori. He is going to Rome tomorrow for conference and agreed to talk to Virgili regarding Larderello problems.

Upon recommendation from Lt.Col. Cooley, General Bowman, 5th Army Engineers, agreed not to draw further on Selt-Valdarno stores for material.

Captain Duran - With Eng. Legnaioli of Selt-Valdarno, called on Ing. Porro, Director General of Società Metallurgica Italiana, to discuss details of making special refractory brick for repair of boilers at Leghorn Steam Plant.

Porro says that on receipt of certain materials, the plant could operate within two weeks, and Valdarno's order for 4000 special pieces could be turned out in two months operation.

Assistance requested:
Materials - 30,000 tiles for roof (or 2000 m^2 corriron)
300 Kg iron wire

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17 cm timber
10 cm lime
15 cm sand
2 tons cement
Elec. Energy - 10000KWH/mo, 100 KW peak demand
Water - 10 to 20 mc/day
Removal of Italian Civilan Mess (PBS Ord.) from factory building.

Hauling of rock crusher (6 T) and 5000/260 V transformer (1½ T) from Fornaci di Barga.

Permit for plant Manager to move from Limestre to Leghorn to supervise work.

Total of 28 workmen to be employed.

Called on Major Drake, Industry section of Toscana Region who promised all necessary assistance to start this plant. Advised Porro through Ing. Legnaioli to call on Major Drake to give more specified details of requirements. Will follow up.

February 25th.

Conference with Director Virgili at Larderello. He is going to Rome tomorrow to attend board meeting to select new officers for Larderello Co. Phoned this information to Major Rosson, requesting that an officer contact principals of meeting beforehand and then attend meeting in order to insure that a leader is selected that is satisfactory to all concerned.

February 26th.

Major Vallero and myself met with Labor Comittee at Larderello. Workers admit slow down. This due to present director dispute. Workers agreed to devote their future efforts wholeheartedly toward rehabilitation. They expect the Feb.28th meeting in Rome to end the director dispute. Major Vallero assigned to Larderello (with weapons carrier), to take over ILVA job later (in addition).

Captain Duran - Florence to Lima and return with Ing. Legnaioli and Ing.Benetti of Valdarno at request of Col.Cooley. Also present were Maj. Tuckett and Lt. Davies of 543 E & M Co. and Capt. Mc Collum, Elec. Officer for IV Corps. Matters of cooperation between military and Valdarno were discussed together with channels of authority.

One 2000 KVA machine is running on short circuit and

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will go on line in a few days using 1 - 2000 KVA 5/60 KV transformer, which is ready. P.B.S. is also handling second unit of 2000 KVA which is expected by 10 April using 1-5000 KVA 5/60 KV transformer also under repair. Third unit will be responsibility of A.C. Excitation and transformer capacity will be sufficient for third machine after second enters service. Some castings for third unit are now being made in ILVA Foundry at Follonica. Will get more detail on work scheduled from Ing. Legnaioli.

Original installation was 3-2000 KVA and 1-1500 KVA machines, 5000 V 50 cycle, Francis turbines 500 RPM. Excitation was from two separate machines with Pelton wheels. Present excitation will be from generators salvaged from Castelnuovo dei Sabbioni coupled with a motor from some other point.

Capt. Mc Collum advises that Gallicano and Sestaione are still inaccessible. Pàvana will not be rebuilt but he will visit Suviana again on 27th Feb. and advise. Santa Maria being in II Corps area, he has turned all available information over to Major Gaither. Will contact Maj. Gaither before visiting Santa Maria.

Capt. Lowdon - To 5th Army HQ rear to secure release for screws for Valdarno. Successful. For release for stranded steel wire was not successful. Lt. De Gabriel referred me to Capt. Odie A.F.H.Q. who said that the release fof this could only be procured by us applying to Industry Sub-Commission HQ who apply to A.F.H.Q. I will write Major Price. Sent to Industry & Commerce Toscana Region for release for tape for Larderello, cement and building material for Valdarno. I had previously checked with Capt. Duran that the requirements were necessary. Wrote Major Price re release of materials from Rome.

Capt. Stephens - Major Wooster phoned wanting information about Grosseto allocation from Larderello. Col. Cooley gave instructions on 20th Jan. to Eng. Palchetti S.E.M. that the line feeding Grosseto would not be switched on until 22.30 hrs and switched out at 06.00 hrs; no max KWs were fixed.

Rag. Rossettini - With Capt. Stephens in the office of Eng. Ciampolini, Viale Principessa Margherita 64. Talked about the work in progress to repair the primary lines:

120 KV line Ponticino - Rifredi; 3 contractors are working; work started the 15/Feb. and the line will be ready by the 1st June;

120 KV line Rifredi - Tavarnuzze; already repaired by Railways people;

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120 KV line Rifredi - Suviana; workers of the Railways are working under control and with help of Allied Engineers.

The repair of the 120 KV line Larderello - Ponticino - Riccione is a job of the "Ufficio Elettrificazione" in Rome. Ing. Ciampolini knows that the Larderello - Ponticino line is severely damaged: more than 20 towers are missing.

February 27th.

Talked to Major Renton - Contract for repair of 120 KV line Larderello to Ponticino to be let soon. 120 KV line Ponticino to Riccione will not be rehabilitated at present but held in obeyance - Rimini area to be served from direction of Bologna for the present instead by way of this line.

Lt-Col. Cooley called. Second unit at Pian della Rocca will be ready about April 10th; second unit at Lima about April 1.

Capt. Duran - Telephoned Lt. Monie, A.C., trucking organization of Transport S/C at 13 Via Pannocchia, Livorno, telephone value 573. 2½ T 6 x 6 for Leghorn Steam Plant has arrived, is being serviced today, and is available for duty on 28th Feb. Advised Ing. Legnaioli who will have Capo Doveri see Lt. Monie and arrange details.

Telephoned Mr. Rowden, R.N., re oxygen for ILVA from Monterombolo. Upon receipt of ILVA's demand endorsed by this office as to necessity, additional requirement may be made available until or unless curtailed by operational needs.

Sent phonogram to Maj. Vallero at Larderello that I may meet him at ILVA piombino at 2.30 p.m. on 1st March, to transfer to him all information and details re steam plant rehabilitation and arrange for additional oxygen.

Talked with Ing. Legnaioli re our relations with Valdarno and P.B.S. Requested program of proposed work on third unit at Lima; program and justification for third unit at Pian della Rocca if desired and the same for any other proposed project.

Telephoned Major Gaither and advised of my intention to visit Santa Maria on 28th February. He has recently made available 100,000 lire and issued orders to start clean-up work.

Capt. Lowdon - Called Major Price ref. 200,000 tiles from Siena. He is to help get release of stranded steel wire for Valdarno, also he will help in the melting and fabricating

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of wire in Naples for Valdarno.

To 5th Army for release for Pignone and Galileo. To Siena to see Capt. Shopel ref tiles for Rome. Conference very unsatisfactory as he suggested that if we gave him extra electricity he could give us tiles. The extra electricity was not for manufacturing tiles but for all Siena. Tried to 'phone Major Price from Siena but failed. Ref transportation Capt. Shopel is transportation officer also. Telephoned Major Price results of visit.

Capt. Stephens - Ref. 158/PWU letter dated 24th Feb. Information through Eng. Legnaioli, Selt-Valdarno, 120 KV Valdarno transmission Chiusi - Tavarnuzze. This is in service (insulated for 120 KV) Chiusi - Castelnuovo 60 KV, Castelnuovo - Tavarnuzze 30 KV, Tavarnuzze - Rifredi 120 KV line completed. 120 KV line Rifredi - Suviana is now being repaired by F.S. gang of 50 men under military engineers (supervision Lt. Cooper) vide Major Crowther report 24/2/45 (does not touch Ca' di Landino) 60 KV line runs from Suviana to Ca' di Landino.

Arranged with Eng. Ghetti, Società Adriatica di Elettricità, to leave for Rimini etc. on Tuedday 6 March (Eng. Martinez will no be back from Rome prior to that).

Major Vallero - Conferred with Ing. Musi regarding immediate program. Went to Ghirlanda with the truck and transported column for 60 KV transformer to Castelnuovo. "Società Maremmana di Elettricità" men had the 60 KV transformer assembled and were waiting for column. Proceeded with work immediately. Visited Poggio Piovana - good condition. The 38 KV line intact and operating.

February 28th.

Received releases from 5th Army Ordnance for our use of Pignone Foundrie and Galileo.

Capt. Duran - Visit to Santa Maria Centrale of "Società Bolognese" and Ca' di Landino sub-station of FF.SS.

Unable to see station chief, but talked with assistant and inspected works and damages. Since plant was destroyed on 25th Sept. there has been no contact with direction in Bologna. C.A.O. at Castiglione, Capt. Geo. Barnes has exhibited interest in plant and has two engineers surveying damage and planning rehabilitation. They are Ing. Protti, Civil Engineer of Comune, and Ing. Fenzi, a free-lance Elec.Eng. working for Capt. Barnes.

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A new program and report as of this date will be submitted by Ing.Fenzi, fo which copy will be sent direct to our office.

Maj. Gaither, 5 Army A.M.G., has made available 100,000 lire for clearing débris from site, but I was unable to determine who is administering funds and believe a considerable proportion was used to pay back salaries and wages.

Plant consisted of 3 2350 KVA alternators driven by Pelton type wheels and two separate exciters also Pelton-driven. One exciter is said to be sufficient for all three machines.

Head is 320 m. by single penstock from Lake Brasimone and hydraulic works are good to and including main valve at station. Building is almost completely destroyed, especially section housing machines. Crane is badly damaged but can be repaired and remounted when wall and runway is rebuilt. Alternators do not appear to be badly damaged nor do the Pelton whells although the cases are all shattered. One exciter is completely destroyed, but one appears salvageable. Two of the governors appear to be in fair conditions and the third may be repaired by replacement of certain broken parts. 14 workmen are clearing débris and soon a more detailed survey of damage may be made.

The transformer section of the building is not so badly damaged and the 14 Ton crane is good. There are 3 2500 KVA 5/50 KV transformers all blown in the same manner, and it appears that only the central coil and the case of each are damaged. It should not be difficult to restore two transformers to service in a short time. One 2000 KVA 5/15 KV transformer is damaged in the same manner. Two 50 KV OCB's for the lines are undamaged. Three sets of interruptors for the three machines are slightly damaged. Disconnects and buswork is only slightly dammged.

Upon repeipt of the estimates and proposals with alternate programs of Ing. Fenzi, they will be studied along with more detailed data and observations of this office, and it is believed that within a very reasonable time it will be possible to restore at least two machines to service at a cost of not more than 2,000,000 lire.

Capt. Stephens - To Ca' di Landino, railway sub-station (Castiglione de' Pepoli). Building, with exception of roof, is in good condition.

Primary object of sub-station, feed for railway tunnel. All indoor switchgear totally destroyed; 4 Brown-Boveri frequency changers 50 to 42 cycles.

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Motor three phase 600 KW. Stator Volts 5000-73 Ampères. Exciter 40 V 115 Ampères, 500 RPM continuous service 50 cycles. Alternator. Three phase 700 KVA cos 0.8,42 cycles, stator Volts 5000, 81 Ampères; Exciter 40 V, 180 Ampères, 500 RPM continuous service.

One set damaged beyond repair. One set with exciter and shield damaged . Two sets damaged but are repairable and shield broken, etc. All damage caused by demolition charges.

Outdoor switchgear, transformers,2 Marelli 700 KVA 60,000/5000 V one totally destroyed, one damaged but can be repaired.

Swithhgear. Oil circuit breakers totally destroyed. Links, bus bars, insulators etc. and structure damaged but easy to repair. 60 KV cable to tunnel damaged and difficult to repair.

March 1st.

Obtained permission from 5th Army A.M.G. Public Safety Officer for Major Renton to visit Florence (Telephone Florence 1389).

Major Renton called. Sig. Cerabona (Minister of Transport Italian Government) is the new president of Società Larderello. Requested Renton to investigate to see if this was "honorary" job or would he take an active interest in affairs of the Società.

Jeep reportedin to this office from Rome.

Capt. Stephens - To Tavarnuzze. Particulars of all transformers in substation handed to Major Crowther.

Capt. Duran - Florence to Piombino to meet with Major Vallero and plant officials, inspect work progress and turn over to Major Vallero.

Reported that sacks would be required to move cement according to letter from Major Price dated 21st Feb. '45. None on hand yet, but Major Vallero will try to coordinate and arrange for early delivery.

Had ILVA prepare request for 30 bottles of exygen per week for presentation to Royal Navy.

To Larderello with Major Vallero to disduss further details.

Major Vallero - Ing. Musi stated that the pumps and

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motors are operating at a reduced efficency because of 45 cycles current, and requested the use of the 900 KW unit exclusively for the two "Centrale" at Castelnuovo and Larderello to be operated at 50 cycles. Ing. Musi can make the switch-over (isolating the 900 KW unit) in half a day. After the switchover the 900 KW unit could be put back in the grid in a matter of minutes if necessary. It will be necessary to close both machines down for the day period. Called Col. Cooley on Valdarno line and advised him of all this. He suggested drawing up a plan for approval of all concerned.

Visited Castelnuovo. The transformer will take another 10 days or so. The men are working 12 hours a day. Warned them about making the Delta Wye connections and they understood. Minor adjustments are being made on the 800 HP motor driving the pumps. Expectø to have turbine turning over either Friday or Saturday. Estimate about 7-8 days for drying of rotor, then apply varnish. Estimate another 15 days for adjustment before putting it on the line. Journeyed to Piombino. Picked up 10 bottles for oxygen and brought them back to Larderello. Met, and discussed the ILVA situation with Capt. Duran. ILVA has put in a formal request for 30 bottles of 02 per week, which we favourably endorsed. ILVA needs about 3000 cement bags to transport 130 Tons cement from Civitavecchia to Piombino. Larderello does not have them. They must be procured in Florence. Larderello also needs cement.

March 2nd.

Conference with Major Gaither. He is checking on the 100,000 lire advanced for Santa Maria job. He can also furnish additional money for project if it is difficult to get through our channels. Lt-Col. Lapper, please advise. A/B

Capt. Duran - Larderello to Leghorn. Endorsed and presented ILVA's request for oxygen to Mr. Rowden, R.N., who promised to make it immediately available.

Called at 5th Co, 1st Truck Bn, A.C., Lt. Monie advised that truck for Valdarno is in service for them. Later called on Capo Doveri at plant. Arrangements are satisfactory and truck was put in service 1st March. 75 workmen are on job and clean up progressing including work on boilers. Boiler repair should start soon and Mr. Rowden suggests that the work might be expedited by Allied Commission requesting Naval Officer in charge to make a project of it rather than by

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the two Italian Companies concerned as the materials procurement would be simplified.

Capt. Lowdon - To Pignone with 5th Army release to manufacture castings, etc. Saw Dr. Ing. Piazzoli (who speacks fluent English) and he informed me that the foundry and machine shops were now much busier and the blowholes in the castings were caused by lack of silicate. He is to put in a request for this thru us. Electricity was then mentioned and he is sending to 77 C.R.E. thru us a request for 300 KWs for 24 hours day or 200 KWs day load and 300 KWs by night. He asked about added rations for the heavy labour (I am looking in to this).
Sig. Giusti of Larderello Co. called with reference to supplies.

ADVANCED SECTION
P.W. SUB-COMM
OFFICIAL
DATE
ELECTRICAL DIVISION

Robert A. Bell
Major S.C.
Officer in charge.

Declassified E.O. 12356 Section 3.3/NND No. 785019

P.W. & U. A.C. 28 FEB 1945 231

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ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMM.
ALLIED COMMISSION

Florence, 6 Via Cerretani
Telephone nº 1153
24th February 1945

Lt Col Cupper
28/2

SUBJECT: Weekly Report
of Advanced Section.

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394

This report covers the period from 17th to 23rd February inclusive.

February 17th

Directore Prinetti (Selt-Valdarno Co.) called in to find out why Central Dispatcher ordered them to drop 2000 KW at 7 a.m. this morning when they were within their allotted 10,000. Answer from Major Renton was that the whole system was overloaded due to a major generator being out. Rome was asked to drop 3000 at the same time. Selt-Valdarno Co. carried out order but did so by dropping off Siena completely. Upon hearing of this I attempted to arrange a meeting between Selt-Valdarno, 77 C.R.E., and Major Wooster in order to formulate a better plan for dropping load. Due to the meetings in Rome and the fact that this office is not respoonsible for the above - agreed with 77 C.R.E. to let them call the meeting.

Conversation with Capt. Mc Collum, Keystone 50. He will meet Capt. Duran at the first opportunity. Also will send us a copy of all his reports on electrical facilities.

Rag. Rossettini reported to this office for duty; (formerly worked for Lt-Col. Cooley in Leghorn).

Lt-Col. Cooley called - He desires that Selt-Valdarno Co. send all requests for meterials through us and not direct to P.B.S. We will forward them to P.B.S. if the necessity warrants such action. Col. Cooley could use turbo generator set with condenser up to 5000 KW for installation at Rosignano Solvay - 9 Kg. pressure - to utilize exhoust from big turbine there.

February 19th.

Called Major Renton and requested that he see Col. Kennedy in Rome (77 C.R.E.) to discuss electric problems in Florence.

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Major Gaither called. He is advancing Bolognese Electrical Co. 1000/°° for clearing up Santa Maria plant.

Major Vallero - Interviewed with Capt. Lowdon Lt-Col. Higgins, Ord. Off. 5th Army Rear, regarding Pignone & Galileo. Explained our program here and asked for his co-operation with regard to above companies. He suggested we write a formal letter stating our program and asking for partecipation in operation of Pignone and Galileo. Wrote and revised above mentioned letter.

February 20th.

Conference with Eng. Bruni of "Società Maremmana". He will repair second 60 KV transformer at Larderello with his workmen.

Major Renton called. We are to get another jeep (British driver) here Monday. Lt-Col. Lapper suggests that Region Industry & Commerce man appoint a director of the chemichal side of Società Larderello. I contacted Major Harris on this matter; the answer is no, as borax is not a controlled item.

Major Vallero - Discussed proposed trip. Journeyed to Larderello. Had a brief discussion with Eng. Virgili, after meeting him.

Capt. Lowdon - Inquiring for Larderello Co. for cotton for making tape. Saw Major Drake and Harris and found tape at "Manifattura Silvi" Via Tavolini. Rome wants facts reference transformer at Tavarnuzze. Saw Eng. Piela, and he stated that ~~electrically~~ mechanically the transformer would be ready by 1st March, but was not certain about the building. Saw Eng. Legnaioli next morning and he said that as the building would not be ready the drying out and oil processing could not be finished before 1st April. Phoned Rome and let them know.

Larderello Co. wanted petrol, oil etc. and I found out they had not been going about it in the correct manner. They are now doing so.

February 21st.

Major Buckley of M.R.S. reports that the railroad Cecina to Saline could be put into service with very little repairs. This would be very valuable in getting supplies to Larderello (and borax out). Fifty tons of coal is being hauled in and thirty tons of salt out of Saline daily by truck. M.R.S. in Rome should be contacted regarding this.

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Journey to Forlì with Capt.Stephens. Met Major Weeber, Provincial Engineer - called at thermo station and left note for Capt. Lovell.

Journey to Riccione - met Regional Commissioner, engineer, and executive.

Major Vallero - Discussed letters in detail. Virgili noted decisions of Major Bell and will act accordingly. Went on a tour of inspection at Castelnuovo and Larderello plants. Virgili stated that 120/9 KV transformer is ready mechanically - were heating oil for it in transformer house. Are in process of repairing 38 and 60 KV lines. Will have them completed before first unit is ready to go into operation. Appears to be a slight amount of damage to one 38 KV transformer. Will have to take it to transformer house for dismantling and repair. Larderello Nº 1 has one (1) 2800 KVA transformer in operation, one (1) undergoing repair, and a 4000 KVA unit under repair. Eng. Virgili and I discussed revised program. Virgili stated he has already sent a copy to Major Bell. Reference this letter, Virgili stated his needs of materials, etc. There were also encompassed in the revised program.

Capt. Lowdon - Finding motors for Major Gaither of the 10 asked for, I found 6. In the search I visited lots of electrical stores, none of which had anything of interest to us with the exception of "Curradi Corradino" Via Borgognissanti 7-9, where I saw quite a lot of insulating material. This material is being heavily frozen by Major Austin, but he wants us to demand the material we wish. I am having a list made out by the Co. and will then demand it.

February 22nd.

Conference with Lt-Col. Hartley (executive) and Lt-Col. Spann in Riccione. Gave them the general outline of our reason for existence and requirements. Before working in this territory, it is necessary to have the good will of the 8th Army.

Met Col. Giffin,S.C.A.O. 8th Army A.M.G.

Conference with Major Stuart, 170 C.R.E. Major Stuart is working in the same capacity as Lt-Col. Page, formerly was with the 8th Army. He agreed that we should work on the 120 KV sub station at Riccione and the 120 KV line Pontecino to Riccipne.

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His personnel (and Major Rivets) have stopped work on this as it will take approximately six months to complete. Any other projects that we start in this area must be approved by Major Stuart first. He approved three passes for officials of the Adriatica Co. to visit this area. The Royal Navy is moving a 1250 KW turbo alternator (steam) from Forlimpopoli to Ancona.

Capt. Lowdon - Looking at Electrical stores. Nothing of interest. Arranging accomodation for Major Barry and drivers.

Capt. Duran returns to Florence from a 7 days trip to Lucca, Leghorn and Larderello and reports as follows:

(15/2/54) Florence to Lucca. Maj. Gaither 5th Army A.M.G. was to have telephoned Capt. Mc Callum 5 Army A.M.G. Elect. Off. working with Col. Walker, SCAO IV Corps A.M.G. advising of my arrival at 10.30 a.m. Message apparently not received and Col. Wlaker & Capt. Mc Collum both out. Talked with Executive Officer.

Proceeded to Laghorn and talked with Col. Cooley. He says that neither Gallicano nor Sestaione are yet accessible but that P.B.S. will expedite repairs at Gallicano as listed by Eng. Bruneti as soon as it becomes precticable. Suggests that work of clearing be started at Sperando. This should be done, but A.C. would be more interested if it should become known whether the spare alternator at Gallicano is still fit to be repaired and put in service at Sperando.

P.B.S. is assisting in the rehabilitation of a 1200 KVA Diesel plant at Saint Gobain, Pisa, and that nothing is required of A.C. regarding this plant.

Valdarno is asking Col. Cooley for 8 tons more of coke to finish castings of 3rd Lima unit and two smaller machines at Ravacce. The Col. expressed disinterest in Ravacce, but said there were still 2400 tons of coke available at Rosignano Solvay and small amounts could be obtained thru Major Frick, P.S.O. for A.M.G. at Leghorn. He telephoned Maj. Bell re this.

Valdarno has also asked P.B.S. for transport for Leghorn steam plant and tried to have reserved a workshop of one contractor, Giuseppe Lapi; suggested that I see Eng. Mocenni.

Called on Mocenni and advised that truck would probably be available in the first part of next week. He advised that Valdarno is considering giving Lapi a contract for building repairs, but he did not know location of his shop. Wanted permit

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for Lapi to move certain machinery from one of his shops at Pisa, to Leghorn.

Told Mocenni that first we wanted to know if and when Lapi got the contract, the location of his shop, the list of machinery to be moved and necessity there for. With this information we might see Real Estate about making his shop secure against requisition, and Pisa A.M.G. about moving any necessary machinery.

With Mocenni went to factory of "Società Materiale Refrattario" Piazza S. Marco, from which firm Valdarno expects to get special brick for boiler repair. As reported, the site was occupied by American troops - Tenth Port of Embarcation Maint & Repair Section, Capt. Wolfs, telephone Village 13. As Capt. Wolfs was out did not see him but took Mocenni to investigate another factory which Col. Cooley and Maj. Hart, S.C., had just told me about. This is property of and part of "Società Metallurgica Italiana" General Offices at 99 Borgo Pinti, Florence, Eng. Porro Gen. Mgr, local office at 2 Via Ademollo, Leghorn, Eng. Devilla Mgr.

This section of the works was used to make refractory products for their own use; is reported to be in fair order with some raw material on hand. It is included in a part of the works requisitioned for P.B.S. Signals, but Maj. Hart says it is free to produce. S.M.I. says ti will require not more than 30 days to go into operation. An Italian mess for civilian employees of Army Ordnance may be moved out. Power requirements would be about 10,000 KWH/mo, peak demand about 100 KW. It was agreed that Valdarno furnish a sample with specifications and information of their quantity requirement, S.M.I. than to advise if it is possible for them to make.If this proves impraticable, will contact Capt. Wolfs, 10th Port re Società Materiale Refrattario or then the R.N. British Officer in charge of Works who is understood to have recently completed an industrial survey of Italian facilities. (Commander Bishop or Sub Lt. Lang).

(16/2/45) Travel Leghorn to Piombino. At I.L.V.A. Director, Eng. Salvi Costantino, was gone to Rome, but talked with Eng. Annunziata and others. On 15th Feb. a Captain of Allied Commission, Food Sub-Comm., was at the plant and gave orders to prepare port, rails and grounds for unloading and assembling of several thousand trucks. This need not conflict with any electrical work in progress. ILVA says that both port and rail facilities should be ready for operation within 10 days. ILVA

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is repairing port cranes (2-5 Ton capy ea) and rails within the grounds while FFSS is repairing rail link between Piombino and Stazione di Campiglia on main line. Two berths may accommodate ships - one a high wharf with the two cranes wich however are said to require 300 KW, the other with cranes destroyed but low enough to unload from ship to rail cars with ship's gear.

Inspection of electrical rehabilitation showed tremendous progress to date. Two generating groups are very nearly completed and ready for operation with all auxiliaries - alternator ratings:

1 - 2140 KVA 3100 V 50 cycle .7PF
1 - 3750 KVA continuous/5250 KVA peak, 3150 V .8PF

The nine boilers under repair should be completed within one month - welding must be done in off-peak hours 10pm to 6.30 am.

Cable ducts repairs for cable to pump motors have been made with a small quantity of cement from other sources. All breaks in the sea-water duct to condensers and drains from condensers have been excavated and work is ready to proceed immediately on receipt of cement. They claims this work can be completed within one month after receipt of cement and generating plant in production by April 1st 1945.

ILVA claims to have stock of lubricants on hand. 2 transformers - 6000 KVA 3/60 KV reported in good shape except for oil. 60 KV reduced volume OCB from Valdarno is nearly ready together with bus work. Requests for oil was made thru Ports Office A.C. and some assurance made that it will be available. ILVA has own oxygen plant at Monterombolo but it is controlled by Royal Navy under Mr. Rowden who, they say, allows them only 10 bottles per week. 20 per week are needed and if cannot be taken from their own plant, are available from Larderello if bottles and transport are furnished and payment made.

ILVA says they have arranged with Eng. Balsanti, Local Mgr for "Maremmana" for repair of 60 KV line to the steam plant. Noticed that about 3 Km of line is out with conductor gone, but towers and most of insulators standing. Telephoned this info to Maj. Bell so that order may be issued at Florence for this repair to be made by 1st April.

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(/2/45) Larderello. Eng. Virgili says blades for turbine blades have been forwarded to Naples and FF.SS. office in Naples has placed or will place order with Corradini for require-

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ment. Will see or call Maj. Ryan to see that this order is pro-perly and promptly handled.

Work progress is satisfactory. Generating group, water pump is pratically completed, work now in progress on steam & oil piping. Cooling tower and canal are completed. Expect tests to begin the first few days of march. English repair crew have been taken away leaving one 4500/4500/3000 KVA, 60/37/15 Y-9 KV transformer to be repaired. Transformers ready are 2 2500 KVA 37/60 KV, and one 4500/4500/3000 KVA 60/37/9 KV transformers making only 8000 KVA of capacity. In addition is ready one 2800 KVA 9/45 KV transformer for station auxiliary of which about 1000 KVA will be required. This leaves about 6000 KVA of available power for which no transformer capacity is available. Larderello nº 1 with 3900 KVA of power available is limited to the capacity of one transformer of 2860 KVA. Other transformer of 2860 KVA will require two months to repair; other transformer of 4000 KVA will take longer.

Still looking for 50 Kg of special cast iron welding rods for repair of certain cast casings at Larderello. Soc. Larderello also needs a supply of filter paper for transformer oil.

Test and drying of machine due to start on 3 or 4 June using 15000 KVA 120/9 KV transformer as load and drying it out at the same time.

(19/2/45) Rome - Mr. Crooks (Am. Civ.) Ports & Warehousing Div. Transport Sub-Comm. Advised that plants are under way to open port at Piombino for sardo coal, trucks and food. Orders issued to ILVA to prepare port, rail and crane facilities. 2 5 tons cranes to be used to unload coal from coasters; Liberty berth to be used to unload trucks with ship's gear. Certain assistance has been given ILVA under high priority from A.F. HQ including a small amount of cement. Transformer oil has been requested by ILVA on the basis of restoring 6000 KVA 60/9 KV transformer for taking power from Larderello for crane operation. Took over this requirement to procure thru Maj. Price but rather on the basis of restoring transformer to tie 4000 to 5000 KW expected from ILVA by 1st April to the grid.

Maj. Barry will meet me at ILVA Piombino at 2 pm on Wed. 21 Feb. Learn that also Mr. Crooks together with Col. Cornes will be on hand at the same time, so that all things pertaining to these two projects may be coordinated. Mr Crooks also said that his sub-commission had arranged for the release of funds due ILVA which were now in hand.

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Major Price - Procurement.

Received request from ILVA to Ports Office A.C. for 18 T Transformer oil and turned this letter over to Maj. Price who will arrange to fill this requirement. MajL Price also arranged for 50 T/wk of cement available at Italcementi, Civitavecchia; will call Rome office of ILVA telling them to arrange payment; and also will arrange for rail transport as soon as praticable. In the meantime cement may be picked up immediately at Civitavecchia if prompt payment is arranged and their own transport used to start the first work. If trucks not available at ILVA possibly Transport S/Comm. may assist.

Turned over to Maj. Price for procurement a letter from Soc. Larderello requesting 50 KG of special cast iron welding rod. (retained English translation).

Maj. Price has taken steps to procure 300 sheets of filter paper for Larderello.

Maj. Price advises that there are allocated for Soceità Valdarno tyres as follows:

8 - 600 x 16 and 8 - 750 x 20 complete with tubes. These may be obtained by Valdarno representatives first contacting Maj. Price, then making payment and picking them up in Rome.

Maj. Ryan - Naples office. - Told maj. Ryan about dies for turbine blades at Larderello and he will follow to see that order is properly placed by Virgili's representative at FF.SS. and filled by Corradini.

Arrangements concluded with Lt. Allyn, Trucking organization of Transportation Sub-Comm., for one 2½ T 6x6 to be made available to Valdarno at Leghorn when new unit moves up from Rome some time prior to 25 Feb. If this organization cannot furnish driver, service and maintenance along with truck, will contact Livorno Provincial Transport Officer to handle from the Provincial Motor Pool & Shop.

(21/2/45) Travel Rome to Piombino. At ILVA steel met with Maj. Barry, Direttore Ing. Salvi, Mr. Crooks of Ports Office, Transport Sub-Comm. and Ing.Annunziata.

Possible ready dato of steam plant reported on 16 Feb. by Ing. Annunziata as 1st April 1945 was revised by Direttore to 30 April, however Annunziata still believes he may make 15 April.

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Reported availability of cement. Arrangements made on the spot as follows to permit early start of work: Mr. Crooks agreed to furnish local transport from plant to port at Civitavecchia. Direttore Salvi will arrange transport from port of Civitavecchia to port of Pkombino by means of Tug "Matilde" and barges which make regular runs.

Reported possibility of obtaining oxygen at Larderello. Requirement now reported at 40 bottles per week which however includes certain work other than electrical. Will talk with Mr. Towden R.N. to see if possible to allow more than 10 bottles per week.

Reported that transformer oil requiremeht had been placed in hands of Maj. Price, with full expectation of delivery in due time.

With Maj. Barry and Eng. Annunziata, inspected work progress of both electrical facilities and port.

Travel with Maj. Barry to Larderello.

(22/2/45) Inspection of work progress at Castelnuovo. Travel to Leghorn. Inspection of Leghorn Steam Plant with Maj. Barry. Unable to contact Mr. Rowden of R.N. or Capt. Beatty; Provincial Transport Officer, Livorno A.M.G. Will handle by telephone.

Travel to Florence.

<u>February 23rd</u>.

Conference with Major Barry. Future repair work on Larderello to be taken to either Follonica or Pignone instead of Terni. A turbine from the Leghorn steam station can probably be rehabilitated. Major Barry to discuss Riccione to Larderello 120 KV line with M.R.S. and let me know the outcome. The U.N.E.S. Co. Director will report to this office to discuss rehabilitation. A copper drawing plant is badly needed for this area. Capt. Duran to get details of starting the Barga plant.

Capt. Lowdon - To Richard-Ginori Doccia works at Sesto. This factory is capable of manufacturing any insulators or bushings for any voltage. Major Price has a complete list of the products. They are short of coal and oil. Arranged release notes for Valdarno and Larderello for tape insulating materials.

Capt. Duran - Eng. Bruni of "Società Maremmana" says Col.Cooley has ordered them to repair second 60/37/15 KV,

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4500/4500/3000 KVA transformer now at Castelnuovo within ten days. Will send workmen from Massa Marittima for this work but need transport between Massa and Castelnuovo for column and coil weighing 1½ Tons. Claims they have no truck; Larderello has two trucks but claim to have no tires. Also require 4½ Tons of oil. Lt. Tanner is said to have moved 20 Tons to Castelnuovo from Livorno and some should still be on hand. Will check.

Upon return of Major Bell and Major Vallero learn that they have story on this and that all work may be done at Castelnuovo unless Maremmana can find own transport.

Robert A. Bell
Major S.C.
Officer in charge

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Copy Letter
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ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMM.
ALLIED COMMISSION

Florence, 6 Via Cerretani
Telephone 1153
20th Feb. 1945

SUBJECT: Utilization of the Pignone Iron Foundry and Galileo Optical Company Facilities.

TO : Ordnance Officer, Fifth Army Rear
attention Lt-Col. Higgins.

1. This letter is intended to outline this section's mission and also to formally request your permission and co-operation in utilizing the facilities of the Pignone Iron Foundry and the Galileo Optical Co. facilities. Personal interviews have been held between Major V.F. Vallero and Cp[illegible], R.F. Lewdon of this section and Lt-Col. Higgins and Lt. Quinn, Ordnance Section Fifth Army.

2. The program of this section is the long range rehabilitation of the Italian electrical system. Any power plant which can be put into operation within a relatively short time is taken over by P.B.S. or Army Engineers, depending on the territory. Also these plants are used by the military units that are in the immediate locality, whereas the long-range rehabilitation program is our problem.

3. At present, the above mentioned industries are doing some work for the Selt-Valdarno Company, who own and control the electric system in this part of Italy, but only a very small percentage of the work that is required immediately. The interviews have brought out that other military agencies are utilizing the industries but not the particular sections that are needed for the work to be done for the Selt-Valdarno Co., namely the foundries and heavy machine shops. A.M.G. / A.C. sources control a quantity of coke needed by the Pignone Foundry to do the castings and will be duly supplied with such. The Pignone Company knows where manpower and materials other than coke can be obtained, so the only element lacking is permission from your office to go ahead with the program. The major portion of the work to be accomplished by the foundry will consist of hydraulic

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turbine casings, ranging from a few hundred pounds to as large as fifteen tons. The machining of these castings can be accomplished in the foundry's heavy machine shop. The Galileo Optical Company have a very well equipped precision machine shop that can also be utilized to a much greater degree than at present. The Galileo Co. is an associate member of "Società Adriatica di Elettricità" and have in the past manufactured the type of electrical equipment that is so vitally needed now.

4. The Industry & Commerce Sub-Commission, Allied Commission, has given this section authority to use these industries to the fullest capacity where it doesn't interfere with military needs. The undersigned requests favourable endorsement to the requests outlined herein.

Robert A. Bell
Major, S.C.
Officer in charge

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Col. Lapsley 3A

"LARDERELLO " S.A.

Larderello 14th Feb.1945

Translation

MEMO FOR MAJOR BELL, Officer in charge.

As I already informed you, and according with the program submitted to Major Barry, this Company means to increase the electrical production actionning other generators in the year 1945. - Namely:

1) - In Larderello Plant one 3000 KW unit. For this unit, following examination of the question with Eng. De Gasperi, it is needed the "Terni" to make casting of the whole cast-iron tank, and work it. The shaft, the valves and other accessories are available or may be made in Larderello. The "Terni" needs, however, to be granted authority by A.C. to put this casting in the work program. In two months after the casting will have been made, the unit may be in service.

2) - Another unit (15,000 KVA) to be installed in Castelnuovo Val di Cecina.

For this set it is needed:

a) - "Terni" to make the same work made for the first turbine at Castelnuovo, and to repair the shaft with the pieces of the two damaged shafts. The roller for this turbine may be recovered in Larderello N°2 Plant.

b) - "Terni" to construct two pumps for the condenser water circulation. All the pieces we need for one of these pumps are available , except the impellor for which a drawing has been made. For the second pump it is needed to have the impellor made by "Terni" as well as the casting of the sprayer and of the rotating part. We have patterns of these two pumps. As these pumps will be installed as a reserve for the first unit in Castelnuovo Plant, it would be very beneficial that the Terni Foundry be authorized to make these pumps in the nearest future.

c) - The repair of two 800HP 4500 V. motors for the actionning of the pumps shown in para b), to be made by us. For the repairing of the insulation of the winding bars we hope to have the help of M.A.T.E.R. We will provide for the setting of the windings and the repairs of the tanks with our own means, as we did for a first motor.

d) - The winding of the stator of the alternator to be made by us, as we did for the first alternator; the help of M.A.T.E.R. will be required if necessary in order to repair the insulation of the winding bars. For the rotor of this alternator we will need the help of Terni to straighten the

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shaft of the less damaged amongst the available rotors.

NOTE - The available transformer 9/120 KV 15,000 KVA can be used for this unit.

Should the Terni be able to repair the pumps in July 1945 and the turbine and rotor of the alternator in August 1945, this second unit would be ready for service in October 1945.

3) - The possibility is under examination to reconstruct a third unit turbine-alternator to be also installed in Castelnuovo; the collaboration of Società Terni is indispensable for this group and in the same measure. Should Terni assistance enable us to constract the turbine and straighten the shaft of one rotor in October 1945, the unit could be in action in this year.

To achieve the above outlined program the following further assistance from A.C. will be necessary:

a) - Transports to carry from Castelnuovo to Terni all that concerns the parts of the pumps that are available, namely a 8 tons load; scraps of cast-iron to be also carried from Castelnuovo to Terni for totally 30-40 tons to be utilized for the casting of pumps and of the parts of turbine.

b) - supply of the undermentioned insulating materials:

Cambric 30 mm	Kg 30
" 20 "	" 60
" 15 "	" 15
Clear air-drying Varnish	" 200
Black " " "	" 50

c) - urgent transport from Terni to us of:
the parts of a turbine regulator which remained in the steel plant;
30 Kg tin allotted to us
the steel wheel for the crane pf n°2 Central in Larderell which was ready at Terni for 20 Feb. This Central crane has already been repaired by us, but can not be actioned unless the wheel is installed.

(signed. Eng. Virgili)

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Col Rupp
Rots

INTERVIEW Major A.Crowther, Advanced Section Electrical Div. and Eng. Sica F.S. Office, Florence.

1. 120 KV line Larderello - Cascina:

Work has not began; Rome Office F.S. has a program drawn up. Florence Office are awaiting instructions from Rome. (The work will be done by Railroad personnel).

Detail of survey:

Towers totally destroyed -	3 & 11
Conductors broken	47 & 203
Conductors splintered	44 & 112
Conductors damaged	23 & 86

2. 120 KV line Rifredi - Pontecino:

Work is in progress on this line by the F.S. Florence staff.

From Pontecino to Rome work is in progress by the F.S. Rome staff.

3. 120 KV line Rifredi - Suviana.

Repairs are in progress by the F.S. gang of 50 men under orders of the Military Engineering Company under the supervision of Lt. Cooper.

Two military lorries pick up the workman daily and take them to the site.

Arrangements are in hand to organize working gangs on this line on from Subiana to Grizzana (railway sub-station).

4. QUESTION: Can men be found to work on the Larderello-Riccione line?

Yes, they have a gang in Pontecino, another at Incisa about 40 man that could be employed. Probably Ancona Compartment could provide another gang from the Ancona branch of F.S. The line is 104 Km: 47 km. is the responsibility of Florence office, the remainder Ancona office.

5. Line Cascina-San Romano:

The fact that the wrecked towers are American concrete type presents a problem. It is suggested that suitable steel towers could be taken from the Castelnuovo-Chiusi rail line. This line was a project unfinished owing to the war; the towers are steel, a few are raised, there are many laid or grounded.

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A. Crowther, Major

24/2/45

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Col Lafper

3B

Translation

MEMO - WORKS IN THE "ALBERTO LODOLO" THERMOGENERATING PLANT - LIVORNO

Rersonnel conscripted to remove débris and collect materials is actually 75 workmen temporary in addition to the Plant personnel that is about 20 workpeople.

Owing to lack of means of transportation and difficulties in food and housing, every day various of the temporary workmen are missing; on February 14 th, e.g.,only 58 of 75 enrolled men reported to work. The situation will grow worse unless it is provided to supply the Plant with a truck, so to allow the personnel to return to their families once a week; some of them are resident in localities distant from Leghorn (Torre del Lago, for instance).

The truck is also needed for supply of materials as cement, bricks, required for the repairs to the building.

We also require to move to our plant some parts of a turbogenerator which are now at the A.N.I.C. Factory. If we shall not be able to get this means of transportation we shall be compelled to give up the works to the Leghorn Generating Plant.

o o o o o o

Arrangements are in hand with "Orlando Shipyard" for rehabilitation of two of the four existing boilers. The Shipyard would accept the commission and responsibility to put in good order the said boilers by means of specialized personnel and lending us their workshop. To be enabled to achieve this work Orlando Shipyard needs:

a) - A permit issued by Allied Authorities allowing the Shipyard to work for other firms, for actually the whole of Orlando workshop and staff are requisitioned by British Navy for ship repairs.

b) - To be allocated with electrodes for electric soldery, of oxigen and carbide for cutting works or "ossiacetilinica" soldering.

c) - To be put at its disposal a means of transportation, even though a not very big one, to take the workers every day from the Shipyard to the Plant, to supply the food at noon time, to carry the various pieces to be worked from the plant to the shipyard and viceversa; this means of transportation should be solely at the disposal of the Shipyard as long as the work to the boilers will last, and therefore in addition to the other truck, above

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mentioned, which would be employed solely for the other requirements of the plant.

o o o o

Following to an examination of the existing material, which is either in the plant or in the care of A.N.I.C. Factory, it is deemed that a turbine alternator STAL-ASEA unit could be reconstructed.

As already stated, it is however necessary to collect every part of this unit in one premise and therefore (we need to repeat it) it is necessary to have a truck at our disposal.

To complete the said unit it is required:

a) - To supply the two pumps for circulating cooling water of the condenser, which have been destroyed. The data of the said two pumps are as follows:
cooling water required 3120 cm per hour, 11 mts head. Each pump was coupled with an electric motor 102 KW, 5000 Vols and 960 tours.

b) - To supply two pumps for extraction of the condensed (?) capable to extract Kg 68000 of condensed per hour, with 30 mts head.

c) - To reconstruct completely the winding to the stators of the two alternators of the unit, supplying the necessary insulating material.

o o o o

While the Company has provided to start the works of re-organization, assuming numerous personnel for the purpose, with consequent considerable amount of expenses, we are compelled to point out to the Allied Authorities that some elements essential for the functionning of the Plant have been requisitioned by the Army; namely two motors that have been taken by Capt. Adam Vernon 98th Eng. Regt; it is believed that they are scheduled to be moved to a mine in the vicinity of Grosseto.

The former of these motors (40 HP) was actionning the mill of coal together with the main transporter of the said coal. The latter (12,5 HP) was actionning two conveyers which transport the pulverized coal from the fans on top of the mills to the reservoir from which the fuel is carried to the boilers.

It is necessary to have these two motors back in the plant

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as soon as possible in order to avoid that their use by unexperienced people may produce damages that it would be very difficult to repair nowdays, and thus risk to have the plant not working at the end of the repairs.

o o o o

We point out the necessity to be allocated in the nearest future with the building materials which we need for repairs in the building and to cover the roof in premises where it has been blown up.

Tabulation of the required material has already been submitted, and may be resumed as follows:

65,000 bricks
7,000 air bricks
20,000 tiles "marsigliesi"
9,000 covering tiles
500 quintals cement
sand
gravel
iron bars Ø 16 - 18 mm
" " Ø 6 - 8 "
" " Ø 7 - 8 "
total 5 tons
1250 m^2 asphalt cm 1,5 thick
glasses for sky-light m^2 850 7-8 mm thick
" " windows m^2 1000

o o o o

We remaind the necessity of having a department of the "Società Italiana Mattoni Refrattari di Livorno" functionning to make the special pieces of non-conducting material shaped so as to fit the suspended vaults in the two boilers that it is planned to repair.

o o o o

All the leather belts in the coal pulverizing department and in the mechanic workshop are missing, and are needed to start all the machinery to work.

Arrangements are in progress with a Firm capable to rehabilit the plant for coal pulverizing and the combustion chambers of said plant, but this firm - as well as Orlando Shipyards - requires means of tranpportation, allocation of oxigen, carbide,

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electrodes, and various materials. We need to know if there is possibility that this help be granted in order to achieve the agreements in hand.

Florence, February 16th 1945.

Report by
Engr. Leonardo
Valdarno.

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Q Asst. Div. 2

ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMM.
ALLIED COMMISSION

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P.W. & U. S/C A.C.
21 FEB 1945 158

Florence, 6 Via Cerretani
Telephone nº 1153
17th Febr. 1945

c.c. Major Renton
c.c. Major Price.

SUBJECT: Weekly Report
of Advanced Section

TO : Hqtrs Allied Commission
Public Works & Utilities Sub-Commission
A.P.O. 394

Spare copies should Caserta

These reports generally cover events starting on Saturday morning and ending Friday night, however in some instances a field officer may be away on a trip, the result of which will necessarily be reported upon his return. Capt. Stephens visited the 8th Army area on February 7th and reports as follows:

Contacted Lt-Col. Spann, Emilia Regional Engineer, and Capt. Rpgers,Electrical Officer, and obtained the following information. In this area the following plants are operating: GUALCHIERA CAM NELDOLO FORLI' 2 x 150 KW three phase 42 - 5000/15000 V. BREIZAGLIA "Società Elettrica Romagnola" 1 x 385 KW threephase 50 - CESENA (M 5803). These are controlled by the army and most of the output used by army.

The station QUARTO "Società Idroelèttrica Alto Savio" (R.4981) and MATELICA CANNUZZO "Società Elettrica Romagnola" were totally destroyed; FURLO and LICIA DI FANO "UNIONE ESERCIZI ELETTRICI" in the Pesaro Province were also totally destroyed.

Transmission lines in this area have been badly damaged and where repairs are being carried out these are directed by Army.

With Capt. Rogers I visited the 120 KV Railway outdoor substation at Riccione. This consists of two distinct substations two 120 KV lines feeding in from Ancona on to two sets of bus bars four (4) 2640 KVA 141/10KV Brown Boveri transformers. These have been destroyed by demolition charges. The other substation is fed from Ancona line, two sets bus bars with three feeds off, two to Bologna and one to

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Larderello via Arezzo. From this bus bars two others feeds through transformer into the building. One transformer is missing, the other badly damaged, name plates are missing.

In both substations circuit breakers and isolating links were automatic controlled, all contactor gear is destroyed. Otherwise outside switch gear is not badly damaged. A lot of valuable copper could be salvaged from this substation.

Went to Cesena with Lt-Col. Hartley and Capt. Rogers and contacted Major Young 8th Army A.M.G. (Main).

I asked Major Young for permission to inspect power stations transmission lines and to contadt Electrical Engineers in 8th Army area, but was informed that until he had contacted Q 8th Army & Signals he did not think it advisable for me to make the necessary enquiries, but would forward the necessary permits ti this Hd Qtrs in a few days time.

On making enquiries about the route back to Florence was informed that Route 67 was closed and that the only route open was route 16 to Portocivitanova then 77 Perugia - Arezzo - Florence.

The following information was obtained from Major Gamble, Forlì, Emilia Region Public Works Engineer:

In the Sugar Factory, Forlì, there is a thermal plant of 800 KWs oil burning boilers which could be converted for coal. This is in perfect condition and can be put into commission as soon as fuel is available.

At the PANETI WORKS (Foundry), Forlì, there is a small hydro plant of approx. 420 KWs slightly damaged.

At BRENZAGLIA there is a frequency changer 42 - 50 - cycle 10,000 KVA condition OK.

February 10th

Conference with officers. Discussed matters that should be taken up in Rome office conference.

Secured release order for four 12 volt storage batteries to be picked up and delivered to Rome office, however discovered that these batteries are no longer available, having been sold on orders of the Local Economic Council (Italian) apparently prior to the freeze order.

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Capt. Lowdon conference with Capt. Mason-Tolby reference pumping plant in Florence which, at the moment, is quite satisfactory, but voltage is still low. He has secured a release for 33-250 KVA condensers from Società Metallurgica Italiana at Fornaci di Barga, 10 of which are to be installed at Tavarnuzze with 6 switches and lines; but Capt. Mason-Tolby does not consider this to be of first priority as to power-factor is 95 and Fornaci di Barga is still under fire. He informed me that the power station at Gallicano is still under fire.

February 11th

Delivered 10 Kg of varnished cambric cloth to Larderello. Inspected Castelnuovo plant. The 12000 KW unit should be operating by March 1st (original schedule).

February 12th

Conference in office of Lt-Col. Lapper. Agreed to go ahead with "Ilva" Plant at Piombino. Major Barry to place order for coal for April 1st. Order for other needed material to be placed immediately. Capt. Duran to check lubricants, transformers oil, etc. on next trip.

Conference with Mr. Vaughn, director of Industry and Commerce Sub-Commission. Approved of this office supervising the operation of foundrie, machine shops, and related industries in this area that are primarily utilized in power rehabilitation, provided we do so through the local Industry & Commerce officer.

Capt. Stephens-Information given by Tec. Rozzari, Via Anghera 25 Rimini, Soc.Idroelettrica Alto Savio with regards to 30 KV transmission lines in this area does not agree with existing line diagrams of the Società Adriatica.

Information given:
Ancona to Cattolica - good
Cattolica to Dogana - all down approw.90 poles
Dogana to Quarto - very small damage
Cattolica to Rimini - good

Eng. Martinez of "Officing Galileo" informed me that he would send Eng. Ghetti of the Società Adriatica di Elettricità to Eastern Emilia, who is familiar with this area, to report on present status.

Capt.Duran-At 8.30 picked up Maj.George (Tr) QRE 1212 (Rwy Engineers) and proceeded to investigate Quiesa Tunnel

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on rail line between Lucca and Viareggio in which Valdarno reported some of the machinery from Leghorn Steam Plant.

Tunnel is 1½ Km long, straight and down grade from South to North toward Viareggio. Lucca end is blown - in by a very heavy charge extending 150 to 200 yards from the mouth. A tremendous amount of earth of a sandy nature and rock would make the clearing of this end a rather large project. The rails have not been destroyed except for several small bridges and the large bridge over the Serchio.

At the Quiesa end, the mouth is similarly blown for an apparent distance of about 100 yards. The earth here is more of a rocky nature and again the clearing would be a rather large projedt. Also on this end, the rails are blown in each section.

Questioned residents living very near the south entrance and Ferrovie employee of the Cantoniera at the north end, and both report that the tunnel is also blown in the middle. Neither believes that there is any mahhinery in the tunnel. There is reported to be one ventilating shaft near the middle. Did not find this, but it must be several hundred feet high and reported by the employee to be impossible to enter. At several hundred meters from the south end was another large hole blown by a heavy charge, interrupting a watercourse, the water going into the ground here and apparently into the tunnel. This was further indicated by a comparable amount of water flowing out of the fill at the northend.

Questioned the stationmasters at Massarosa and Lucca who confirmed other reports also the disbelief of any wagons sealed in the tunnel. It was also reported that the Germans kept a large railway gun in the tunnel by day, taking it out the north end to fire by night, for about one month between the time of destruction of the Serchio bridge and the time of destruction of the tunnel.

The conclusions to be drawn from this investigation are that no work could be justified until Valdarno shall be able to prove beyond a reasonable doubt that their machinery is actually in the tunnel and that the value of it is worth the effort to recover. Also to be considered is the probability that the tunnel stands partially if not completely filled with water, probably resulting in further damage whatever remains within, according to its nature. The Military Railway

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Service does not contemplate any work or rehabilitation on this road in the near future.

Finally in consideration of the opinions received, the report that the section of railroad was out of service for a month before destruction of the tunnel, and that the Germans used the tunnel for a railway gun which they were apparently able to get safely away before blockng the tunnel, it appears unlikely that they should not have been able to get away with the machinery in question within that time, if it were over there in the first place.

Upon reporting these finding to Ing. Legnaioli of "Valdarno", the Ingegnere concurs in this opinion and seems to consider the recovery of such machinery very improbable.

February 13th

Capt.Lowdon To Tavarnuzze with Rag. Rossettini who reported for work, but has since stated he has not finished with Col. Cooley yet.

Of the three 20,000 KVA 120 KV transformers, two are at Tavarnuzze and one in Florence. One 120/60/30 KV unit will be ready for service the first week in March. There is no hold up on the repairs but Sig. Forgiarini thought that there may be some delay on the building (and crane) where the transformers are to be housed. Large bakelite rings will be necessary for the second unit (they do not know where they are obtainable) but this unit will not be ready for a long time (May-June). I will take the first opportunity of inspecting the third unit.

Ing. Martinez (Galileo) called at office wanting passes to go to east coast to inspect "Adriatica" plants.

February 14th

Major Vallero reported for duty with this office.

Conference with Prof. Manzetti and Eng. Boscano of Galileo Optical Co. Prof. Manzetti is the director of the Rome office of "Società Adriatica di Elettricità" and was sent here to direct Galileo,which is owned by Adriatica. He is very interested in getting surveys made and rehabilitation started of the Adriatica properties. Left application for travel permits with us for his representatives.

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Ing. Sica of Ferrovie dello Stato called in. Left drawings and pamphlets of F.S. properties in Florence and Bologna districts.

Called on representatives of G.4, 5th Army; Ordnance officer, 5th Army; and Local Ressources officer; 5th Army AMG. The conclusion is that 5th Army G.4 is not ready to release the foundries, etc. in their area to us, however a working agreement is being arranged. G.4, 5th Army, will not approve requisition on "Selt-Valdarno" stores, unless necessary. An exception to this is light bulbs, which have all been requisitioned.

Capt. Stephens-Contacted Lt-Col. Bye P.S.O. 5 Army A.M.G. with regards to the issue of separate passes for officers of the Advanced Electrical Section P.W. & U., A.C., to visit forward areas of the 5th Army; he informed that passes were not necessary, the usual routine when entering a Corps area was to first contact the C.A.O. of that Corps.

Permits for civilian engineers etc. to enter forward areas must go through the usual channels in P.S.O.s of the area concerned, this method can not be side tracked. Lt-Col. Bye said he could not give permission for Major Bell to sign permit forms for forward areas (Army line north of Arno).

February 15th

Valdarno officials complain of orders from central dispatcher in Rome. After conversation with Major Renton, informed them to carry out orders and complain later either to me or the monthly mmetings. Due to the arrangement of circuits here, it is difficult for Valdarno to drop load when asked to. A conference with military, civilian and Valdarno representatives is being arranged to arrive at solution.

Obtained from Ing. Rubiera diagram of Soc. Adriatica transmission lines (130/60 & 30 KV).

Appointed Capt. Lowdon, supply officer, for this office. He is to set up a system of dealing with this phase of the work and work directly with Major Price.

February 16th

Major Vallero-Accompanied Capt. Lowdon on an inspec-

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tion tour of the Pignone Foundry and the Galileo Machine Works. A very sizable stock of raw material exist, and are available for use. We met Lt. Quinn, 5th Army Ordnance, O.C. of the Plants and explained our function and what we needed in the way of co-operation and co-ordination. He was non-committal on authorizing any large amount of work to be done in the plant. He referred us to Major Higgins, in Ordnance Office, 5th Army. A small amount of work is now being accomplished by Pignone for the Valdarno Co. Most of the civilian work being done by Pignone is for the State Railways and the clothing mills in Prato. The foundry is not being utilized to more than 50% of its capacity. Sig. Enaldi, Dr. Brignole and Eng. Perotti were called and a conference was held. Capt. Lowdon and I explained our function and operation. We asked them about the coke situation and found that the residue of the coke, obtained by the Valdarno Co. from Col. Cooley, was excessive. I explained that coke can be obtained through this office from military sources for work given them by the Valdarno Co. The labor situation is excellent. Sig. Enaldi (speaks fluent English) assured us that skilled manpower was available in Florence and could be obtained easily. Assurances were given that the type of work we would require would in no way interfere with their Army or Railway work. Requested them to call us when any work stoppage occurs on Valdarno jobs.

We proceeded to the Galileo Optical & Mechanical Co. and, in the company of Eng. Martinez, inspected the machine shops and electrical shops. The machine shop is very well laid out and not at all damaged. This shop is not capable of handling large castings, but can be utilized fully in the repair of electrical equipment. They also have electric welding outfits. The power given to them amounts to 100 KW continuous. The heavy motor shop is now turning out cigarette lighters for the 6th Army. The precision meter shop is still in production on instruments. Eng. Martinez is very simpathetic with our program and promises full co-operation.

Capt. Lowdon - Visited Veraci Foundrie (see separate report).

Robert A. Bell
Major SC, U.S.A.
Officer in Charge

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5 FEB 1945 158

ADVANCED SECTION
ELECTRICAL SECTION DIVISION
PUBLIC WORKS & UTILITIES SUB-COMM.
ALLIED COMMISSION

Florence, 6 Via Cerretani
2nd February 1945
Telephone nº 1153 FI

SUBJECT: Initial Report of Advanced Section.

TO : Hqtrs Allied Commission
Public Works and Utilities Sub-Commission
A.P.O. 394

1. - The exact date of the formal opening of the Advanced Section of the Electrical Division is rather vague as several trips and conferences have been held for the past two weeks, however January 29th 1945 is the date that a telephone was installed and regular office hours started in the Conference room of the Selt-Valdarno Electric Co. in Florence. All pertinent incidents previous to this will be grouped together, and a chronological grouping will be rendered starting with this date.

2. - On January 15th, a conference with Col. Lapper was held stressing the need for better contact and liason with the forward areas. A decision to establish this Office in Florence was reached. I was given a copy of a letter from Lt-Col. Spann, 8th Army A.M.G. Engineer, asking for electrical assistance in his area. Later, in a conference with Col. Cooley, P.B.S. electrical office, the following generating-stations in P.B.S. area were "assigned" to A.C. for rehabilitation purposes. Larderello, Ilva, Leghorn Steam Plant, Castelnuovo di Stabbioni (steam), Santa Maria, Subiana, Sestione, Sperando and Pavano. The first two groups in Piano della Rocca and Lima will be completed by P.B.S., the third groups being handled by A.C. if rehabilitated. The "Società Metallurgica Italiana" factory at Fornaci di Barga was visited with Col. Cooley. This plant is relatively undamaged, specializes in wire drawing and special metallic strips (alluminium, copper, bronze, and brass) including turbine blading. Some stock is on hand at present. This plant is under direction of P.B.S. and will resume operation on a small scale shortly.

I agree, A.D. to Mai Bobb usual clear Report. [illegible]

Lt Col Lapper [illegible]
I read this with interest and consider it a good clear report devoid of unnecessary sentences.
[illegible] 7/2

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Capt. Duran was the first officer assigned to me. The two of us made an inspection of "Ilva" Steel, Larderello , Magone Steel, Follonica Iron Foundry, etc. Me has effectively taken over the 5th Army side of the forward area and secured electrical layout of Ilva Steel including list of transformers (these have been previously turned over to Col. Lopper), conferred with Ing. Bergozzi of "Società Maremmana", and secured following informations:

1-38 KV line	Larderello - Poggio Piovana	in service
1-60 KV line	" " "	under repair
1-38 KV line	Poggio - Massa - Frosetto	in service
1-60 KV line	Poggio - Massa	under repair
1-60 KV line	Poggio - Leghorn	in service
1-60 KV line	" "	out of service
1-60 KV line	Poggio - Chiusi	out of service
2-60 KV line	Poggio - Cafaggio	good, one in service
1-60 KV line	Cafaggio - Piombino	good, in service at9KV
1-60 KV line	Cafaggio - Piombino	out of service

A new system diagram is being made at present for Col. Cooley. The Società makes its own connectors for alluminium lines, but not at present, due to lack of power. P.B.S. has been asked (by Società Maremmana) for 25 KW for this. Visited Cafaggio Sub-station (60/30/9 KV). Transformers as follows:

1 - 3000 KVA 60/9KV	in service
1 - 3000 KVA 60/9KV	good, not in service
1 - 3000 KVA 30/9KV	good, except for oil

Piombino fed 9KV at night only. Adjacent to this sub-station is another feeding a mine with 2-1000 KVA, 60/30 KV transformers apparently in good conditions.

Visited Ilva Steel (Piombino) and secured following info:

Ing. ANNUNZIATO,Girardo - Capo Servizio Elettrici e Termi
Sig. FERRETTI, Ferruccio - Assistente Capo
Ing. CAMPANA, Fabio - Capo Ufficio Tecnico

Engineers report that within one month it is possible to repair two groups:

1 - 3000 KVA, 3000 V, 50 cycles
1 - 1500 KVA, 3000 V, 50 cycles

work is now in progress on those machines.

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That within two months they may repair nine boilers: (work now in progress):

5 Babcock-Wilcox, 10 atm., 500 m^2 surface e a
4 Tosi 10 atm., 300 m^2 surface e a

That eight of those will be in service at one time, a ninth undergoing routine maintenance.

That Ribolla lignite runs about 4500 calories (corresponding to 8000 BTU/lb) and he claims to be able to produce at the rate of 1 KWH/1,25 Kg lignite. That Sardinian coal runs about 7000 calories (12,500 BTU/lb).

Condensers, exciters, governors, pumps and other auxiliary equipment are reported in good condition.

Two ducts carrying sea water to condensers, 1.6 m. dia e a, reinforced concrete are smashed and require estimated two months and cement to repair. Approx 100 T. cement-steel on hand. Drains from condensers to sea also require estimated 40 T. cement to repair. Additional 30 T. required to repair underground cable duct to circulating pumps (3000 m^3/hr circulating).

Present requirements to undertake this rehabilitation are said to be:

100 KW elec. power for 8 hr/day - welding etc.
170 T. cement as stated above
10 rolls insulating tape ("nastro isolante")
2 tons Carbide (available at "ILVA",Naples area,but lack transport.)

When and if power is available, ILVA could handle with own transformers at 9KV or at 60 KV. Will further investigate all statements when time permits.

Visited Laghorn Steam Plant - Valdarno.

Ing. LANDUCCI, Ing. LEGNAIOLI
Capo di Centrale, DOVERI Giuseppe

Personnel working:
17 men on permanent station staff - resident
10 men to start Monday 29 Jan. permits in hand - local
33 men from Torre del Lago and 15 other locals to start as soon as permits, which are arranged for, are obtained.
Transport necessary for men from Torre del Lago to plant on

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Mondays and to homes on Saturdays, men to live in plant. Company to arrange for supplementary rations, and mid-shift meals.

As soon as expedient, specialists from Orlando Shipyard (under Mr. Rowden, R.N., Base Eng. Officer) to start repair of boilers. Of four boilers, it is believed possible to restore two for service.

Of three generating groups of 10,000 KW e a, Germans took away one completely and component parts of the others. Capo DOVERI believes that he may be able to locate certain equipment at A.N.I.C. near Leghorn, water pumps from condensers and certain other material in a tunnel (Tunnel di Quiesa, near Maggiano, O-1080). Doveri will need permits to visit thse places. Col Cooley has also taken two pumps for water supply. Equipment remaining in plant including turbine parts and alternators are badly damaged by mines and bombing. The Company proposes to bring together all possible parts or components to restore one group to survey damage and estimate time and materials for rehabilitation. Written work program will be submitted early next week.

Much clearing of débris has been done and this work continues and will be expedited. Bldg is badly damaged and work programs contemplate early essential repairs.

Coal pulverizing plant except for belting taken, condensers except for pumps taken or destroyed, high tension transformers, switch gear and other components are not badly damaged and may be re-entered in service with a nominal amount of work. Only one of three high-tension transformers is badly damaged.

For special type refractory brick required in repairing boilers, Valdarno is depending on SOCIETA' MATTONI REFRATTARI, Via Indipendenza, Leghorn. This plant is now occupied by a military orgn. and it is stated that further they will require a small allocation of electric power and about three months to prepare necessary material.

Arranged with Capt. Beatty, Leghorn Prov. Trnasport Officer, for release of one 3-T. truck for use of Valdarno.

Learnde of Maj. Hunt, C.A.O., details of obtaining supplementary rations for heavy workers and informed the Company

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As suggested by Col. Cooley, contacted Mr. Rowden,R.N., Base Eng. O. (Orlando Shipyard). At the appropriate time, will arrange with him for specialists on boiler repair.

Copies of a detailed report made by the Valdarno CO. on condition of the Leghcrn Steam Plant were obtained from Col. Cooley (Col. Lapper has a copy of this report). Since the clearing of débris and repair to boilers is under way, the next step is a plan for rebuilding this station. This plan must be built around the turbines and generators that are available,hence the importance of locating such sets immediately.

Contacted Lt-Col. Thompson, 15th Army Group, Civil Affairs Section. He assures me of their co-operation in every way and permission to travel in the Army Areas for further contacts. Also contacted Florence City A.M.G., Florence Province A.M.G. and Florence Allied Area Command to let them know who we were, etc.

Conference with Lt-Col. Lee, Tuscany Regional Engineer and delivered Col. Lapper's letter of January 25th to him. Major Crowther assigned to this office per S.O. nº26, paragraph 7 dated January 26th. Capt. Stevens to report to this office (Col. Lapper writing letter to Col. Lee to this effect). Capt. Lowdon reported to this office on Jan. 23rd.

Conference with Major Gaither, 5th Army A.M.G. Engineer. Introduced Capt. Duran and arranged for him to confer with Capt. Mc Collum (electrical officer now attached to IV Corps).

Met Ing. Landucci, Director Prinetti, and various other personages within the Valdarno Co. Asked them to give me a list of electrical material now on hand in their warehouses, up to date transmission line maps, etc.

January 30th.

Conference in office with Capt. Lowdon and Capt. Duran. Written report from each officer to be turned in every Friday night on the weeks activities,this to contain all pertinent happenings, one copy in pencil sufficient as it is to be used only to make consolidated report to Rome office. Captain Lowdon is in medical category B. The trip from here to Rimini requires two days (though snow with chains), hence it is not avisable to send him to that territory. Assigned him to make initial survey of Florence

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for iron foundries, electrical supply shops, and machine shops.

Major Renton called - one 25 KW, single phase, power plant is being made available to each region.

120 KV Terni - Tavarnuzze transmission line to be ready to operate on 1/2/45. Confirmed this would be so. Also that 65 KV line Nera Montoro - Castelnuovo would be interrupted at Chiusi, and that the line Nera Montoro - Chiusi would be used for feeding consumers between these points (Orvieto, etc.) and the line Chiusi - Castelnuovo would not be normally used. Valdarno wish to use both lines to feed Florence. Confirmed communications system between Florence - Terni. This is by telephone to Nera Montoro, then by phonogram to Terni. An existing line between the last two points is being repaired. They could not give a date for the completion of this.

January 31st.

Major Crowther reported for duty with this office. He is also medical category B. Assigned him as general supervisor of office to hire stenographer, start a filing system, and liason with all Selt-Valdarno Departments. During this early period, it is highly advantageous to have both Major Crowther and Captain Lowdon available for purely local details in the vicinity of Florence.

Capt. Lowdon inspected Pignone Foundrie (see separate report on this). Ten tons of metalurgical coke is needed to complete present Selt-Valdarno work now in hand.

February 1st.

Conference with Col. Cooley. Received two copies of Selt-Valdarno report on Leghorn Steam Plant.

Read report on Santa Maria Station dated January 17th.
" " " Pavano " " December 14th
" " " Suviana " " December 14th

Selt-Valdarno report on Sestaione to be picked up later.

Engaged Signorina Bartalini Adele as typist. Formarly employed by Police Office, accustomed to translations, good interpreter and efficient in general office routine (not interested in being transferred to Rome).

February 2nd.

Conference with Major Gaither - met Col. Wa[illegible] IV Corps Civil Affairs Officer. He assures me of every co-opera

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tion and permission for officers of this Office to travel and work in his area, Captain Mc Collum to be contacted first.

Twenty tons of metalurgical coke needed at Pignone Foundry. Major Price please requisition from Coal Division.

Robert A. Bell,
Major, Signal Corps U.S.A.
Officer in charge

RAB/ab

2 cys to Hq
2 cys file Lab

Declassified E.O. 12356 Section 3.3/NND No. 785019

1st February 1945

Major Bell

FOUNDRIE PIGNONE

This foundrie situated on Route 6625 employs about 1300 workpeople and is well laid out, capable of turning out finished iron castings up to 15 tons. They also make castings in brass, phosfor-bronze, etc.

There is an excellent draughting-room and pattern shop; and while a lot of machines have been removed by the Germans, a lot still remain.

I saw one turbine runner being repaired for Valdarno, and several castings for Florence sewers which had just come out of the mould.

A 20 ton crane is now under repair and will be operating by the 15th of this month.

The steel plant has been destroyed.

The director speaks English.

An American Ordance Bn & Bakery are on the site.

This foundrie is under control of G 4, 5th Army, however no work is being done there by them and they are willing for us to take it over in any manner that we see fit.

R.F. Lowdon, Capt.

RFL/ab

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