

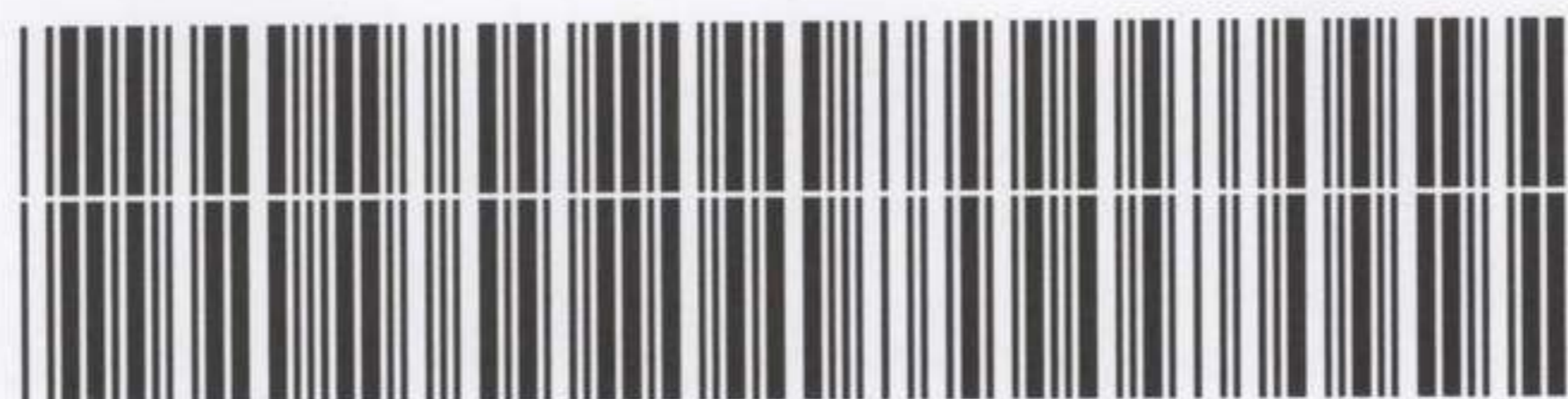
AWM4
Australian Imperial Force unit war diaries,
1914-18 War

Medical, Dental & Nursing

Item number: 26/82/20

Title: 7th Sanitary Section, ANZAC
Mounted Division

March 1919



AWM4-26/82/20

Confidential

Original

Australian Imperial Force

War Diary

of

No 7 Sanitary Section Anzacs
for

March 1919

Officer Compiling Harvey Sutton major

Officer Commanding Harvey Sutton major

Page 1

Year 2 Volume 3 Folio 1

WAR DIARY

Army Form C. 2118.

Instructions regarding War Diaries and Intelligence Summaries are contained in F. S. Regs., Part II. and the Staff Manual respectively. Title pages will be prepared in manuscript.

March

INTELLIGENCE SUMMARY.

(Erase heading not required.)

7th Sanitary Section Anzacs

Place	MARCH Date	Hour	Summary of Events and Information	Remarks and references to Appendices
RAFA	1 st 2 nd		Inspection Ymca 2 nd med. 2 nd Bde	B
	3 rd	0915	Lecture to one half NZ Brigade at Ymca Tent on Personal Health	B
		1030	Board Inspected areas around main road	B
	4 th		Lecture postponed (open air) on account of fierce wind and dust	B
			Work on Seasonal Graph of malaria	B
			Inspected Inumerator area	B
	5		extremely wet and windy this morning	B
			U.K Leave party 30K. by Walthamston Capt. Heaton for Phipps left for Mwascar.	B
	6	0900	visited 4 th 5 th 7 th regimental areas 4 th arrived yesterday - arranged about latrine	B
		1100	visited Inumerator area	B
	7	1400	Medical Board First Brigade Major Mannering President	B
		1		B
8	1000-1115	Medical Board First Bde	B	
	1315 - 1415	" "	B	
9	1000-1215	" "	B	
	1440 1600	" "	B	
10	0915	Lecture one half NZMR Bde (B class) at Ymca 'A Healthy Farms'	B	
	10-30 1215	Medical Board First Brigade	B	
	1330 1430 + 1915 - 2045	" "	B	
11	0915	Lecture one half NZMR Bde (A class) open air 'Healthy Citizen'	B	
		DADOS re fly issues - swatters etc	B	
		Horses boarded. Box sent + 2 draughts exchanged with Signal Squadron	B	
12		Inspected watering area inumerators	B	

D. D. & L., London, E.C. (A8004) Wt W1771/M2031 250,000 5/17 Sch. 52 Forms/C2118/14

Harvey Sutton Major
oc. 7 San Sec
Anzacs

Warrington

Volume 2

Volume 3 7000 2

Army Form C. 2118.

WAR DIARY

— or —

MARCH

INTELLIGENCE SUMMARY.

(Erase heading not required.)

Seventh Sanitary Section Anzac

Instructions regarding War Diaries and Intelligence Summaries are contained in F. S. Regs., Part II. and the Staff Manual respectively. Title pages will be prepared in manuscript.

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices		
RAFA	13	1000-1215 1400-1630	Medical Board First Brigade	Inspected camps 1 st & 2 nd Regt + B+C who marched out last night	B	
	14	"	"	"	B	
	15	"	"	"	B	
	16	"	Disinfected 50 Am. Train Egyptians	"	B	
		1130	Meeting of CO's at GOC Anzac regarding conditions in general	"	B	
	17	0915	Lecture NZMR Bde "B" Class in YmCA 'Eugenics'	"	B	
	18	"	Inspected NZ Bde area (Bde left last evening) details at work cleaning up	"	B	
		1030	Medical Board	"	B	
	19	"	"	"	B	
		1430	Rafa station re Turkish Thrush 1500 DAAQ Anzac	2 BR inspectors for NZMR Bde left that night	B	
	20	"	Inspected B+C ship areas when moving out	"	B	
	21	0930	Inoculator inspected; Three Thrush Disinfectors 2 on loan 1 in possession handed over to Scottish Horse F.A.	"	B	
	22	"	Inoculator - NZ area; Sanitary Report forwarded Bde GOC as per instruction ARMS	"	B	
	23	"	" + 2 nd Bde area	"	B	
	24	"	Saw Major Kempel - late Capt Choquon L/C Sander regarding the area and the Bedouin interference	Two inspectors to 2 nd HZA	B	
	25	0900 0930	One patient wounded at memorials	Inspected 32 nd Am Train evacuated six influenza patients	Wounded + ARMS and evacuated to the station	B
		"	+ used separate trucks for train with isolation Kaulas	Wounded up memorials area	"	B
	KANTARA	26	"	Inspected sites before moving (At 1200 brought loaded air truck)	"	B
			"	Arrived at Kantara. Material by motor lorry to camp site near 3 Egyptian Troop + old POW camp	"	B
27		0930	Inspected B+C, saw ARMS and ARSOS	"	B	
28		0930	Inspected 92 Sander obtained 1 spray some formalin	Leut. Brownlee 32 nd Am sprayed by Sgt Jones	B	
29		0930	Inspected 92 Sander obtained 5 sprays also RE Park	3 Reinforcements for 4 th HZA	B	
30		"	Strong hot N wind reports + diary written up	"	B	
31	1000	Inspected 150 Rafa also 92 San Sec B+C	Six Reinforcements arrived 2 nd ASH Warrington	B		
	1051		Usual inspections & general sanitary work carried out	Harvey Sutton Major OC 4 th San Section	B	

D. D. & L., London, E.C. (A8004) Wt W1771/M2031 750,000 5/17 Sch. 52 Forms/C2118/14

Page 1
WAR DIARY

Original

Harvey Sutton, Major, VC
7. San. Sec.
Singapore

March

Appendix I -

Incineration

A feature of sanitation - the chief feature in fact - was the establishment of a divisional incinerating area. The scheme had original points. In Kantara well constructed large brick destructors carried out similar work more in municipal fashion. The Raja camp idea was the adaptation of field service conditions to base camp methods. Instead of disposal of refuse and excreta by individual units it was found practicable to combine all this and concentrate the whole work to one area under the control (direct) of the Divisional Sanitary Section. Units thus carried out collection and transport. The rest was done for them. Two headquarters helped to bring about the adoption of this scheme. The first of the kind I believe North of Kantara.

① The Divisional site was unusually compact. Units camps close together + generally concentrated - hence unit incineration would have been a nuisance + camps full of smoke. - Concentration too lessened amount of transport. The incinerating area was ~~located~~ leeward.

② The spells of stormy wet weather occurring during the winter rendered the complete burning of human feces difficult, and units therefore less keen on keeping the responsibility of disposal.

This difficulty was overcome at the incinerating area by

(a) more efficient type of incinerator - Box type i.e. A box open at both ends and at the top made of 4 sheets of corrugated iron two as a floor and one at each side supported on a framework like a bed of 3 sets of three angle irons or iron props arranged as two uprights and one crosspiece ^{to} support each end and the middle.

Wire mesh held in the rubbish at each end. The floor level is about 18 inches to 2 feet from the ground partly for air draught partly to put off loading being about the level of the lumber floor. The iron sheets are perforated (not essential). The iron props pegged together by iron nails tied with wire - wire alone first used tended to melt and give way with the heat.

Such an incinerator once it is going well is difficult to put out. The tins in the rubbish get as hot + retain the heat well and even in wet weather will burn completely out.

(b) To get them going well we used at times C solution.

but mainly relied on dry tallow. A large heap of damaged forage was made and even in the rain by digging under the top damp layer fresh supplies of dry tallow could always be obtained.

The incinerators were raked out each morning - any unburnt portions again put on the fires.

(sometimes called
bedstead type)

Page 2
WAR DIARY
MARCH

Original
Appendix I

7. San Sec. Arizona
Harvey Sutton
Major

INCINERATION

(c) An important aid to burning of feces was introduced by Staff Sgt Bainsgrave. The first method was to dump the buckets ^{contents} on top of a small mound of tublin, then transport this to the incinerator or were burnt on a larger heap of tublin on the ground. I made a rule that no refuse of any description was to go on the ground everything must go into the incinerator. The device adopted allowed this rule to be effectively followed up. Four Old Buckets were obtained & perforated in sides and bottom for use as strainers. These were placed on two iron bars stretched lengthwise over a trough of corrugated iron leading to a large absorption pit with bucket strainer at the entrance.

The Unit buckets ^{contents} on arrival were quietly dumped into these receptacles and ^{the buckets} returned to the limbers so that Unit transport was not in any way delayed and the traffic did not become congested. (The goat man came in each morning between 10 am - 11 am). When the urine had strained off - a matter of a few minutes - in these iron "colanders" the relatively dry feces mixed with tublin were dumped on a ^{burning} incinerator and more tublin put on the top. This mixture of feces and tublin formed so to speak the icing of the cake of rubbish and soot hot times in the fire below. Soot on dirt - disappeared in combustion. The smell involved in the whole affair is a minimum. Fresh feces do not smell. The smoke is not malodorous. The iron trough had to be watched. It was burnt out twice weekly with solution & resoled daily. When finally removed when the area was closed up. It was free from odor or nuisance and disposal of urine even though fecal stained effective and complete.

One difficulty alone in connection with incineration was not overcome, namely smoke. This is the one advantage that a well built incinerator municipal destructor possesses - smoke by a draught, combustion chamber and chimney can be completely eliminated. We tried first having the incinerators to North Westward of prevailing winds. Then utilizing the leeward sides of the square in which the 26 incinerators were arranged. This was a failure for the wind chopped about and often 20 out of 26 would be in full blast. The smoke was trying to the eyes and two other patients required eye baths. Meteor goggles would have been helpful. The time of exposure however was roughly about 2 hrs in the morning one hour in the afternoon. Once the incinerators were filled they looked after themselves.

WAR DIARY
MARCH

Original
Appendix 1

of San Jose Arizona
Harvey Sutton

INCINERATION	Day	Rubbish	Tobin	Accal Buckets	Incinerators	On OR	Horses
1st Bde (seems part)		30 sacks	4 sacks 2 bales	11 buckets	2 1/2	700	99
2nd Bde Complete		70 + 2 wagonloads	11 bags 10 "	21	7 1/2	1800	
Artillery		19	2	5	2	300 +	
		119 + 2 wagonloads	17 bags 12 bales	37 buckets	12 incinerators	3000 approx.	
3rd Bde (seems part)		11	10	11	1 1/2		
4th Bde		28	16 bags 5 bales	17 buckets	4 1/2		an incomplete day
Artillery		5	0	1	1/4		
5th Bde		2 wagonloads	29 bags 8 bales	2	4		
		44 +	53 + 13	36	8 1/2		

The above notes were made when units were already dispersing the 1st Bde and Divisional units gone and first part of 1st Bde embarked again only a few horses, transport animals and officers charges remained with unit. Still it gives an idea of the approximate amounts dealt with normally.

FECES 3000 men = 37 buckets at 80 lbs a bucket = 2960 lbs = 1 1/4 tons and approx 1 lb a man in full dinner when about 4000 men were dealt with = over 3 tons daily

INCINERATORS Capacity of a well packed incinerator = 9ft x 4ft x 3 1/2 ft high = 120 cubic feet per incinerator = 120 cu ft x 150 lbs of rubbish = 18000 lbs of rubbish. Calculated on 100% water - 144000 lbs = 90000 lbs = 40 tons approx. In full working order at least 20 incinerators 24 hrs a day = 66 tons

40 tons then is a conservative estimate for mass incineration while considering the great mass of tobins not burnt but put on the heap. The total weight at times have approached 100 tons daily.

A danger of incinerator work is the explosion of cartridges carelessly allowed to be thrown away in the rubbish. One of our one Egyptian received superficial wounds in this way. Finally a large heap of burnt tin, a large stack of glass bottles and a very large heap of tobins & shells. 26 incinerators were left in the area. Harvey Sutton

100 water = 1000 lbs
or 1000 lbs

Daily Incineration

Page 4
WAR DIARY
MARCH

Original
Appendix II

4 San Sec Anzac
Harvey Sub Camp

Suggestions for Disinfection of Saddlery See GRO 5035 3/2/19 DRO 230 3/1/19

STEAM	CRESOL	CRESOL	FLAME	BURN
Hot steam Disinfectant after ordinary washing	2 1/2% (1 in 40) not stronger SOAK SCRUB SUN-DRY	No soaking SCRUB 5-10 mins Wipe DUBBIN	with BRAZING lamp or spirit before & after ordinary cleaning	

CLOTH:-	Blanket	RUG	Nose Bag	Ropes	LEATHER:-	METAL:-
Blanket	Rug	Nose Bag	ROPES	SADDLE BRIDLE HARNESS HEADSTALL EYE FRINGE SAND MUZZLE	BIT STIRRUP LINKS	if old
Metal bit	Metal Bit	Stirrup	Stirrup	GROOMING KIT DANDY BRUSH		if old

In block letters for method of choice
Underlined the most important links of infection
ANTHRAX or TETANUS burn everything carcass ^{burn without}

SANITATION

Instructions re Evacuation of unit areas Rafa
Units are responsible for their own area and the adjacent roadway
Details remain behind the main body to clean up, report all
clear to the Staff Captain where available RMD in respect
and give a certificate

All beds, canteens ovens left intact
Timber wood etc not burnt but neatly stacked in one heap
Grease traps, sinks, pits covered and filled in
Latrine buckets after emptying mopped out with caustic soda
washed with cresol. Screens, rolled up, buckets etc returned to base
All rubbish tin bottles soap kitchen refuse carted to the incineration area
None burnt in the lines

On no account whatever is anything unburnt to be buried
Sanitary native remain Rafa - & last handed over to 4th San Sec
If transport impossible - Staff Captain may find
1. Rubbish burnt in lines - all heap
2. Transfer to Sanitary Section any remaining latrine

Harvey Sub Camp
Anzac

In actual practice
almost universal burial
of latrine rubbish occurred
because any latrine
& littered the whole
area with rubbish

March

Appendix 1.

Incineration

A feature of sanitation - the chief feature in fact - was the establishment of a divisional incinerating area. The scheme had original points. In Kantara well constructed large brick destructors carry out similar work more in municipal fashion. The Rafa camp idea was the adaptation of field service conditions to base camp methods. Instead of disposal of refuse and excreta by individual units it was found practicable to combine all this and concentrate the whole work to one area under the control (direct) of the Divisional Sanitary Section. Units thus carried out collection and transport the rest was done for them. Two circumstances helped to bring about the adoption of this Divisional scheme the first of its kind I believe North of Kantara.

1. The Divisional Site was unusually compact Unit camps close together and generally concentrated hence unit incineration would have been a nuisance and camps full of smoke - concentration too lessened amount of transport. The incinerating area was situated to leeward.

2. The spells of stormy wet weather occurring during the winter rendered the complete burning of human feces difficult and units therefore less keen on keeping the responsibility of disposal. This difficulty was overcome at the incinerating area by

(a) more efficient type of incinerator - Boxtype i.e. a box open at both ends and at the top made of 4 sheets of corrugated iron two as a floor and one at each side supported on a framework like a *★* bed of 3 sets of three angle irons or iron props arranged as two uprights and one crosspiece to support each end and the middle. Wire mesh held in the rubbish at each end. The floor level is about 18 inches to 2 ft. from the ground partly for air draught partly to suit off loading being about the level of the timber floor. The Iron sheets are perforated (not essential) the iron props pegged together by iron nails and tied with wire - wire alone first used tended to melt and give way with the heat. Such an incinerator once it is going well is difficult to put out, the tins in the rubbish get red hot and retain the heat well and even in wet weather will burn completely out.

(b) To get them going well we used at times C solution but mainly relied on dry tibbin. A large heap of damaged forage was made and even in the rain by digging under the top damp layer fresh supplies of dry tibbin could always be obtained. The incinerators were raked out each morning and unburnt portions again put on the fires.

(c) An important aid to burning of feces was introduced by Staff Sergt. Banskrove. The first method was to dump the buckets contents on top of a small mound of tibbin on the ground. I made a rule that no refuse of any description was to go on the ground everything must go into the incinerator. The device adopted allowed this rule to be effectively followed up. Four old buckets were obtained and perforated in sides and bottom for use as strainers, these were placed on two iron bars while stretched lengthwise over a trough of corrugated iron leading to a large absorption pit with bucket strainer at the entrance.

The Unit bucket contents on arrival were quickly dumped into these receptacles and the buckets returned to the limbers so that Unit transport was not in any way delayed and the traffic did not become congested (the great mass came in each morning between 1000 and 1100). When the Urine had strained off - a matter of a few minutes - in these iron "colanders" the relatively dry feces mixed with tibbin were dumped on a brightly burning incinerator and more tibbin put on the top. This mixture of feces and tibbin formed so to speak the icing of the cake of rubbish and red hot tins in the fire below. It soon dried and disappeared in combustion, the smell involved in the whole affair is a minimum, fresh feces do not smell and the smoke is not malodorous. The iron trough had to be watched. It was burnt out twice weekly with C solution and cresoled daily.

★
(Sometimes called bedstead type.)

then transfer this to the incinerator or even burn on a large heap of tibbin

March

Appendix 1.

Incineration

A feature of sanitation - the chief feature in fact - was the establishment of a divisional incinerating area. The scheme had original points. In Kantara well constructed large brick destructors carry out similar work more in municipal fashion. The Rafa camp idea was the adaptation of field service conditions to base camp methods. Instead of disposal of refuse and excreta by individual units it was found practicable to combine all this and concentrate the whole work to one area under the control (direct) of the Divisional Sanitary Section. Units thus carried out collection and transport the rest was done for them. Two circumstances helped to bring about the adoption of this Divisional scheme the first of its kind I believe North of Kantara.

1. The Divisional Site was unusually compact Unit camps close together and generally concentrated hence unit incineration would have been a nuisance and camps full of smoke - concentration too lessened amount of transport. The incinerating area was situated to leeward.

2. The spells of stormy wet weather occurring during the winter rendered the complete burning of human feces difficult and units therefore less keen on keeping the responsibility of disposal. This difficulty was overcome at the incinerating area by

(a) more efficient type of incinerator - Boxtype i.e. a box open at both ends and at the top made of 4 sheets of corrugated iron two as a floor and one at each side supported on a framework like a *** bed of 3 sets of three angle irons or iron props arranged as two uprights and one crosspiece to support each end and the middle. Wire mesh held in the rubbish at each end. The floor level is about 18 inches to 2 ft. from the ground partly for air draught partly to suit off loading being about the level of the timber floor. The Iron sheets are perforated (not essential) the iron props pegged together by iron nails and tied with wire - wire alone first used tended to melt and give way with the heat. Such an incinerator once it is going well is difficult to put out, the tins in the rubbish get red hot and retain the heat well and even in wet weather will burn completely out.

(b) To get them going well we used at times C solution but mainly relied on dry tibbin. A large heap of damaged forage was made and even in the rain by digging under the top damp layer fresh supplies of dry tibbin could always be obtained. The incinerators were raked out each morning and unburnt portions again put on the fires.

(c) An important aid to burning of feces was introduced by Staff Sergt. Bangrove. The first method was to dump the buckets contents on top of a small mound of tibbin^{ANY} on the ground. I made a rule that no refuse of any description was to go on the ground everything must go into the incinerator. The device adopted allowed this rule to be effectively followed up. Four odd buckets were obtained and perforated in sides and bottom for use as strainers, these were placed on two iron bars while stretched lengthwise over a trough of corrugated iron leading to a large absorption pit with bucket strainer at the entrance.

The Unit bucket contents on arrival were quickly dumped into these receptacles and the buckets returned to the limbers so that Unit transport was not in any way delayed and the traffic did not become congested (the great mass came in each morning between 1000 and 1100). When the Urine had strained off - a matter of a few minutes - in these iron "colanders" the relatively dry feces mixed with tibbin were dumped on a brightly burning incinerator and more tibbin put on the top. This mixture of feces and tibbin formed so to speak the icing of the cake of rubbish and red hot tins in the fire below. It soon dried and disappeared in combustion, the smell involved in the whole affair is a minimum, fresh feces do not smell and the smoke is not malodorous. The iron trough had to be watched It was burnt out twice weekly with C solution and cresoled daily.

*** Sometimes called bedstead type.)

** then transfer this to the incinerator or even burn on a large heap of tibbin*

March

Appendix 1.

Incineration

A feature of sanitation - the chief feature in fact - was the establishment of a divisional incinerating area. The scheme had original points. In Kantara well constructed large brick destructors carry out similar work more in municipal fashion. The Rafa camp idea was the adaptation of field service conditions to base camp methods. Instead of disposal of refuse and excreta by individual units it was found practicable to combine all this and concentrate the whole work to one area under the control (direct) of the Divisional Sanitary Section. Units thus carried out collection and transport the rest was done for them. Two circumstances helped to bring about the adoption of this Divisional scheme the first of its kind I believe North of Kantara.

1. The Divisional Site was unusually compact Unit camps close together and generally concentrated hence unit incineration would have been a nuisance and camps full of smoke - concentration too lessened amount of transport. The incinerating area was situated to leeward.

2. The spells of stormy wet weather occurring during the winter rendered the complete burning of human feces difficult and units therefore less keen on keeping the responsibility of disposal. This difficulty was overcome at the incinerating area by

(a) more efficient type of incinerator - Boxtype i.e. a box open at both ends and at the top made of 4 sheets of corrugated iron two as a floor and one at each side supported on a framework like a *** bed of 3 sets of three angle irons or iron props arranged as two uprights and one crosspiece to support each end and the middle. Wire mesh held in the rubbish at each end. The floor level is about 18 inches to 2 ft. from the ground partly for air draught partly to suit off loading being about the level of the limber floor. The iron sheets are perforated (not essential) the iron props pegged together by iron nails and tied with wire - wire alone first used tended to melt and give way with the heat. Such an incinerator once it is going well is difficult to put out, the tins in the rubbish get red hot and retain the heat well and even in wet weather will burn completely out.

(b) To get them going well we used at times C solution but mainly relied on dry tibbin. A large heap of damaged forage was made and even in the rain by digging under the top damp layer fresh supplies of dry tibbin could always be obtained. The incinerators were raked out each morning and ^{any} unburnt portions again put on the fires.

(c) An important aid to burning of feces was introduced by Staff Sergt. Bangrove. The first method was to dump the buckets contents on top of a small mound of tibbin^{*} on the ground. I made a rule that no refuse of any description was to go on the ground everything must go into the incinerator. The device adopted allowed this rule to be effectively followed up. Four old buckets were obtained and perforated in sides and bottom for use as strainers, these were placed on two iron bars while stretched lengthwise over a trough of corrugated iron leading to a large absorption pit with bucket strainer at the entrance.

The Unit bucket contents on arrival were quickly dumped into these receptacles and the buckets returned to the limbers so that Unit transport was not in any way delayed and the traffic did not become congested (the great mass came in each morning between 1000 and 1100). When the Urine had strained off - a matter of a few minutes - in these iron "colanders" the relatively dry feces mixed with tibbin were dumped on a brightly burning incinerator and more tibbin put on the top. This mixture of feces and tibbin formed so to speak the icing of the cake of rubbish and red hot tins in the fire below. It soon dried and disappeared in combustion, the smell involved in the whole affair is a minimum, fresh feces do not smell and the smoke is not malodorous. The iron trough had to be watched It was burnt out twice weekly with C solution and cresoled daily.

Sometimes
called
bedstead
type.)

** then transfer this to the incinerator
or even burn on a large heap
of tibbin*

When finally removed when the area was closed up it was free from odor or nuisance and disposal of urine even though fecal stained effective and complete.

One difficulty alone in connection with incineration was not overcome mainly smoke. This is the one advantage that a well built municipal destructor possesses - smoke by a draught, combustion chamber and chimney can be completely eliminated. We tried at first having the incinerators to Northwest of leeward of prevailing winds then utilizing the leeward sides of the square in which the 26 incinerators were arranged. This was a failure for the wind chopped about and often 20 out of 26 would be in full blast. The smoke was trying to the eyes and two or three natives required eyebaths. Motor goggles would have been helpful. The time of exposure however was roughly about 2 hrs. in the morning one hour in the afternoon. Once the incinerators were filled they looked after themselves.

ESTIMATE OF AMOUNT OF REFUSE DISPOSED OF DAILY

Specimen Day Unit	Rubbish	Tibbin	Fecal Buckets	Incinerators Full	O & O R	Horses
First Bde. (second part)	30 Sacks	4 Sacks 2 Bales	11 Buckets	2½	700	99
S Second Bde. Complete	70 + 2 Waggon Loads	11 Bags 10 Bales	21 Buckets	7½	1800	
Artillery	19	2 Bags	5	2	.300+	
	119 + 2 Waggon Loads	17 Bags 12 Bales	37	12	3000 Approx.	
=====						
Incomplete 2nd. day 1st. Bde. less 1 Reg.	11	10	11	1½		An incomplete day
Second Bde.	28	16 Bags 5 Bales	17	4¼		
Artillery	5	0	1	¼		
D.H.Q. Area	2 Waggon Loads	27 Bags 8 Bales	2	4		
	44+	53+13	31	10		
=====						

The above notes were made when units were already dispersing the B Bde. and Divisional units gone and first part of 1st Bde embarked. Again only a few horses, transport animals and officers chargers remained with unit, still it gives an idea of the approximate amounts dealt with ordinarily.

FECES 3000 men = 37 buckets at 80lb.+ a bucket = 2960lbs. = 1¼ tons and approx. 1 lb. a man.

When finally removed when the area was closed up it was free from odor or nuisance and disposal of urine even though fecal stained effective and complete.

One difficulty alone in connection with incineration was not overcome mainly smoke. This is the one advantage that a well built municipal destructor possesses - smoke by a draught, combustion chamber and chimney can be completely eliminated. We tried at first having the incinerators to Northwest of leeward of prevailing winds then utilizing the leeward sides of the square in which the 26 incinerators were arranged. This was a failure for the wind chopped about and often 20 out of 26 would be in full blast. The smoke was trying to the eyes and two or three natives required eyebaths. Motor goggles would have been helpful. The time of exposure however was roughly about 2 hrs. in the morning one hour in the afternoon. Once the incinerators were filled they looked after themselves.

ESTIMATE OF AMOUNT OF REFUSE DISPOSED OF DAILY

Specimen Day Unit	Rubbish	Tibbin	Fecal Buckets	Incinerators Full	O & O R	Horses
First Bde. (second part)	30 Sacks	4 Sacks 2 Bales	11 Buckets	2½	700	99
Second Bde. Complete	70 + 2 Waggon Loads	11 Bags 10 Bales	21 Buckets	7½	1800	
Artillery	19	2 Bags	5	2	300+	
	119 + 2 Waggon Loads	17 Bags 12 Bales	37	12	3000 Approx.	
=====						
Incomplete 2nd. day 1st. Bde. less 1 Reg.	11	10	11	1½		An incomplete day
Second Bde.	28	16 Bags 5 Bales	17	4¼		
Artillery	5	0	1	¼		
D.H.Q. Area	2 Waggon Loads	27 Bags 8 Bales	2	4		
	44+	53+13	31	10		
=====						

The above notes were made when units were already dispersing the B Bde. and Divisional units gone and first part of 1st Bde embarked. Again only a few horses, transport animals and officers chargers remained with unit, still it gives an idea of the approximate amounts dealt with ordinarily.

FECES 3000 men = 37 buckets at 80lb.+ a bucket = 2960lbs. = 1¼ tons and approx. 1 lb. a man.

When finally removed when the area was closed up it was free from odor or nuisance and disposal of urine even though fecal stained effective and complete.

One difficulty alone in connection with incineration was not overcome mainly smoke. This is the one advantage that a well built municipal destructor possesses - smoke by a draught, combustion chamber and chimney can be completely eliminated. We tried at first having the incinerators to Northwest of leeward of prevailing winds then utilizing the leeward sides of the square in which the 26 incinerators were arranged. This was a failure for the wind chopped about and often 20 out of 26 would be in full blast. The smoke was trying to the eyes and two or three natives required eyebaths. Motor goggles would have been helpful. The time of exposure however was roughly about 2 hrs. in the morning one hour in the afternoon. Once the incinerators were filled they looked after themselves.

ESTIMATE OF AMOUNT OF REFUSE DISPOSED OF DAILY

Specimen Day Unit	Rubbish	Tibbin	Fecal Buckets	Incinerators Full	O & O R	Horses
First Bde. (second part)	30 Sacks	4 Sacks 2 Bales	11 Buckets	2½	700	99
5 Second Bde. Complete	70 + 2 Waggon Loads	11 Bags 10 Bales	21 Buckets	7½	1800	
Artillery	19	2 Bags	5	2	300+	
	119 + 2 Waggon Loads	17 Bags 12 Bales	37	12	3000 Approx.	
=====						
Incomplete 2nd. day 1st. Bde. less 1 Reg.	11	10	11	1½		An incomplete day
Second Bde.	28	16 Bags 5 Bales	17	4½		
Artillery	5	0	1	¼		
D.H.Q. Area	2 Waggon Loads	27 Bags 8 Bales	2	4		
	44+	53+13	31	10		
=====						

The above notes were made when units were already dispersing the B Bde. and Divisional units gone and first part of 1st Bde embarked. Again only a few horses, transport animals and officers chargers remained with unit, still it gives an idea of the approximate amounts dealt with ordinarily
FACTS 3000 men = 37 buckets and 200 lbs. + 1 bucket man = 200 lbs. = 1½ tons

In the full division when about 7000 men were dealt with = over
3 tons daily

INCINERATORS Capacity of a well packed incinerator = 9ft x 4ft x 3 $\frac{1}{2}$ ft
high = 120 cubic ft per incinerator = 12 diam. x 120 = 1440 cft of
rubbish

Calculated on Sp Gravity Water - 1440 cft = 90000 lbs. = 40 tons approx.
In full working order at least 20 sometimes 24 were used

1 cft water 10 15
= 1000 ozs. = 20 x 120 x 1000 = 150,000^{lbs.} = 66 tons
or
1000th. = 24 x 120 x 1000 = 180,000^{lbs.} = 80 tons
 16 16

Daily Incineration 70 tons then is a conservative estimate for mass incinerated while considering the great mass of tibbin not burnt but put on the heap the total might have at times approached 100 tons daily.

A danger of incinerators work is the explosion of cartridges carelessly allowed to be thrown away in the rubbish. One O/R & one egyptian received superficial wounds in this way. Finally a large heap of burnt tins a large stack of glass bottles and a very large heap of tibbin together with 26 incinerators were left in the area.

Harvey Sutton Major
OC 7 San. Sec. Anzacs.

In the full division when about 7000 men were dealt with = over
3 tons daily

INCINERATORS Capacity of a well packed incinerator = 9ft x 4ft x 3½ft
high = 120 cubic ft per incinerator = 12 diam. x 120 = 1440 cft of
rubbish

Calculated on Sp Gravity Water - 1440 cft = 90000 lbs. = 40 tons approx.
In full working order at least 20 sometimes 24 were used

1 cft water 10 15
= 1000 ozs. = ~~80~~ x ~~120~~ x 1000 = 150,000^{lbs} = 66 tons
or
 3 1660
= 1000th. = ~~84~~ x ~~120~~ x 1000 = 180,000^{lbs} = 80 tons
 16 16

Daily Incineration 70 tons then is a conservative estimate for mass incinerated while considering the great mass of tibbin not burnt but put on the heap the total might have at times approached 100 tons daily.

A danger of incinerator work is the explosion of cartridges carelessly allowed to be thrown away in the rubbish. One O/R & one egyptian received superficial wounds in this way. Finally a large heap of burnt tins a large stack of glass bottles and a very large heap of tibbin together with 26 incinerators were left in the area.

Harvey Sutton Major
OC 7 San Sec Anzacs.

In the full division when about 7000 men were dealt with = over
3 tons daily

INCINERATORS Capacity of a well packed incinerator = 9ft x 4ft x 3 $\frac{1}{2}$ ft
high = 120 cubic ft per incinerator = 12 diam. x 120 = 1440 cft of
rubbish

Calculated on Sp Gravity Water - 1440 cft = 90000 lbs. = 40 tons approx.
In full working order at least 20 sometimes 24 were used

1 cft water = 10 15
= 1000 ozs. = $\frac{20}{3} \times \frac{120}{16} \times 1000 = 150,000^{lb.} = 66$ tons
or
 $\frac{1000}{16}$ th. = $\frac{24}{16} \times \frac{120}{16} \times 1000 = 180,000^{lb.} = 80$ tons

Daily Incineration 70 tons then is a conservative estimate for mass incinerated while considering the great mass of tibbin not burnt but put on the heap the total might have at times approached 100 tons daily.

A danger of incinerator work is the explosion of cartridges carelessly allowed to be thrown away in the rubbish. One O/R & one egyptian received superficial wounds in this way. Finally a large heap of burnt tins a large stack of glass bottles and a very large heap of tibbin together with 26 incinerators were left in the area.

Harvey Sutton Major
OC 7 San Sec Anzacs.

Suggestions for Disinfection of Saddlery see GRO 5035 3/2/19 DRO 230 3/1/19

<u>STEAM</u> Thresh Steam Disinfector after ordin- ary washing	<u>CRESOL</u> 2 $\frac{1}{2}$ % (1 in 40) not stronger SOAK SCRUB SUN-DRY	<u>CRESOL</u> No soaking SCRUB 5-10 mins. wipe DUBBIN	<u>FLAME</u> With BRAZING Lamp or ignit- ed Methylated Spirit before or after ord- inary cleaning	<u>BURN</u>
<u>CLOTH:-</u> <u>BLANKET</u> <u>RUG</u> <u>NOSE BAG</u> Ropes	Blanket Rug Nose Bag ROPES			If old
		<u>LEATHER</u> SADDLE BRIDLE HARNESS HEADSTALL <u>EYE FRINGE</u> <u>SAND MUZZLE</u>		If old
Metal Bit Stirrup	Metal Bit Stirrup		<u>METAL:</u> BIT STIRRUP LINKS	
	<u>GROOMING KIT</u> DANDY BRUSH			If old

In block letters for method of choice
Underlined the most important links of infection
In ANTHRAX or TETANUS burn everything carcass and all without disturbing anything.

SANITATION

Instructions re evacuation of Unit areas Rafa.

Units are responsible for their own area and the Aracat roadway
Details remain behind the main body to clean up report all clear to
the Staff Captain. Where available R.M.O. & S.M.O. inspect and give
a certificate.

All huts cookhouses ovens left intact
Timber wood etc., not burnt but neatly stacked in one heap, grease
traps and urine pits cresoled and filled in. Latrine buckets after
emptying mopped out with crude oil. Seats washed with Cresol.
Screens rolled up and buckets etc., returned ordnance.
All rubbish tins, bottles, rags, kitchen refuse carted to the Incin-
erating Area. None burnt in the lines.

- * On no account whatever is anything unburnt to be buried
Sanitary Natives remain Rafa - and later handed over to 7th San. Sec.
If transport impossible - Staff Captain may permit:-

- * In actual practice almost universal burial of tent rubbish occurred. Bedouins dug it up and littered the whole area with rubbish.
- (1) Rubbish to be burnt in Lines - one heap
 - (2) Transfer to Sanitary Section any remaining latrinage.

Suggestions for Disinfection of Saddlery see GRO 5035 3/2/19 DRO 230 3/1/19

<u>STEAM</u> Thresh Steam Disinfector after ordin- ary washing	<u>CRESOL</u> 2½% (1 in 40) not stronger SOAK SCRUB SUN-DRY	<u>CRESOL</u> No soaking SCRUB 5-10 mins. wipe DUBBIN	<u>FLAME</u> With BRAZING Lamp or ignit- ed Methylated Spirit before or after ordi- nary cleaning	<u>BURN</u>
<u>CLOTH:-</u> <u>BLANKET</u> <u>RUG</u> <u>NOSE BAG</u> Ropes	Blanket Rug Nose Bag ROPES			If old
		<u>LEATHER</u> SADDLE BRIDLE HARNESS HEADSTALL <u>EYE FRINGE</u> <u>SAND MUZZLE</u>		If old
Metal Bit Stirrup	Metal Bit Stirrup		<u>METAL:</u> <u>BIT</u> <u>STIRRUP</u> <u>LINKS</u>	
	<u>GROOMING KIT</u> DANDY BRUSH			If old

In block letters for method of choice
Underlined the most important links of infection
In ANTHRAX or TETANUS burn everything carcass and all without disturbing anything.

SANITATION

Instructions re evacuation of Unit areas Rafa.

Units are responsible for their own area and the Aracat roadway Details remain behind the main body to clean up report all clear to the Staff Captain. Where available R.M.O. or S.M.O. inspect and give a certificate.

All huts cookhouses ovens left intact
Timber wood etc., not burnt but neatly stacked in one heap, grease traps and urine pits cresoled and filled in. Latrine buckets after emptying mopped out with crude oil. Seats washed with Cresol. Screens, rolled up and buckets etc., returned ordnance.
All rubbish tins, bottles, rags, kitchen refuse carted to the Incinerating Area. None burnt in the lines.

* On no account whatever is anything unburnt to be buried
Sanitary Natives remain Rafa - and later handed over to 7th San. Sec.
If transport impossible - Staff Captain may permit:-

* In actual practice almost universal burial of tent rubbish occurred. Bedouins dug it up and littered the whole area with rubbish.

(1) Rubbish to be burnt in Lines - one heap
(2) Transfer to Sanitary Section and remain in latrine.

Suggestions for Disinfection of Saddlery see GRO 5035 3/2/19 DRO 230 3/1/19

<u>STEAM</u> Thresh Steam Disinfector after ordin- ary washing	<u>CRESOL</u> 2½% (1 in 40) not stronger SOAK SCRUB SUN-DRY	<u>CRESOL</u> No soaking SCRUB 5-10 mins. wipe DUBBIN	<u>FLAME</u> With BRAZING Lamp or ignit- ed Methylated Spirit before or after ordi- nary cleaning	<u>BURN</u>
<u>CLOTH:-</u> <u>BLANKET</u> <u>RUG</u> <u>NOSE BAG</u> Ropes	Blanket Rug Nose Bag ROPES			If old
		<u>LEATHER</u> SADDLE BRIDLE HARNESS HEADSTALL <u>EYE FRINGE</u> <u>SAND MUZZLE</u>		If old
Metal Bit Stirrup	Metal Bit Stirrup		<u>METAL:</u> <u>BIT</u> <u>STIRRUP</u> <u>LINKS</u>	
	<u>GROOMING KIT</u> DANDY BRUSH			If old

In block letters for method of choice
Underlined the most important links of infection
In ANTHRAX or TETANUS burn everything carcass and all without disturbing anything.

SANITATION

Instructions re evacuation of Unit areas Rafa.

Units are responsible for their own area and the Aracat roadway Details remain behind the main body to clean up report all clear to the Staff Captain. Where available R.M.O. or S.M.O. inspect and give a certificate.

All huts cookhouses ovens left intact
Timber wood etc., not burnt but neatly stacked in one heap, grease traps and urine pits cresoled and filled in. Latrine buckets after emptying mopped out with crude oil. Seats washed with Cresol. Screens rolled up and buckets etc., returned ordnance.
All rubbish tins, bottles, rags, kitchen refuse carted to the Incinerating Area. None burnt in the lines.

* On no account whatever is anything unburnt to be buried
Sanitary Natives remain Rafa - and later handed over to 7th San. Sec.
If transport impossible - Staff Captain may permit:-

* In actual practice almost universal burial of tent rubbish occurred. Bedouins dug it up and littered the whole area with rubbish. (1) Rubbish to be burnt in Lines - one heap (2) Transfer to Sanitary Section any remainiⁿ latrine.