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ABRUZZI
APR. 1944

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REGIONAL REPORTS, REGION V,
ABRUZZI - MARCHE
APR. 1944 - JAN. 1945

ENGINEERING DIVISION
HEADQUARTERS

AMG/AC

ABRUZZI MARCHE REGION

C.M.F.

RECEIVED

C.W. & U.S./C.A.C.

31 JAN 1945 [47]

TO :--The Director, Public Works and Utilities
Sub-Commission HQ. AC.

FROM :--The Regional Engineer, Abruzzi - Marche Reg.V,
HQ, AMG/AC

SUBJECT :--Monthly Report.

REF :--516/26

DATE :--

1. Transmitted herewith, in duplicate, monthly report from the above Region for the period 16 December 1944 to 15 January 1945, Incl.
2. This report consists of five pages of text information, appendix "A", Electrical Position at the close of 1944, in five pages, Appendix "B", statistical report from the Abruzzi and Appendix "C" statistical report from the Marche.

C.A. LATIMER

Lt.Col. C.E.

Regional Engineer

Distribution:

- Reg. Comm. 1
- File 516/26 1

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C.A. Latimer
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 Lt. Col. C.E.
 Regional Engineer

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Ad Col Rhodes

31/1

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31/1

ENGINEERING DIVISION
HEADQUARTERS
AMG/AC
ABRUZZI MARCHE REGION
C.M.F.

FROM :--The Regional Engineer, Abruzzi-Marche, Region V.
TO :--The Director, Public Works and Utilities
Sub-Commission.
SUBJECT :--Monthly Report, Period 16 December to 15 January 45,
Incl.
REF :--516/26
DATE :--26 January 1945.

1. GENERAL:

There has been no change in Regional areas during this period, nor has there been any changes in the political-administrative boundaries. Army control lines are the same as reported during the last period. There is no change in Army administration. Headquarters Third District has been moved to Naples and Engineer Section, First District (or at least its Liaison Officer) has moved to Perugia from Foligno.

An important problem during the later half of this period, has been snow removal. Route 16 was at no time closed at any point for more than twenty-four hours to W.D. transport. This was a tribute to transport however rather than local snow clearance activity. Military highways 5 and 17; particularly in the vicinities of Popoli and East of Antrodoco, were blocked for a period of three days, with minor blocks frequently occurring there after. Italian snow removal equipment is not heavy enough, nor in adequate repair, to keep open the high priority roads as rapidly as desired or to open the roads to more than single lane traffic. Efforts are being made to have an angle-digger or heavy duty snow plow for use on Highways 17 and 5.

2. ROAD PRIORITIES:

No. One District. No. changes.
No. Three District - App. to III Dist. letter 574 Q.,

dated 3 January 1945:

A.V.H.Q. - No. changes.

209 Sub-Area:

Inst. : (a) Route 86, Vasto to Castiglione.
(b) San Vito-Lanciano-Mozzagrogna-Possacesia.
(c) Pescara-Diversion to Route 16 Via Bailey

DATE : -26 January 1945.

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209 Sub-Area:

1st. : (a) Route 86, Vasto to Castiglione.

(b) San Vito-Lanciano-Mozzagrognana-Fossacesia.

(c) Paglieta-Diversion to Route 16 Via Bailey (H.398980).

2nd. : (a) Chieti Road Junction, (C.107188).

(b) Popoli-Sulmona.

3rd. : (a) Diversion to Teramo (Giulianera, (B.9861) Ballante (B.8460), Road Junction, (B.8159), Rd. Junction (B.8254) Teramo.

(b) Roads from Route 16 to Città S. Angelo and Atri.

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Page 2)

3. STAFF AND PERSONNEL.

Edwin L. Shull, Major, Infantry (A) has been assigned and reported to this Region where he is on duty in the Abruzzi.

James Sapp, Major, F.A. (A) has been attached to this Region and assigned for duty at Ancona to assist that Office by handling Public Works projects and Engineering other than Roads and Bridges.

H. Cagnazzi, Lt. (B) has been assigned to this Region by A.C. and further assigned by this Office to the Ancona Office, as assistant to Major Sapp.

4. ITALIAN ENGINEERS.

There has been no important changes in the Italian organization in this Area. An assistant or deputy has been requested for Ing. Asioli, Ispettore Generale del Genio Civile, Aquila, the Abruzzi Compartimentale. Ing. Asioli, an elderly gentleman, is frequently absent due to heart ailment and no one in his present organization may be authorized to act for him during such absences. The anticipated use of Ing. Valeris in this Area was found impractical due to lack of transportation on our side and Italian organizational difficulties on their side.

In the Marche Compartimento, Genio Civile is responding very slowly to our insistence that they enlarge their staffs. Investigation of an organization chart of Genio Civile in Ancona indicated most of the staff existed only on paper. The Chief Engineer, U.S.V.S. Ancona completely lacks initiative and the work in his area is neglected.

These Agencies however must function under extremely adverse and discouraging conditions. They have been unable to have the minimum required office space in Ancona. In Marche, as in Abruzzi, their cars are immobilized due to lack of tires. Their rates of salaries are so low they must supplement them with other means.

5. INSPECTION TRIPS:

Routine inspection trips have been made over all of the Region. The Regional Engineer also attended the Regional Engineer Conference in Rome on Jan. 8th, following which he visited Hq. III District in Naples to confer with Brig. Gen. Keane.

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6. MILITARY HIGHWAYS

Construction work on all highways has been held up to a large extent by weather conditions. The statistical report from Marche, U.S.V.S. however shows some progress on all Military Projects. Abruzzi Marche Region has been requested to take over the maintenance, by contract, material and transportation to be supplied by Army, of Route 16, South of Ancona, and Routes

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Page 3)

76 and 77. This we will not be able to do until transportation for the contractor's equipment, by rail from Rome, is completed.

Reports have been requested on seven Bailey bridges in Marche where the District desires to remove Baileys at an early date. Projects for the construction of new bridges at these locations are being given priority of preparation and work will commence as quickly as possible.

7. OTHER HIGHWAYS

Projects for work on other highways having to clear through the Italian Ministry have not cleared that Agency. Col. Thompson has advised the Ministry has not financially cleared them because money was scarce, yet the Provincial Genio Civile is spending millions of lire on small projects which do not require such approvals.

Considerable progress, by 21 CRZ, was made on clearance of mined roads. This activity has been stopped due to weather conditions. The tunnel crew to be made available from 21 CRZ, for the road to Scanno, has not been used as anticipated in last period report; it being decided it was more practical to leave this work up to the civilian authorities, since the contractor has the necessary equipment.

8. PUBLIC BUILDINGS AND HOUSING.

Conditions in the field have changed little in this respect. Many projects in this category are held up by the Ministry as mentioned above. All active projects are being delayed due to lack of materials and transport. The 107 apartment project in Ancona (indicated as initiated in last period report) is in progress and a related project to salvage materials from other damaged buildings has been initiated. The water works project in Ancona is under way. A number of small projects for individual repair of less than L.200,000, not requiring the authority or financial assistance from the Ministry, are under way. Work on the reservoir at Chieti and Francaville has almost stopped due to weather.

9. ELECTRICAL

Repair work has been retarded during the last half of this period by weather conditions. Repaired transmission lines, with the exception of interruptions to service in Te-

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9. ELECTRICAL

Repair work has been retarded during the last half of this period by weather conditions. Repaired transmission lines, with the exception of interruptions to service in Teramo and Chieti, have stood up well under heavy snow fall.

The two 300 KVA sets from Caresse have been installed at Pettorano, Aquila Province; the first on 23 December and the second on 9 January. The output of the second set has been diverted to the Avezzano District which had a meagre supply from Rieti.

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Page 4)

A partial repair has been made to the dam of Villa Polinga I plant (Macerata) and a new channel is being built for the Francioline Station (Ancona) which is hoped may be brought back into service by the end of January.

The plant of Faro S. Martino is producing approximately 1,500 KVA, of which approximately 1,200 KVA, is being supplied to the Chieti Area. Work has begun on the Faro P. Petri plant damage.

Captain A. Duren has continued supervision over reconstruction projects in this Area. This method of handling projects works very well.

The completion of the 30 KV. line from Ancona to Fano has been completed and is being followed by the reconstruction of the 30 KV. line from Ancona to Jesi. The general situation in the Esino Valley will be much eased, and, in Ancona Province improved, with both lines in operation. Repairs to the 150 KV. SME. line, Bari to Foggia, restored the bulk supply to Pescara but was interrupted by damage to the line between Cupello and Pescara from snow. Poles to replace those broken are available in Aquila but snow blocked roads prevent transport.

The 30 KV. line from Vittorito to Avezzano, operating at 10 KV., has made possible an improvement to the Avezzano supply.

Appendix "A" herewith shows the electrical position in the Region at the end of 1944.

INDUSTRIAL REHABILITATION:

Industrial rehabilitation is very active in Ancona Province. Demands for power have been most difficult to meet because production is low and Military demands high. Restricted power has been given to the paper mills at Fabriano and to the match factory at Jesi, with the effects of this load being carefully watched by CRE 20.

Other important demands awaiting solution are the sulfur mines at Carbernerds; 200 KW, the Porto S. Giorgio - Amendole Ry; 800 KW., and the carboxide factory - Ascoli.

Coal has been allotted to the Bomba Cement Works which will permit the production of 600 tons of cement per month.

Brick productions in Ancona Compartemente, with but in stopped. No cement is being produced in

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TRANSPORT:

Everything that may be said about the lack of transport has been reported in previous reports. The situation ^{has} in no way been improved and daily grows worse. One tire has been furnished Genio Civile in this period and a number of truck tires, that will not fit any vehicle in which this department is interested, were declared available. :/:

Page 5)

An Officer from this Section has been working in transportation coordination to make available backloads of construction materials in trucks returning otherwise empty from various points in the Region. The various Regional and Provincial Truck Pools have been requested to cooperate and all are advised of materials that needs to be transported. When weather and road conditions improve it is believed considerable transport of this nature may be utilized. It is estimated that approximately 45% of normal transport mileage is with empty trucks.

GENERAL REMARKS

The matter of salaries for professional and semi-professional Italian personnel and the pay of skilled and unskilled workmen, as compared to living costs, clothing, shoes and necessities, or tangible results for services rendered, still presents a dangerous situation. All work is being hampered because workers have neither good shoes or adequate clothing during the Winter weather.

Numerous requests have been directed to this Office, by contractors, Genio Civile and UNES, for shoes for field workers. We have been unable to render any assistance or advise them where they may, obtain them. The Regional Supply Office has issued requests for shoes but is told all available new or repaired stocks are diverted to the Italian Army. In Aquila as in many other Communes in this area, retail shoe stocks are available in the black market, openly displayed in fairly large quantities, at prices ranging from 2,000 to 3,000 Lire a pair. Clothing, hosiery, gloves, various materials in bolts are likewise available in retail stocks at comparatively fabulous prices. Some condemned M. stocks of clothing items have reached this market where they are retailed at profits as high as 1000 %

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Lt. Col. C.E.
Regional Engineer

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7043

ENGINEERING DIVISION
HEADQUARTERS
AMG/ACC
ABRUZZI MARCHE REGION
C.M.F.

TO : The Director, Public Works and Utilities Sub-Comm.AC.
SUBJECT : Monthly Report, Abruzzi-Marche Region V, Period
16 October to 15 November 1944, Incl.
FROM : The Regional Engineer, Abruzzi-Marche Region V.
REF : 517/17
DATE : 29 November 1944.

1. General:

The provinces of Ancona and Pesaro-Urbino were given over to Regional Control in this period. This places the complete area of the Region under its administrative control.

The Region comprises two Compartimenti; Marche, entirely in AMG. Area; Abruzzi, entirely in A.C. Territory.

An attempt is being made to turn more responsibility over to Italian Administration in Abruzzi. It is necessary however at the same time to maintain pressure in order to keep initiative active. Orders have been issued turning all projects, other than those of Military influence, over to Italian Government control, as of 16 November 1944, in accordance with relative A.C. directive. Methods are being studied toward maintaining an advisory status without let down in accomplishments presented.

It should be here noted that the program as reported, and agreed upon, last month, has not been put into operations by the 8th. Army. There consequently is approximately Lire 21,000,000.00 worth of projects in progress in Ancona Province of which only approximately 50% has been financed.

The Army and District Engineers have been ordered to furnish no more cement or other controlled materials for work other than Military Projects. Very little construction of a permanent nature can be executed due to the lack of this class material.

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REP : 517/17

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The Capo Genio Civile of Ancona and the Ingegnere Visbilità for Marche Compartimento require approximately thirty rooms for offices and nine to ten apartments as a minimum.

The Compartmental and Provincial engineering offices must be centralized under their chiefs if we expect to get results. This cannot be done with Engineers, Geometers, Clerks scattered all over the Province.

The question of office space and housing was discussed with the Provincial Commissioner and it is believed some progress has been made in that direction.

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A Cepo Genio Civile, Ing. Amoroso, has been assigned to and is in Pesaro-Urbino. A protest has recently been addressed to AMG, 8th Army, relative to the carrying forward by their Roads Officer of an important Geometer of the Province of Pesaro-Urbino together with a small truck belonging to the Provincial Engineer Office of that Province. Important projects were under his immediate supervision. It is imperative he be returned at once. A communication dated 12 November from this Section having not been answered, the Regional Commissioner has recently addressed a strong protest to Group Commander Benson.

The entire Abruzzi Compartimento lies within Dist. three and in 67 Garrison; Marche Compartimento is divided between Dist. One and 8th Army; Dist. One extending North to include State Road No. 3; running South-west from Fano, and 8th Army extending from that line forward.

2. Staff and Personnel:

F.O. Griffith, Civilian, F.E.A., has been assigned to this Region, effective 6 November 1944 as Administrative Officer to the Regional Engineer.

J.B. Peden, Major, was assigned to electrical work exclusively effective 15 November, assisted part time by J.S. Bennett, Major, on loan from Lejuro and Captain DURAN, detailed for special duty from A.C. Another Officer is needed if close supervision is to be given this field.

John H. Walsh, Captain, was appointed as Public Works and Utilities Officer with Office in Ancona and will supervise all projects in Marche except electrical generation and transmission works. J.C. Marsella, Major, Italian Army, attached to this Region by A.C. is assigned to assist Captain Walsh. E. Milani, Captain, Italian Army, now in Uniform, is assigned to Region Headquarters Office (Engineer) in Aquila. Transfer out of the Region has been approved for J.C. Rively, Major, and he is awaiting orders.

INSPECTION TRIPS:

The Regional Engineer visited all Provinces several times during this period, contacts were established with three District Engineers at Castellammare and a tour was made of Aquila Province with the Roads Officer and Col. Mc Neil. Special study was made of projects in Marche to be submitted for approvals and which

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MILITARY HIGHWAYS:

All military highways are open in Abruzzi except Route 80 from Teramo to Giulianova, Route 84 from Palena to Rocorosso and all of Route 81 from Ascoli-Piceno to Chieti Scala.

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General progress is good though some delay exists on bridge projects due to lack of transport, gasoline and from cement and lumber.

OTHER HIGHWAYS:

Progress is generally good with delaying factors, remaining as in the past, lack of transport, availability of materials and often lack of transport fuel.

PUBLIC WORKS:

Public Buildings and housing rehabilitation in devastated areas, particularly last Winters lines, has been considerably activated by Public welfare and Civil Affairs Sub-Commission working in close co-operation with this Section. Various studies and reports, as materials required estimates, distribution percentage of damage, glass for hospitals and schools, per capita damage by villages, have been furnished them by this Section.

ELECTRICITY:

Repair and reconstruction activities have continued and there has been a general improvement in supply due to additional stations entering operations and the increased water in rivers.

Rain and wind storms have frequently broken down transmission lines.

Several visits by Captain Duran and Lt. Butcher, H.Q.; A.C., in connection with generating and distribution problems in Pescara and Chieti, Provinces have been most helpful.

Two features of interest were the putting into operation of the Pianicella (Pioraco) Plant now developing up to 1,500 KW. and the increased output at Pedaso which has risen from 1,500 KW. to a peak 3,700 KW. Advantage of increased output has generally been spread over the widest area possible by parallel or combining systems. Aquila has benefited and it has been possible to double peak load and improve the voltage.

Progress on the Chieti-Scarfo line is slow but cannibalizing unneeded lines in the Area is expected to speed progress, with completion very soon.

The 60 KV line from Crepello to Lanciano is being repaired and should be in operation Dec. 15, which will permit the obtaining of the 3000 KVA from the South allowed. The 30 KV line is estimated to be approximately 1500 KVA.

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After Provincial orders were issued controlling consumption by industrial users, spot checks are being made, since it is felt orders are being ignored. Power and lighting circuits
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cannot be separated and control is difficult. Instruments are scarce but in a few places it has been possible to install time switches.

Generally the minimum requirements of industrial consumers, as flour mills, olive presses, saw mills and woodworking plants and metal working shops for agricultural tools and machinery, are being met. The match factory at Jesi and the sulfur mine at Cabernardi, in Ancona - Pesaro Provinces are still unpowered but it is expected this may soon be remedied with negotiations now in progress with CRE 20. The electrical situation as a whole is retarded by lack of transport.

The power generating situation in this Region is shown on the inclosed appendix "Electrical".

PUBLIC UTILITIES:

Waterworks projects were initiated during this period and work progressed on supply systems at Navelli, Castelvechio Subequo and Capetrano.

Pesaro, initiated last month, was completed this period. The one for Chieti has not been started due to confusion in Genio Civile orders.

Several projects are proposed for approval in the repairs to museum and arts building, reconstruction of jails and police stations have been submitted. With the handing over of the four southern provinces to the Italian Government on 16 October there has been had a substantial falling off of the number of projects submitted by the Genio Civile. Their activities have been much of a routine nature. Projects approved by the Regional Engineer are in attached statistical sheets.

TRANSPORT:

Lack of transport is rapidly assuming prime importance in the construction program in this Region.

Although requisitions for tires and batteries have been submitted many times in the past six months, the net result so far has been nil. Unless our Genio Civile can be furnished with tires and batteries almost immediately they will be off the road except for jobs within walking distance and others will cease. This is the first phase.

7039

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Waterworks projects were initiated during this period and work progressed on supply systems at Navelli, Castelveccchio Subequo and Capestrano.

Pesaro, initiated last month, was completed this period. The one for Chieti has not been started due to confusion in Genio Civile orders.

Several projects are proposed for approval in the repairs to museum and arts building, reconstruction of jails and police stations have been submitted. With the handing over of the four southern provinces to the Italian Government on 16 October there has been a substantial falling off of the number of projects submitted by the Genio Civile. Their activities have been much of a routine nature. Projects approved by the Regional Engineer are in attached statistical sheets.

TRANSPORT:

Lack of transport is rapidly assuming prime importance in the construction program in this Region.

Although requisitions for tires and batteries have been submitted many times in the past six months, the net result so far has been nil. Unless our Genio Civile can be furnished with tires and batteries almost immediately they will be off the road except for jobs within walking distance and others will cease. This is the first phase. 7039

The second phase is the transport of materials. The Army has no transport available for Engineering needs. Local material supplies in the advance area has been depleted. Unless transportation can be furnished from other sources, construction work will cease. I have eighteen bridges held up for material in Marche of the present time. In one case the Genio Civile asks to cancel a contract and pay consequential damages unless the material can be found. :/:

5)

GENERAL REMARKS:

The impossibility of adequate distribution of foodstuffs, fuel, clothing, particularly shoes, is reacting very unfavorably in the labor situation. Black market operations, directly resultant, are flagrantly unopposed. Unemployment is large. Dissatisfaction, with attendant and threatened strikes are prevalent. The Winter Season will further aggravate this condition and needs now falling in the category "less serious" will become "acute". Political and group assemblies are being held and well attended in some localities. This might well be accepted and encouraged as a development of public interest in the public welfare. Assistance in civilian transportation requirements, follow through by Sub-Commissions studying rehabilitation of housing, clothing and fuel could result in a lasting and beneficial self sufficiency.


C.A. LATIMERLt. Col. C. of E.
Regional EngineerDistribution:

A.C.P.W. and U. HQ. 2.
Regional Commissioner 2.
File / 517/17 1.
Office Copy 1.

7038

ENGINEER SECTION
HEADQUARTERS
AMG/ACC.
ABRUZZI MARCHE REGION
C.M.F.

TO : Director, Public Works and Utilities Sub-Comm.A.C.
FROM : Regional Engineer Abruzzi Marche Region AC/AMG.
SUBJECT : Activities report - Oct. 1944 (Period 16/9/ - 15/10)
REF : 5/517/17
DATE : 25 October 1944.

General : Pesaro Urbino and Ancona are still under control of 8th Army.

Abruzzi compartimento, comprising the provinces of Pescara, Chieti, Teramo and Aquila returned to the Italian administration on 16th October 1944:

No.2 District has turned its area in this Region consisting of Abruzzi compartimento, over to N.3 District. Engineer Headquarters of N.3 District is still maintained in Castellmare with a sub office, called the eastern division, in Bari.

An engineering office has been set up in Ancona and in conjunction with Provincial Commissioner, Provincial Finance Officer and 8th Army Senior Finance Officer (all of which officers are at the present time operating under the 8th Army AMG.) The following procedure has been agreed upon and is in operation:

The 8th Army Roads Officer will continue to approve and Finance work being done on Military Roads under control of the C.E. 8th Army.

All other proposed work on roads is submitted to Capt. Walsh for approval. After approval he requests funds (as per total estimate) be credited to the Capo Genio Civile by the 8th Army Finance Officer.

Controlled materials required are requested from 8th Army or 20 C.R.E.

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2)

No actual control has as yet been given this Region over building or public works projects in this province altho Major Foden has been invited in to discuss Electric Power, Sewage and Water Supply with 20 C.R.B. Works.

A project for removing several sunken ships from the mouth of the Misa River (thru Senegallia) to prevent the possible flooding of that city has been discussed with and permission to do so obtained from the Navy in order to prevent possible flooding of the city of Senegallia. The project is being prepared and contract will be let shortly.

Things have not been helped in Ancona by the refusal of the Provincial authorities to cooperate in an attempt to get the Genio Civile's employees back into town. They are spread thru a number of neighboring villages which does not make for efficient functioning of that department especially with communications and transportation what they are at present.

In Pesaro-Urbino there is still much confusion. To date there is no Capo Genio Civile for the Province. The Provincial Commissioner had asked the Ancona official to act when A.M.G. first went in but this arrangement is most unsatisfactory for many reasons, viz: He has more than he can do in Ancona, conditions of transport and communication make it impossible for him to maintain contact with the entire area and Pesaro is still in the emergency stage with work being initiated by every body and any body. My report of conditions states - "All bridges are destroyed and communication is impossible in most of the Province".

A Capo Genio Civile has been requested and it is expected will have arrived prior to this report having been received in Rome.

Personnel. Military-

The personnel (Officer) of the Public Works and Utility Section of this Section now consists of the following

Lt.Col. O.A. Latimer (a) Regional Engineer, Major J.E.Foden (b) Utility and Public Works (except roads).

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3)

Major J. C. Rively (a) Roads and Bridges - Abruzzi, Capt. John H. Walsh (a) Roads and Bridges - Marche. An Italian officer - Major Morsella Giulio - Genio R.A. attached to A.C. from the Italian Army has been assigned to this region and has been sent up into Army area to assist Captain Walsh where his army standing will assist materially in his being allowed to circulate and in his messing and billeting arrangements.

Major Denning has by orders of A.C. been regularly dropped from Public Works and is on Provincial duty in the Region.

Under arrangement with Piemonte Region Major Bennett has been returned to assist on Utilities in this Region until he is again needed for duty with his forward unit.

Personnel- Italian.

Engineer Covajes has been shifted from Pescara to Chieti to fill the place vacated by Eng. Trillo suspended awaiting the decision of the Ministry on charges.

Eng. Brasile stays in Aquila and we await a new engineer in Pescara.

The prefect of Teramo is still "gunning" for the Genio Civile in that Province. He apparently doesn't like the new engineer (Pistelli) any better than the old one but has no pretext by which he can throw the new one into jail. It almost looks as though the prefect is most interested in "who" is engineer in his Province.

The Engineers in the Marche remain the same.

As noted under "General". The finding of office and living accommodations for the Genio Civile, and his sub sections, in Ancona is seriously hampering getting them organized.

Inspection Trips - to all Provinces in the Regional Area have been made during this period. Ancona and Pesaro-Urbino have been visited several times to maintain an up to date knowledge

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4)

of changing conditions in those "Army" Provinces.

A visit was paid to Brig. Keane of 3 District upon his taking over this area.

The Road engineers (Major Rively and Capt. Walsh) spend at least 50 percent of their time in the field.

Military Highways

Priorities An overlay showing priorities of Roads in I District has been received, it is not repeated here because a copy has been seen in the Roads Office at this headquarters.

No change in priorities has been received from 2 Dist. (now 3 Dist.) These were reported in appendix A, September report, and are not repeated herein.

General Progress:

Progress on Military roads in this area has continued. The rains which may be expected from now on have developed some of the weak spots in the system and the need of Bailey bridges in the advance area with consequent removal from the year areas has at times made things difficult but projects for permanent bridges are being prepared, contracts for approved projects let and we are living at peace with the Army.

The removal of some Bailey Bridges on Route 5 (Popoli to Pescara) has thrown us back on to diversions in this area but all these diversions are serviceable. A section of this road badly damaged by a "blow" has had the retaining wall reconstructed and will be completed during the next period.

Contractors are working on Route 17 between Aquila, Antrodice and Popoli on bridges (2) culverts and retaining walls.

On Route 16 the bridges over the S. Biagio is completed.

Diversions over the Brancadoro (B. 905809) and Acquachiaro (B. 905806) rivers are also completed and contracts have been approved for the construction of bridges at these sites.

5)

On Route 16 in Macerata Prov. bridges over the Acquasone (S.740226) Asola (S.754178) and Fosso a Mare (S.750190) have had 1/2 completed in order to pass traffic, the other 1/2's are being built new. Revetments and walls found necessary to support Bailey bridges over the Chienti and Potenza Rivers are also being constructed.

There are 11 bridges under contract in Ancona and Pesaro Provinces on Route 16 - 10 of which should be complete at this reporting. These bridges are of course all under supervision and financing by the Army as are 3 under contract on Route 3 and 13 on Route 76 between Fabriano and the coast.

Other highways:

In the compartimento of Abruzzi - State Roads are being opened up as rapidly as the need is shown and the projects can be worked out. I append as Appendix 1 a copy of schedule of bridges on these roads. Contracts have been let for stone on many of the state roads and ordinary maintenance is being carried on as needed.

Work on Province's Rds is proceeding satisfactorily, surveys of damage have been made and projects are being prepared for the rehabilitation of these roads in the order of their importance.

It might be of interest to note that contracts have recently been signed for the completion of bridges and other repairs (retaining walls etc) to road No.82 running from Avezzano generally south thru the western part of Aquila Province to Sora in Frosinone Province. This road altho considered a very important highway nationally is of little or no value to Aquila in a provincial sense.

The fact that P.O.L. has decided that petrol etc for the contractor must come from Aquila civil allowance (ration has raised considerable protest (quite rightfully) from the Supply Div. and may lead to a request to cancel these contracts for lack of necessary supplies.

Other Highways

In Ascoli-Piceno, Road No.4 (Ascoli-Rieti) has been opened and completed thru to Rout 16 by use of some diversion.

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6)

Route 81 (Ascoli to Teramo) and Route 73 (Ascoli to Macerata) are being pushed and except in abnormal weather are passable.

Provincial roads are receiving attention in accordance with their importance. This province reports 65 bridges to be reconstructed on State, Provincial and Communal, non military roads. There are at present 14 bridge projects being prepared. There are 4 bridges under construction. 18 All weather diversion have been authorized 19 are under construction and 7 have been completed.

Macerata

Reports roads in very bad condition Diversions being improved but not in such state as to stand up thru winter. Transportation badly needed. Approximately 115 chilometri of road being maintained.

The works in Ancona and Pesaro which are still under Army control have been reported under general.

It might be said of these provinces that the Germans were ractising in the lower province and really made a job of the bridges when they arrived here. One cannot be sure of getting thru on any but Army roads and only War Dept. vehicles should be used in this area.

Projects are however being prepared for other bridges essential to AMG administration and supply on this area.

Public Works

Water Supply. No serious difficulties have been encountered during the month but Genio Civiles have been instructed to report on and submit estimates for necessary improvement works.

The construction of a reservoir for Francavilla at Mare has been sanctioned and approval obtained for repairs to the water supply systems at Pescara, Navelli, Castelvecchio Subequo and Capistrano.

Sewers and Drainage.

A project for repairing the sewers at Pescara has been approved and a proposal for repairing the sewers at Popoli awaits approval.

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7)

A project for maintenance of the banks of the river Aterno and waterways at Popoli awaits approval.

Gas. There has been no call for schemes under this heading.

Tranways. A small tramway between Porto Civitanova and Civitanova Marche in Macerata Province was found to be operating. It is supplied with power by a small local hidro-electric plant of about 100^{kW} capacity. As the tramway is not serving an essential purpose it is intended to close it down and divert the power to more useful purposes.

Railways. The narrow gauge line running inland from Porto S. Giorgio to Amandola is serviceable as far as Servigliano and the F.C. Ascoli-Piceno has requested 200 tons of steam coal to enable it to be put into operation.

The question of whether this line should be activated has been referred to the Transportation Sub-Commission.

Industries. A request from 8 Army AMG for power for flour mills in Ancona Province has been dealt with by the 20 CRE Works' Committee.

Buildings. A number of projects for rebuilding schools government offices, barracks etc have been approved. The largest scheme is for the reconstruction of Avezzano Prison at a cost of L.2.400.000.-

Housing. The Genio Civile has been notified that projects for the repair of houses even the privately owned will be considered. Of course in the Abruzzi this will now come under the Italian Government plan which no one in this area knows any thing of. The Genio Civile has been notified that the responsibility of shelter for the winter is purely an Italian Government matter in Italian territory.

Electricity. In Chieti and Pescara Provinces the electrical work being supervised by Maj. Bennett has been continued under the supervision of Ing. Cipriani, an Italian engineer engaged by this Division. Chieti and Pescara are still dependent upon the Perindola power station and Diesel driven generator at Pescara but repairs to the 60 KV line from Lanciano to Pescara are nearing completion and within a few days power should be available from the south.

No delivery of belting for the Bouda Cement Factory has delayed the release of cement to complete repairs at Lemp power

8)

station and efforts are being made to secure the services of a mine clearance squad to enable the Para Milorum Pietri plant near Chieti to be connected to that town.

No work has been done on the Chieti-Scafa 30 KV line and UNES have put in a demand for sufficient materials to build this line anew. This demand is regarded with suspicion and is being checked. The extension of this line from Scafa to Bussolengo is finished.

In Aquila Province the supply situation has gradually improved during the month as the effect of the rains has become felt. The steam plant at Rieti was closed down on ACC. instructions during the latter part of September and an alternative supply given from Terni. Since 1 Oct the increased output from Bolognola power station (Ascoli Province) has enabled Aquila to obtain an almost continuous supply from that source enabling Avezzano to obtain power from Rieti once again.

In Ascoli-Piceno and Teramo electricity supply characteristics are much the same as in Aquila as they share the out put of Bolognola and Carassini plants. The out put of Pedaso has been diverted to meet Army requirements along the east coast up to and including Ancona.

A survey has been made of power stations in Macerata Province belonging to the Municipalities of Macerata and Tolentino. Although damaged a sufficient number of installations escaped or have been repaired for an almost normal service to be maintained. With increased water flow in the rivers and completion of repairs on hand the generating resources of this Province should enable material assistance to be given to Provinces both north and south. The situation is very reminiscent of that in Campobasso Province.

Electrical installations in Ancona Province have suffered heavily and the total generating capacity is only about 500 KVA divided between three small stations in the Esino Valley. On account of the numbers of troops present and the general dependence of water supplies on pumping, the situation is being closely controlled by 20 CRE Works and weekly meetings are held in Ancona at which the Supply Companies and AMG. are represented.

In Pesaro Province destruction has been exceptional^{743y} heavy and, except for arrangements made by the Army for its own use, the Province is almost entirely without power.

9)

Industries and Factories : The Torlonia Project for the drainage and maintenance of the Fucino Lake bed near Avezzano was inspected and work was approved for continuation.

This project provides for the maintenance of 14,000 hectares (34,500 acres) of fine agricultural land growing sugar beets, potatoes, grain and forage which must be kept drained in order to be productive. The drainage is provided by two tunnels from a collecting basin at the west end of the old lake bed thru the mountains into the upper end of the Liri in the Val Roveto. The Germans did considerable damage to these drainage tunnels and the Torlonia administration is attempting to get them into shape to function prior to the rainy season.

The importance of the work was considered such that a letter was sent approving the project and releasing (their own) cement to continue the job. A copy of this letter together with a copy of their engineers report was forwarded to Headquarters P.W. and U. Sub-Commission at Rome.

Materials:

The supply of building materials has become critical in this area. Army states that they can not allow us more cement from their stores because we have been made a allotment for work in this territory from Bari - Information is requested as to this. "Mat. 10 a" for 650 tons are at present in Rome, but no reply has been received.

This office suggests an allotment to the Abruzzi-Marche region of 100 tons per month of high grade "300" Cement, to cover our present needs.

Asphalt and bituminous materials are also needed, requests for these will be prepared in proper form and submitted.

Transport:

The prime need of this Region ^{is} transport for construction of public works and utilities. There is little or none in the area. The army has very little available and that little that we have been able to find has been unable to run to advantage because of shortage of petrol, tires and batteries. 7029

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10)

Until it is realized that lines of communication are the life lines of the contry and that there is no use shipping food and supplies into the country unless it can be distributed, and until due consideration is given the service of construction and they receive some priority in the distribution of petrol, tires and necessities for such work we will continue to have complaints that food stuffs urgently needed in other areas cannot be moved. The black market is rampant and that unemployment and dissatisfaction with attendant strikes are widespread thruout the country.

Respectfully submitted.


C.A. LATIMER
Lt. COL. C.E.
Regional Engineer

7028

Appendix I.-October Report

REPORT OF RECONSTRUCTION WORKS FOR BRIDGES IN THE ABRUZZI REGION

State roads in Aquila, Chieti Pescara Teramo Provinces

No	Most important bridges to be reconstructed		Military iron bridges		Diversions being used		Bridge projects to be prepared.		Bridge projects in preparation		Approved projects		Reconstruction in progress		Completed		Military bridges removed in this month		All weather diversion				Diversioni utilizzabili in qualsiasi stagione				
	M	Nm.	M	Nm.	M	Nm.	M	Nm.	M	Nm.	M	Nm.	M	Nm.	M	Nm.	M	Nm.	M	Nm.	M	Nm.	M	Nm.	M	Nm.	
No 5	6		4		2		6		5																		
No 16	16		14		10		17		6				9		4		2 1/2										
No 80		15																									
No 81		20																									
No 84		10																									
No 85		6																									
	22	52	18		1	12	24	23	1	12	21	6		9	4	4		1 1/2		1		3		1		1	2

To: Director of Public Works Utilities Sub-Commission

From: Regional Engineer-Region V AM3.

Subject: Activities Report-Aug. 1944 (Period 16/7; 15/8)

Ref: 5/517/17

Date: 25 Aug. 1944

Region V (Regional Engineer)

GENERAL

(a) ~~At this writing the areas controlled by Region V are essentially~~ as reported last month, Pesaro-Urbino has not yet been occupied, Ancona and Macerata are under the control of 8th Army, and Campobasso altho returned to the administration of the Italian Government has not yet been removed from the administrative control and technical supervision of Region 5.

The area of Region 5 at the present time lies within the 1st and 2nd District areas. Recent orders have put 1st Dist. under 8th Army.

ORGANIZATION:

The following officers are at the present time assigned and working with the Public Works and Utilities Divisions of the Regional Engineer Section, Region V.

Lt. Col. C.A. Latimer (A) Regional Engineer
Major J.E. Foden (B) Public Works Officer
Major John Bennett (A) Public Utilities Officer
Lieut John Walsh (A) " Works Officer

Lt. Walker (B) has been transferred to the Transports Section-entirely out of engineering.

Major Boucher (B) has been appointed Liaison Officer to Dist. 1 and orders were requested assigning him to Headquarters.

(2) At this writing the areas controlled by Region V are essentially as reported last month. Pesaro-Urbino has not yet been occupied. Ancona and Macerata are under the control of 8th Army, and Campobasso altho returned to the administration of the Italian Government has not yet been removed from the administrative control and technical supervision of Region 5.

Boj
The area of Region 5 at the present time lies within the 1st and 2nd District areas. Recent orders have put 1st Dist. under 8th Army.

(B) ORGANIZATION:

The following officers are at the present time assigned and working with the Public Works and Utilities Divisions of the Regional Engineer Section, Region V.

Lt. Col. C.A. Latimer (A) Regional Engineer
Major J.E. Roden (B) Public Works Officer
Major John Bennett (A) Public Utilities Officer
Lieut John Walsh (A) " Works Officer

Lt. Welker (B) has been transferred to the Transportation Section entirely out of engineering.

Major Boucher (B) has been appointed Liaison Officer to Dist. 1 and orders were requested assigning him to Headquarters at Macerata but inasmuch as Major Boucher's Dist 1 has now moved to Poligno it is requested that Major Boucher be relieved from Region V. He has not yet reported to this HQ. Major Bennett is under orders to report to A.C.C. headquarters but is to be left with Region V until actually needed in his new area.

=2=

The contemplated personnel changes will necessitate ~~about~~^{month} organizational changes during ~~the~~^{the} next period.

(c) The Provincial Engineer at Teramo has been dismissed by the Prefect and another ~~staff~~^{staff} engineer appointed in his place. Eng'r Asioli has suspended the Prov. Engr (Turchio) pending investigation and has appointed the senior member of the Teramo Provincial Engineer Staff in his place. I intend to investigate this personally at the earliest possible date, in company with Eng'r Asioli and possibly Eng. Valerio. ^{PAK} If the engineer is at fault I will approve the dismissal, but ^{from} the new appointment must be from name or names submitted by the Dept of Public Works.]

There have been no other changes in the Italian organization.

(d) Inspection Tours

The Regional Engineer visited Teramo, Ascoli Piceno, Macerata, Ancona, Pescara, Aquila and Campobasso on inspection trips, ~~this period~~^{period} besides attending a Provincial Commissioners conference and discussing engineering problems with the Provincial Commissioners.

^{Ad. L.} ~~Ref. HQ. AAI, CMT, 2078/12 of 17/7/44.~~

We note 415, Appendix A and will be guided by these instructions, and by Par. 1 of the reference.

There is intense activity along Route 16, due primarily to ^{winter} an effort to get this very important highway ready for all ~~use~~^{use}. Bridges are being repaired, or high level diversion constructed (in many cases using Bailey). This work has been ordered by, and designs approved by, ~~the District Army Engineers~~^{the District Army Engineers}. We are watching to see that debris from old bridges is promptly cleared from water ^{ways}.

Route 5-17 from Pescara to Antrodoco is being maintained

7025

Engineer Staff in his place. I intend to investigate this personally at the earliest possible date, in company with Eng'r Asioli and possibly Eng. Valerio. ^{place} If the engineer is at fault I will approve the dismissal, but ~~then~~ ^{from} new appointment must be from name or names submitted by the Dept of Public Works.]

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(e) MT-Roads - (Ref. HQ. AA.I, CMF, 2078/12 of 17/7/44.)

We note 455, Appendix A and will be guided by these instructions, and by Par. 1 of the reference.

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7025
Route 5-17 from Pescara to Antrodoto is being maintained and improved by ~~two bridges under reconstruction~~ ^{two bridges under reconstruction} ~~contractors Ganten, Carlo and Vittorini, Pietro~~ ^{contractors Ganten, Carlo and Vittorini, Pietro} Paolo who started originally under 1st Dist Engs and are continuing supervised by the Genio Civile. Two bridges 1 of 5, 8 m. span at (B522132) and 1 of 7 m. span at (B522130) ~~new~~ being erected by Vittorini, Pietro Paolo.

The remainder of this road is being maintained by Canton.

-3-

ieri-Aquila engineers are supervising maintenance to introduce the old AA. SS. boundary of this district. It is impossible to give expenditures at this time as these on military roads are approved by Dist. Eng. Officers.

(f) Other roads

Engineer Valerio ~~in~~ ^{at} Campobasso is considerably distressed because the army having ordered letting of certain contracts pulled out with out freeing required materials; they also removed various Bailey bridges prior to completion of masonry bridges ^{in second} under way and their going has reduced available transportation to a point where public works must practically come to a standstill unless other arrangements are made. ^{five} bridges were approved for construction and contract ~~1, 2, 3, and 4~~ ^{1 and 2} this period. The others have been approved, ~~by the~~ ^{by the} for forwarding thru Italian channels.

In ~~the~~ ^{some} other provinces ~~the~~ emphasis for construction and repair of roads (other than Military) have been on those roads ~~(Nos. 80-84 and Rd. Porto Civitenova-Macerata)~~ ^{Coastal} leading in from coastal supply points, and those connecting Aquila (Regional Hdqtrs) with the various Provincial capitals and Rome. The roads to Macerata and Ascoli Piceno from Aquila (via Nos 4 & 78) with connecting Provincial roads at the lower end are open. The road to Teramo (No 80) is passable for a jeep, but will require about three weeks more for a standard car.

The Road No 17 (Aquila to Isernia) is passable but extremely rough, and is being worked upon. Much of this road is being worked on ~~at~~ ^{at} cost-plus contracts, originally let by the CRES, other parts ~~are~~ ^{are} being improved by local gangs, under the Cantonieri.

Considerable trouble has been caused by contractors on Rd. 88 (working under contracts signed in Rome) coming into Aquila ⁷⁸⁸ ~~to~~ vince and paying higher wages than are authorized in this province,

out without freeing required materials; they ^{in hand} removed ~~them~~ Bailey bridges prior to completion of masonry bridges under way and their going has reduced available transportation to a point where public works must practically come to a standstill unless other arrangements are made. ^{Five} bridges were approved for construction and contract ~~accept~~ 1 and 2) this period. Three others have been approved, ^{by HQ} for forwarding thru Italian channels.

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Considerable trouble has been caused by contractors on Rd. 82 (working under contracts signed in Rome) coming into Aquila province and paying higher wages than are authorized in this province, and purchasing materials at higher than ordinary prices. It was understood that these contracts were to have been turned over to Region V, but nothing has yet been done ^{about} it.

Road work, particularly high-level, all weather diversions, is proceeding in the forward areas. Our contracts with District I ^(Ancona)

-4-

have been most pleasant.
amiable,

(8) Public Works

Water-supply still heads the list, of ~~plans~~ Plans for re-servoirs at Chieti have gone forward for approval, and release of controlled material. Work is proceeding on various other ~~water~~ supplies. In many cases the supply depends upon electricity to operate pumps. This problem is particularly serious in Aquila, where many villages and towns are without water due to the low and fluctuating voltage of an exceedingly scant supply of power. In most cases, where the problem is one of construction, it is well in hand.

Sewers in Pescara are opened and finally operating.

Small expenditures have been approved for the repair of the

"Castle" in Aquila, for use of Italian military authorities.

(2) Electricity

The power situation in the advance areas of region V is most unsatisfactory, but very little can be done ~~about it~~ at the present time. The important stations are destroyed or badly damaged and transmission lines are ~~badly~~ disrupted. Ancona and forward military centres are increasing the demand faster than other sources can be repaired.

700 KW has been allotted Aquila from Ascoli Piceno plants. The province has been subdivided and a study made of essential plants and services. This power has been distributed ~~equally~~. The U.N.S.S. engineer in Aquila is now making a detailed survey of all plants in this Province, with a view to repairing or salvaging ~~all~~ equipment or parts.

7023

Work is proceeding on the repairs of a 1000 K.V.A. electric line at Treme de' Peliccioli for use in Chieti. The main power line

to operate pumps. This problem is particularly acute where many villages and towns are without water due to the low and fluctuating voltage of an exceedingly scant supply of power. In most cases, where the problem is one of construction, it is well in hand.

Sewers in Pescara are opened and finally operating.

Small expenditures have been approved for the repair of the "Castle" in Aquila, for use of Italian military authorities.

Electricity

The power situation in the advance areas of region V is most unsatisfactory, but very little can be done ~~about it~~ at the present time. The important stations are ~~badly~~ destroyed or badly damaged and transmission lines are ~~partly~~ disrupted. Ancona and forward military centres are increasing the demand faster than other sources can be repaired.

700 KW has been allotted Aquila from Ascoli Piceno plants. The province has been subdivided and a study made of essential plants and services. This power has been distributed equally. The U.N.D.S. engineer in Aquila is now making a detailed survey of all plants in this Province, with a view to repairing or salvaging ~~AA~~ equipment or parts.

7023
Work is proceeding on the repairs of a 1000 K.V.A. electric plant at Lama dei Peligni for use in Chieti. The main power line from Lanciano to Pescara is being rebuilt and should be finished in about five weeks. When complete this should ease conditions considerably in this entire area. The transmission line from

Chieti to Aquila is being repaired and should be ready by the time Lanciano Pescara line is ^{finished}.

Industries

Several cement plants have been surveyed and requests sent forward for critical materials--(mostly belting)-- in order to get these plants back into production.

An inspection was made of a natural gas plant in the Fucino Lake area near Avezzano, which had escaped damage and arrangements were made for it to have some power in order to operate. Work has started on a transmission line to Scafo San Valentino, to reactivate a large asphalt plant at that place.

Materials

Instructions for distribution of P.O.I. have been received and studied. It is hoped that this new operation will remove one of the more serious difficulties that we have experienced. Additional transport is urgently needed for Public Works operation, particularly in Campobasso.

[It is requested that every effort be made to provide ~~the~~ required belts for the cement plant at Bomba.]

Cement requested for bridge construction and construction of reservoirs at Chieti must be made available immediately if work is to be done this season, ^{as} both these jobs are urgently needed before this winter.

Miscellaneous

Two small jobs not requiring critical material have been approved for Historic Monuments Comm.

Respectfully Submitted

7022

these plants back into production.

An inspection was made of a natural gas plant in the Pucino Lake area near Avezzano, which had escaped damage and arrangements were made for it to have some power in order to operate. Work has started on a transmission line to Soefi San Valentino, to reactivate a large asphalt plant at that place.

(18) Materials

Instructions for distribution of P.O.L. have been received and studied. It is hoped that this new operation will remove one of the more serious difficulties that we have experienced. Additional transport is urgently needed for Public Works operation, particularly in Campobasso.

[It is requested that every effort be made to provide ~~Adg~~ required belts for the cement plant at Bomba.]

Cement requested for bridge construction and construction of reservoirs at Chieti must be made available immediately if work is to be done this season, ^{and} both these jobs are urgently needed before this winter.

(19) Miscellaneous

Two small jobs not requiring critical material have been approved for ^{the Ministry} Historic Monuments Comm.

Respectfully Submitted

7022

E.A. LATIMER

Regional Engineer

To : Utilities and Public Works Sub-Comm. A.C.C.
 From : H.C. Region 5, A.M.C., Engineering Division
 Subject : Report. (May 1944)

Reference : ES/517/17.

Date : 1 Jan 44.

1. The Utilities Section in Region 5 has been busy on routine investigations, power consumption as a basis for rationing, reports for and setting with Dist. 2 Electricity Control Committee and various special investigations noted below.
2. At the meeting of the Electricity Control Committee in HAWI on May 26th it was pointed out that when POWS was taken it might be necessary for the Southern district to further reduce the consumption of ^{current} in order to make a contribution to the needs of that city and several instructions were issued to prepare lists of feeders that might be disconnected in order to insure this reduction upon one day's notice. Such a list is now being prepared for PUGLIA Province but it is a most difficult problem due to the wide distribution of military installations in this Province.
3. The question of reactivating the Payer Mill at PUGLIA town was discussed and it was decided that the power demand would be such that an application would have to be made to and approved by the Power Committee, HAWI before permit for operation could be granted.
4. Some time has been devoted to the inspection of grain storage bins in PUGLIA Province as the request of the Economics and Supply and Agricultural Sections of Region Headquarters.
5. Time was also spent in arranging to increase the power feed to a large and badly needed pasta plant in the CAUTERAS area which increase, made by installing a new transformer, will improve and increase the output of this mill.
6. Some improvements were suggested in the water distribution system which will better the water supply in CAUTERAS.
7. At the request of the Dir. of Mines an inspection was made of the Ordo MACONELAI (anywhere) mine near BOLIVIA and certain information obtained from the director which was forwarded through the Economics and Supply Div to the Mining Div. A.C.C.

For Regional Commissioners,

R. J. J. J.
 C. J. J. J.
 Lt. Col., U.S.A.,
 Regional Engineer.

CAJ/EM.

7021

it was pointed out that when ^{current} water was taken it might be necessary for the Southern District to further reduce its consumption of ^{current} water in order to make a contribution to the needs of that city and general instructions were issued to prepare lists of feeders that might be disconnected in order to insure this reduction upon one day's notice. Such a list is now being prepared for POCOLIA Province but it is a most difficult problem due to the wide distribution of military installations in this Province.

3. The question of reactivating the Pagar Mill at POCOLIA town was discussed and it was decided that the power demand would be such that an application would have to be made to and approved by the Power Committee, WAPLES before permit for operation could be granted.

4. Some time has been devoted to the inspection of grain storage bins in POCOLIA Province at the request of the Economic and Supply and Agricultural Sections of Region Headquarters.

5. Time was also spent in arranging to increase the power feed to a large and badly needed pasta plant in the CAUCABASSO area which increase, made by installing a new transformer, will improve and increase the output of this mill.

6. Some improvements were suggested in the water distribution system which will better the water supply in CAUCABASSO.

7. At the request of the Dir. of Mines an inspection was made of the Cudlo MARCINILLI (Mangarosa) mine near BOLANO and certain information obtained from the director which was forwarded through the Personnel and Supply Div to the Mining Div. A.C.C.

For Regional Commissioner,

[Signature]
C.E. LANTIER,
Lt. Col., U.S.A.,
Regional Engineer.

CAU/BSL

7021

To: ~~Col.~~ Col. C.A. Latimer, C.E., Regional Engineer, HQ., A.M.G. Region 5.
 From: Major J.E. Foden, Regional Public Works Officer, HQ., A.M.G. Region 5.
 Date: 1 June 1944.

Subject: Report on Activities of the Public Works Section, Engineering Division, for May 1944.

1. Previous reports have covered both Public Works and Utilities. On the advice of Lt. Col. L. A. Jenny, Director, Public Works and Utilities Sub-Commission, A.C.C. during his recent visit to this HQ. the designations of the two officers of this section have been changed to:

Major J.S. Bennett - Regional ~~Electrical~~ Utilities Officer
 Major J.E. Foden - Regional Public Works Officer

This report is therefore confined to Public Works except in so far as assistance has been given to the Regional E.C.O. who is submitting a separate report on matters dealt with by his section.

2. Activities during the month have not introduced any new major items. In general the Section has been engaged on routine matters and following up reconstruction programmes initiated at an earlier date.

3. Water Supply. (a) The survey has been extended to cover Fersoli when it was found that previous difficulties had been overcome and a reasonable supply was being maintained.

(b) In Campobasso town supply is being maintained but requires watching. The higher part of the town is fed by gravity from a spring some miles outside. The normal summer diminution in flow is causing some shortage in this area and every effort is being made to secure equitable distribution of the water available by control of the piping circuits. Troops are quartered in several of the buildings in the affected zone and for that reason special attention is being given to any reports of shortage. In particular the situation is being alleviated by extending the pumped supply, which feeds the remainder of the town and suffers less from seasonal flow variation, to the lower part of the area.

4. Roads and Bridges. Surveys of provincial roads have been instituted to determine the possibility of constructing diversions or temporary bridges pending permanent rebuilding. Road travel in Campobasso Province calls for many long detours and a short term policy of improvisation which would open up the by-roads would be advantageous to the community. Indications are that many of the roads have surfaces equal to or superior than those of the State roads.

5. Civilian Transport. Trunk Pool No. 1, Poggia, has been assisted to make contacts with RAOG and REMS in connection with indenting for spares and making arrangements for repairs.

6. Railways. Major E. J. Mole, Transportation Sub-Commission, A.C.C. visited Campobasso during the month to investigate the recommendations made in my April report for re-opening the Campobasso-Fersoli Railway. He made a personal survey of the line and expressed general agreement with the project. He returned to Naples on 25 May and is in the process of making arrangements for the project.

This report is therefore confined to Public Works except in so far as assistance has been given to the Regional P.U.O. who is submitting a separate report on matters dealt with by his section.

2. Activities during the month have not introduced any new major items. In general the Section has been engaged on routine matters and following up reconstruction programmes initiated at an earlier date.

3. Water Supply. (a) The survey has been extended to cover Termoli when it was found that previous difficulties had been overcome and a reasonable supply was being maintained.

(b) In Campobasso town supply is being maintained but requires watching. The higher part of the town is fed by gravity from a spring some miles outside. The normal summer diminution in flow is causing some shortage in this area and every effort is being made to secure equitable distribution of the water available by control of the piping circuits. Troops are quartered in several of the buildings in the affected zone and for that reason special attention is being given to any reports of shortage. In particular the situation is being alleviated by extending the pumped supply, which feeds the remainder of the town and suffers less from seasonal flow variation, to the lower part of the area.

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5. Civilian Transport. Truck Pool No. 1, Foggia, has been assisted to make contacts with RACC and RENE in connection with indenting for spares and making arrangements for repairs.

6. Railways. Major E. J. Mole, Transportation Sub-Commission, A.C.C. visited Campobasso during the month to investigate the recommendations made in my April report for re-opening the Campobasso-Teroli Railway. He made a personal survey of the line and expressed general agreement with the project. He returned to Naples to report to his Sub-Commission and the result is awaited. 12th 20
meantime a skeleton programme has been mapped out so that no time shall be lost should the scheme be approved.

7. Electricity Supply. The situation in Campobasso district continues satisfactory. Supply is meeting the demand and apart from a few local breakdowns there have been no serious interruptions to supply.

Repairs to the DE Cosimo hydroelectric plant should be completed by June 7th bringing in another 285 KVA.

Instruments to complete the control panel for one set at Riefreddo have been ordered from Naples and should enable this station to generate 150 KVA by 1 July.

Present efforts are directed towards repairing transmission lines to give a greater measure of inter-station working.

Progress with power plant repairs indicates that by the commencement of new ~~work~~ the Biferno group of stations will be generating in excess of local requirements and export of power to the UNES system along the Adriatic coast a possibility.

8. Industrial School Workshop, Campobasso. Possession of this workshop has now been obtained and the original staff reinstated. Tools and equipment are being overhauled under the supervision of this Section and steps taken to procure essential items to put the shop into commission.

9. Central Store, Campobasso. Constructional alterations are complete. Doors and windows are being made and should be fitted within the next ten days when the building will be ready for handing over to the Economics and Supply Division.

J.E.F.
J.E. FODEN,
Major,
Regional Public Works Officer.

7019

TO : Major C. L. LAYHER, C.E. Regional Engineer, Reg. 3 AND
 FROM : Major J. E. POWEN, Regional E. V. & U. Officer
 SUBJECT : Report on Activities of Public Works & Utilities Section,
 Engineering Division, for April 1944.
 DATE : 1 May 1944.

1. WATER SUPPLY. Further attention has been given to improving the water supply in Campobasso city. Arrangements were made for the Water Engineer to visit Naples where he was able to procure piping and fittings for use on repairs. A drive has been made to reduce wastage from free running faucets. Both pumping sets in the pump house are working satisfactorily after the starter of the Foggia motor had been re-wired for the local voltage.

Water is now normally available from 0700 hrs until 2400 hrs and any interruptions to supply are usually local and due to repairs to mains.

Barbed wire has been provided for the protection of one of the intake points against pollution.

2. ENERGY SUPPLY.

a. Power Generation. The inspection of power stations on the Diferno river has been completed and embodied in a separate report of which a copy is attached.

b. Power Consumption. In Campobasso Province, south-eastern district, power supply is meeting the demand reasonably well.

This Region was represented by Maj. J.S. Bennett at the meeting of No. 2 District Electricity Control Committee held on 14 April. It was then agreed that economy measures already instituted in Foggia Province should be allowed to continue without alteration for the present; also that Campobasso Province S-E district, which is independent of the pool, should make its own regulations for controlling consumption of power as circumstances demand.

Classified data regarding power users in Campobasso Province, north and east districts, is being collected and submitted for consideration at the next meeting of the committee.

3. REPAIR FACILITIES. There has been delay in making over the workshop referred to in the March report due to the difficulty of finding alternative accommodation for NAAFI stores in the building. Arrangements were made to move NAAFI to another building but have had to be deferred owing to combatant troops passing through taking over. Latest information is that it is expected to be possible to move NAAFI in the near future. Meanwhile it is not possible to overhaul the equipment owing to the congested state of the store.

4. RAILWAYS. A survey has been made of the Ternoli - Campobasso railway and findings have been incorporated in a separate report. This indicates the nature and extent of damage due to enemy action and outlines proposals for putting the line into operation again.

7018

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Barbed wire has been provided for the protection of one of the

2. WATER SUPPLY.
 - a. Power Generation. The inspection of power stations on the Eiferno river has been completed and embodied in a separate report of which a copy is attached.
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Classified data regarding power users in Campobasso Province, north and east districts, is being collected and submitted for consideration at the next meeting of the committee.

3. REPAIR FACILITIES. There has been delay in making even the workshop referred to in the March report due to the difficulty of finding alternative accommodation for HAAPI stores in the building. Arrangements were made to move HAAPI to another building but have had to be deferred owing to combatant troops passing through taking over. Latest information is that it is expected to be possible to move HAAPI in the near future. Meanwhile it is not possible to overhaul the equipment owing to the congested state of the store.

7018

4. RAILWAYS. A survey has been made of the Ternoli - Campobasso railway and findings have been incorporated in a separate report. This indicates the nature and extent of damage due to enemy action and outlines proposals for putting the line into operation again.

5. AMG CENTRAL STORE DEPOT, CAMPOLASSO. Plans, specifications & contract for adaptation of the Ente Economico della Cerealicoltura, Campobasso, as a central store depot for AMG purposes have been approved. Release of materials not otherwise available to the contractors has been obtained from L.E. stocks.

J.S.F.
 J.E. POSEY
 Major, O/L
 Regional P.W.S.U. Officer
 Engineering Division
 Region 5 AMG

To : Major G.A. LATIMER, A.E., Regional Engineer, Region 5, A.M.G.
 From : Maj. J.E. PUGH, Regional P.W. & U. Officer, Region 5, A.M.G.
 Subject: TERMOLO-CAMPORASSO-RENVENITO railway.

Reference : R5/517/3.

Date : 27 Apr 44.

I. INTRODUCTION.

1. The TERMOLO-RENVENITO line is a link in the Italian State Railway System providing a connection with the NAPLES-FOGGIA line at RENVENITO and the main West coast route at TERMOLO. It is a single line track of standard gauge for steam operation, no sections being electrified.
2. The northern section of the line, from TERMOLO to RENVENITO, and comprising approximately two thirds of its length, lies in CAMPOBASSO Province.
3. In view of the importance to A.M.G. of exploring all means of transportation an investigation has been made of the extent of the damage done to this line and repairs required to restore it.
4. The official responsible for engineering work on the line is Dott. Ing. ANTONIO CARLUCCIO of CAMPOBASSO who has provided much valuable detailed information which has been of great assistance in compiling this report.

GENERAL.

II. CONDITION OF LINE.

5. From the information supplied by Dott. Ing. CARLUCCIO it was immediately apparent that whereas between TERMOLO and CAMPOBASSO damage by enemy action has been of limited extent, between CAMPOBASSO and RENVENITO demolitions and destruction has been carried out much more thoroughly and methodically.
6. Apart from damage to the permanent way, including torn up and heaved rails, removal of fish-plates and sleepers etc. which can be replaced with little difficulty, the more serious aspect of reconstruction concerns damage to bridges and tunnels.

7. The relative position in the two sections of line as regards damaged bridges and tunnels is as follows :

<u>Bridges.</u>																	
No. of Arches.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total.
TERMOLO - CAMPOBASSO		2	1	1	-	2	-	1	-	1	1	-	1	-	1	-	10
CAMPOBASSO - RENVENITO		1	-	9	1	2	6	3	1	4	-	2	-	2	-	-	28

Tunnels.

TERMOLO - CAMPOBASSO, 5.
 CAMPOBASSO - RENVENITO 8.

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2. The bridge section of the line, from TEMOLI to CAMPOBASSO, was approximately two thirds of its length, lies in CAMPOBASSO Province.

3. In view of the importance to A.M.G. of exploring all means of transportation an investigation has been made of the extent of the damage done to this line and repairs required to restore it.

4. The official responsible for engineering work on the line is Dott. Ing. ANTONIO CARLUCCIO of CAMPOBASSO who has provided much valuable detailed information which has been of great assistance in compiling this report.

GENERAL

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6. Apart from damage to the permanent way, including torn up and painted rails, removal of fish-plates and sleepers etc. which can be replaced with little difficulty, the more serious aspect of reconstruction concerns damage to bridges and tunnels.

7. The relative position in the two sections of line as regards damaged bridges and tunnels is as follows:

Bridges

No. of Arches.	1	2	3	4	5	6	7	8	9	10	14	15	Total.
TEMOLI - CAMPOBASSO	2	1	1	-	2	-	1	-	1	1	-	1	10
CAMPOBASSO - RENEVENTO	1	-	9	1	2	6	3	1	4	-	2	-	29

Tunnels

TEMOLI - CAMPOBASSO, 5.
CAMPOBASSO - RENEVENTO 8.

8. Between CAMPOBASSO and RENEVENTO demolition of bridges has been thorough and little more than piles of rubble remain to mark their position. Between CAMPOBASSO and TEMOLI destruction in the majority of cases has been partial only. The same general characteristic applies to tunnels.

9. In view of the foregoing broad survey it was considered that re-building of the CAMPOBASSO-RENEVENTO section could not be completed in time to serve A.M.G. purposes and attention has been concentrated on the CAMPOBASSO-TEMOLI section.

10. The greater part of the latter section has been surveyed personally and the observations which follow combine the results of the survey and information supplied by Dott. Ing. CARLUCCIO.

III. TEMOLI-CAMPOBASSO SECTION/.....

7017

- 2 -

III. TERMO-LI-CAMPORASSO SECTION.

11. Map references, ITALY 1:100,000 sheet 155 S. SEVERO.
" " " 154 LARINO.
" " " 162 CAMPORASSO.
12. Starting in TERMO-LI station the first two kilometers of line run parallel with the main TERMO-LI-LARI coast line.
13. At H837753 the track turns SSE and crosses the TERMO-LI-POZZUOLI road by a single span overbridge at H835748. This bridge is carried on brick abutments and the decking consists of heavy RSJs placed side by side and filled in between with concrete. Attempted destruction by the enemy blew out the three outside joists and the fourth joist is distorted. The remainder of the decking and the abutments are sound and the bridge takes rail traffic which is able to get as far south as GUERCONERI. Thorough overhaul of the decking and repairs to the side of the bridge are necessary and should be completed in 30 days.
14. At H822698 the combined rail and road bridge over the ALPINO river adjacent to GUERCONERI station is blown and road traffic is carried on a 250 ft Bailey. It is understood that a scheme for a new permanent bridge is under consideration as part of the road-bridge re-building programme and provision for running a single line track over it as before should present no difficulties.
15. South of the ALPINO river the fish-plates have been removed from both rails for a distance of approx. 4 km.
16. At H812675 a single arch brick bridge over the TERMO-LI-CAMPORASSO road has been blown. The abutments are sound and re-construction of the arch is estimated at 40 days work.
17. At H803652 the track has been ained and both rails slightly bent for a length of 20 ft.
18. From H794568 to H794560 both rails have been torn up and are lying at the side of the track. Fish plates and sleepers are missing and the ballast has been disturbed. This length has the appearance of having been used as a M.V. park. Relaying of the track is a straight forward platelaying job.
19. From H794560 to LARINO station (H764555) the track is in good condition. For about 0.5 km around the loop at H779536 the track appears to have been relaid with new rails quite recently. Old rails are lying alongside the track and there is mentioned also a 0.5 km run of contractor's tramway 0.3 m gauge.
20. At H709494 a ten span brick arch bridge across a stream bed had been partially demolished. Three arches are affected but piers and abutments are sound and it is estimated that rebuilding could be completed in 50 days.
21. At H703497 a three span brick arch bridge over the TERMO-LI - CAMPORASSO road has been completely demolished. It is considered that in rebuilding the two end arches could be dispensed with by extending the embankment to each end of a single brick arch of 8.0 m span. The time required for construction of the new bridge is estimated at 70 days.
22. Three arches of 12, 12 & 6 m span of the 15 arch brick bridge at H645384 have been demolished together with 2 piers. The remaining arches and piers are sound and it is estimated that reconstruction could be completed in 70 days.

14. At bridge the concrete wall and road bridge over the river has been removed from both rails to GUGLIEMINI station is blown and road traffic is carried on a 260 ft Bailey. It is understood that a scheme for a new permanent bridge is under consideration as part of the road-bridge re-building programme and provision for running a single line track over it as before should present no difficulties.
15. South of the RIVERNO river the fish-plates have been removed from both rails for a distance of approx. 1 km.
16. At H612675 a single arch brick bridge over the TEMOLI-CAMPORASSO road has been blown. The abutments are sound and re-construction of the arch is estimated at 40 days work.
17. At H635652 the track has been mined and both rails slightly bent for a length of 20 ft.
18. From H794568 to H794560 both rails have been torn up and are lying at the side of the track. Fish plates and sleepers are missing and the ballast has been disturbed. This length has the appearance of having been used as a M.T. park. Relaying of the track is a straight forward platelaying job.
19. From H794560 to LAKINO station (H764555) the track is in good condition. For about 0.5 km around the loop at H779536 the track appears to have been relaid with new rails quite recently. Old rails are lying alongside the track and there is estimated also a 0.5 km run of contractor's tramway 0.5 m gauge.
20. At H709494 a ten span brick arch bridge across a stream bed had been partially demolished. Three arches are affected but piers and abutments are sound and it is estimated that rebuilding could be completed in 50 days.
21. At H703407 a three span brick arch bridge over the TEMOLI - CAMPORASSO road had been completely demolished. It is considered that in rebuilding the two end arches could be dispensed with by extending the embankment to each end of a single brick arch of 8.0 m span. The time required for construction of the new bridge is estimated at 70 days.
22. Three arches of 12, 12 & 6 m span of the 15 arch brick bridge at H645384 have been demolished together with 2 piers. The remaining arches and piers are sound and it is estimated that reconstruction could be completed in 70 days.
23. At H643383 a tunnel 58 m long has been damaged for a length of 19 m at the CAMPORASSO end. The CAMPORASSO - TEMOLI road passed over the damaged portion and has already been diverted. Time for clearing debris and rebuilding is estimated at 60 days.
24. A five arch brick bridge at H595378 has been completely demolished. In the reconstruction scheme it is proposed to reduce the bridge to one of three arches, each of 8 m span, and replace the end arches by an earth embankment. Time for rebuilding estimated at 90 days.
25. At H594377 a tunnel 65.5 m long has been damaged at the ends for distances of 20 and 12 m respectively and also a centre portion 12 m long. It is estimated building could be completed in 90 days.
26. At H579325 at tunnel/.....

26. At H579325 a 1/2 tunnel 204.6 m long has been damaged at the ends and in the centre for distances of 15, 30 and 15 m respectively. The earth cover over the tunnel is shallow and in rebuilding the portals would be set back from their original positions. To complete the work is estimated to require 180 days.

27. Eight arches and seven piers of the 9 arch brick bridge at H572327, where the track crosses a stream bed, have been destroyed. The reconstruction scheme provides for rebuilding 4 arches and replacing the remainder by an earth embankment using material available through partial demolition of the tunnel at the CAMPOBASSO end of the bridge. Work involved is estimated to require 90 days for completion.

28. The 155 m long tunnel at H571327 has been damaged at both ends and in the centre for distances of approximately 12 m in each case. The earth cover is shallow and in reconstructing the tunnel the portals would be set back from their original positions. It is estimated that rebuilding could be completed in 95 days.

29. The 85 m long tunnel at H567328 has been completely demolished. As the earth cover is only 2.5 m thick it would be reconstructed as a cutting. Time required estimated at 60 days.

30. The 7 arch bridge across a depression at H567328 has been completely demolished. It is proposed to reconstruct it as a single arch of 8 m span with embankments at either end, using material from the demolished tunnel at H567328 for the purpose. Estimated time for completion 70 days.

31. At H566327 the line crosses a two arch brick culvert which has been demolished. Each arch has a span of 3 m and it is estimated that rebuilding could be completed in 40 days.

32. From the above culvert to CAMPOBASSO station the track requires only general overhaul.

33. Points in the station yards at HIPABOTNGI (H704411), CAMPOLENGO (H573580), KAPRICE (H583593), HIPALINGANO (H564325) and CAMPOBASSO (H553284) have been damaged. At other stations in the section the points are intact.

34. Water towers at CAMPOBASSO and CAMPOLENGO stations have been destroyed but those at UNURI (H794358), S. MARTINO (H818643), LARINO (H764555) and CASACALANDA (H706487) are in good order.

35. All rolling stock and locomotives seen in the section have been destroyed, the former generally by fire and the latter by explosives. Some salvage of rolling stock is possible but locomotives have been damaged beyond repair.

36. Station buildings are generally in a fair state and many are at present in use for military purposes. Renovations for essential needs would be a small part of the reconstruction programme.

37. Signalling apparatus has been put out of action throughout the section and requires replacing.

38. Much of the foregoing work could proceed simultaneously and saving materials to be delivered is required the total time for completion of the rebuilding programme is estimated at 180 days.

7015

29. The 25 m long tunnel at H567328 has been completely destroyed as a cutting. Time required estimated at 80 days.

30. The 7 arch bridge across a depression at H567328 has been completely demolished. It is proposed to reconstruct it as a single arch of 8 m span with embankments at either end, using material from the demolished tunnel at H567328 for the purpose. Estimated time for completion 70 days.

31. At H566327 the line crosses a two arch brick culvert which has been demolished. Each arch has a span of 3 m and it is estimated that rebuilding could be completed in 40 days.

32. From the above culvert to CAMFORASSO station the track requires only general overhaul.

33. Points in the station yards at NIMBOTTONI (H704411), CAMPOLEITO (H637380), MARTINE (H583353), HIRALIMOSANO (H564325) and CAMFORASSO (H553284) have been damaged. At other stations in the section the points are intact.

34. Water towers at CAMFORASSO and CAMPOLEITO stations have been destroyed but those at UNUEI (H794558), S. MARTINO (H518643), LARINO (H764555) and CAMACUENCA (H706487) are in good order.

35. All rolling stock and locomotives seen in the section have been destroyed, the former generally by fire and the latter by explosives. Some salvage of rolling stock is possible but locomotives have been damaged beyond repair.

36. Station buildings are generally in a fair state and many are at present in use for military purposes. Renovations for essential needs would be a small part of the reconstruction programme.

37. Signalling apparatus has been put out of action throughout the section and requires replacing.

38. Much of the foregoing work could proceed simultaneously and assuming materials to be delivered as required the total time for completion of the rebuilding programme is estimated at 180 days.

7015

IV. LOCALLY AVAILABLE MATERIALS/.....

IV. LOCALLY AVAILABLE MATERIALS FOR RECONSTRUCTION.

39. Local resources require further investigation but indications are that the bulk of materials required are to be found in the vicinity of the railway or within reasonable transport distance.

a. Stone for Construction and Ballast. Quarries in CAMPOBASSO and VINCIGRANO. There is also a railway quarry at LIPAROTON.

b. Bricks. Brickworks near CAMPOBASSO and LIPERA.

c. Lime. There are limekilns at S. MARTINO in FEMINILIS 16 km.

south of TEMOLI and limestone is understood to be found in the valley of the river CIGERO nearby.

d. Sand. From the river CIGERO and other sources along the route.

e. Cement. (pozzolano) from AVELLINO.

40. It is estimated that approx. 300,000 bricks will be required for the reconstruction of arches. Piers and abutments would be reconstructed of stone quarried near the track or salvaged. Cement would amount to about 3000 quintals but could be reduced to half or less by the use of lime mortar for which the local lime kilns would provide the lime.

41. It is understood that there are in CAMPOBASSO and district a number of railway employees with the necessary experience for this work and that a number of others have found employment elsewhere and could be recalled.

V. GENERAL.

42. The immediate interest of this line to ARI lies in the facilities it would provide for direct transportation by rail of civilian supplies from HUPES and BARI to CAMPOBASSO, an important distribution centre. It would also prove valuable for the transportation of agricultural products from the farming districts through which the line passes.

43. Taking a longer view it appears probable that the RENNEVO - TEMOLI line as a whole will prove to be the easiest to reconstruct to provide an additional standard gauge rail link between the main east and west coast routes. Alternative standard gauge routes to the north pass through territory where heavy fighting has taken and is taking place and much more ~~work~~ demolition can be expected, eg. the VAIRANO - ISENIA - CAROVILLI - CASTEL di SANGRO line joining the main east coast line at PESCARA.

44. Renovation of the TEMOLI - CAMPOBASSO line in the near future would serve an immediate useful purpose and also reduce the amount of work to be done to restore the TEMOLI - RENNEVO connection.

45. There is evidence that ballast is being removed from the track here and there for road repairs and this and similar petty diversions of railway property likely to continue so long as it remains derelict, all add to the work of reconstruction.

10.1.
J.E. FORD
Major 9/1

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but could be reduced to half or less by the use of lime mortar for which the local lime kilns would provide the lime.

41. It is understood that there are in CAMPOBASCO and district a number of railway employes with the necessary experience for this work and that a number of others have found employment elsewhere and could be recalled.

V. GENERAL.

42. The immediate interest of this line to AMI lies in the facilities it would provide for direct transportation by rail of civilian supplies from NAYAKA and BARI to CAMPOBASCO, an important distribution centre. It would also prove valuable for the transportation of agricultural products from the farming districts through which the line passes.

43. Taking a longer view it appears probable that the BENEVENTO - TERNOLI line as a whole will prove to be the easiest to reconstruct to provide any additional standard gauge rail link between the main east and west coast routes. Alternative standard gauge routes to the north pass through territory where heavy fighting has taken and is taking place and much more ~~extensive~~ demolition can be expected, e.g. the VAIRANO - IERACALA - CAROVILLI - CASTEL di SANGRO line joining the main east coast line at PESCARA.

44. Renovation of the TERNOLI - CAMPOBASCO line in the near future would serve an immediate useful purpose and also reduce the amount of work to be done to restore the TERNOLI - BENEVENTO connection.

45. There is evidence that ballast is being removed from the track here and there for road repairs and this and similar petty diversions of railway property likely to continue so long as it remains derelict, all add to the work of reconstruction.

7014
J. F. FOLEY
Major G/L
Regional PW & V Officer
Region 5 A.M.

To : Maj. C.A. LATINA, C.E., Regional Engineer, Region 5 A.M.G.

From : Maj. J.E. FODEN, Regional P.W. A U. Officer, Region 5 A.M.G.

Subject : Electrical Power Generation and Distribution in Campobasso Province;
South-eastern District.

Reference : R5/516/2.

Date : 26 Apr 44.

I. INTRODUCTION.

1. The generation and distribution of electrical energy in Campobasso Province falls into three distinct districts :

(a). North and North-east along the valley of the river TRIENO and South-east along the coast from VASTO to the CAMPOBASSO-FOGGIA boundary extending inland as far as LARINO forming part of the UNES system.

(b). South-west centred on ISERNIA and VENAFRO and forming part of the SNE system.

(c). South-east centred on CAMPOBASSO and extending along the valley of the river BIFERNO from its source to the UNES boundary. Part of the SNE system.

2. This report deals with the 3rd district which is self-contained and self-supporting, neither taking power from nor, at the present time, feeding into the national grid.

3. Power is generated in 16 stations, all hydro-electric and operating on low heads, and located on the BIFERNO river. Capacities vary from 60 to 880 KVA but there is no standardisation of voltage, either of generation or distribution. Frequency is standardised at 45 cycles but is not always closely regulated and varies between 45 and 50 cycles.

4. Each power station has been inspected to determine the damage done by enemy action, the present generating capacity and the possibility of increasing output by reasonable repairs.

5. The majority of the stations are owned and operated by the Societa Elettrica della Campagna of the SNE group which company also purchases and controls the distribution of power from most of the remaining privately owned stations. The senior official of S.E. della C. responsible for this district is Ing. ENZO FURLO whose headquarters are in CAMPOBASSO.

6. Prior to Region 5 taking over Ing. FURLO had already completed numerous repairs and improved power generation and distribution in the district. These and subsequent repairs make further possible improvements in the near future relatively small. The stage has almost been reached where repairs to damaged plant as distinct from the re-building of completely demolished stations have been completed.

II. POWER GENERATION.

7. Power generation is seasonal and influenced by the flow of water in the

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(a). North and North-east along the valley of the river BIFFINO and South-east along the coast from VASTO to the CAMPOBASSO-FOGGIA boundary extending inland as far as LIPINO forming part of the UNES system.

(b). South-west centred on ISERNIA and VENAFRO and forming part of the SUE system.

(c). South-east centred on CAMPOBASSO and extending along the valley of the river BIFFINO from its source to the UNES boundary. Part of the SUE system.

2. This report deals with the 3rd district which is self-contained and self-supporting, neither taking power from nor, at the present time, feeding into the national grid.

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4. Each power station has been inspected to determine the damage done by enemy action, the present generating capacity and the possibility of increasing output by reasonable repairs.

5. The majority of the stations are owned and operated by the Societa Elettrica della Campagna of the SUE group which company also purchases and controls the distribution of power from most of the remaining privately owned stations. The senior official of S.E. della C. responsible for this district is Ing. ENZO FURLO whose headquarters are in CAMPOBASSO.

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II. POWER GENERATION.

7. Power generation is seasonal and influenced by the flow of water in the BIFFINO which falls off to a considerable extent during the summer months. The influence is least felt in the stations nearest the source of the river which is fed by perpetual springs and melting snow from the Monti del Matese above BOIANO. Taking the district as a whole output is reduced to about two thirds of the winter output.

8. A list of the 17 power stations with particulars of installed capacity present state and summer and winter output is given in Appendix "A". It will be seen that five installations, DE ANGELIS, ISCHIA, GUACCI, QUIRINO & S. MASSIMO have been completely destroyed, i.e. nothing short of re-building and re-equipping from the foundations upwards will see them in operations again.

9. BIVARO has suffered considerable damage to the fabric of the powerhouse and to the mechanical and electrical equipment. One modern turbine has escaped damage however and an alternator from the BIFFINO station can be made available for coupling to it. As this would make another 215 KVA available in the immediate vicinity of CAMPOBASSO town the S.E. della C. engineer has been instructed to

prepare a scheme/.....

- 2 -

prepare a scheme involving the minimum of re-building to house one set - the original station housed two sets.

10. The RIVAREDO station suffered considerable damage to the fabric of the power house and to the control panel and turbine governors. A temporary brick structure has been built to protect the plant and repairs to the governors are being made locally. Lack of instruments is holding up repairs to the control panel and a list of those required has been passed to P.W. & U. Sub-commission, A.C.C., with a request that they be obtained through SME head office in RAIES. This is one of the stations least affected by seasonal variations in the water flow and the additional summer/winter output of 200/280 KVA in the BOIANO district which would become available are considered justification for giving all possible assistance. It is also possible that the greater part of this output could be diverted to the BENEVENTO area if required.

11. Uncompleted repairs at the remaining damaged stations are small and their completion depends only upon minor items for the release of which applications has been made.

12. The S. MASSIMO installations is the only one in CAMPOBASSO district operating under a high head, viz 736 metres. In summer the water supply dries up completely and the plant is closed down. The fact that the plant has been demolished does not therefore adversely affect the normal summer contribution of this station to the system as a whole.

13. The 4 undamaged stations are in good condition and have been well maintained by the resident plant attendants. In one case only, COLLEMANHISE, was the plant found in a dirty condition and appropriate action was taken with the plant attendant responsible.

14. Power stations are in telephonic communication with one another and with the head office of S.E. della C. in CAMPOBASSO. Owing to the remote location of most of the stations and difficulties of travel it has not been possible for the engineer-manager of S.E. della C. to visit his installations at frequent intervals and their high standard of upkeep reflects credit on his local staffs.

15. Dams, flumes and tail races are in good condition and normal maintenance work is proceeding.

16. Much of the repair work carried out to date is the result of improvisation and the use of materials in the possession of S.E. della C. Requests for assistance have been negligible.

III. TRANSMISSION & DISTRIBUTION.

17. All communes in the district covered by this report are receiving power for industrial and lighting purposes. Arrangements have been made with power users - flour and pasta mills etc. - in different villages to stagger their hours or days of working to ease peak loads and no excessive hardships have been inflicted.

18. It should be possible to meet summer power demands as output falls by extending hours of working as the need for lighting decreases.

19. The transmission system is shown on the map, Appendix "B".

20. The bulk of the power is transmitted to sub-stations at 20, 11 or 764V? two small areas being fed at 3 and 1 KV respectively. Transmission lines are in fair condition and breakdowns have generally been due to combined snow and wind.

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13. The 2 undamaged stations are in good condition and have been well maintained by the resident plant attendants. In one case only, COLLEDARCHESE, was the plant found in a dirty condition and appropriate action was taken with the plant attendant responsible.

14. Power stations are in telephonic communication with one another and with the head office of S.E. della C. in CAMPOBASSO. Owing to the remote location of most of the stations and difficulties of travel it has not been possible for the engineer-manager of S.E. della C. to visit his installations at frequent intervals and their high standard of upkeep reflects credit on his local staffs.

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19. The transmission system is shown on the map, Appendix "B".

20. The bulk of the power is transmitted to sub-stations at 20, 11 or ^{7.6} KV, two small areas being fed at 3 and 1 KV respectively. Transmission lines are in fair condition and breakdowns have generally been due to combined snow and wind effects. With improving weather there has been practically no interference with distribution.

21. The ~~transmission~~ important 60 KV grid line from CAMPOBASSO to BENEVENTO is out of action on account of damage to the line itself between these towns. The main 60 KV transformer sub-station (SME) in CAMPOBASSO is also completely destroyed. This isolates CAMPOBASSO from the south and effectively prevents any interchange of current.

22. The practicability of the suggestion in para 10 depends upon the installation of a 9/60 KV step-up transformer at RIORREDO and repairs to the CAMPOBASSO-BENEVENTO line, although, for the power available, it might be found possible to transmit as far as BENEVENTO at 9 KV without excessive losses.

23. The 20 KV line/.....

23 23. The 20 KV line between FORTORE and CASALNUOVO (Foggia Province) is also out of action on account of damage further isolating the CANTORASSO district.

IV. CONCLUSIONS.

24. Repairs to power plants and transmission lines already effected have cleared most of the work which can be done short of re-building demolished stations. It is recommended that assistance be given to complete remaining items outlined above as soon as possible.
25. There is a reasonable balance between supply and demand and no serious rationing hardships have been imposed.
26. Possibilities of export of power to outside districts are limited and in amount and dependent upon transmission line and transformer repairs.

28 Apr 44.
JEF/BL

J.E. FODEN
J.E. FODEN,
Major, General List,
Public Works & Utilities Officer,
Engineering Division,
H.Q. Region 5, A.M.G.

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