



NZ ARMY
NGATI TUMATAUENGA

SUSTAINER

AUGUST 2011

Professional journal of New Zealand Army Logistics,
equipping and sustaining the NZ Army to be world class, operationally focused and equipped to win.

Engineering a Capability Shortfall Exercise Bluebell Shield
Special Operations Force Enablers
The Changing Nature of Combat Logistic Patrols
French Logistic Mentors in Afgan



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ON THE COVER



Armoured LOV of 2 Wksp Coy departing its FOB on a Patrol on Exercise Bluebell Shield. See story on page 13



RNZALR Guard of Honour for the RNZALR Colonel-in-Chief, His Royal Highness The Prince Andrew

This medium is approved for the official dissemination of material designed to keep individuals within the Army Logistic Community knowledgeable of current and emerging developments within their areas of expertise for the purpose of enhancing their professional development.

M.J. SHAPLAND
Colonel
Logistics Commander (Land)



First and foremost, it is a distinct honour to have been selected as the Logistics Commander (Land). I look forward to representing the RNZALR and to working with all members of the Regiment. I know that together we will make tremendous progress in the time ahead. My sincere gratitude is extended to Brigadier Lott for his able leadership and many accomplishments during his time as the Logistic Commander (Land). His hard work has helped to make my transition both smooth and efficient.

Since the last issue of the New Zealand Army Sustainer was published the RNZALR has been exposed to substantial change. The Defence Transformation Program is no longer a theoretical concept, instead the effect of the transformation is clearly visible and as each day passes it becomes a practical reality. The effect of far reaching transformation can be seen through the realignment of C2 structures, the adaptation of our individual training philosophy and the continued upgrading of our equipment. During the turmoil that change brings RNZALR have successfully supported all current operations and provided significant effort to the Canterbury earthquakes in September 2010 and February 2011. You can be proud of your efforts in these areas.



You may have heard that our Logistic organisations and structures are about to undergo change. This change will see the establishment of Regional Logistic Delivery Centres to provide Garrison support. The intent of this change is to allow uniformed personnel to focus on training for operational outputs. This will enhance our ability to provide RNZALR officers and soldiers that are trained, equipped and ready to succeed on operations.

Army Sustainer is the voice of the RNZALR and I encourage you to solicit “cutting edge” articles from both past and present serving members of the Regiment to enhance the value of our professional publication. There is no need to wait for me to request them, just send them to us. I know there is a lot of pertinent Logistic information both out in the units and on operations and we want to hear about it! I urge you to read all the articles in this issue of the Army Sustainer, I trust that you will find the articles very informative and I hope you will gain some knowledge on the achievements and happening in the Logistics environment.

Finally thank you all for your dedicated support and hard work. Again, I am truly honoured to be your Regimental Colonel and I look forward to the challenge of leading the Regiment.



On the 22nd of February, just after 1pm, a sharp but not unusually large tremor rumbled through Burnham Camp. This was not uncommon since the “big one” last September and, like most Cantabrians who have put up with almost daily rumbles since, I thought nothing of it. Having fired off a quick text to my wife in the city, asking her “did you feel that one?” her immediate reply before cellphone communications went down was pretty dramatic. “Kids OK. That was way worse than last year; you need to let your people go home to check their families”.

The months following the February quake have seen this unit, along with fellow Logisticians from all units in the Regular and Reserve Army and the Navy and Air Force who came to our assistance, step up and support a Humanitarian Assistance and Disaster Relief Operation, something we largely train to do overseas, in our own backyard. Along the way our people, many of whom are Cantabrians, have been through the full gambit of emotions.

For some it has been grief and despair at the loss of family, friends or property; for others sadness and sorrow while undertaking a wide variety of sometimes difficult tasks in support of the Police, DVI, Emergency Services and people of Christchurch; and for many a feeling of helplessness and frustration for not being able to do more. Mixed in this has been times of relief to find loved ones safe, satisfaction for completing tasks with tangible results that make other’s lives better, a kind word of thanks, and a sense of pride at being tested and able to exceed expectations.

As the CO of 3 Log Bn, our support to the quakes over the past eight months has been immensely satisfying for me from a professional standpoint; none more so than after February 22nd. Firstly, for the immediate response of my own unit, who, again, were required to make only the most basic of checks on the welfare of their families, friends and homes and then, knowing the scope of the task ahead, immediately get stuck into providing whatever support they could. When we saw the initial level of destruction in the City, it became apparent that logistics support to this quake response would need to be enduring well beyond the immediate response. It was our good fortune that HMNZS CANTERBURY was alongside at the time. Logistics assets from 2

Log Bn quickly picked up tasks as part of the 3 Log Bn overall effort, in support of the people of Lyttelton, or in some instances provided capabilities that only that unit could. A rapidly deployed convoy from Linton and subsequent supplementation by 2 Log, TRSB, Reserve units, the RNZN, and the RNZAF ensured that support was quickly and effectively provided well in excess of our stated tasks. Without this support, it is fair to say that in the weeks and months after February 22nd shake, we would have struggled, and we appreciated it.

Most of the diverse tasks that have been conducted during this emergency, have been at the section level or lower, and have required solutions not taught on any of our formal courses nor directed through our required unit outputs. Amongst other tasks, it included the establishment of the Mortuary and DVI facility to cater for the mass casualties, a task that was beyond current Police and Coronial Services. It included the establishment of a decontamination facility at the USAR base. It included extending the catering capacity of one of our messes to over 6500 meals a day. It included running a WOF checking facility on 600 camper-vans for the temporary accommodation village. It included taking a turn on the Cordon. And (luckily for the Truckies) it included the distribution of tens of thousands of chemical toilets (and informal instruction to residents!).

Many of these tasks required a can-do attitude, a good dose of common-sense and planning, and a willingness to get stuck in. I have been immensely impressed by the level of initiative displayed by our junior soldiers and officers, and their leadership. The professional manner in which this group of, not only 3 Log Bn but all RNZALR soldiers and NCOs, undertook tasks both here in Burnham, and in the City, speaks volumes for the future of our Regiment, our people, our junior leaders, and our ability to step up and exceed expectations.

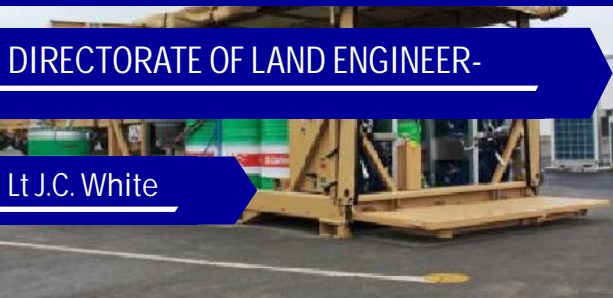
On behalf of all of us in Burnham, we thank you for your immediate support when we needed it most, your offers of assistance throughout, and your professionalism whilst working in and around the city. We appreciate it.

Ma Nga Hua Tu-Tangata



Members of the RNZALR are currently deployed to the following countries

1. EGYPT
2. TIMOR LESTE
3. SOLOMONS
4. AFGHANISTAN
5. CANADA
6. UNITED STATES
7. SOUTH KOREA
8. CHINA
9. UNITED KINDOM
10. TONGA
11. AUSTRALIA



“Foolproof systems don’t take into account the ingenuity of fools” – Gene Brown.

The above quote by Gene Brown raises a big issue for any engineer worth their weight in gold. Our World Class Army is one not of fools, but of agile, creative and adaptive personnel of all ranks and trades.

So the problem arises when an engineer is challenged with the design, development and construction of a system to meet a capability shortfall that does not exist off-the-shelf. The solution must not only meet existing user requirements and employment environments, but consider and factor in future possibilities. It must not only achieve its stated objective but consider how our agile, creative and adaptive force may use it, try to use it, or enhance it.

The Emergency Response personnel of our Defence Force continue to operate a fleet of Hino Rural Fire Appliances that are 23 years old. It is then our Equipment Support workshop personnel that are challenged to keep them serviceable when parts are regularly no longer available. With the future operating concept for Fire Fighting envisaging the use of Rapid Intervention Vehicles (‘Smoke Chasers’) supported by larger tankers, a capability gap has become evident. The fragility of the Hino fleet is also such that progressing future operating concepts have become an urgent priority.

With a problem at hand and capability shortfall identified Land Combat Support, Capability Branch approached the Director of Land Engineering to pitch the issue for evaluating a prototype fire pod. This prototype could be mounted on an in-service U1700 with a view to proving the viability of the vehicle as the host platform. The Palletised Fire Pod concept would also have the potential to meet some of the future fire rescue needs. With a credible problem, logical ideas, and appropriate funding available the investigation toward a solution was commissioned.

Objectives and criteria are identified, defined and

recorded. Users and Fleet Managers are consulted with relevant facts documented and concept design begins.

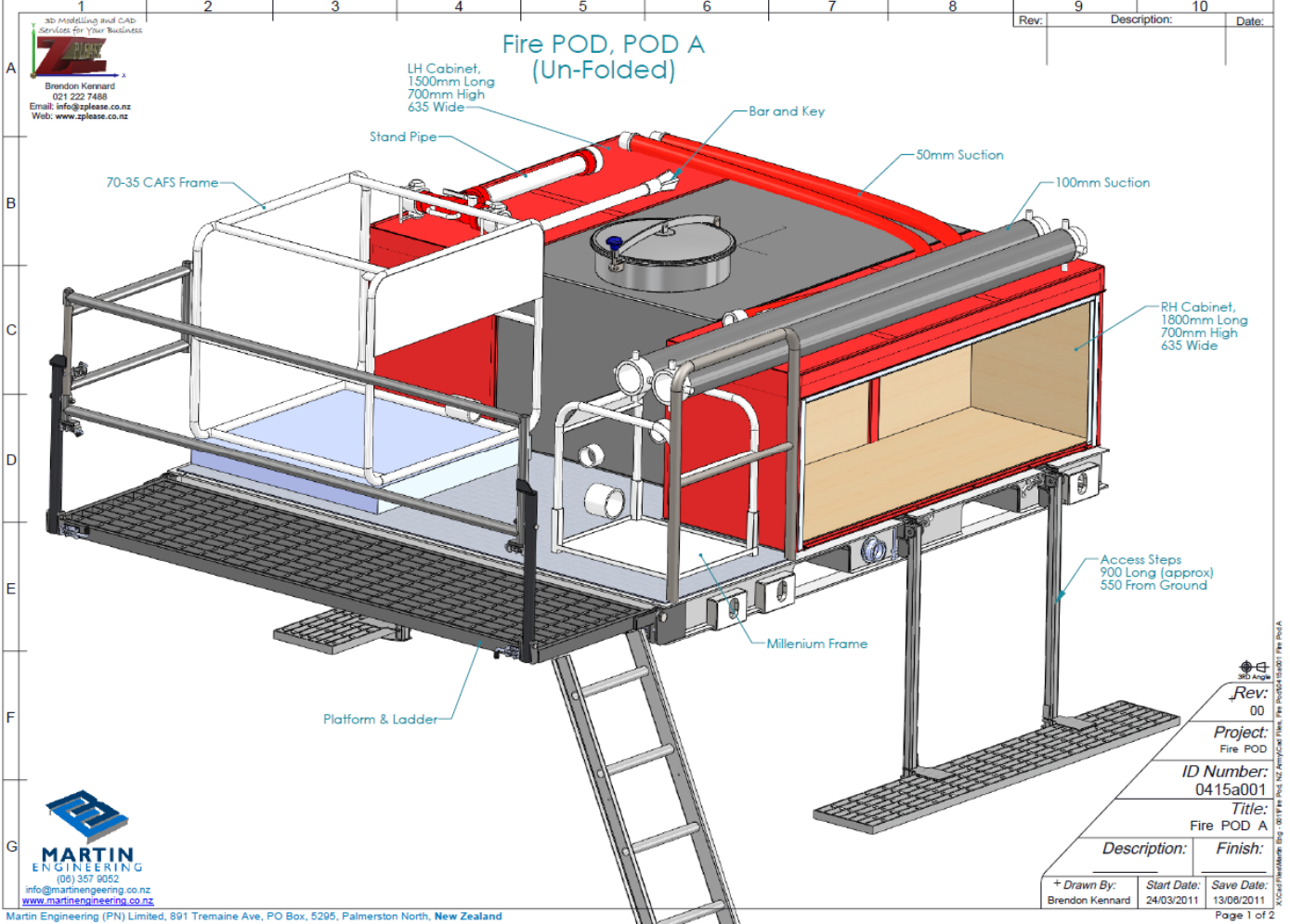
‘How much water does it require?’, ‘What sort of pumps will it need?’, ‘Who will operate it?’, ‘Where will they operate it?’, ‘How many hoses will they need?’, ‘How might they refill it?’, ‘How do they know how much water is left?’, and the list goes on. The answers to these questions must then be converted into a quantifiable or measurable metric to ensure concepts do in fact meet the users’ requirements.

Concepts are modified and refined until the best solution is established. Through technical drawing and certification, where appropriate, fabrication and construction may begin.

For the Palletised Fire Pod a number of stakeholders were involved and external companies utilised to create the Rapid Intervention concept demonstrator. This demonstrator will help to inform the needs of the future fire fighting fleet and operating concepts for the Emergency Response teams of our Defence Force. It will mount on the rear of a U1700, have the capacity to be expanded and utilises both new and existing ideas/concepts.

With a completion target date at the end of June for construction of the prototype and trials planned to commence shortly after, you may just see the concept demonstrator around your Formation in the later half of this year.

If you have an engineering idea, problem or solution then you can submit it to the Army Innovation Scheme or through your chain of command to the Fleet Managers who can then discuss it with the Director of Land Engineering for further development.



LEA WEBSITE
http://awi-teams/ags_le/sq&ea/

Lt J.C. White is currently the Engineering Change Manager at DLE

Logistics..."embraces not merely the traditional functions of supply and transportation in the field, but also war finance, ship construction, munitions manufacture and other aspects of war economy."

Lt Col George C. Thorpe, USMC, Pure Logistics, 1917



The 1st STAB for 2011 was held over the period 28 – 29 Mar at the Messines Defence Centre, Trentham. Whilst minutes of the meeting have been published and distributed through the STAB members, the key areas discussed were:

On the Job Training

The STAB discussed at some length matters relating to, and the concept of, On the Job Training (OJT). Improvements have been made throughout the units in conducting OJT however it was acknowledged that significant challenges still exist with personnel shortages and balancing day to day work outputs when attempting to conduct OJT. The STAB resolved to ensure that Advisory Quartermasters will become more proactive in co-ordinating OJT within the Formations as required by DFO(A) Vol 4, and to ensure that Command at all levels are informed of the importance of OJT for Sup Tech personnel.

Critical Appointments Matrix

An output of the STAB is to advise LC(L) on the Sup Tech Critical Appointments that need to be staffed as a priority for the next 12 months. Whilst the process achieved the required aims over preceding years, the STAB identified an opportunity to improve the way in which the critical appointments are identified. Since Aug 10 Cap Staff have been working on the new process which has now been completed and endorsed by LC(L). The STAB and MCM is now in the position of being able to provide qualified information to highlight risk areas and priorities to Com-

mand to ensure identified Critical Appointments are staffed in the most appropriate manner. A big thanks to Capt Harding, WO1 Law, WO1 Nighy and WO1 Burton for their efforts in producing the matrix.

Supply Workshop 2011.

The next Sup Wksp is to be held over the period 29 – 31 Aug at Linton. The major topics for the 2011 Wksp are Sup Tech Trade Management, and Line Item Accounting (LIA). These two topics are particularly important to the future of Sup Tech Trade. As a result attendance for 2011 will be restricted to a representative from each unit that is responsible for LIA and some senior Sup Tech pers that are able to contribute to the future trade management intent. In addition the STAB membership will be reviewed to ensure that each Formation/Staff is appropriately represented.

STAB Briefs

A number of presenters from within NZDF provided updates to the STAB. Particular thanks to WO Reeves, RNZN, DLC WO for opening address, WO2 Olsson for the Material Management Group update, and Maj McQuillan for the Class 9 presentation.

Welcome

Welcome to the new Sup Tech soldiers who recently 'marched-out' of TAD. As always it is the new soldiers that continue to invigorate the Sup Tech trade, and as such you are an extremely important component of our future. All the best in your future with the RNZALR.

Major Cavanagh is currently the GSO2 Supply, capability Branch, HQ NZDF



“We cannot afford to sit on our hands. We have to make massive step changes. I want everyone in Logistics to be innovative and proactive in thinking about great logistics solutions. The DLC leadership board is convinced that the Defence Force can be smarter with its logistics support”.



In my last article, TRSB QM Platoon relocated from the various areas at the back end of Trentham Camp to the front and amalgamated all our services into a one stop shop for Stores, Ledgers, Clothing, UPF, Transport uplift/dropoff and freight.

This was a crash course on Change Management and after a few teething problems, we were able to consolidate our services for the benefit of the customer. Other benefits have included the management and control of staff and providing relevant training to ensure we understand each others functional areas.

Not long after our move we were then tasked to convert our previous building to hold stores and equipment for HQJFNZ. This has traditionally been known as the Force Extraction Team (FET) store. Again consultation and planning was required to ensure the layout, works and implementation went smoothly.

With minimal finance, good subject matter advice and a bit of *“doing more with less”* we have achieved a better result for Defence and have given TRSB real time operational experience which allowed HQJFNZ to concentrate on the strategic (deciding) whilst we do the Tactical (doing).

The additional benefit of taking on the daily Force Extraction store is the operational focus for our staff. At the time of writing, we have provided support to Crib, Rata and Gyro missions since Nov 10 of which four of the QM Pl staff have deployed to conduct the Logistic side of the FET. In the next few months we will have provided an additional four personnel. Of these personnel, five will have been Private soldiers.



We have also used this opportunity to further develop processes and procedures for the efficient running of FET and ensuring the correct management and training is employed both in NZ and abroad.

In the coming month or so, we will be receiving an X-ray machine to further enhance our abilities to check Body armour plates for serviceability during



the FET process.

Whilst TRSB are currently fulfilling this role, further changes are planned for TRSB to morph into the CTC HQ by Dec 11. All Garrison Support currently being conducted will be commercialised by Dec 12.

Throughout all this change and development, TRSB QM Pl have not only maintained but increased their outputs with fewer staff and resources. We have focused on the operational outputs to ensure all military staff maintain their operational requirements (RFL, OPFIT, AWQ, Swim Test, Med etc).

In my view we need to give our young soldiers every opportunity to learn and take on responsibility. At present all my junior staff are PTE's with no intermediary staff between Warrant Officer and them. They have had to learn fast and get on with it with minimal supervision. We also need to keep the fun factor (regular PT, Sports, military training and deployments) for them to develop and grow and ultimately have the skills to take us forward as a force.



Warrant Officer Class Two Terry McGeough is currently the Regimental Quartermaster Sergeant for TRSB. He has over 22 years experience within Logistics as a Supply Technician. During this time he has been posted within various Supply and Maintenance Support posts including completing his apprenticeship and gaining Trade Certificate within Automotive Parts and Accessories Merchandising. He has also served overseas on various exercises and operational Deployments including such places as Great Britain, Australia, Solomon's, Sinai and East Timor.

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Webistes

Trentham Regional Support Battalion

<http://awi-teams/trsc/>

RNZALR Supply Technician

<http://org/l-tts/S%20%20Publishing%20Webpart%20Pages/Supply%20Q%20Wing/SuppHome.aspx>



operating environment.

On the 04th October 2010 2nd Workshop Company deployed on Exercise Bluebell Shield. The exercise was conducted in two phases, which were designed to test the workshop personnel in leadership, All Arms and recovery skills in a complex contemporary operating environment.

The first phase of the exercise saw the workshop conducting classroom and practical lessons in Linton prior to deployment to the exercise area. With a significant number of inexperienced soldiers the exercise started at a basic level. All sections conducted building clearances, vehicle check points, cordons, urban patrolling, and detainee handling training.

2 Wksp Coy personnel conducted a tactical road move to Waiouru, and established a base of operations at the Waiouru Recovery Detachment (formally AFV Workshop), to continue lessons and conduct a number of BHE's. All sections participated in three stands a day, these included providing security to recovery tasks, building clearance training, break contact drills and counter vehicle ambush drills. It was a diverse learning environment for young logistics soldiers and their Section Commanders.

At the completion of the training in Waiouru the Platoon moved further north to the small Waikato township of Mangakino. The Platoon had to move into a barren area of land and occupy it as an FOB for the next week. As soon as the FOB was established it didn't take long for the first patrol orders to come through, only five hours after entering the township. There was a dedicated enemy party living in the township, it was the platoons job to assist the New Zealand Police in maintaining law and order and bring confidence back into



the community.

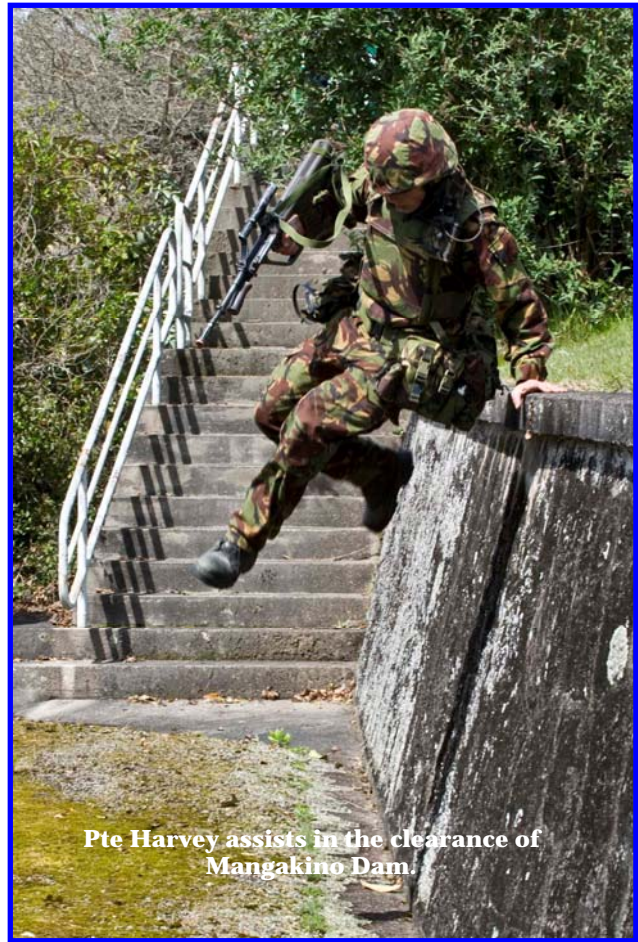
the community. The week progressed with patrols going out on foot and mounted in Armoured LOV, while the remainder of the platoon manned a Quick Reaction Force, and FOB security. The sections conducted cordons in the centre of town in order to provide security due to bomb threats, and conducted building clearances of houses suspected to be involved in drug production. The enemy was getting swamped with all of the military activity in the township so they opted to take the fight to the FOB on several occasions. The platoon obtained intelligence that the enemy were operating around a hydro-electric dam just out of town, so the decision was made to conduct a platoon ambush. This was another fast learning curve for everyone, with this sort of task normally being done by the infantry. The entire platoon worked hard to get the ambush set in time, punching their way through pine and secondary native forest with thick blackberry undergrowth making the going much more difficult. The ambush was a success and a large number of the enemy were destroyed. The exercise then culminated in a building clearance operation that turned into a full platoon contact.

With the enemy dealt to and the soldiers feeling accomplished at what they had learnt there was some time for some public relations activities. Whakamaru Country School was visited, assistance giving to painting the local Bowling Club, and the

local Mangakino Golf Club had some recovery assistance to move some boulders to a new location.

This completed the exercise and saw the Platoon move back to Waiouru to conduct the reconstitution and tell war stories.

Overall the exercise was a great success and enjoyed by all, with most personnel stating it was the most enjoyable, challenging and relevant exercise they had ever done. 2 Wksp Coy's junior soldiers experiencing valuable and contemporary training and it's junior leaders where given the opportunity to gain valuable command experience in contemporary setting outside the norm of there day to day workplaces in Linton.



Pte Harvey assists in the clearance of Mangakino Dam.



Pte Reid mans a Vehicle Check Point in central Mangakino.

Equipment Care Publications

NZ Army (NZDF Intranet)

NZ P92— Guide to equipment Care in the New Zealand Army

<http://reference/army-publications/NZ%20P92/P92.pdf>

Soldiers Five—A quick look at equipment husbandry & developments

<http://reference/army-publications/Pages/Magazine/soldiers-five.aspx>

External Publications (Internet or Camp Libraries)

PS, The Preventive Maintenance Monthly— a monthly United States Army Magazine published since June 1951 to illustrate proper preventive maintenance methods with comic book style art

KIT Magazine—The British Army quarterly guide to equipment care in bit size chunks

http://www2.armynet.mod.uk/armysafety/kit_mag.htm



101 Pl, 10 Tpt Coy, 2 Log Bn commemorate ANZAC Day with North Street School, Feilding



Weather is a consideration for any operation, however when it changes it's just another variable to deal with, just as the Anzac's experienced in 1915. The students at Feilding's North Street school were given the opportunity to

experience this when 101 Pl, 10 Tpt Coy visited 05 April 2011.

The school children (from year six through to year eight) were studying the history of ANZAC day and the NZ Army were asked to provide some soldiers to help enhance their knowledge.

Nine privates were each given a 20 minute stand to show the pupils a small part of NZ Army life and pass on facts based on ANZAC commemorations. The different stands included; observation; introduction to field cooking; physical training; how to set up a 14 x 14 tent; section harbour drills; a con course activity; cam and concealment; drill; and navigation.

The day started off with the children being split into nine groups of 10, with each group being named after a Victoria Cross recipient. Each group had a soldier as their team leader, who would also help to answer questions that any of the students had on Army life and ANZAC day in general.

Fortunately the weather played the game, with rain and cold temperatures setting in. The kids didn't seem phased though, with many taking the opportunity to warm up by running between and on the dif-



ferent stands.

Family members of the students provided a much enjoyed morning tea. The break came at a good time, as the bad weather really started to set in. However, once again the children were more than happy to bear the elements in order to see all of what the Army had to offer.

The day had to end at some stage and with a quick pack up it was time to head back to Linton, but not before awards were given to the best student leader and the team that displayed the best teamwork throughout.

All in all it was an enjoyable day out, a good distraction from the events in Christchurch and a good chance to showcase our people in a positive situation for potential future soldiers.



PTE Farrow tests the kid's memory of personal equipment



PTE Greening & 'Commander Raymond' give instructions to their Nav Team from the CP.

Lifting the NZDF on Ex SILENT VIPER

Lieutenant John Samuela



Drivers are the most under-rated soldiers in the NZDF. Even before being posted to 10th Transport Company (10 Tpt Coy) in Dec 10, I shared the common misconception that any soldier with a licence can be a driver in the

NZ Army. What a naïve fool! These drivers in 101st Heavy Lift Platoon (101 Pl), 10 Tpt Coy have impressed me with their diversity, commitment, humility, innovation and potential on Ex SILENT VIPER, a 10-day exercise in spt of Ex VIPER, 2nd Land Force Group (2LFG) and New Zealand Defence Force (NZDF).

Against all attempts to plan, pre-empt and prepare 101 Pl for the inevitable field exercise either as part of or alongside of Ex VIPER, I found myself flapping (inwardly only) when the final decision was made to go ahead at D – 10 on the 20 May. The Transport Sergeant (Tpt Sgt) and Platoon Staff Sergeant (Pl SSgt) were in overdrive turning on all vehicles,

equipment and stores. It didn't help that we were also committed to a 2LFG parade, Light Armoured Vehicle (LAV) move, Museum vehicles (veh) move, town courier, duty-driver, recovery support to Ex BENGHAZI STAKES (Ex BS), LAV course and 103rd Medium Lift Platoon. On top of that, the Platoon Commander (pl comd) had planned a pl photo two months back. What a good guy!

A couple of MD 717's being submitted (and withdrawn) later, we had rolled through our start point and on our way to the sunny Hawkes Bay with only one 'o800 how's my driving' complaint about our 'army tanks' holding up the traffic.

101 Pl operated (their 'army tanks') from FOB Dalmatian out of Roys Hill. When the pl weren't on the road lifting stores and ammo for Ex VIPER and 16 Field Regiment, they were recovering and back-loading LAV, General Support vehicles, playing customer to Ex BS, conducting UBRE tasks (look out Pet Ops) and transporting skyhawks (we've got your



back Airforce).

We covered some valuable all-arms training included LFTT's, dismounted patrols, section battle drills, and mounted training (Counter-vehicle Amubushe's, Break-contact Drill's, Vehicle Check-points and Combat Logistic Patrol's) when not on task.

Pl HQ also conducted planning for a deliberate re-org which once returned to 2LFG would see a change in the platoon (pl) organisation, the way the pl operates and standing up a trg capability. We also celebrated a couple of birthdays being PTE Jessop and PTE Greening (well done, you owe us a drink).

It's funny, regardless of interviews and activities within the garrison environment; you don't quite know your soldiers unless you've seen them in the field or on a task. Hat off to you 101 pl soldiers, who were tired before we deployed and stayed committed. A special mention to PTE Gage who stepped up as a Sect 2IC on Ex SILENT VIPER and proved he is leadership material. This article is but a snippet of what these 'truckies' are getting up to behind the scenes. Renown for playing it down and just doing the 'mahi', 101 Pl will continue to grow and develop exceptional drivers. If you want to be driver in 101 Pl, you'd better bring more than a licence



and your best game; we're not interested in anyone that has less than the potential to be exceptional.



Transferring stores to the Junior Drivers and Sect Commanders

Exercise Southern Avenger



Members of the 3rd Logistics Battalion (3 Log Bn) recently took part in Exercise SOUTHERN AVENGER, held over the period 6 – 20 May in the Mackenzie Basin area. Combat Service Support Team (CSST) ZEUS was deployed in support of a

Group, Light (CATG (Lt)) operating within an EC2E* scenario.

SOUTHERN AVENGER provided 3 Log Bn with an ideal training opportunity in which to meet a number of unit and wider Army objectives. Firstly, to provide real time Combat Service Support CSS to the 2/1 RNZIR Combat Teams conducting Exercise SOUTHERN AVENGER. Secondly, to provide functional, trained transport, material support and supply platoons for the RNZALR Pl Comds Cse, and thirdly to regenerate and assess 3 Log Bn Force Elements up to their required training level and P rating, after a long time supporting Op CANTERBURY QUAKE II.

CO 3 Log Bn, Lt Col Jim Bliss said, "The exercise was a good example where real time support, training of Force Elements and the individual assessment requirements of our schools could be synchronised into one activity. The exercise allowed new RNZALR officers to operate within a formed and trained CSST, and at the same time, gain exposure to emerging contemporary CSS operations and procedures including Combat Logistic Patrols (CLPs)

under development within the unit, and the NZ Army C-IED TTPs."

During the exercise, the Logistic Operations School provided the Exercise Control and ran a number of different testing scenarios based around Platoon level tasks for the Transport, Supply and Maintenance Support stream which make up the core of the RNZALR. In addition to these tasks, the CSST had the opportunity to conduct a number of their own Battle Handling Exercises (BHEs). One in particular was a blank firing CLP over a 70 km route. This scenario saw the CSST required to re-supply a Forward Operating Base (FOB) and operate over a route which had both insurgent activity and an IED threat. The CLP was able to practise the integration of organic Force Protection, as well as driving on Night Vision Equipment (NVE) on a closed off road. The BHE saw the CLP clear several vulnerable points and conduct two counter ambush drills.

The Officer Commanding CSST Zeus, Major Duncan George said, "This type of logistic re-supply is what many of our contemporaries in the RLC and Australian Army are now having to conduct, in order to support the combined arms forces in places such as Afghanistan." "The reality is that in the non-contiguous battle space, RNZALR force elements must be able to protect themselves, as well as providing CSS, and this is what this type of training is trying to achieve."

The exercise concluded with a live field firing package provided by the 3 Log Bn training wing, which focussed on vehicle mounted shooting, as well as basic Section battle drills.



LT Layne Lovett (CSST 2IC) briefs the orders for a CLP



MAJ Duncan George (CSST OC) briefs the key control measures for the CLP

*EC2E = EC2 Security Challenges to New Zealand's Interests in the South Pacific
E Challenges to legitimate governments, including civil war and secessionist conflict.



Vehicles of the Force Protection component leave the CSST location as part of the CLP



2LT James Anderson speaks with WO2 "Doon" Groves (Logistic Operations School) during the exercise



A vehicle from the Supply Platoon moves into location at PUKAKI

Trade Training School Train With the RNZN

Sgt Snax Palmer



You may have noticed there has been an influx of hydraulically operated equipment brought into service in the Army over the last few years. Equipment like the palletised knuckle boom crane (PKBC), 20 ton swing thru, heavy transport trailer and the upgraded unit bulk refuelling equipment (UBRE) all have elements of

hydraulics which put them a step above anything the Army has dealt with in the past – and there is more to come. For operators, you may have noticed the improvements in technology keeping the Army up with the civilian sector, including load sensing technology, which ensures our lifting equipment is working within its safety range.

RNZALR Maintenance Fitters are responsible for keeping this equipment working. The increase in technology has meant that the trade has had to up-skill in hydraulic training.

As a nice segue into the TED joint training initiatives that will become more common in the future, the first hydraulic course for Army was recently conducted at the RNZN Trade Training School at Narrowneck in Devonport. Five second year Maintenance Fitter Apprentices from Trade Training School (TTS) in Trentham attended a five week hydraulics course which, until now, has run up to four times a year solely to train RNZN technical trades.



During the first two weeks of the course the TTS Apprentices learnt hydraulic calculations and physics. This enabled them to gain an understanding of hydraulics in practice, which leads into 16 experiments using the Navy's propose built hydraulic training boards. These boards have full working miniature versions of most control valves and actuators found on hydraulic equipment today. The apprentices started the experiments by measuring the output of a hydraulic pump and worked their way to designing and building a regenerative two speed hydraulic circuit... that's a lot to learn in two weeks! But the Apprentices worked very well and achieved very good results, winning accolades from the Navy Instructors.

During their final three weeks in Devonport, the Apprentices learnt about electrical control systems. Via a remote control unit, this arrangement is how the PKNC and 20 ton swing thru are controlled. It is a technically advanced system which allows operator freedom of movement, whilst providing finely accurate control of the machines movements.

Over the five weeks the Apprentices had a great time working with the Navy and enjoyed many new experiences, including a tour on the new off shore patrol vessel (OPV) HMNZS Otago, and an afternoon at the Damage Control School.

TTS extends our thanks to the staff at Trade Training School Narrowneck for this opportunity and anticipates the continuation of joint training opportunities between both Schools.

Sgt Snax Palmer joined the Army in 1997 as a Maintenance Fitter. He has deployed on NZUNFET6 and to Afghanistan on OP CRIB in 2006.

While much of his career has been based in Linton, he has also been posted to Auckland and Burnham, and most recently as an instructor at TTS in Trentham, a position he has held since Dec 2008. Sgt Palmer is an experienced SNCO who has been involved with the introduction to service of a number of the technologically advanced items the Army has recently procured (notably, the Knuckle Boom Crane). He has been instrumental in delivering training for these pieces of equipment, including helping to point out deficiencies in training and identifying the Hydraulic phase in Devonport to help fill the Army's skill gap.

Exercise Pacific Partnership

Sgt Paul Cannon



Tonga, Vanuatu, Noumea. These are all great holiday destinations. However for a small team of Movement Operators these destinations were the focal point for Ex Pacific Partnership 2011.

The Team included Sgt Cannon (IC). Cpl Geary (Crew Commander), Cpl Mason (resident POM, Long Look), LCpl Kumar(5 shades of green) , Pte Morris-Kerie (under water expert)and Pte Rogers(Mirror Hog).

As with any Exercise there is a preparation phase. Ours started with 2 ER (who had the lead) assisting with their preparation for the Exercise. We provided advise and assistance with the Stuffing and Shoring of Containers, Preparing Vehicles for Sea Move and ensuring all the require export documentation was completed prior to the road move to Devonport for on load to the HMNZS Canterbury.

An advance party travelled up to Devonport to assist the Ships Amphibious Load Team (S.A.L.T) with loading HMNZS Canterbury. All the vehicles and Containers were loaded over the next few days prior to the Main body arriving. Once the Main body arrived and we set sail, there was time for PT, movies and some planning for what was going to happen upon arrival at Nuiatuputu, Tonga (NTT).

After a stop over in Noumea for a night in order to uplift the French flight Team complete with their PUMA we sailed onto NTT. The Naval Hydrographers and Divers needed to survey the channel to ensure that the Landing Craft could safely navigate through the crystal clear coral reef and deliver the required vehicles. Whilst this was happening the Mov Det deployed with the Contingent HQ to NTT via Helo insertion. Once landed our job was to receive under slung loads whilst Cpl Geary (still on board CAN) rigged the loads. This allowed the Engineers to get most of their stores to land in order to start the rebuilding projects. It also allowed the Medics and Dentists an advance look at the facilities they would be working out of once their vehicles and equipment could be landed.



PT on board.

Team, LCpl Russell (team caller)

Sgt Cannon, Cpl Geary, Pte Akau'ola Lauula, Pte Proebstel, Cpl Amos, Pte Tangare, Pte Morris-Kerie

Once the channel was opened and the under slung complete, the beach Party began their job. We were working off a permanent slipway with both LCM in operation. Once all the vehicles were on dry land, It was a daily task to send and receive the contingent either via LCM or RHIB to and from the Canterbury.

Just as we were getting into a rhythm it was time to clean all the vehicles and equipment and leave. With the job complete it was off to Vanuatu to more of the same.

Once we landed in Vanuatu it was the 24 Apr and preparations for ANZAC day had to be done. All dressed up, some of the contingent headed to land whilst the rest remained on board and had the dawn service with the crew of the Canterbury. Later that day we sailed for the Island of Santo Pekoa to complete the task in Vanuatu.

Once we berthed it was time for some of us to depart home for NZ and let a whole new bunch of enthusiastic defence Force personnel finish the task at hand. A Relief in Place was conducted with 2 x C130s being used to bring more troops in and send part of the contingent home.

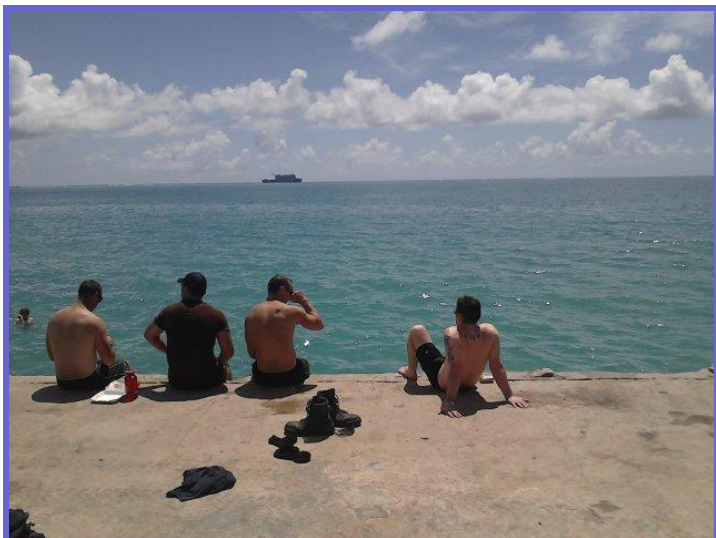
As I stood on the Tarmac at Santo Pekoa International airport and looked over at Sgt Baker and his team (our replacements) I knew my team and I had had the fun part of the Exercise. He still had the clean up to go. 5 hrs on a Herc and the Tropical heat was left behind for the sun filled sky of Palmerston North with the team and I wondering where the OC was going to send us next.



Pte Morris-Kerie and a Naval Leading rating doing a Underwater check of the Slipway for integrity.



LCM coming into the Beach head at Naitaputapu.



Personnel from the contingent waiting for the ride home to HMNZS Canterbury.



Vanuatu From the Air

Sgt Paul Cannon has 20 yrs plus experience within Logistics initially as a chef, changing trade to Mov Op in Dec 2008. He has also worked as an instructor at YDU, TAD and TTS. He has deployed to the South Pacific Region, Antarctica, Timor Leste, Bosnia and Iraq. Sgt Cannon is currently the Pl Sgt 52 Pl, 5 Mov Coy

Catering Competitions

Private Chany Yeatman



A strong contingent of military Chef's and Stewards from throughout the NZ Army made the journey to the Wellington Culinary Fare over the weekend of 27 – 29 May 2011 in order to compete in numerous civilian competition events, and for the coveted military catering prize, the Roy Smith Memorial Catering Trophy. A number of catering Senior Non-Commissioned Officers and Warrant Officers also participated as qualified hospitality competition judges and administrators.

Catering soldiers of the 21st Supply Company represented the 2nd Logistic Battalion in catering combat against their military peers, and civilian hospitality industry professionals in a wide variety of competitions which included:

- Chef of the Capital – CPL Tony Lyon.
- National Finals of the Hans Bueschkens Junior Chef Challenge - CPL Mata Nooroa.
- The Innovative Cocktail Class - PTE Kennedy.
- The Ian MacLennan Memorial Trophy, and the Roy Smith Memorial Trophy - PTE's Yeatman, Lulia and Kennedy.

Chef of the Capital consisted of a three-course meal themed around 'Wellington' as a destination, which



Corporal Tony Lyon Bronze medal winner Chef of the Capital

had to include local ingredients and local beverages to match the dishes.

All competitors had to plate four plates of each course, within three hours.

CPL Lyon achieved a Bronze medal in this prestigious event, achieving an overall score of between 70 and 80%.

The National Finals of the 'Hans Bueschkens Junior Chef Challenge' is a competition run by the New Zealand Chefs Association as part of the World Association of Chefs (WACS) international competition. This year there were eight competitors who represented different regions of New Zealand, all highly motivated by the opportunity for the winner to go on to represent New Zealand at the Pacific Rim Final in Auckland.

The competition comprised of a live 'Magic Box', where competitors were given a variety of mystery ingredients to create an entrée and main course for six covers within three hours. Another component of this competition was the presentation of two plated desserts featuring chocolate as the key ingredient. CPL Nooroa competed well amongst a stellar field to achieve a Bronze medal in this event.



Corporal Mata Nnra Bronze medal winner Hans Bueschkens Junior Chef Challenge'

The Ian MacLennan Memorial Cup / Roy Smith Memorial Catering Competition

The Ian MacLennan Memorial Cup consisted of a three course meal, comprising of a soup course, main course and dessert to be prepared for five covers... all within two and a half hours.

This competition is a memorial to a former Senior Catering Instructor of the Joint Services Catering School, and Head of Department of Hospitality at Weltec, who passed away from Motor neuron disease.

Each year the NZ Army tries to enter at least one team; however, this year all NZ Army catering units were represented with their own team. The judging was tough, and close!

Burnham came away with a Certificate of Participation, and both Trentham and Linton teams came away with bronze medals. Linton was .25 of a point ahead of Trentham, therefore making them 3rd overall. The winners of this competition were Weltec, gaining a Silver medal with a score of 80-90 marks.

The Ian MacLennan Memorial Cup was competed for as part of this year's 2011 Roy Smith Catering Competition. This competition covered the 'Hot Kitchen' and 'Stewarding' phase. Other components of the Roy Smith Memorial Catering Competition were conducted at TTS, Trentham Camp. These were the 'Quizzine Cup', and the 'Operational Trophy' components. Both were theory exams designed to test the combined student knowledge of all teams.

The Cuisine Cup was conducted as a "BUZZ" type game, with all team members answering individually. The Operational Trophy phase involved a theory booklet which was completed by each team. Knowledge amongst the teams was fairly



Privates Lisa Kennedy, Nathan Lulia and Chantal Yeatman proudly display their impressive haul of trophies. From left to right, Pte Kennedy holds the Roy Smith Memorial Trophy, Pte Lulia holds the Quizzine Cup, and team captain Pte Yeatman holds the Murray Ross Hot Kitchen Trophy, and the Inter Services Fretwell Downing Trophy.

even, with victory finally coming down to a slim one point lead by Linton's 2nd Logistic Battalion caterers.

Roy Smith Memorial Trophy results:

Harvey Bourne Cup (best dessert)	TRSB
Dave Murray Cup (Stewarding)	TRSB
Murray Ross Cup (Hot Kitchen)	2 Log Bn
Fretwell-Downing Trophy (Inter-services catering)	2 Log Bn
Quizzine Cup	2 Log Bn
The Operational Trophy	2 Log Bn

And the winners of the 2011 Roy Smith
2nd Logistic Battalion!

PTE Chantal Yeatman enlisted into the NZ Army as a Chef in 2008. She is currently Chef RNZALR Intermediate Course qualified, and holds her City & Guilds Certificate in Food Preparation and Cookery. She has represented NZDF in competition catering at national level, and has represented both TRSB and 2 Log Bn at inter-service competition level. She is currently employed as a Shift IC within Catering Platoon, 21 Supply Company.

Special Operations Force Enablers

Major Nathan Baker



Introduction

This article is aimed at providing RNZALR personnel a brief glimpse of one individual's experiences within the logistics world of 1 NZSAS Group. The logistics and combat support engine of this Unit resides within Support Squadron. This Squadron is a multi-functional organisation comprising of personnel from five Corps and 16 different trade groups; with 50% of the Squadron consisting of RNZALR personnel. Support Squadron meets the support requirements of the Unit through provision of the full range of Combat Service Support, Intelligence, and Communications services. 1 NZSAS Group is a dynamic Unit with shifting needs. To accommodate these altering requirements, the Squadron continually innovates and adapts through ongoing change and improvement.

The reader will gain an understanding of life within Support Squadron through following the experiences of Sergeant H in his own words.



Sergeant H

"In Jul 07 I was watching a 1 NZSAS documentary whilst posted to OP RATA as a Corporal. I decided that was a bit of me. I expressed my interest through the command chain and received a phone call a week later asking if I was interested in the Motor Trades Sergeant position at 1 NZSAS Group.

I was posted to 1 NZSAS Group in Jan 08 and started the year with induction training. This skilled me up on Unit weapons and equipment, and tested my mental and physical ability through physically demanding leaderless tasks.

I've had a number of interesting experiences while serving in the Unit. I have acted as a hostage, and terrorist, amongst other things, for many different realistic training activities. I've been directly involved in developing at least four full-size remote control cars as part of the moving target capability. Enhancements included controllable progressive acceleration, improved braking control, and gear selection on an automatic car thus allowing the car to select forward, neutral, and reverse. Where else would you be able to take a car, strip it, then fit it out, and test its turning circle and acceleration on a helo pad, whilst sitting in your office?

In order to remain at an Operational Level of Capability (OLOC) and be proficient in supporting the Unit in a range of operational scenarios, I have been trained in a variety of weapon systems, including the SLP, MP5, M4, sniper rifles, and put more brass through the 50 cal than I've ever fired from a Steyr.

Despite a hectic operational tempo, the Unit has ensured that my professional and career development has not been restricted, and in Oct 08 I completed my Intermediate Maintenance Support (MS) Course and followed this with the SNCOs Course in Mar 09. A week after returning from this course I also successfully completed the Counter Terrorist Tactical Assault Group Entry Assessment. This provided me some additional career alternatives, with the option to train as a Commando being made available.

In Jul 09 I was promoted to Sergeant and was quickly thrust into the relatively short notice preparation for deployment of the Unit to OP WĀTEA, AFGHANISTAN. During this time I was also called upon for input into the procurement and improvement of the Unit's replacement operational motorbikes - the KTM530EXC R.

Over the period Oct 09 – Apr 10 I deployed on OP WĀTEA. The constrained number of personnel committed to the operation meant that I fulfilled the role of a number of functions, including Vehicle Mechanic Sergeant, Research and Development team member, driving and maintenance trainer, and camp infrastructure maintenance NCO. I was later to learn that these roles earned me a recommendation for a Chief of Army's Commendation.

The task of standing up OP WĀTEA was massive and, as always, the support personnel worked feverishly alongside the badged operators to achieve a standard of which the NZDF could be proud. This involved using daily innovation and producing the best product with the resources available. I was called upon to deploy on a number of the Task Force's operations where my technical skills were needed, and got to really understand how enablers have become such a critical component in the modern world of Special Operations.

In Oct 10 I was attached to the mobility phase of the SAS Cycle of Training as the Vehicle Mechanic, and part of a vehicle crew. I took part in various training including break contact drills in the Unit's Special Operational Vehicles (SOV) using the 50 cal machine gun, and 'test riding' of the KTMs at the WAIOURU motorcross track.

Come Feb 11, I was again deployed to OP WĀTEA as part of a Light Armoured Vehicle (LAV) armour upgrade team.

My experiences in 1 NZSAS Group have surpassed my expectations and developed my understanding of what excellence really means. PAPA KURA MILITARY CAMP is a first-rate environment and we work closely with other RNZALR personnel within the

Auckland Regional Support Centre (ARSC). Much of the 'Auckland posting' image within the Army is inaccurate, and this is largely dispelled the moment we get guys up here on a Tour of Duty. No sooner are they back at their Units, than they're asking for a posting up here."



If This Sounds Like You...

If you excel in your chosen trade and believe you have the right attitude and aptitude for supporting Special Operations, then express your posting interest through your command chain. 1 NZSAS Group will create for you a new definition of what it means to be motivated and operationally focused.

Once posted to 1 NZSAS Group, personnel need to qualify to wear the coveted Unit beret and be eligible for deployment on Special Operations. Qualification is achieved by completing the Special Operations Forces Induction Course (SOFIC).

This course addresses physical barrier testing, familiarisation with Unit-specific weapons and equipment, and educates personnel on the unique ethos and values of the Unit - the most important tenet being the 'unrelenting pursuit of excellence'. The course also includes a three month probationary period where workplace performance is assessed.

The next SOFIC will be run in late Jan 12.

For more information see the NZSOF webpage at <http://awi-teams/1NZSAS/>



Major Nathan Baker is the OC of Support Squadron, 1 NZSAS Group. He has served in the NZ Army for the last 18 years and has gained experience in logistics, management and engineering through deployments to East Timor and Afghanistan, together with education at Canterbury University and in the United States.

The changing nature of Combat Logistic Patrols

Lt Col G Ewart-Brookes RLC

This article has been reproduced from the Summer 2011 edition of the RLC magazine "The Sustainer"

Desert Snake to Urban Dasht



Whenever anyone mentions CLPs it probably conjures up an image of a long snake of vehicles, obscured by hanging dust, pushing through undulating desert terrain against a backdrop of vivid mountain scenery and with a lone MASTIFF perched on a middle-distant hill

providing depth Overwatch. Twelve months ago this view might have been entirely typical of CLPs resupplying Sangin or Musa Qala on the now revered Op LAVAs and LOAMs.

But in the last year the typical CLP has changed. More likely now would be to see a MASTIFF or BUFFALO negotiating almost impossibly tight routes within the Green Zone, or transiting down narrow, pitted tracks, bounded by deep irrigation channels, or to watch numerous EPLS¹ picking their way through compounds scattered with livestock, bemused elders and punctuated by the screams of children excited by the prospect of free pens! This short article aims to explain the impact of a shift from the "desert snake" on previous HERRICKs to what perhaps could now more appropriately be called the "urban dasht"²

There are a couple of caveats that ought to be clarified up front. The first is that there is no such thing as a 'standard CLP' and therefore comparisons will be based on generalities in some instances. The second is

that none of this is an exact assessment it isn't backed up by reams of statistical analysis (though it is underpinned by some); instead it is more of a qualitative assessment based on observation, perception and undoubtedly a little conjecture.

It could consequentially be accused of being biased, since the views are from someone deployed on HERRICK 13. Those who came before might of course have a different perspective. Regardless, the article is most certainly not an attempt to 'big up' 13 Close Support Logistic Regiment (CSLR) or 'do-down' its predecessors all of whom conducted themselves with professionalism and much tactical acumen.

At the start of Op HERRICK13, there was a common expectation that, once Sangin had been out loaded, the periodicity, size, duration, intensity, complexity and threat to CLPs would all reduce.³ What this article will illustrate is that some of the above is true.

There is not the space to cover complexity and threat and a fuller paper, with higher clarification has been circulated with this analysis included. However, what it should also emphasise is that many of these assumptions were either overly optimistic or based on incomplete analysis; a sort of "same number of troops + more compressed battlespace = easier logistic solution". In order to address the issue, the article will compare CLPs now to those that predominated in operations on HERRICK 11 and 12.

I want first to turn to periodicity and size to determine whether, post SANGIN, CLPs did become less frequent

1. Enhanced Palletised Loading System (the new DROPS).

2. Dasht is one derivative of the Afghan word for desert

3. The author's assessment based on perceptions drawn from the HERRICK 13 recce in May and from general conversations with members of HQ TFH during TOA and with PJHQ during preparations for TCR 2/10.



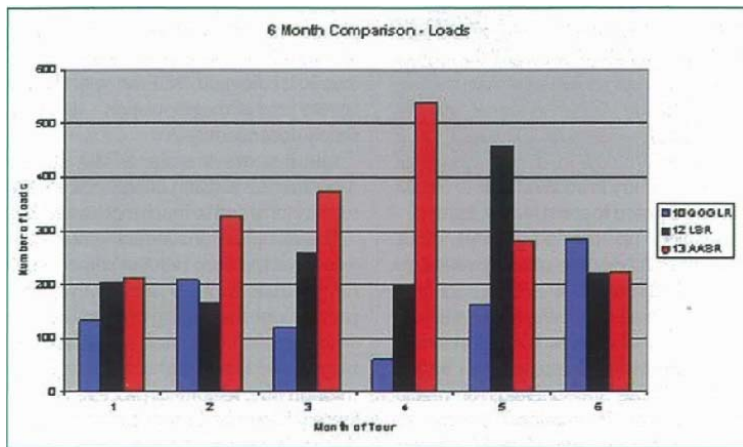


Figure 1: Comparison of CLP loads

and smaller relative to HERRICK 11 and 12 as many intimated. In overall terms during HERRICK 11 and 12 there were 21 and 33 CLPs respectively. Using the same metrics⁴ the 61/2 months of HERRICK 13 saw 56 CLPs. This equates to 1950 loads moved at the point of writing and with at least 3 CLPs still to go before TOA, by comparison to 1,510 moved during HERRICK 12. What also becomes apparent is that in terms of size on average, CLPs during HERRICK 12 were larger than now but that the difference is pretty nominal at only 7 extra vehicles.⁵ The most fundamental aspect of this rather unsophisticated statistical analysis is that it shows clearly that the frequency of CLPs has increased significantly and that total loads moved around Central Helmand have also grown. In fact if a comparison is taken at the end of Op HERRICK 13 it shows an increase of CLPs of over 60% and loads by 33%. The headline issue is that the assumption that the frequency of CLPs during HERRICK 13 would reduce is false; indeed the opposite is true as Figure 1 shows. It is also important to note that this intensity has been managed at a time when the CSLR was reduced under Theatre Capability Review (TCR) 1/10 by a further 60 posts.

The nature of these CLPs has changed in terms of duration too. Again, anecdotally the consensus is probably that HERRICK 11 was typified by long CLPs to Sangin and Musa Qala; that HERRICK 12 started to see increasingly short runs into Central Helmand interspersed with runs to Sangin and that HERRICK 13 has been defined by short rapid runs into the Green Zone. Statistical analysis does back this up partially, though the delta is not as pronounced as some might imagine.⁶ Figure 2 above shows that more recently, a higher proportion of the CSLRs activity has been single day operations, but it also indicates that the number of longer CLPs (ie those greater than 3 days) has not changed radically between HERRICK 11 and 13. Perhaps the most stark contrast is that there has been a notable shift from 2-3 day operations to 1-2 day CLPs in the last 12 months and that short 1 day CLPs have predominated on HERRICK 13.

My assessment is that the principal reason for this shift to shorter CLPs is the impact of greater freedom of movement within Central Helmand. Historically, when previous CSLRs were conducting discrete operations into the Green Zone their SoM remained largely identical.

The enduring threat forced them into utilising the same ingress and egress routes to the logistic hubs each time.⁷ In many instances these were chosen correctly because of their safety and at the expense of flexibility of supply or indeed speed. Often approaches were through open dasht and over ground that had to be cleared and then held for the subsequent withdrawal of the CLP. Throughout Op HERRICK13 there have been significant improvements to freedom of movement within the CF AOs and there are now more opportunities for CLPs to cross between these AOs in order to affect more dynamic and responsive resupply. A number of locations which would previously have taken more than a day to reach can now be resupplied in under a day and there are almost always alternative means to reach each location, offering greater opportunity for quicker, dynamic resupply and for improved deception. By way of example there are at least 5 new arterial routes now open to CLPs and several smaller ones that can be secured for transit with limited CF support.

Frequency and speed, however, do not give an overall picture of intensity and could, taken in isolation, be misrepresentative. Some might, for example, argue that a CSLR that can transit more quickly through TFH's AO, on demonstrably shorter (mostly 1 day) CLPs and with less notable impact from the insurgent, could be operating at a lower level of overall effort than its predecessors. Perhaps the best way to measure intensity is as the drivers would 'see it' in 'days out' on CLPs. On HERRICK 11 the CSLR spent approximately 67 days deployed on the CLP5; on Op HERRICK 12 that had increased to 74 days. The cumulative duration of Op HERRICK 13 CLPs was 76 days; broadly comparable. This might seem odd given that we have less troops in Helmand now than in the latter period of HERRICK 12 when the TRB were deployed into NDA(N) and CF SGN was still operationally active. I would assess that the increase in intensity has come about for several of reasons. Firstly because of the number of surge operations which seem to have punctuated time on Op HERRICK 13. They include, the closure of Sangin and Budwan — which for example accounted for 13 extra CLPs alone — Op RITA to Kandahar, support provided to the US, support to the repair of the Singhazi Bridge, the UK's expansion into Ops Box EDEN in Maiwand and increasing support to the

4. Defining a CLP by a departure from and arrival at BSN as an operation that has a set of orders and battleprep its own right — something established by 12 CSLR during OpHERRICK 12.

5. These figures have included CSLR vehicles only not those attached to the CLP for movement or protection (such as TALISMAN).

6. This data excludes the 3 CLPs that 13 CSLR ran to complete the outload of SANGIN.

7. For example, Op MIKA 10,11,12,13 utilised the GOWRAHMANDEH and PIMON to access SQT, as did Op MUBAREZ 2 and 3

Danish Battlegroup. Secondly I would argue that growing security in Central Helmand has enabled more risk to be taken in CSLR battle preparation, reducing planning timelines and making the Unit more responsive to the TF's needs. In turn this makes CLPs a more effective and 'attractive' resupply option for TFH compared to alternatives such as contract heli-lift support helicopter or indeed civilian convoys.

The third and final reason is that during Op HERRICK the intensity of Coy(+) operations has increased four-fold creating a corresponding (though not equal) rise in sustainment demand.

What can be concluded from my observations? I wouldn't profess that Op HERRICK 13 has been a harder tour than those experienced by my predecessors and in terms of intensity (days out on CLP5) Op HERRICK 13 has been broadly comparable to that of HERRICK 12. However, I would claim that in those 'days out' we have been forced to do more - over 30% more loads moved into and out of Central Helmand. We have done it at a time following a mandated reduction in our personnel and with only modest reductions in insurgent activity. While I have not turned my

attention to future CSLR activity, I would judge that given the future potential for drawdown and the enormity of the logistic task of extracting UK Force Elements from Central Helmand, that intensity will only continue to increase.

I will leave my final two observations as an after note. Perhaps what is fundamentally different now from earlier HERRICKs is the standard of equipment the CSLR posses and operates. The vehicles (even task vehicles offer unrivalled levels of protection from mine blast and SAF; indeed all of the soldiers injured within these vehicles during HERRICK 13 have been able to walk (or hobble) away from the incident.

will conclude with only the one thing that hasn't changed; that is the indomitable professionalism, the unconquerable spirit and the irrepressible humour of the soldiers of the CSLR (TA and Regular). They amaze me everyday, they are a credit to our Corps and I thank them for their unyielding effort.

This article has been reproduced from the Summer 2011 edition of the RLC magazine "The Sustainer"

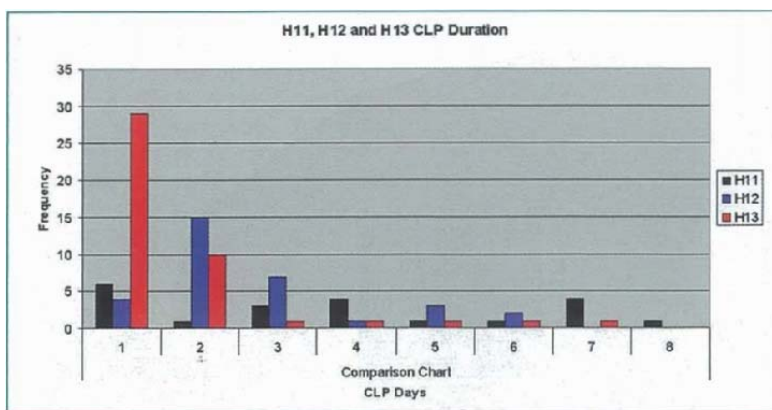


Figure 2: CLP duration



This article is reprinted from Military Logistics International Magazine

In remote regions that are away from main supply routes, air deliveries are essential in allowing forces on the ground to be fully mobile. **Francis Tusa** reports on the importance of this resupply method.

The pace and intensity of operations in Iraq and then Afghanistan has caused forces deployed in those theatres to re-examine, and then reintroduce, a resupply skill that has ebbed in and out of fashion – air delivery. This is the provision of supplies by fixed-wing aircraft, sometimes by landing on strips and pushing stores out of the back, but more often by dropping cargo on parachutes from higher altitudes.

‘Air drop is the perfect tactic to support the ground commanders in counter-insurgency [COIN] operations,’ Maj Tyler Kern of the USAF Air Mobility Division (AMD) told *Military Logistics International*. ‘Air delivery allows ground commanders the freedom of movement to operate in remote areas away from main supply routes where ground convoys cannot move freely or sustain themselves. Reducing the number of convoys also reduces the threat to ground forces from IED attacks, in turn increasing freedom of movement. “Any time and anywhere” logistics feeds the fight during COIN operations.’

FALLING FAST

For most Western nations involved in recent operations, Iraq provided an initial ‘kick’ to re-examine air delivery, but Afghanistan has pushed such flights to the fore.

‘This mission started after the need was expressed by units in Afghanistan. The request was then relayed to the French Air Force [FAF] and required us to go beyond the initial operating framework planned for actions in 2001 and 2002 [to support the forces engaged in Afghanistan],’ Lt Col Franck Flammier, the French airlift group commander at Dushanbe, Tajikistan, told *MLI*. ‘The main idea regarding dropping is that you only need to drop somebody or something when you have no other alternative, and no capability to land the aircraft in the vicinity of the relevant area, in order to minimise the risks to personnel. ‘The idea was to support elements inserted in OMLTs [operational monitoring

and liaison teams], and to be able to support forces as closely as possible at any time, by day or night, in visual or instrument meteorological conditions, should the standard logistic chain fail. At that time, the only solution was night drops using NVGs. This type of delivery was immediately tried, but it did not fully meet the requirements. In order to increase delivery precision, the FAF developed, on its own, a new capacity – HALO drops [high altitude, low opening]. The first drops occurred during August 2008.’

The French forces have now used the technique for support and replenishment for more than two years as a complement to the ground logistic chain. This type of delivery is used to provide support to the isolated units of Task Force Lafayette in FOBs and combat outposts in Kapisa and Surobi provinces, while reducing the risk to convoys from IEDs and to aircraft from surface-to-air weapons.

‘The UK has been active in Afghan airdrops since 2006,’ Sqn Ldr Gareth Burdett, officer commanding B Flight, 24 Squadron at RAF Lyneham added. 24 Squadron is the operational conversion unit for the UK’s Hercules force, and every pilot is trained in the required roles, including air delivery. ‘The approaches to air delivery vary between brigades [deployed to Afghanistan], but there has been a consistent upward swing in the demand for aerial delivery since that time,’ he said. ‘Iraq really initiated the capability, and we used it to resupply mobile patrols in the deserts of east and south Iraq. But in Afghanistan, on *Herrick IV* [May-November 2006], 16 Air Assault Brigade identified the need for air delivery, and the new kit [the C-130J] and computer that it had could provide this capability very well. Generally, the recent genesis of UK air drops follows the development of the C-130J. A lot of clearances were prioritised to get the capability operational.’

But he added that despite the new-found interest in air drops for supplies, ‘the drawdown of the UK operational area in Helmand has made them slightly less attractive – but it still is a vital component. Re-



Air delivery/air drop of supplies has gone from being a tactical sideline to a major aspect of combat operations in Afghanistan. (Photo: US DoD)

80 pallets, representing a total load of 70t. A C-160 can drop four pallets, each weighing more than one tonne, in two runs.

MINDFUL RE-USE

‘The main difference between the USAF and other air forces in Afghanistan, is that the US uses several types of aircraft. C-130s execute about 60% of the Combined Air and Space Operations Center’s AMD-directed air drop missions, with the C-17s executing the remainder,’ Kern explained.

‘However, the number of bundles and weight dropped is closer to 40/60 respectively. For current operations, the loads for the C-17 and C-130 air drops are the same. We do use the C-17 for our high-volume users and the C-130 for our small demand users. High-volume customers request a large amount of supplies in each order.’ Another advance is the development of lowcost air drop (LCAD) equipment. This is a more accurate and flexible air delivery method for resupply of small, mobile forces. Traditional silk parachutes and rigging are both expensive and labour-intensive. LCAD is a one-time use, prepackaged air drop system that uses expired T-10 personnel parachutes, and is allowing the high volume of drops to continue with already established tactics and procedures. ‘We also use a low-cost low-altitude (LCLA) form of air drops, specifically, the C-130 LCLA combat air drop, which is accomplished by dropping bundles weighing 80-650lb, in prepacked expendable parachutes. The “low-cost” term reflects the relative expense of the expendable parachutes compared to their more durable, but pricier, nylon counterparts. “Low-altitude” alludes to the relative height that bundles are released from the aircraft – between 300 and 500ft above ground level. This is a significant step forward in our ability to sustain those engaged in combat, and it is also more accurate than traditional, higher-altitude air drop methods and cuts down on “stray bundles” that can land away from the DZ,’ Kern said.

cently, we’ve been doing a lot of air drops in support of the USMC in areas which Task Force Helmand was responsible for previously’.

USING THE RIGHT TOOLS

Burdett told *MLI* that the RAF’s C-130J is at the heart of the UK’s air delivery operations. ‘Currently, the quantity of UK air drop in Afghanistan does not call for a C-17 capability – the C-130 fleet easily meets the demand, and the J has the capacity and capability for the role,’ he said. ‘The C-130J has earned its spurs in the air delivery role – it’s the “white van” of the air transport fleet. If you do your job well, then no one notices the Hercules fleet, but they do notice if you’re not there!’ The RAF uses a range of delivery means, as Burdett explained. ‘We have a system called “small stores”. This is anything really. The utility is that you can drop stores at very short notice onto a very small drop zone (DZ). It’s ideal for engineering spares, ammo and small volumes of stores. We would classify small stores drops as ranging from 30-300kg. There is no need for [an aircraft] role change at all. You could have 70 passengers and some small stores bundles, drop those and then take the passengers to a different destination. ‘Then there is the container delivery system [CDS],’ he said. ‘They’re called containers, but they aren’t – they are bundles of different stores, packaged together. We can carry 16 in one lift. It’s on a pallet with a cardboard crumple system and a parachute on each. ‘It’s very flexible – you can drop one container, or up to 16t in 20 containers, or as little as 400kg. It does require a dedicated role change down the back of the aircraft, so it is less flexible for short-notice tasking.’ ‘For military operations over Afghanistan, all the HALO drops for French forces are done by C-160 Transall tactical cargo aircraft belonging to the airlift group, based at Dushanbe airport,’ Flammier added. ‘HALO can also be carried out from the FAF C-130s, although it has not been done so far over Afghanistan.’ About 30 HALO deliveries have been completed by the cargo aircraft of the Dushanbe airlift group for an approximate total of

ON THE MONEY



The French Air Force has adopted a high-altitude delivery tactic to provide supplies with accuracy to widely dispersed forces. (Photo: SIRPA Air)

The issue of air delivery accuracy has been to the fore for air forces on operations today. ‘When we started, perhaps we were not as accurate as the ground forces would have liked,’ Burdett admitted. But keeping operational details carefully vague, he added: ‘We aim to minimise the load spread, and put the load as close as is safe to the FOB/patrol, so that it becomes easy for them to clear the DZ. We recognise that ground forces have to operate in areas with mines and IEDs, so DZ clearance is an issue.’ For the RAF, the means to do this have been simple, according to Burdett. ‘Wind is the variable we have to deal with – the longer that a load is exposed to this, the less accurate the delivery will be,’ he said. ‘So we bought an element of the US precision air delivery system. A sonde is thrown out that traces its path in the sky as it falls, and it broadcasts that back to the aircraft so that we can see what has happened as it drops. We can then apply that data to our drop. It isn’t fully “precision”, as the load isn’t guided, but it is still very accurate.’ ‘Meteorological conditions are no longer a limitation, since the aircraft does not descend to drop at medium or low altitude,’ Flammier said. ‘The only serious limitation could be thunderstorms in the vicinity of the DZ and the resulting non-predictable winds that would distort the dropping calculations made by crew. ‘Personnel in charge of the delivery add stabilising and extracting chutes, a barometric release system and to finish with, the main chutes. It is important to keep in mind that no electronic device is fitted, that it is just a wellmastered free fall, and that all the dropping equipment can be re-used for future deliveries.’ Kern agreed about what affected air delivery in Afghanistan, but differed on how to deal with it. ‘Wind – it still plagues air drop operations,’ he concurred. ‘But conventional balloon data and GPS sondes do not meet the tactical requirements of current operations. The USAF Weather Agency has made dramatic advances in forecasting with their four-dimensional wind modeling that informs crews on the air mass, but a real-time, tactical solution is still missing.’

IN SHORT SUPPLY

All interviewees commented on two aspects of air delivery that are often forgotten. ‘With air drop missions increasing, rigging supplies and commodities to fill the loads are in short supply, but the customer is always asking for more,’ Kern said. ‘The air delivery “reverse supply chain” is no longer an issue of education,’ Burdett explained. ‘Army units understand the need to get the air drop kit back to us. But it’s all very well getting our parachutes returned to us, but if it means that someone loses a limb doing it, then we’ve failed.’ And then there are those indispensable helpers. ‘47 Air Despatch Squadron [Royal Logistic Corps] are intrinsically linked to organising the air drop role,’ Burdett outlined. ‘They source the stores, build the load and come on the mission with

PUTTING IT INTO PERSPECTIVE

The mid-January 2011 USAF headline was stark and loud: ‘Afghanistan air-drop levels set record in 2010’. The story described how in 2010, some 27,400,000kg of cargo was air delivered in support of operations. This was up from 14.6 million in 2009, 7.5 million in 2008 and 3.7 million in 2007. Clearly, a steady progression in air drop with a doubling every year. And these figures do not include air delivery operations by other players in Afghanistan. The RAF told *MLI* that from January 2010 to January 2011, some 281,000kg of cargo was delivered by air via RAF C-130 aircraft. The French and Italian air forces have also been involved. But it makes some sense to put a historical overlay on these. To take the USAF figures, 27,000,000kg across a year amounts to an average of 74.7t a day. So what? Well, these are the air delivery figures for a range of operations from the late 20th century:

- **Stalingrad (November 1942-February 1943).** The stated requirement was 680t per day, but only around 450t were delivered, with a peak of just over 630t per day.
- **Berlin Airlift (June 1948-May 1949).** The bare minimum requirement to feed Berlin was 1,400t per day, with an extra 1,600t of coal, 3,000t per day in total. After a shaky start, this was achieved, and by the end, 11,800t per day were delivered.
- **Dien Bien Phu (March-May 1954).** Around 135t per day were required to supply the garrison. Generally, only 90-100t per day were delivered, and much of this was captured by the Viet Minh.
- **Khe Sanh (January-April 1968).** Average daily lift/drop of 210t, and a maximum of over 270t.

The point to make is not to denigrate the efforts in Afghanistan, but to put them into some historical and logistical perspective. There will be those – rightly – who will point to the fact that the air delivery operations for Stalingrad and Dien Bien Phu were hardly successes. But consider the fact that even these ‘failed’ operations were managing, just, to deliver hundreds of tonnes per day, and do this day-on-day. Perhaps the point to take away is that while a Ju 52 was lucky to carry 2.25t, and a DC-3/CH-47 could carry 3.2t, with modern aircraft taking 14.5-18t (C-130J), and 55-72t (C-17), might there be room for even more use of air delivery on operations?

us as well. 47 AD see it through from end to end. We couldn’t do air drop without them.’ ‘The record-breaking efforts start with heroic efforts by the sustainment brigades and parachute riggers and end with the aircrews and DZ control teams,’ Kern added.

HERE TO STAY

‘Looking to the future, air delivery may develop by way of adapting the load dropped to the forces on the ground, in real time,’ Flammier concluded. ‘Those missions could have something in common with close air support missions, with DZs listed during the preparation phases or timely DZs given to the crew members by a JTAC [joint tactical air controller].’ ‘The bottom line – air drop provides the capability to deliver critical supplies into the most remote regions of the world with little to no infrastructure,’ Kern said. ‘Air drop allows combined forces land component commanders the freedom to manoeuvre and arrange forces as needed.’ ‘Air drop is an intrinsic part of UK operations in Afghanistan,’ Burdett concluded. ‘Whether the next major operation is COIN or not, it is very likely that it will be expeditionary, requiring the reach of air drop and air transport to sustain deployed forces. People have rediscovered the utility of air delivery.’

This article is reprinted from the US Army Sustainment Magazine

French operational mentor and liaison teams advise and train Afghan National Army units and help them become more capable of independently securing their nation.

From June to December 2008, I led a French logistics operational mentor and liaison team (OMLT) in advising the 5th Kandak, the Afghan logistics battalion serving the 1st Brigade, 201st Army Corps, Afghan National Army (ANA). The French OMLT replaced a U.S. embedded training team at the beginning of 2008 and retained the focus of the U.S. unit's mission. The OMLT's mission was to perform, sometimes simultaneously, three functions: teach, advise, and train.

In this duty, the French logistician must become a mentor. The key to an OMLT's success lies in choosing men with adequate mental strength to stand alongside Afghan soldiers—not only in training but also in combat. Even if fighting is not the aim of the mission, it is a very probable consequence of the mission of mentoring. Actually, in Afghanistan, French logisticians have been serving as “fighting logisticians” since 2008. Within the OMLT, every member of the French Transportation Corps, from private to colonel, is committed as a fighting logistician.

The French Army deployed its first OMLT (an infantry one) in 2007, and a logistics OMLT was deployed the following year. This logistics team of 30 men (mostly noncommissioned officers and officers) does not support other OMLTs but advises the 5th Kandak every day and for each operation.

The French Transportation Corps has experience in establishing logistics battalions by building mission-tailored units out of various specialties, but the OMLT concept is new. The concept is based on military assistance missions that were carried out in Africa, and today the OMLT is the key element in gradually bringing the ANA to independence in security tasks.

The Choice of Men: The First Criterion of Success

The choice of men is incredibly important to the mission because the members of the team will spend

1 year together (training for the mission for 6 months and carrying it out for another 6 months). The OMLT's cohesion is built during the operational training, which itself must be considered as the first mission.

During these months of training, which are crucial for mission success, the team builds up its moral strength. The qualifications requested from each individual are numerous, and their psychological balance is fundamental. In fact, the ideal French OMLT logistician must demonstrate hardiness, a full spectrum of technical competencies, emotional stability while facing stressful combat situations, an open mind (since Afghan culture is complex), and the ability to speak English since an Afghan translator speaks Dari or Pashto and English but no French at all. These qualities may not exist in one single man.

However, in Afghanistan, the quality of training was evident in the correctness of the advice given daily to the Afghan soldiers and especially in the success of the operational missions. Lessons learned revealed that a person's psychological balance is the most important quality for a commitment in the context of the OMLT, but it is also the most difficult one to judge.

Mentoring: A New Form of Military Assistance

In civilian life, mentoring is an activity called coaching (even in French), meaning “revitalizing an ailing firm.” As part of the OMLT, the mentoring mission is innovative and is based on three tasks:

- Advise ANA units in everyday life, teaching, and training.
- Advise Afghan commanders in planning and using land or air support from coalition forces.

- Provide the necessary means to use command and control assets to allow authority to be implemented and operations to be controlled.
- The daily tasks are complicated by the fact that they are intended for a mix of ex-mujahidin, former officers trained by the Soviets in the 1980s, and young people involved in a regular army who have good operational abilities despite lacking basic technology skills.

As a team leader of the logistics OMLT, I directly advised the commanding officer of the Afghan logistics battalion and cooperated with him in training his unit and preparing logistics operations to support his infantry brigade of 3,000 men. Each of the 15 French mentors had an Afghan counterpart in each logistics specialty of the 5th Kandak, which is essential to resupplying the brigade. The brigade secures Highway 1, which stretches over 100 kilometers out of Kabul and is the only logistics supply line linking the capital to Kandahar.

Mentoring is about advising, showing an open mind, proposing, suggesting, guiding, and letting the Afghan officer make the final decision. Trust between the French officer and his Afghan counterpart is fundamental. This takes time to achieve, but this relationship is the only way to success.

The French officer must not be a substitute for Afghan authority, or else the mission will fail. The mentor is an adviser or a trainer but not a surrogate. The first month of the mission was an observation round that determined the result of the mission and its success. Confidence was gained on the ground, particularly after 2 weeks in Afghanistan when the first ambush occurred and our capabilities were successfully tested.

Convoys: The French Transportation Corps at War

The conflict in Afghanistan is a war without a name or front line, and logisticians travel across many uncontrolled areas. The ANA is at war, but the coalition forces, which officially are present only for assistance, are not. The enemies have no front line and attack the logistics convoys throughout the whole area of operations. The notions of front and rear do not exist. It is a modern conflict in which logisticians support the farthest forward operational bases and ensure resupply missions are everywhere.

The current missions of the French OMLTs include accompanying the 5th Kandak when resupplying the ANA infantry battalions that secure Highway 1. The OMLTs and the 5th Kandak deliver fuel, engineering equipment, and food and evacuate the vehicles damaged in combat.



A soldier in a French armored personnel carrier at the entrance to the Saalar Combat Outpost secures an area near Highway 1 during a refueling mission.

In 6 months, the OMLTs conducted about 100 missions throughout the provinces of Logar, Wardak, and Bamyan. They traveled over 100,000 miles on the trails of Afghanistan. The mission was difficult, and each soldier felt the pressure of each convoy, which turned out to be combined, and sometimes joint, military operations. The duration of such missions varied from 1 day to 1 week, but the enemy threat and the improvised explosive device ambushes were constant. The first enemy that had to be fought was the routine. Everyone had to remain careful from the first day of the mission to the last one and master the tactics, techniques, and procedures.

We showed our Afghan counterparts that each French logistician is a fighter and thus earned their trust. The partnership has been going on for 2 years now. This exciting mission is a great adventure for a soldier. It puts everyone, whether specialist or leader, private or colonel, in the role of a soldier and a fighting logistician. But this mission is dangerous because it means that the French soldier shares the daily mission of the Afghan soldier, who is at war.



A French light armored personnel carrier and two Afghan fuel tankers proceed in a convoy in the Bamiyan Mountains.

Lieutenant Colonel Christophe Barbe is the chief of the French Army logistics advanced course in Bourges, France, and a former logistics operational mentor and liaison team leader in Afghanistan. He has a master's degree in the history of international relations from the University of La Sorbonne in Paris.

Military Repair Facility Savings

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PYEONGTAEK, South Korea — The head of the Army's big repair complex in South Korea is looking to save the U.S. military several million dollars a year in a proposal to have work shipped from elsewhere in the Pacific to his facility, rather than sending it stateside.

The biggest savings would come in shipping costs and a comparatively low labor rate at the one-of-a-kind military facility in the Pacific, where 50 Defense Department civilians and 600 South Korean workers repair everything from radios to rifles to tanks. "Traditionally, MSC-K has been Korea-centric, supporting Army forces on the peninsula," said Col. Phillip A. Mead, commander of the Army's Materiel Support Center-Korea. "What I would like to see happen, and part of my command vision in the Pacific, is over the next couple of years, providing Pacific-regional support."

Last month he pitched his proposal to the U.S. Army Pacific in Hawaii, U.S. Army Japan and the U.S. Marine Corps Logistics Command in Albany, Ga. He said no final decisions are likely for at least several months, and that they'll come only after thorough analyses of costs and benefits. "We're just looking at it as a possible course of action," said Army Col. Clay Hatcher, deputy chief of staff for logistics at USARPAC in Hawaii. "We're still very much doing an analysis."

Located at Camp Carroll in Waegwan, the facility does all major repair and maintenance on Army ground combat equipment in South Korea that are beyond the capabilities of local base motor pools. MSC-K also provides similar support to some equipment from the U.S. Marines on Okinawa and Hawaii, Mead said.

"Having a depot-like facility located in the Far East is an extremely valuable asset," said Marine Col. Stephen Gabri, assistant chief of staff for logistics at III Marine Expeditionary Force on Okinawa. "And the relative closeness of MSC-K to Okinawa provides relative ease of transporting goods to and from our locations."

At its cavernous repair bays, the facility overhauls thousands of items of equipment yearly — battle tanks, Bradley fighting vehicles, Humvees, radios, night vision goggles, small arms and an array of other equipment. It also makes one-shot repairs to equipment damaged beyond what a local motor pool can fix.

Operating on a \$41 million annual budget, the hourly labor rate at the facility is the lowest of any logistics operation in the Pacific, at \$36.06, Mead said. By comparison, Hawaii's labor rate is \$78, he said. The national average for the United States is \$49.25, MSC-K officials said.

Shipping costs for many items — depending on what they are and where they would need to be repaired at equipment depots in the States — also generally run less if the gear is sent to the Korea facility, according to MSC-K figures. And shipping times would be shorter, meaning the equipment could be put back in service sooner.

In addition, MSC-K is near Busan, the world's fifth biggest seaport, where the Korean government picks up the cost of hauling cargo overland from Busan to Camp Carroll, Mead said.

This article is reprinted from the <http://www.leatherneck.com/forums/archive/index.php/t-89226.html>

First Lt. Rebecca M. Turpin received the Navy and Marine Corps Commendation Medal with Combat Distinguishing Device at Combat Logistics Battalion 3's Warriors' Field Sept. 4, for her actions under enemy fire during the battalion's last deployment to Afghanistan from October 2008 to May 2009. Since February 2003, a total of 12 female Marines have received the Navy and Marine Corps Commendation Medal with a Combat "V." Turpin is the seventh female company grade officer to be awarded this medal and device. Although categorized as a supporting unit, CLB-3's triumphant efforts to carry out their mission while under enemy attack provides an example of the vital role of every Marine, regardless of their Military Occupational Specialty.

The First Hour (Daily Dose)

First Lt. Rebecca M. Turpin woke up to her alarm at 1:30 a.m. after a couple hours of restless sleep. She was in the third month of her first deployment, and today she would be leading her second convoy as a platoon commander for Motor Transportation Company, CLB-3. She was nervous, but confident. For Turpin, it was just another day in theatre, and she looked forward to getting her daily dose of motivation – working with her Marines.

The Second Hour (80 Miles To Go)

Combat Logistics Patrol 1 departed Forward Operating Base Bastion in Southern Helmand Province, Afghanistan, at 4 a.m. for what they thought would be a standard day-long cross country movement to FOB Musa Qalah, more than 80 miles away. Regularly providing the six functions of logistics to five forward operating bases and three combat outposts, the battalion's mission that day was to provide logistical support including supplies and maintenance to Lima Company, 3rd Battalion, 8th Marines, as well as supplies for United Kingdom troops.

"If our Combat Logistics Patrols did not deliver necessary supplies and services, capabilities would be severely reduced," Turpin said. "Our missions had to be successful, especially because of the limited supplies and equipment in the [area of operation] at

the time. Every Marine in the patrol knew this and they always put mission accomplishment first."

devices, and have the Explosive Ordnance Disposal team assess the site," wrote Lt. Col. Michael Jernigan, commanding officer, CLB-3, in his award recommendation. "EOD found two additional IEDs, and she directed them to exploit the IED for intelligence and then destroy them in place in order to continue with the patrol."

The only thing Turpin remember's going through her mind was that she didn't want any of her Marines getting hurt. As the convoy pushed on, Turpin continued to think ahead, planning for the patrol's next move.

The 15th Hour (Deja Vu)

Eight hours later, the patrol was still pushing forward, with the rich darkness of the night limiting visibility, even with night vision goggles. "I've never used NVGs more than on that patrol," Turpin said. "I was constantly looking around asking myself – are there people moving in that village; are we coming up on a tough crossing point?"

Suddenly, another IED exploded, hitting vehicle one of the convoy. It destroyed the attached mine roller, littering the surrounding area with metal fragments, making it impossible to sweep for secondary IEDs.

"Lt. Turpin directed the sweeping to the rear of the vehicle and had it reverse in its own tracks in order to remove the vehicle out of the danger area and not endanger more Marines," Jernigan said.

Turpin then coordinated with higher headquarters to have a new mine roller delivered via a United Kingdom helicopter support team. While Turpin ordered the immediate sweeping and clearing of a hasty helicopter landing zone, 2nd Platoon, Motor Transportation Company, CLB-3 worked together at Bastion to assemble the mine roller for external lift to the convoy.

"The United Kingdom's British forces were wonderful," Turpin said. "If I could work with them again, I'd love to."

The 24th Hour (No Sleep 'Til Musa Qalah)

After the convoy received and installed the new mine roller, Turpin continued leading the mission forward, pressing on without sleep. At this point, Turpin said she realized that leading the mission was much like the Obstacle course - she knew she'd simply have to take one event on at a time. "Marines are the most impressive people I have ever encountered, and being given the opportunity to lead Marines and work with them, especially under the most challenging circumstances, is my motivation," Turpin said.

The 35th Hour (Sinking Feeling)

Around the halfway point of the convoy's trek, the patrol began making its way through a medium-sized village with men farming their land and children playing soccer in the streets. Shortly after entering the village, the routine movement was interrupted.

"The men in the village began rushing the women and children into the houses and began gathering; I had a sinking feeling when I saw this," Turpin said. "I heard my gunner yell, 'RPG!' and heard the RPG strike our refueler's engine block, disabling the vehicle."

The hit initiated a complex attack with small arms fire and several more RPG's from multiple firing positions from covered areas in the village.

An RPG struck the engine of Vehicle 15, the refuel MTRV, resulting in a mobility kill.

"It's like a huge crack that you can feel in your chest," Turpin said of the RPG's.

Turpin immediately ordered return fire and directed the lead vehicles to pull back out of the kill zone, form a security perimeter around the downed vehicle and rig it for tow.

As two of the vehicles became disabled, Turpin directed the patrol to provide cover for the Marines rigging and towing one vehicle and repairing the air compressor on the other. Only later would Turpin find out the Marines took a smashed soda can to cover the bullet hole in the compressor to create a seal, returning air to the brake lines, miraculously fixing the vehicle.

"I was like, 'You guys are amazing,'" Turpin said to the innovative Marines.

As the convoy returned fire and suppressed the enemy, Turpin wrote to the Combat Operations Center at Bastion, "Troops In Contact!"

"[Then] our Joint Tactical Air Controller coordinated our air support with Cobra helicopters and other fixed-wing air support that were redirected to our position," Turpin said. "Our machine gunners engaged the positively identified



fighting positions, and once all vehicles were able to roll, we moved out of the valley."

The Cobras escorted the two wreckers through the valley as they expertly traversed the terrain while pulling the MTRV's.

"The Marines driving the wreckers were so experienced and they made the vehicles accomplish some amazing feats," Turpin said.

The 37th Hour (Out Of The Valley)

After the Marines completed repairs and tow rigging, Turpin moved to the lead vehicle for better visibility of the terrain and controlled the movement of direction in order to break contact. She directed the convoy to pull back from the village; however, the two wreckers, each pulling a downed MTRV, could not traverse the terrain. Turpin then utilized the Cobras to scout better egress routes for the wreckers. Once a route was found, she ordered the wreckers and two security vehicles to take the new course, splitting her platoon.

"The Marines never gave up and just worked through any problem we encountered, especially those mechanical and equipment issues," Turpin said. "The Marines are incredible at doing the most with the least, and thinking outside the box to get the job done."

Once half the patrol was out of the valley, suddenly the rear of the convoy was attacked with four RPGs and machine gun fire.

“I was just thinking, ‘We have got to get these Marines out of this valley,’ Turpin said. “The more that happened, the initial shock begins to wear off and you get into the zone of dealing with the problem at hand.”

Turpin directed four separate ‘gun runs’ from the Cobras which released four 10 x 2.75-inch high explosive rockets and two-hundred 20 mm rounds of ammunition, eliminating the enemy threat located within nearby trench lines and an irrigation tunnel complex. She broke contact and again continued the CLP-1’s mission.

“While still engaged, she was able to calmly redirect the movement of the convoy to take a different direction and still give guidance to the air officer for air support,” said Gunnery Sgt. Isaac Hart, platoon sergeant, Motor Transport Company, Combat Logistics Battalion 3.

The 54th Hour (Two And A Half Days Later)

More than two days after its beginning, the patrol reached its destination, arriving at FOB Musa Qala at 10:30 a.m., Dec. 15. Fighting fatigue, Turpin then carried out the mission of supply distribution and maintenance as well as directed the repairs of the downed vehicles.

Five days later, CLP-1 made its way back to Camp Bastion with no other incidents.

“Throughout the mission, Lieutenant Turpin led by

example and set the standard of calm under fire,” Jernigan wrote. “She ensured that her Marines effectively fought their way out of dangerous situations and completed her logistics resupply mission. Her efforts ensured the delivery of vital combat logistics support to FOB Musa Qalah while eliminating several enemy threats along the way.”

Turpin said it was the Marines’ actions during the two and a half day patrol which enabled mission success and ensured the safe return of all personnel.

“No matter how long the patrol went on, how tired and hungry the Marines and corpsmen were, they did everything they were asked to do and more,” Turpin said. “They supported one another, each did their own part, and by all elements of the patrol working so fluidly and efficiently, this patrol concluded with zero casualties. I think that the success of a logistics patrol is not measured when everything goes perfectly, but by how the Marines and corpsmen react and behave when everything goes wrong.”

Turpin humbly said receiving the medal meant her superiors saw fit to award her for doing the job she was assigned to do.

“I am honored by the award, but feel that I was completing my assigned duties as per my billet, by directing the Marines and corpsmen that themselves completed the mission and made our deployment a success,” Turpin said.

Since February 2003, a total of 12 female Marines have received the Navy and Marine Corps Commendation Medal with a Combat “V.” Turpin is the seventh female company grade officer to be awarded this medal and device.



Department of Defense releases new operational energy strategy; more fight, less fuel

This article has been reproduced from the website <http://www.greencarcongress.com/2011/06/dod-20110614.html>.

The US Department of Defense (DOD) has released a new operational energy strategy designed to transform the way it consumes energy in military operations, and said this strategy is consistent with efforts to adapt the forces to emerging threats.

DOD accounts for 80% of the federal government's energy use, and 1% of that of the nation as a whole, said Deputy Defense Secretary William J. Lynn III. In 2010, for example, the Department consumed nearly 5 billion gallons of petroleum in military operations, costing \$13.2 billion, a 255% increase over 1997 prices. In releasing the strategy, Lynn and Sharon Burke, assistant secretary of defense for operational energy plans and programs, said the plan will reduce costs, and also improve military capabilities.

Not only does [energy] cost the taxpayers, it costs the warfighters. Every dollar spent on energy use is a dollar not spent on other warfighting priorities. Whether deploying and sustaining forces at the front, or powering mission-critical facilities they depend on in the rear, everything we do, every mission we perform, requires significant amounts of energy. Ensuring the forces have the energy they need, when they need it, is not easy. The less energy we need, the more operationally resilient we will be.

—William Lynn

At least 80% of land convoys in Afghanistan are for transporting fuel to warfighters, Lynn said. The routes are laced with roadside bombs and prone to ambush, he noted, resulting in 1,100 insurgent attacks last year. From FY 2003 to FY 2007 in Iraq and Afghanistan, a total of more than 3,000 Army personnel and contractors were wounded or killed in action from attacks on fuel and water resupply convoys.

The overall goal of the “Operational Energy Strategy” is to ensure that US armed forces will have

the energy resources required to meet 21st century challenges. This strategy outlines three principal ways to a stronger force:

- **More fight, less fuel: Reduce the demand for energy in military operations.** Today's military missions require large and growing amounts of energy with supply lines that can be costly, vulnerable to disruption, and a burden on warfighters. DOD says it needs to: reduce the overall demand for operational energy; improve the efficiency of military energy use in order to enhance combat effectiveness; and reduce military mission risks and costs.
- **More options, less risk: Expand and secure the supply of energy to military operations.** Most military operations depend on a single energy source, petroleum, which has economic, strategic, and environmental drawbacks, DOD says. In addition, the security of the energy supply infrastructure is not always robust. This includes the civilian electrical grid in the United States, which powers some fixed installations that directly support military operations. The department needs to diversify its energy sources and protect access to energy supplies in order to have a more reliable and assured supply of energy for military missions.
- **More capability, less cost: Build energy security into the future force.** Current operations entail more fuel, risks, and costs than are necessary, with tactical, operational, and strategic consequences. Yet the Department's institutions and processes for building future military forces and missions do not systematically consider such risks and costs. The department needs to integrate operational energy considerations into the full range of planning and force development activities. Energy will be, in itself, an important capability

for meeting the missions envisioned in the QDR (Quadrennial Defense Review) and the National Military Strategy.

Operational energy. DOD considers operational energy to be the energy used in: military deployments, across the full spectrum of missions; direct support of military deployments; and training in support of unit readiness for military deployments.

Military deployments generally rely on petroleum-based fuels, which power equipment, expeditionary bases, tactical vehicles, aircraft, some naval vessels, and other platforms. In current operations in Afghanistan and Iraq, jet fuel (JP-8 or JP-5 on ships) is the most prevalent battlefield fuel.

Individual Warfighters in Afghanistan may carry more than 33 batteries, weighing up to 10 pounds (4.5Kg), to power critical gear. By 2012, battery loads for the same mission are projected to increase to more than 50 batteries per soldier, weighing nearly 18 lbs(8.2kg). At the battalion level, the Marine Corps has tracked a 250% increase in radios and a 300% increase in computers over the last decade. Moving the energy to feed these capabilities at the “last tactical mile” can be especially challenging, DOD says.

To reduce the demand for operational energy, DoD Components shall take the following actions:

- Document actual and projected energy consumption in current and planned military operations: designate Service and Combatant Command operational energy leads to coordinate energy data collection; and work with other DoD Components to use consistent and comparable reporting methodologies.
- Accelerate and adopt technological and management innovations from across the “DOTMLPF” (Doctrine, Organization, Training, Materiel, Leadership, Education, Personnel, and Facilities) spectrum to reduce demand and improve efficiency: place priority on innovations that can benefit current operations; invest in research, development, testing, evaluation, and fielding of efficiency improvements in equipment, logistic delivery methods, weapons platforms, and energy conversion; apply investments to rapid fielding, mid-life upgrades of platforms, systems, equipment, and long-term

development of new capabilities; and integrate improved efficiency and management of energy into planning for and management of contingency bases.

In the long term, the strategy plan notes, alternative fuels have the potential to be an important part of the US energy landscape; DOD should be prepared to leverage this development through continued investments in Research, Development, Testing, and Evaluation (RDT&E) of alternative fuels. These investments must be supported by analysis on economic and technical feasibility and meet the following conditions:

- The fuels must be “drop in” (i.e., compatible with current equipment, platforms, and infrastructure);
- The fuels must be able to support an expeditionary, globally deployed force;
- There must be consideration of potential upstream and downstream consequences, such as higher food prices; and
- Lifecycle greenhouse gas emissions must be less than or equal to such emissions from conventional fuel.

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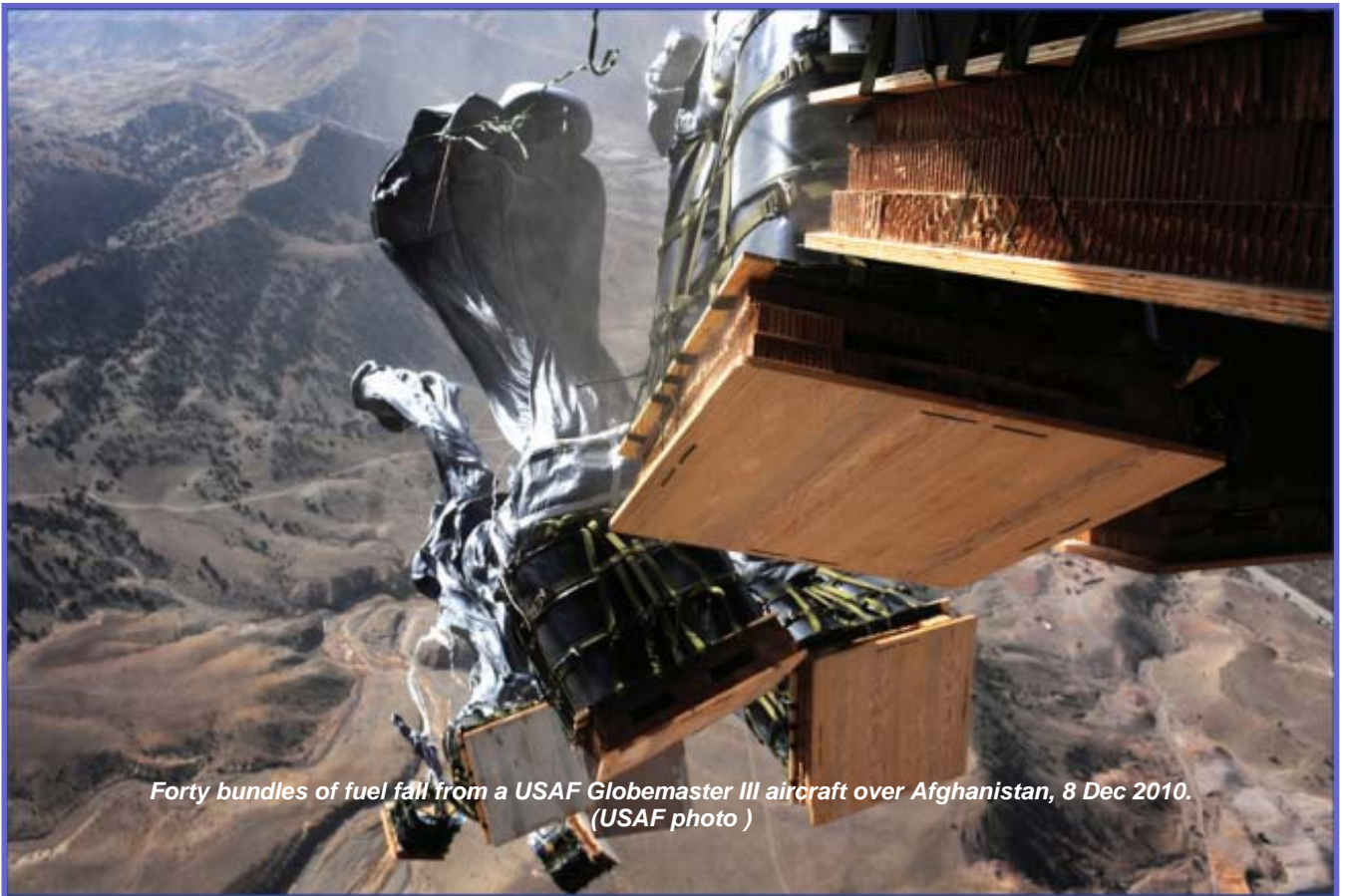
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Further Reading:

Copies of the US Department of Defence Operational Energy Strategy and the United States Marine Corps Expeditionary Energy Strategy and Implementation Plan are available from the GSO2 Supply HQ Logistic Command (Land)



After having failed his exam in “Logistics and Organization”, a student goes and confronts his lecturer about it.
Student: “Sir, do you really understand anything about the subject?”
Professor: “Surely I must. Otherwise I would not be a professor!”
Student: “Great, well then I would like to ask you a question. If you can give me the correct answer, I will accept my mark as is and go. If you however do not know the answer, I want you give me an “A” for the exam. ”
Professor: “Okay, it’s a deal. So what is the question?”
Student: “What is legal, but not logical, logical, but not legal, and neither logical, nor legal?”
Even after some long and hard consideration, the professor cannot give the student an answer, and therefore changes his exam mark into an “A”, as agreed.
Afterward, the professor calls on his best student and asks him the same question.
He immediately answers: “Sir, you are 63 years old and married to a 35 year old woman, which is legal, but not logical. Your wife has a 25 year old lover, which is logical, but not legal. The fact that you have given your wife’s lover an “A”, although he really should have failed, is neither legal, nor logical.”

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The disintegration of the Soviet armed forces continued well after the official demise of the Soviet State at the end of 1991. Military manpower and materiel of the former Soviet Union was divided or claimed by USSR successor states, with the largest share of these resources now incorporated into the Armed Forces of the Russian Republic. Russian military forces found themselves sitting in shrinking, isolated garrisons in what is now termed the “near abroad” beyond Russia’s borders, on the territory of a now united Germany, or in installations spread across Russia. One consequence of this enormous and continuing military turmoil was the shattering of a centralized logistic support system designed to sustain joint and combined operations of unprecedented size and scope, which also is integrated with the military and civilian resources of the former Soviet Union’s Warsaw Pact allies. Nevertheless, Soviet concepts for the conduct of combined operations - logistics theory, organizational structure, and resources integral to their support - remain instructive for military planners and historians alike and deserve the closest study and evaluation.

The development of Soviet military art and operational logistics - that complex of rear service roles, missions, procedures, and resources intended to sustain military operations by army and front groupings - clearly occupied a prominent place within overall Soviet efforts to formulate or adapt warfighting approaches to new conditions.¹ As Soviet military theorists and planners have long emphasized, logistic theory and practice are shaped by the same historical and technological developments that influence Soviet warfighting approaches at every level. In turn, they play a major role in defining directions and parameters for Soviet warfighting approaches.

Soviet military writings point also to the need for logistic theory and practice that are wholly consistent with other components of strategy, operational art, and tactics. Despite the many changes in the political, economic, and military environment and the quickening pace of technological change, Soviet military theorists and planners continue to emphasize the importance of applying pertinent historical precedent to contemporary military problems. This process is evident now in the area of logistic support, where formulating or adapting logistic support concepts for fundamentally different circumstances is a particularly complex task.²

This article will address the development of logistic concepts and resources integral to sustaining large-scale combined-arms operations as the Soviets have conceived them over the five decades from 1939. It will also consider what Soviet specialists see as rear service developments that will shape logistic support in the 1990s.

This article will be in two parts in this and the next issue of Army Sustainer.

- Part One: Prewar Preparation, Wartime Reorganization, and the Support of Strategic Operations, 1939–1945
- Part Two: Operational Logistics after World War II

1. Rear service support (*tylovoi obespechenie*) comprises three principal components: materiel support, concerned with the supply of ammunition, petroleum (POL), and other consumable supply items; technical support, concerned with maintenance, repair, and the supply of major end items; and medical support in its various forms. See N. V. Ogarkov, ed., *Sovetskaya voennaya entsiklopediya* [Soviet military encyclopedia] (hereafter cited as *SVE*) (Moscow: Voenizdat, 1980), 8: 152–58, for a discussion of key rear service terms.

2. The problems facing Soviet logisticians are particularly difficult because they must respond not only to military change in all its dimensions, but also to constraints, restructuring, and other developments in the national economy. The application of historical precedent is apparent in a number of ways. For example, an officially sanctioned list of military historical research topics published for the 1981–1990 period identified many issues of rear service experience that clearly were of concern to contemporary planners. See M. M. Kir’ian, “Perspektivnaya tematika voenno-istoricheskikh issledovaniy na 1981–1990 gg.” [Perspective themes for military-historical research in 1981–1990], *Voyenno-istorichesky zhurnal* [Military-historical journal] (hereafter cited as *VIZh*) (May 1981): pp. 44–47, and (June 1981): 59–61.

Part One—Prewar Preparation, Wartime Reorganization, and the Support of Strategic Operations, 1939–1945

When German forces began their rapid advance into the Soviet Union on 22 June 1941 - the beginning of the Soviet-termed Great Patriotic War - the logistic support system of the Red Army and Navy was in virtually every respect unprepared for the demands that were to be placed upon it. Rear service responsibilities were largely decentralized; analogous rear service control and management entities often absent from key tactical, operational, and central command levels; existing rear service directorates understaffed; and logistic resources of all types badly deployed for dealing with the “difficult” support situations faced by Soviet military forces. Indeed, the whole concept of providing logistic support to armies and fronts - operational logistic support - proved badly flawed from both organizational and resource standpoints.

Prewar logistic planners anticipated these systemic and resource problems, though senior Soviet commanders (severely attrited by the 1930s purges) gave logistic matters only secondary attention. Thus, when a 47-year-old corps commissar named A. V. Khrulev was appointed supply chief of the Red Army in October 1939, he found himself in a job that was ill defined and possessed little real authority over those many agencies charged with logistic support.³ Khrulev, a decorated veteran of S. M. Budennyi’s First Cavalry Army in the civil war, set out with his staff to reconstruct a rear service establishment that even in peacetime seemed clearly unsuited to support large-scale combined-arms operations.

Almost from the beginning of his tenure, however, he became immersed in the numerous problems engendered by the 1939–1940 Winter War with Finland. Transportation and logistic management problems were particularly acute in the Winter War. Even from the earliest days, railway cars supplying front forces were backed up on a number of lines because of inadequate tracking and poor planning. An attempt to alleviate this problem by also supplying the Northwest Front by sea from Arkhangelsk through Murmansk instead created chaotic conditions at the Arkhangelsk port. Every Red Army branch of service (artillery, engineer, signal, etc.) operated on its own schedule with no overall coordination.

Information sent from operational levels to central logistic planning bodies was irregular and

sometimes inaccurate.⁴

As a consequence of these problems, and the inability of the logistic establishment to deal with them, Khrulev pushed for the creation of a central “Quartermaster Directorate” with expanded capabilities, a request met by People’s Commissar of Defense Marshal K. E. Voroshilov, in the summer of 1940. Khrulev (now a lieutenant general) was given increased authority and staff support. While this constituted a measure of progress at the central level, it was far from the sweeping restructuring envisioned as necessary at all levels by senior logisticians.

As Khrulev continued to push for greater control over rear services in the months preceding the Soviet Union’s entry into World War II, there was considerable discussion and disagreement within the Soviet military establishment over the subordination of rear service bodies and responsibilities for planning logistic support at every level. These disagreements became particularly acute with the assignment of Army General G. I. Zhukov to be chief of the Soviet General Staff in January 1941.

General Zhukov “supported those on the general staff who believed that a general outline sufficed as a basis for directing the supply of the army in the field.”⁵ Under this approach:

The General Staff would calculate needs and issue a directive; the quartermaster services subordinate to it would dispatch everything requested from them; and the commandant’s offices of the general staff’s Military Transportation Service, to which motor vehicle, rail, water, and air transport were subordinate, would deliver to the troops all types of authorized supply.⁶

In short, Zhukov wanted the general staff to retain direct control of key rear service entities. By the start of the war, in accord with Zhukov’s wishes, logistic responsibilities were divided among the several principals. As the recently retired chief of staff of the Soviet Armed Forces Rear Services, Col. Gen. I. M. Golushko, noted in a considerable understatement forty years later, “a definite separateness could be observed in the organization and, consequently, in the actions of the directorates and services related to the rear support sphere.”⁷ At the tactical and operational levels, the control of

3. See I. Srafronov, “General Armii A. V. Khrulev” [Army General A. V. Khrulev], *Tyl i snabzhenie Sovetskikh Vooruzhennykh Sil* [Rear and supply of the Soviet Armed Forces], (hereafter cited as RS) (September 1972): 85–87; and S. N. Skriyabin, “Iz istorii sozdaniya organov upravleniya tylom Sovetskoi Armii” [From the history of the creation of the rear control organs of the Soviet Army], *VIZh* (July 1979): 54–59, for an account of Khrulev’s service, to include his early experiences. Khrulev had served as a political commissar in the First Cavalry Army during the civil war and in various quartermaster posts in the 1930s, among other assignments.

4. Skriyabin, “Iz istorii sozdaniya organov,” p. 56.

5. A. V. Khrulev, “Stanovlenie strategicheskogo tyla v Velikoi Otechestvennoi Voine” [Formation of strategic rear services in the Great Patriotic War], *VIZh* (June 1961): 65. This substantial article (pp. 64–86) is a particularly useful account of the formation of rear service control bodies in the early period of the war. Decisions made at this chaotic time largely proved themselves effective in subsequent military operations and continue to be reflected in contemporary Russian rear service control structure.

6. *Ibid.*

7. I. M. Golushko, “Iz opyta raboty shtaba Tyla Sovetskoi Armii v gody Velikoi Otechestvennoi voiny” [From the experience of the staff of the Rear Services of the Soviet Army in the Great Patriotic War], *VIZh* (October 1985): 37.

logistic planning within fronts, armies, and divisions rested principally with the commanders and combat staffs, not specialized rear service planning bodies. This allowed only the most superficial attention to be given to rear service support because of the other combat demands placed on the commanders and staffs.⁸

In addition to the organizational problems and resulting difficulties in the operation of the rear service system, those logistic resources intended to support Soviet operational formations in the initial period of war were badly deployed. Basically, there were depots for all classes of supply (weapons and equipment, ammunition, POL [petroleum, oil, and lubricants], repair parts, food, etc.) subordinate to the various central directorates of the Commissariat of Defense, and to military districts. These stockpiles were intended for the mobilizational deployment of operational formations. However, in addition to the lack of centralized rear service management (and likely because of it), there were dangerous anomalies in what supplies were found at which levels. For example, the General Staff's POL reserves were virtually all located at military district level or in facilities of the national economy, with almost no stocks under direct central control.⁹ Thus, the general staff was limited in how quickly it could influence the POL supply of field formations.

On the other hand, ammunition stockpiles, which were the responsibility of the Main Artillery Directorate's (GAU) Artillery Supply Service at each level, were located in GAU central, military district, and field army depots. In wartime central depots were expected to supply forward army ammunition dumps directly, while army depots in turn would supply lower echelons.¹⁰ No provision was made for a front link, though fronts would be expected to plan for the expenditure and resupply of ammunition while army entities carried out the actual resupply operations.¹¹ The problems and confusion resulting from this kind of arrangement were not difficult for Khrulev and his staff to imagine and indeed became quickly manifest once the war began.

It is clear that the rear service support establishment existing at the time of the German attack would have had substantial problems meeting large-scale

support requirements even with adequate preparation time and favorable circumstances at the beginning of war. The German attack, however, totally disrupted prewar plans for rear service mobilization and support. Huge quantities of supplies were overrun or destroyed by German forces in the first days of the conflict. Those supplies surviving or located further in the interior were often "in the hands of various services that were not subordinated to combined-arms headquarters" and thus were not made available to combat units.¹² Rear service elements had to simultaneously provide retreating units with supplies, undertake the mobilization deployment of rear service units, and evacuate supplies.¹³ In addition, because of the concurrent requirements to sustain Soviet units and operational formations in combat and evacuate over 1,300 industrial enterprises as well as agricultural and other resources, "two gigantic train flows were moving in opposite directions with incredible difficulty under constant air attack by the enemy."¹⁴

It is not surprising, in light of the above, that the Soviet logistic support system failed in most respects to meet the enormous demands so suddenly placed upon it. By early July 1941, by Soviet assessment, Zhukov and the General Staff were so immersed in operational matters that they had neither a conception of the logistic situation at the fronts, nor knew what the forces required in terms of logistic support. No requirements had, in fact, even been leveled on Khrulev and his staff. On 27 July a thoroughly frustrated Khrulev prepared a written proposal for a centralized rear service establishment designed to impose a measure of order on this rapidly unraveling rear support situation.¹⁵ The proposal was passed to the Supreme Commander, I. V. Stalin, who approved Khrulev's recommendations and immediately ordered that a draft State Defense Committee (SDC) decision on the Red Army rear service organization be prepared.¹⁶

Working with his staff, Khrulev quickly drew up the SDC draft decree and presented it to Stalin in the predawn hours of 28 July.¹⁷ Over Zhukov's objections, the decree was approved - a move that was to establish by 1 August the essential organizations and responsibilities of the Soviet Armed Forces Rear Services as they continued to

8. Ibid.

9. S. N. Skryabin and N. Medvedev, "O tyle frontov v nachale Velikoi Otechestvennoi voiny" [On the rear services of the fronts at the beginning of the Great Patriotic War], *VIZh* (April 1984): 32-33.

10. I. Volkotrubenko, "Artilleriiskoe snabzhenie v pervom periode voiny" [Artillery supply in the first period of the war], *VIZh* (May 1980): 71.

11. Ibid.

12. S. K. Kurkotkin, ed., *Tyl sovetskikh vooruzhennykh sil v Velikoi Otechestvennoi voine, 1941-1945 gg.* [Rear of the Soviet Armed Forces in the Great Patriotic War, 1941-1945] (Moscow: Voenizdat, 1977), p. 75. In Khrulev, "Stanovlenie," pp. 65-66, the author blames the People's Commissar for State Control, I. Mekhlis, for the extensive concentration of stockpiles in the border areas that were subsequently lost.

13. Khrulev, "Stanovlenie," p. 65.

14. Ibid.

15. Skryabin, "Iz istorii sozdaniya organov," p. 58.

16. Khrulev, "Stanovlenie," p. 69.

17. Skryabin, "Iz istorii sozdaniya organov," pp. 58-59. One of Khrulev's key consultants at this time was the former chief quartermaster of the tsarist Russian Army and former assistant chief of the Red Army's Central Supply Directorate, K. E. Goretskii. Goretskii was one of a number of former tsarist quartermaster officers who served the new regime in the first years of Soviet power and in some cases subsequently. See A. G. Kavtaradze, *Voennye spetsialisty na sluzhbe Respubliki Sovetov. 1917-1920 gg.* [Military specialists in the service of the Soviet Republic, 1917-1920] (Moscow: Nauka, 1988), p. 180. In the process of putting together the draft (as described in Skryabin, "Iz istorii sozdaniya organov," p. 58), Khrulev and Goretskii disagreed again over a fundamental issue of rear service organization that had been raised first in a discussion they had in 1939. Khrulev, in delineating those rear service entities that should come under his control, "took a pencil and added one more service, artillery supply, to those under the rear service chief's jurisdiction." This would have given Khrulev direct control of all ammunition, artillery, and small-arms supply, as well as weapon repair and maintenance responsibilities. This major logistic role was then the responsibility of GAU. Goretskii, however, as he had earlier, objected strongly to Khrulev's penciled annotation, and was able to dissuade him from adding the artillery supply service to the proposal on the grounds that this key function, because of its vast scope, would be incompatible with Khrulev's other proposed duties. Khrulev reluctantly agreed, thus setting in motion a division of logistic responsibility that continues to the present.

exist through the 1980s.¹⁸ It also institutionalized what appears to be a degree of creative tension between the national-level rear services and the General Staff.¹⁹

Under the rear service reorganization approved by Stalin, Khrulev was named Chief of the Red Army Rear and a Deputy Commissar (later Minister) of Defense for Rear Services. A Main Directorate for the Rear (consisting of a Main Staff, Military Railroad Directorate, Highway Directorate, and Inspectorate) was established, with Main Quartermaster, Fuel Supply, Ambulance (Medical), and Veterinary Directorates also assigned to Khrulev's direct control.²⁰ The Staff of the Main Directorate of the Rear had sections designated to deal with rear service planning for operational formations, planning rail and motor transport shipments, organizing logistic entities and facilities; and handling general issues.²¹ Thus, Khrulev had control of vast logistic resources in the form of transport, supply stockpiles, and key services, as well as being able to speak with the authority of a Deputy Commissar of Defense. Only technical support - repair, maintenance, the supply of technical equipment including ammunition, and major end items - remained under the control of main and central technical directorates (e.g., *GAU*) and of the various branch services (artillery, armor, engineer, signal, etc.).²² These rear service organizations and resources were in total referred to as "central" or "strategic" rear services - assets the Supreme High Command (*Verkhovnoe Glavnokomandovanie* [*VGK*]) used to influence the course of strategic operations. As the war progressed, this level of rear service support became critical to the direct logistic support of operational formations and, as a consequence, integral to Soviet operational logistics.

Within the operational logistic system itself, "chiefs of the rear," who were simultaneously deputy commanders for rear services, were set up in the fronts and armies. These officers and their staffs had duties analogous to those of Khrulev and his central apparatus. They were directly and immediately subordinate to the commander of the given operational formation, and subordinate "in a special sense" to the chief of the rear at the next higher level.²³ They were responsible for planning and controlling designated rear service activities of the

fronts and armies, while the commanders and other staff officers concerned themselves with force planning and employment issues.

Stalin himself emphasized that supplying armies and fronts required an "iron discipline" and that the new deputy commanders for rear services "must be dictators in the rear zone" of their fronts.²⁴ The rear service chiefs at all levels exercised a coordinating role even in regard to those technical support entities that were not directly subordinate to them. They accomplished this through their control of transportation - a role that grew as the war progressed - and were thus the center for all rear service planning from strategic to tactical levels.²⁵ On 19 August a Chief of Rear Services of the Soviet Army Air Forces was established.²⁶ This officer and his staff (replicated at lower levels) handled all aviation-specific supply items for flying and ground support units in the air armies of the fronts or other air units, while coordinating with the Red Army Chief of Rear Services and staff for all other supply items.²⁷ Since the Main Administration of the Air Force was a component of the Red Army, the Air Force Chief of Rear Services was subordinate in a "special sense" to Khrulev.

By mid-August 1941, then, with a basic rear support structure in place, Khrulev and his subordinates undertook the staggering task of imposing order on a logistic situation that was failing at every level. He was, more specifically, charged with Managing the rear's organization, transporting troops and replacements, delivering all types of materiel to the fronts, evacuating casualties, patients and military property [and] ... maintaining information on the presence of military materiel reserves in the fronts (armies) and bases, as well as on the availability of all kinds of materiel in the field army.²⁸

Each of these functions encompassed numerous and complex components that had to be thoroughly planned and coordinated in accord with developing combat operations.

In performing these myriad tasks, a workable delineation of responsibility was developed between the central rear service bodies and the general staff, and between front and army commanders and their new rear service deputies. The general staff's Main Operations Directorate (and in an analogous way the

18. As mentioned, Zhukov was opposed to the centralization of rear services outside of the general staff, a view he continued to hold even in the face of the general staff's obvious inability to deal simultaneously with operational and logistic matters. Zhukov attended Khrulev's 28 July meeting with Stalin, and upon reading the draft State Defense Committee directive "declared peremptorily" that: "I do not agree. The authors of the draft want the rear services to undercut the general staff." Stalin, "casting an expressive glance at G. K. Zhukov," took back the draft and immediately signed it. Khrulev, "Stanovlenie," p. 69.

19. This is apparent in part from the continued justifications set out by senior rear service officers after the war and to the present. They reiterate the need for centralized rear service planning and execution to be undertaken by logistic commanders and staffs at the strategic and operational level and point to the consequences suffered in the initial period of the Great Patriotic War when this system was not in place.

20. Golushko, "Iz opyta raboty shtaba Tyla," p. 38.

21. Ibid.

22. Khrulev, "Stanovlenie," p. 69.

23. Skriyabin and Medvedev, "O tyle frontov v nachale," pp. 36-37, discusses the responsibilities of various rear service bodies in this period.

24. I. M. Golushko, "1. Razvitiye sistemy upravleniya tyлом" [Part 1. Development of the system of control of the rear], *RS* (May 1981): 1. Part 2 of this article, with the same title, was published in *RS* the following month (pp. 13-17). To illustrate how important Stalin considered the front rear service chiefs, it should be noted that the first five appointed included the Chief of the General Staff Academy (Northern Front), the Chief of the Frunze Military Academy (Southwestern Front), the Chief of the Soviet Army Directorate of Military Educational Institutions (Southern Front), the Commander of Troops, Western Military District (Western Front), and the Deputy Commander of Troops, North Caucasus Military District (Briansk Front). Kurkotkin, *Tyl sovetskikh*

vooruzhennykh sil, pp. 77-78.

25. Skriyabin and Medvedev, "O tyle frontov v nachale," p. 36.

26. Orgarkov, *SVE*, p. 154.

27. U.S. War Department, Technical Manual (TM) 30-430, *Handbook on U.S.S.R. Military Forces* (Washington, D.C.: U.S. War Department, 1945), p. xi-2.

28. Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, p. 77.

front and army operations department staffs) would communicate to the rear services general, initial data on forthcoming combat operations and possible requirements. On this basis, rear service staffs worked out detailed logistic support plans for the operation.²⁹

Each of the three periods of the Great Patriotic War and the 1945 Manchurian operation against Japanese forces, as analyzed by the Soviets, featured critical developments in sustaining all levels of Soviet and coalition armed forces.³⁰ While it is not within the scope of this chapter to address these developments in any detail, features associated with each period are key to understanding Soviet rear service support concepts and operational logistics in particular as they developed in the post-World War II years.

In providing rear service support in the first period of the war - a period characterized by largely retreating Soviet forces conducting a strategic defense in a rapidly changing operational environment - great emphasis was placed on reducing the cumbersome organization of operational rear services and on creating strategic logistic reserves.³¹ The permanent depots and repair centers that initially had been providing support to operational formations were replaced by field depots, the structure of transport support was improved, and the formation of consolidated army logistic bases stocking key supply items begun.³² The number of units and facilities as well as the proliferation of specialized rear staff officers and sections created haphazardly in the early days of the war were reduced.³³

Motor transport at all levels was increased to the extent possible, though this was in critically short supply. As a consequence, extensive use was made of animal-drawn transport at all levels, as well as motor transport columns under VGK (central rear service) control.³⁴ The new trend of using air transport for supplying operational formations gained momentum as the war progressed. Transport aircraft employed in such a role were also principally

assets of the VGK.³⁵ Enormous experience was gained in managing military rail shipments and in building and restoring rail lines. To facilitate this, in March 1942 Khrulev became the People's Commissar of Railroads in addition to his other posts.³⁶

Other significant developments during the first period of war included the extensive use of rear service operations groups. Under this practice, central rear service staffs, including sometimes Khrulev himself, were dispatched to the fronts to coordinate logistic activities and deal with special problems.³⁷ This approach proved useful throughout the war, especially in supporting strategic offensive operations later in the conflict, as well as in formulating approaches for theater-level or strategic rear service control and management four decades later. In March 1942 the Soviets established the Trophy Service, which had organizations subordinated to rear service chiefs at central, front, and army levels to collect, classify, and evacuate captured German war materiel.³⁸ The large quantities of materiel they recovered played an important role in offsetting the severe shortages of Soviet weapons and transport stocks at that time. In May 1942 the Soviets introduced rear service deputy commanders or chiefs of the rear at division and corps levels and established a Navy Chief of Rear Services.³⁹

Simultaneously with supporting forces participating in the strategic defensive efforts of 1941 and 1942 the VGK began to build substantial strategic reserves of all types, including rear service reserves. The logistic components of these reserves comprised transport resources of all kinds, weapons systems and equipment, ammunition and POL stockpiles, and other resources. These assets, managed by central rear service organizations, could be employed only at the discretion of the VGK, and were intended to replace losses, create new units, and decisively influence the support of operational formations in key sectors.⁴⁰ The employment of such

29. I. M. Golushko, "2. Razvitiye sistemy upravleniya tylom" [Part 2. Development of the system of control of the rear], RS (June 1981): 16. Typically, in the case of major operations, rear service directives were worked out by the central rear services in accord with operations plans. These directives were signed by the VGK commander in chief (Stalin) or the chief of the general staff, as well as by Khrulev. Rear service directives, which delineated front rear areas, transportation routes and capacities, timelines for accomplishing key tasks, and other issues, comprised "the principal operational rear service documents of the strategic rear services." Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, p. 81.

30. Soviet military historiography divides the course of the Great Patriotic War into three periods: 22 June 1941 to 18 November 1942; 19 November 1942 to 31 December 1943; and 1 January 1944 to 9 May 1945. The victory over Germany, ending the Great Patriotic War, was followed by the "defeat of militarist Japan" (9 August-2 September 1945), the last Soviet strategic operation of World War II. Ogarkov, *SVE* 2 (1976): 55-65, provides an overview of military operations within these periods.

31. Khrulev, "Stanovlenie," p. 74; N. A. Maliugin, "Sovershenstvovanie operativnogo tyla" [Improving the operational rear], *VIZh* (June 1985): 27-28; Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, pp. 81-82; I. Plotnikov and I. N. Chaban, "Rear Services of the Soviet Armed Forces During the Great Patriotic War," *Istoriya SSSR* [History of the USSR] (January 1975): 5, in the translation by Joint Publications Research Service.

32. Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, pp. 81-82.

33. *Ibid.*

34. Khrulev, "Stanovlenie," p. 76.

35. The use or allocation of these air resources was requested from the VGK by central and front rear services and often planned, organized, and monitored by rear service commanders and staffs. See Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, pp. 254-55.

36. Golushko, "Iz opyta raboty shtaba," p. 40.

37. *Ibid.*, pp. 38-39.

38. Plotnikov and Chaban, "Rear Services," p. 7.

39. Ogarkov, *SVE*, p. 154. The navy's rear service efforts were, of course, of considerably less scope and scale than logistic support of the Red Army. In general, naval rear support historical perspectives of the operational art soviet operational logistics, 1939-1990 321 port during the war years was centered on permanent naval bases with modest numbers of support ships that sustained the fleets and their operations along coastal axes. As the war progressed, the navy gained increasing experience with the deployment of advanced naval bases along coastal axes for the support of amphibious operations and sustaining naval combatants. In the process, naval rear services made far greater use of land transportation and particularly of motor transport to move supplies from fleet main bases to forward facilities. V. Shlomin, "Organizatsiya i sovershenstvovanie tyla VMF" [Organization and improvement of the VMF rear], *VIZh* (November 1975): 42-47, as translated in Joint Publications Research Service, *USSR Military Affairs* no. 66518. The critical importance of rapidly and effectively establishing such advanced bases was impressed on Soviet rear service specialists and naval planners during the war and continues to be identified as a support area requiring the closest attention. Overall, cooperation between the Red Army and Navy rear services became increasingly important in the war, if not as widespread or as effective as Soviet planners judge it should have been. As one authoritative Soviet source put it:

The experience of the past war demonstrated the importance and necessity of organizing efficient, continuous interaction of fleet rear services with those of other Services of the Armed Forces and their operational formations during joint actions in one or adjacent theaters of military action, as well as unifying designated models of armament and standardizing various Army and Navy materiel support. (Kurtoktin, *Tyl sovetskikh vooruzhennykh sil*, pp. 450-51.)

40. For a definition of strategic reserves, see Ogarkov, *SVE* 7: 553. In building strategic logistic reserves, the GAU retained such a tight control of artillery weapons, small arms, and ammunition in 1941 that Zhukov complained he had to beg Stalin for their release. Volkotrubenko, "Artilleriiskoe snabzhenie," p. 72.

strategic rear service reserves was to be critical for the support of subsequent Soviet counteroffensives and strategic offensive operations throughout the war, and the experience gained in their employment has clearly been incorporated into Soviet theater logistic support planning in the 1970s and 1980s.⁴¹

Overall, then, by the end of the first period of the war a basic rear service support system had been established that with considerable difficulty had imposed a measure of order on what had been a chaotic rear area situation. The system was sustaining strategic defensive operations across a broad front and, in accord with strictly followed V GK directives, central rear service organs were building a strategic logistic base for the conduct of far more ambitious operations.⁴²

The second period of the war, as the Soviets assess it, was a fundamental turning point “not only in the course of the Great Patriotic War and the strategic situation, but also in the work of all levels of the Soviet Army’s rear.”⁴³ New problems for the Soviet rear services surfaced during the November 1942 counteroffensive by the Southwestern, Don, and Stalingrad Fronts, as well as from the battles for the Caucasus in 1942–1943, the summer 1943 Battle of Kursk, and the subsequent battle for the Dnieper.⁴⁴ These centered principally on supplying huge combined-arms groupings, often poorly equipped in terms of combat and support equipment, that now were advancing over sweeping frontages and territory on which lines of communication had been largely destroyed. As in the first period of the war, the strategic rear services played a major role in this effort, amassing enormous quantities of materiel prior to the counteroffensives/offensives and directly supplying operational formations during their course. Golushko, for example, in noting that “the influence of the agencies of the strategic rear on the organization of rear support for the fronts increased with the increase in the scale of military actions” went on to indicate that “a number of central bases were prepositioned in the Transcaucasus republics when the battle for the Caucasus unfolded almost simultaneously with the enormous battle between the Volga and the Don.”⁴⁵ In preparing for the Stalingrad offensive, the central rear services deployed supply bases forward to support the Stalingrad, Southern, and Briansk

Fronts and managed other rear service preparation efforts.⁴⁶ In this way, the increasingly mobile central rear services acquired a role, which had not been envisioned earlier, in directly supporting operational groupings.

Great effort was given in the Stalingrad counteroffensives (in the Caucasus as well) to building and restoring roads and railways, with Khrulev requesting and receiving support from two V GK air transport divisions to help reduce transportation shortfalls.⁴⁷ The role of special line of communications troops - Highway and Railway Troops, as well as other special bridge-building and engineer elements - thus grew in importance as an organic component of operational rear services and one critical to the successful supply and support of advancing formations. The application of experience gained in transportation-route construction, maintenance, and management was clearly evident in the buildup for the Kursk Battle.⁴⁸

To better manage the central rear service resources that were playing such increasingly important front support roles in the switch to offensive operations, Khrulev established in the Azerbaidzhan SSR in 1942 a “supply base for the center” to improve the control of rear service resources. This effort included the dispatch of military materiel received from the defense industry and the shipment of supplies through ports on the Caspian Sea.⁴⁹ In a subsequent effort to bring central materiel resources closer to the fronts engaging in offensive operations, central depots, for the first time in the war, were moved west of Moscow and the Volga in the spring of 1943.⁵⁰ The forward deployment of central rear services would continue throughout the war. Technical support at the central and front levels was improved as well, with central- and front-subordinated assembly and distribution points for damaged combat and support equipment established.⁵¹

In operational formations, the Soviets encountered considerable difficulties in keeping combat units of the fronts and armies supplied with materiel. As a consequence of State Defense Committee findings, it was directed in June 1943 that in the future, higher rear service levels would be generally responsible for supplying and otherwise supporting lower levels,

41. See Ogarkov, *SVE*, 7: 554, for a discussion of the strategic rear services.

42. Colonel-General Golushko gave a retrospective assessment that summarized the status of Soviet rear services in this period. He noted that while many difficulties lay ahead of the Soviet rear services and changes and improvements would have to be made, “the main thing was done: the system had begun to work with confidence, and its materiel base was being used more purposefully.” See Golushko, “2. Razvitie sistemy upravleniya tydom,” p. 17.

43. Plotnikov and Chaban, “Rear Services,” p. 8.

44. Ibid.; Golushko, “2. Razvitie sistemy upravleniya tydom,” p. 17.

45. Golushko, “2. Razvitie sistemy upravleniya tydom,” p. 13. See also S. N. Skriyabin, “Sozdanie baz snabzheniya Tsentra” [Creation of the supply base of the Center], *VIZh* (October 1986): 54–60, for an excellent discussion of the role of strategic rear service bases in this period.

46. Kurkotkin, *Tyl sovetsskikh vooruzhennykh sil*, p. 108.

47. Ibid., p. 111.

48. As noted in Golushko, “Iz opyta raboty shtaba,” p. 43:

In the course of preparing for the Kursk Battle, the staff of the rear, on the basis of instructions from the general staff, worked out a plan for troop rear support. In behalf of the Voronezh Front, it supervised the construction of the new Stari Oskol Rzhava railway spur and preparations for the dirt roads; the operation of motor transport units; [and] the supply of personnel with new summer uniforms, good food, and medical supplies.... In the area of the Kursk salient, during the period from March through April 1943, the rear staff and VOSO [Military Transportation Service] bodies handled 141,354 cars of supply freight alone, including: 33,668 cars for Central Front, 31,948 for the Voronezh, 18,359 for the Steppe, 25,905 for the Southwestern, 21,106 for the Briansk, and 10,368 for the Western.

49. Golushko, “2. Razvitie sistemy upravleniya tydom,” p. 13.

50. Kurkotkin, *Tyl sovetsskikh vooruzhennykh sil*, p. 119.

51. Plotnikov and Chaban, “Rear Services,” pp. 10–11. Overall, the role of the central rear services in the second period of the war was key, as Plotnikov and Chaban (p. 12) indicate:

Bases of the strategic rear organizations acquired great significance in the continuous support of forces in their preparation for, and conduct of, offensive operations. All of them made shipments, repaired combat equipment and weapons, procured rations from local resources, and supplied the fronts with ammunition, fuel, rations, and other technical materiel.

rather than the motor transport of units and formations being sent back to higher echelons to pick up supplies or deliver damaged equipment.⁵² This “delivery forward” principle continues as a primary tenet of the Russian logistic system today. In addition, the depths of unit and formation rear areas were greatly reduced, a trend that by the end of the war had cut rear area depths in half. This substantially reduced, of course, the distances required for supplying units and for evacuating casualties and equipment to rear bases.

Finally, the successful evacuation and restoration of Soviet defense industrial facilities began to play a major role in the supply of Soviet military forces in the second period of the war.⁵³ Industrial output - together with other sources of equipment, including Lend-Lease shipments - contributed also to the rapid reequipping and reorganization of the USSR’s armed forces. It made possible the buildup of strategic reserves that enabled the successful switch “from strategic defense, to counteroffensive, and then to strategic offensive operations of tremendous scope.”⁵⁴

The third period of the war saw the Soviet armed forces engaged in three major campaigns that could each be fairly characterized as of “tremendous scope.” Supporting the strategic offensives conducted within the course of these campaigns presented all levels of the Soviet rear services with enormous problems and necessitated the development of new support concepts. As the winter campaign developed, for example, rear services fell far behind the advancing fronts, and armies engaged in the offensive had to rely heavily on local procurement, assets provided by the Trophy Service, and repaired equipment to sustain themselves.⁵⁵ Shortages of motor transport, disrupted rail and road lines of communication, and early spring thaws compounded the problems.⁵⁶ Overcoming these difficulties involved a range of field expedients, including a renewed reliance on animal transport, the hand delivery of ammunition and other supplies by rear service personnel on foot, and the increased use of transport aviation to deliver supplies, principally ammunition, to those forces most intensively engaged.⁵⁷

Overall, despite the numerous tactical, operational, and strategic logistic support problems encountered, the winter 1944 campaign concluded successfully and rear service preparations for the subsequent summer/fall campaign began well

before its completion. These rear service support plans were predicated on the concept of successive offensives on different axes. Joint planning involving the *VGK*, the chief of the rear, *GAU*, and other central rear agencies set out supply requirements that had to be fulfilled before and during the course of the operations. Rear service support was to meet both consumption needs as the operation unfolded and, of particular importance, establish operational and strategic reserves that would enable the fronts to undertake subsequent operations without significant pauses.⁵⁸ This logistic planning approach remains key to contemporary theater rear service support concepts.

In supporting operations of the summer and fall of 1944 and the concluding 1945 campaign in eastern Europe, rear service units, reinforced with motor transport and making heavy use of rail, were brought much closer to the combat forces they would be sustaining:

As a rule, the front rear was deployed in three echelons at the start of the Belorussian, Iassk-Kishinev, Vistula-Oder, Berlin, and other offensive operations. Usually, 70–80% of all front rear service units and facilities were in the first and second echelons, while only about 5% were deployed farther away than 220 kilometers from the front line.⁵⁹ The extensive maneuver and regrouping of units and formations between fronts and strategic directions during the 1944–1945 operations required the simultaneous maneuver of rear service units and resources. Making more effective use of all forms of transport coordinated by those strategic and operational transportation management bodies established earlier in the war, the massive Soviet transfers of units and materiel was carried out with increasing skill. Indeed, the successful regrouping, *peregruppirovka*, of Soviet forces during this period is the focus of close Russian attention today by planners seeking applicable lessons learned.

When Soviet forces entered Eastern Europe, the Soviet rear services were given the task of managing and exploiting foreign road and rail networks. As a consequence, eleven strategic rear service transloading bases were deployed at the junction of railroads having broad Soviet and narrower east European gauge lines, as well as at some seaports.⁶⁰ These bases oversaw, prioritized, and otherwise facilitated the dispatch of military units and materiel to Soviet forces advancing into Eastern Europe. In addition, “procurement administrations” were

52. Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, pp. 507–08.

53. While in some cases the output of the defense industry was provided directly to operational formations, the central rear services comprised the main link between the armed forces and the national economy. The newly produced materiel was made available in substantial quantities during this period. For example, in 1942 the Soviets reported that “25,436 airplanes, 24,668 tanks, 29,561 guns, and 3,237 rocket launchers were produced.” In 1943 the output of heavy industry increased by 19 percent and overall production by 17 percent. This stream of weapons, equipment, and supplies began to flow so rapidly that, for example, the Soviets assessed the ammunition production problem “solved” by the end of that year. *Ibid.*, pp. 106, 129.

54. Plotnikov and Chaban, “Rear Services,” p. 8.

55. *Ibid.*; Malugin, “Operativnogo tyła,” p. 32.

56. Plotnikov and Chaban, “Rear Services,” p. 15.

57. Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, pp. 130–32.

58. *Ibid.*, pp. 133–34.

59. Plotnikov and Chaban, “Rear Services,” p. 18.

60. *Ibid.*

established under the Red Army chief of the rear in Romania, Poland, Hungary, and Czechoslovakia, while fronts began to be assigned railroad operating brigades (in addition to railroad construction brigades).⁶¹

At the same time, “depots of central subordination - artillery, food, fuel, clothing, and others with materiel reserves, and also repair medical, transport, airfield engineering, procurement, and other rear organs - had to be moved forward with the fronts.”⁶² This gave the Supreme High Command the means of directly influencing the success of strategic offensives logistically, by reinforcing the rear services of designated operational formations. In an effort that Soviet planners concerned with Warsaw Pact coalition support measures have given much careful postwar analysis, the “rear services also provided support to Polish, Czechoslovak, and other foreign military organizations formed on Soviet territory, and which battled shoulder-to-shoulder with the USSR Armed Forces against a common enemy.”⁶³

As noted, a number of technical support services were not under the direct control of the chiefs of the rear at each level, but rather of representatives of organizations like *GAU*, the armored services, engineer services, etc. Despite this, as contemporary Soviet logisticians like I. M. Golushko emphasized, the joint planning of transportation, evacuation, rear defense, and common approaches to deployment and redeployment, all supervised and largely controlled by the chief of the rear, provided for a smooth, effective working relationship among the various components of the rear service system.⁶⁴

A most important focus of Soviet rear service attention - particularly during the third period of the war and in Manchuria - was the logistic support of mobile groups. Mobile groups were established at army and front levels, and most often comprised reinforced tank, mechanized, or cavalry corps at army level, or tank-mechanized-cavalry groupings of up to army size at front level.⁶⁵ These mobile groupings were tasked to advance rapidly into the operational depths of the enemy, “cut up enemy groupings,” and otherwise facilitate his defeat - missions that required them to operate at great distances from the main forces and their rear service bases.⁶⁶ A number of specialized supply and support procedures for the operational and exploitation groups were developed. These included the

allocation of “slices” of the more mobile army, front, and central rear service assets to the mobile groups, and innovative approaches to provide for their continuing supply and technical support. As Soviet sources note, special rear service headquarters groups were sometimes organized to oversee mobile group support, which included motor transport, supply stocks, special troops (i.e., line of communications [LOC] construction and repair, combat engineer, etc.), medical support assets, and other rear service resources.⁶⁷ The direct supply of mobile groups by transport aviation resources was also provided for when practical, and by the end of the war it was considered a standard component of support for deep operations forces.⁶⁸ While transport aircraft were limited throughout the war, aviation’s potential for the rear service support of mobile formations made a profound impression on Soviet planners.

Protecting, defending, and securing operational and deep rear areas was a major Soviet concern throughout the war. In the third period, this emphasis was focused on securing the rear areas of advancing front forces as well as the increasingly long lines of communication running back to the Soviet Union. This task was principally assigned to the Border Guard and Internal Troop units of the People’s Commissariat of Internal Affairs, or the *NKVD*, which were most typically organized into security regiments, security battalions, and maneuver groups.

The number of security regiments or other *NKVD* units assigned to front rear areas varied widely with the perceived threat, though half a dozen or more security regiments per front was not unusual. Their actions were controlled by chief of rear security, usually a senior *NKVD* officer, by the front military council, and directly determined by the decisions of the deputy front commander for rear services in his formulation of the rear service plan.⁶⁹ In addition to the units drawn from the *NKVD*, regular line maneuver units and logistic units - all of whose actions were coordinated with *NKVD* forces - were assigned rear area security duties.⁷⁰ Overall, rear area security, carried out by both dedicated and temporarily assigned forces, was considered a rear service responsibility and remained so for the next 40 years.

The final Soviet strategic operation of World War II, the 1945 strategic offensive in Manchuria, required

61. *Ibid.*, pp. 18–19.

62. Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, p. 508.

63. S. K. Kurkotkin, “Tyl — pobedy” [The rear — forge of victory], *Voennye znaniya* [Military knowledge] (December 1983): 1.

64. Golushko, “2. Razvitiye sistemy upravleniya tyлом,” p. 15.

65. K. Abramov, “Nekotorye voprosy tylovoogo obespecheniya v nastupatel’nykh operatsiyakh tret’ego period voiny” [Several problems of rear support in offensive operations in the third period of the war], *VIZH* (November 1980): 32.

66. *Ibid.*

67. *Ibid.*, pp. 32–33.

68. Plotnikov and Chaban, “Rear Services,” pp. 16, 18.

69. B. Veselov, “Tyl armii v nastupatel’nykh operatsiyakh Velikoi Otechestvennoi voiny” [Rear of the army in offensive operations in the Great Patriotic war], *RS* (February 1979): 33–34; and Maliugin, “Operativnogo tyla,” p. 31.

70. Veselov, “Tyl armii,” pp. 33–34.

the redeployment of substantial Soviet forces and supplies from Europe to the Soviet Far East. From December 1944 to August of the following year, some four armies, numerous other maneuver, aviation, and special troop units, and huge quantities of materiel were moved over distances of up to 11,000 kilometers, principally by rail. Postwar Russian planners continue to study all the dimensions of the redeployment associated with the Manchurian operation, which serves as a model considered particularly useful for the strategic movement of combined-arms forces.⁷¹

Planning by the Soviet Supreme High Command for the operation, which began on 9 August, called for the creation of three fronts to defeat the Japanese Kwantung Army in Manchuria: the Transbaikal, First Far Eastern, and Second Far Eastern Fronts.⁷² Each of these, in accord with the organizational concepts developed during the Great Patriotic War, had rear service deputy commanders and staffs, as well as technical support and branch arms and services representatives, to direct and coordinate the overall rear service support of operational formations.

Of particular significance, however, was the establishment of a strategic rear service control body in the composition of a “High Command of Forces for the Far Eastern Theater of Military Action.” The Far East High Command, which was a deployed headquarters of the Supreme High Command, was set up because of the great distance of this theater from Moscow and the enormous area and scope of operations planned.⁷³ The commander in chief of forces in the theater was Marshal of the Soviet Union A. M. Vasilevskii, who with his staff and representatives controlled and coordinated assigned ground, air, air defense, and naval forces, including allocated reserves of the Soviet Supreme High Command (transport and strike aviation, artillery, engineer units, motor transport, etc.) and units of the Mongolian People’s Republic.⁷⁴ Within Vasilevskii’s High Command of Forces, a rear service operations group headed by Col. Gen. V. I. Vinogradov (a Deputy Chief of Red Army Rear Services) was established with the mission of organizing and managing overall rear service support for the 11 combined-arms, 1 tank, and 3 air defense armies, and other ground and air groupings. In addition, the rear service operations group coordinated the rear service activities of the Pacific Fleet and Amur River Flotilla.⁷⁵ Vinogradov’s staff

consisted of representatives from the Red Army’s central rear service directorates, including the Central Directorate of Military Communications (VOSO) and the Main Motor Transport, the Main Road Building and Maintenance, Main Fuel Supply, Food Supply, Clothing Supply, Main Medical, and Main Trophy Directorates.⁷⁶

As noted, counterparts to these directorate representatives were present in assigned operational formations and tactical units, where they were the support to rear service deputy commanders. At every level of command, as before, rear service deputy commanders and staffs played key roles in coordinating the activities of technical services not under their direct control.

Despite maritime materiel deliveries to Far East ports, theater-level rear services were linked principally to the “center” by the Trans-Siberian Railroad, which had extremely limited feeder lines in the Far East. Therefore, supplies for some theater forces had to be moved by motor transport to front forces and concentration areas, in some cases a distance of hundreds of kilometers. In addition, the primitive road network, insufficient motor transport, and rapid advances by many maneuver units on the fronts made it difficult to relocate operational-level logistic bases so far forward.

Front supply depots of the Transbaikal Front, for example, did not relocate during the operation because of this combination of factors, with the increasing distance between bases and supported forces causing substantial logistic problems as the operation progressed.⁷⁷ Fuel consumption in particular was extremely high. By the third day of the operation, elements of the front’s fast moving Sixth Guards Tank Army had to be resupplied with fuel by air transport.⁷⁸ From 11–16 August the Sixth Guards Tank Army received as much fuel by air as it did by motor transport, with the Transbaikal Front overall receiving some 2,456 metric tons of fuel by air during the course of the operation.⁷⁹ Certainly, the Soviets experienced problems in logistic support of Far East Theater forces in their successful twenty-four day campaign, many of which are enumerated in Soviet historical writings.⁸⁰ Notable among these, in addition to the movement and fuel problems noted above, were providing water and cooking fuel, accomplishing road maintenance, ensuring adequate levels of rear service communications, providing for the timely

71. L. N. Vnotchenko, *Pobeda na dal'nem vostoke* [Victory in the Far East] (Moscow: Voenizdat, 1971), provides one of the best Soviet assessments of the Manchurian campaign, particularly the preparatory activities.

72. *Ibid.* For a discussion of the composition and missions of the three fronts, see especially pp. 51–53 and 59–84.

73. *Ibid.*, p. 50.

74. *Ibid.* The direct control of the Pacific Fleet and the Amur River Flotilla, operating in behalf of the overall plans for the strategic operation, was delegated by the Supreme High Command to Navy Commander in Chief N. G. Kuznetsov. See A. Vasilevskii, “Pobeda na Dal'nem Vostoke” [Campaign in the Far East], *VIZh* (August 1970): 7; A. M. Vasilevskii, *Delo vsei zhizni* [The work of an entire life] (Moscow: Politizdat, 1983), p. 505; N. G. Kuznetsov, *Kyrsom k pobede* [On a course to victory] (Moscow: Voenizdat, 1977), p. 498.

75. Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, p. 387.

76. *Ibid.*

77. *Ibid.*, p. 403.

evacuation of casualties, dealing with motor transport shortages, and other difficulties.

Regarding the overall effectiveness of rear service support, however, Soviet military historians make the following judgment:

All the work accomplished by rear agencies in the preparatory period ensured the successful course of the operation. Despite the fact that Soviet troops advanced 300–800 kms during the first 10–15 days, they did not experience serious supply difficulties, with the exception of temporary interruptions in fuel supply for the 6th Guards Tank Army.⁸¹

Despite this generally positive assessment, one major rear service shortcoming highlighted in retrospective assessments of the operation has considerable implications for the contemporary support of theater operations on a strategic scale. That is, while emphasizing the importance of having the Rear Service Directorate in the headquarters of the Far Eastern High Command of Forces, the absence of logistic resources directly under its control was a major drawback to its effective operation.⁸² Since such reserves - reserves of the center - had been established and employed as a matter of course by the central rear services and VGK in strategic offensive and defensive operations against the Germans, their absence in the Far East was most likely a consequence of resource constraints in this remote theater of military action. In any event, the lack of such resources in the Manchurian campaign reinforced Soviet perceptions regarding the absolute necessity for such strategic logistic reserves to directly support operational formations in a theater of strategic military action.

The Soviet rear services ended World War II with a vastly different structure, governed by far more complex and sophisticated support concepts than had existed in the prewar years. It was geared to support combined-arms operations of sweeping scope, with a rear service management structure centralized at the national level and replicated at the operational and tactical levels. Thus, as a former chief of rear services of the Soviet armed forces pointed out, in July and August 1944 the rear services were “capable of simultaneously and completely supporting the participants in the strategic advance of ten of the eleven fronts which were available at that time.”⁸³ Clear, workable delineations were made between operational and rear service planning and control, which at the same time provided for their integration at all levels. The

responsibility of higher echelons to support lower echelons in accord with a center-to-front to army-to-tactical-unit scheme was confirmed, as was the requirement to establish logistic reserves at each level. These would not only support one planned operation, but they would permit formations to undertake subsequent operations without substantial pauses to resupply and regroup. To accomplish this, echeloned systems of relocatable logistic bases at the central and operational levels were created to support combat units and groupings. Echelonment of transport, repair, medical, and other assets was also specified and improved throughout the war.

The coordinated use of all forms of transport under the centralized control of rear service military transportation staffs was developed, with the use of motor transport and aviation becoming increasingly important as the war progressed. Considerable progress was made in employing both motor transport and aviation to resupply mobile groups, with innovative approaches that remain instructive for contemporary rear service planners. Special line of communications troops - railroad, highway, and engineer in particular - played a growing role in building, restoring, and maintaining routes critical to the movement and support of troops.

A development of key importance during the war was the evolution in the role of central rear services from a relatively passive storage and distribution network to that of directly sustaining operational formations engaged in strategic offensive and defensive operations. In the prewar years, planners envisioned that central rear services, fragmented and uncoordinated as they were, would serve principally as a conduit to receive materiel from the national economy and deliver it to the fronts and fleets.⁸⁴ However, the experience of the war from its earliest days caused the role of the central rear services to broaden substantially.⁸⁵

As Russian assessments stress, the role and significance of central rear services increased, especially “during strategic offensive operations on foreign territory, when the rear service efforts of operational formations had to be augmented in the theater of strategic military action.” A broad spectrum of logistic units, facilities, and materiel under central rear service subordination was moved forward with the fronts and directly supported these formations during strategic offensives, including the

81. V. I. Achkasov, ed., “Voennoe iskusstvo osnovnykh gosudarstv, uchastvovavshikh v voine” [Military art of the principal states participating in the war], *Istoriya vtoroi mirovoi voyny* [History of World War II] (Moscow: Voenizdat, 1980), 11: 440–41.

82. As noted in Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, p. 420:

The absence of materiel reserves and reserves of the most important rear service units and establishments (railroad, road, motor transport, air transport, technical support, medical) at the immediate disposal of the Rear Service Directorate prevented it from reacting effectively to all crises occurring in troop rear support. It did not have the potential for extensively maneuvering rear service forces and means among the fronts or operational directions when the situation urgently required such maneuvering.

83. S. Mariakhin, “The Rear and the Front during World War II,” *RS* (May 1972): 24, in the translation prepared by the Foreign Science and Technology Center, FSTC-HT23- 973-73.

78. *Ibid.*, pp. 408–09.

79. *Ibid.*

80. *Ibid.*, pp. 342–86.

84. Kurkotkin, *Tyl sovetskikh vooruzhennykh sil*, p. 508.

85. As noted in Kurkotkin's work cited above (p. 106), the central rear services “not only received military products from the national economy and delivered them to the fronts, fleets, and military districts, but also stockpiled designated reserves of materiel, supported operational and troop evacuation movements, and built, provided technical support to, and restored the most important lines of communication. Centrally subordinated repair facilities carried out the most complex forms of repair on weapons, combat equipment, and property, and manufactured a number of types of military items. A

utilization of transport, military, and economic resources on foreign territory.⁸⁶

At the end of the war, then, the USSR had established a large and complex logistic system from strategic to tactical levels that despite its shortcomings and limited resource base had successfully sustained the Soviet armed forces through four years of war. This logistical system was critical to sustaining operational maneuver. As with the Soviet armed forces overall, however, Soviet rear service planners and theorists were soon faced with new kinds of military problems generated by rapidly changing weapons technology and future battlefields that promised to be far more demanding for the conduct of combined-arms operations.

NEXT ISSUE: Part Two: Soviet Operational Logistics after World War II

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⁸⁶. Ibid., pp. 508–09; Plotnikov and Chaban, "Rear Services," pp. 18–19.

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Ensuring that knowledge products are relevant, accurate, timely, and usable to commanders and decision makers will lead to unit success.

You are the senior logistician in the command post this morning. It is 0800, and you are about to brief the commander in his battle update brief. You have been preparing for the brief since 0600 because the slides were due to the battle captain by 0700. You get up to brief the commander and start spouting out numbers and figures. “We have 100,000 gallons of JP8 and 50 pallets of bottled water. Ammo is green. We are expecting a push from the sustainment brigade later tonight. Our operational readiness rate is 87 percent,” and on, and on, and on.

You wrap up your briefing, and you feel pretty good about what you told the boss; after all, you pulled the data from the Battle Command Sustainment Support System and verified it in the logistics status report. Surely it was good data, but therein lies the problem: It was just a bunch of data.

Your commander sits back in his chair and says, “So what?” You have just failed your commander. If a staff officer briefs the commander and the commander must ask a question either for clarification or relevance, the staff officer has failed in his job.

Making Knowledge Relevant

Logisticians notoriously neglect knowledge management (KM), and the situation described above is just one example of why. We sustainers are faced with more raw data than any other staff officer, and because of that, we often break the most basic principle of KM: ensuring that knowledge products are relevant, accurate, timely, and usable to commanders and decision makers.

Before briefing commanders or providing logistics data to the decision makers, logisticians must analyze and filter the data and information and turn it into knowledge for the commander. I Corps personnel recently addressed this issue in their KM plan. They recommended analyzing information based on seven information characteristics before briefing commanders or decision makers. Those seven characteristics are accuracy, relevance,

timeliness, usability, completeness, brevity, and security.

Sustainers must take the infinite amount of data they receive and filter it using these seven characteristics. Only after the data are filtered, analyzed, and packaged correctly should the information be processed and presented to the commander.

One might argue that sustainers do not have time to analyze all of the logistics data they are faced with and that their commander wants information as soon as it is available. I recommend asking the commander or decision maker, “Which do you prefer: information now or knowledge later?”

During the 5th annual Army Operational Knowledge Management Conference, Dr. Mark Nissen put it another way. He used a pizza analogy: Does the commander want a bad pizza delivered fast or a better pizza that takes a little longer to prepare and deliver? Most commanders will want both. Commanders want information now, and they want it to be right. This makes our job even more difficult, but through the use of effective KM processes, sustainers can meet the commander’s requirements.

Sustainers can start by speaking the commander’s language. Logisticians tend to speak differently than their commanders, especially in maneuver and functional brigades. While we tend to talk of gallons, days of supply, and percentages, the maneuver and functional brigade commanders speak of offensive and defensive operations and the number of missions. Sustainers must take their logistics data and information and put it in terms that the commander can apply immediately. For example, instead of saying, “Sir, we are green on ammunition, and we have 89 percent on hand,” the sustainer should say, “Sir, with the current amount of ammunition on hand, we can sustain 30 missions.” It is the same data and information, but it is spoken in the commander’s language—how the commodity affects missions. This may seem simple, but the way you present the information is almost as important as the information itself.

Sharing Knowledge

One of the seven principles of KM is to focus on sharing knowledge. Field Manual (FM) 6–01.1, Knowledge Management Section, says that “knowledge shared is power.” Sustainers do a relatively good job of sharing information and knowledge within the logistics community. Where sustainers fail to share information and knowledge is across the other warfighting functions.

The brigade S–4 is synchronized with the brigade support battalion’s (BSB’s) support operations officer (SPO), and the BSB SPO is synchronized with the sustainment brigade SPO. But the brigade’s logisticians are seldom fully integrated and synchronized with the movement and maneuver cell or other staff sections. By using several KM tools, sustainers can better synchronize logistics across all warfighting functions.

Running estimates. Sustainers must have simple but dynamic running estimates. Using a Microsoft PowerPoint slide with an imbedded Excel spreadsheet is common practice, but that slide is hardly dynamic, and quite frankly, it is not a running estimate. Now, I am not saying that running estimates need to be real time, but according to FM 3–0, Operations, they need to be a continuous assessment. As soon as data are taken from the Excel spreadsheet and pasted into a slide, the information is static.

Sustainers should leverage technology to make their running estimates more relevant. The Command Post of the Future (CPOF) and SharePoint offer technology solutions for running estimates. When assessing running estimates, analyze the time and effort it takes to prepare, update, and share those estimates. If you or your subordinates are spending excessive time and effort maintaining these, you should look for more efficient and effective solutions. Furthermore, if it is difficult or impossible to share your information, then it is of little use.

Logistics synchronization meeting. Once you have developed your running estimates, those estimates become the foundation for your logistics synchronization (log sync) meeting or your sustainment working group. Few maneuver and functional brigades effectively use the log sync meeting. Most brigades either conduct their meeting with only logisticians (excluding the other staff sections or warfighting functions), or they do not conduct a log sync meeting at all.

The log sync meeting is the key to integrating sustainment and sharing logistics information and knowledge. In a deployed theater, time, distance, and location may make it difficult to conduct a log sync meeting, but once again, sustainers can leverage technology to help facilitate the meeting. Virtual meetings are common and very effective.

Regardless of how the meeting is held, its contents are most important.

When developing your log sync meeting, start with the “7-minute drill” to justify the need for the meeting. It is called the 7-minute drill because you have 7 minutes or less to justify to your boss the need for the meeting. By focusing on the outputs of the meeting, you can show the command the value of the log sync meeting. Once you have completed the 7-minute drill and added the log sync meeting to the battle rhythm, develop the content and structure of the meeting.

Quad charts. A quad chart is an excellent tool to ensure that your log sync meeting and other meetings, working groups, and boards are efficient. The quad chart is not a new product, but it works well. Operations Group Foxtrot and the Battle Command Training Program recognize the quad chart as a best practice when developing the content, structure, and composition of your meetings and working groups.

The quad chart clearly displays the purpose, frequency, duration, and location in one quadrant. The inputs and outputs are displayed in another quadrant and, equally important, the attendees are listed in a third quadrant. In the log sync quad chart below, the attendees include representatives from the operations and intelligence sections. The attendance of these people is critical to integrating sustainers into the operations. The last quadrant simply shows the agenda for the log sync meeting. Notice that various staff sections are involved and facilitate the sharing of information across the brigade.

Improving KM Practices

Perhaps the single most important means of sharing information and gaining situational understanding is the common operational picture (COP), which sustainers sometimes neglect. Logisticians feel that they need to have their own logistics COP (LCOP). FM 3–0 says that the COP is a single display of relevant information that is shared by more than one command. LCOP is never mentioned in Army doctrine, and sustainers must recognize that there is only one COP.

We must incorporate logistics information into the unit’s COP, which is easy to do with CPOF and SharePoint. Sustainers must take the information from their “LCOP” and create views and displays within CPOF and SharePoint to display the relevant logistics information to the commander, other staff sections, and subordinate units. Doing this instantly gives commanders and decision makers the sustainment situational awareness they require.

Another key KM principle is to foster learning. Sustainers must continue to be a learning community. We do this by capturing lessons learned and passing them on to our replacements or other units. This is an area where we could all improve. All too often, units or individuals change something just for the sake of change.

For example, in a recent initial-impression report from III Corps, it was noted that the corps “made a conscious decision to not use several of the automated tools developed by the previous staff, based on the lack of predeployment training on the tools in use in theater. . . . In retrospect, several changes were reversed after learning that the previous unit’s methods worked best.” If we do not learn from previous units and individuals, we will continue to learn the same lessons over and over again.

It is absolutely critical that sustainers capture lessons learned and share them. The Army has numerous means to share these lessons. The Battle Command Knowledge System (BCKS) is one way to share your experiences and best practices, and every sustainer should be an active member of the SustainNet forum, which is an excellent place to find logistics information, products, and best practices.

But do not allow readily available lessons learned to replace individual innovation. You will find numerous standing operating procedures within BCKS, but do not fall into the trap of taking another unit’s product and assuming that it fits your organization perfectly. These products should be

your foundation, but continue to adapt and improve them based on your tacit knowledge.

In the current operational environment, knowledge transfer is critical. Effective KM allows us to learn more, faster. For example, almost everyone has participated in some sort of relief in place/transfer of authority (RIP/TOA), whether it was in Iraq, Afghanistan, Kuwait, or somewhere else. Normally, the incoming sustainer has done some research before the RIP/TOA. This research is done by email, telephone calls, and maybe even a predeployment site survey.

Once an individual deploys, he has less than a month to learn everything he can from the outgoing officers and Soldiers. At the end of those short weeks, the incoming individual probably feels comfortable in his understanding of his duties and responsibilities.

As the new guy gets further into his tour and the last guy goes home, the new guy almost assuredly realizes that he has a lot more to do than the last guy showed him. Why is this? Was the last guy just in a hurry to go home? Probably, but I doubt he intentionally ignored questions. The breakdown most likely can be traced back to a lack of KM and, in particular, knowledge transfer, both tacit and explicit. Retired General John W. Hendrix summed up the importance of KM. As he addressed a functional brigade at its battle command seminar, he said, “It [KM] is a laborious process, but if you don’t do it, it is an accident if this brigade works well . . . If you do not do this process, it is an accident if this brigade functions properly.” He continues, “We are not an institution that accepts accidental decision making. Knowledge management is the process by which we make it [decision making] logical.”

Sustainers provide critical information in this decision making process. We cannot let ourselves get consumed by data and neglect our KM responsibilities. By analyzing our data and information, speaking the commander’s language, sharing our knowledge, and capturing and transferring our lessons learned, we can ensure that it is not an accident when our unit succeeds.

Logistics Synchronization Meeting	
Purpose, Frequency, Duration, Location	Composition
Purpose: Synchronize logistics throughout the brigade and identify existing and future logistics requirements Frequency: Daily Duration: Less than 1 hour Location: Brigade and BSB	Staff Proponent: BSB SPO Chairman: Chief of staff Attendees: Brigade XO, G-3 representative, S-4, S-1, FSC commanders, BSB XO, BSB SPO, S-2, PBO, and representatives for transportation, supply, services, ammunition, distribution, and other commodities
Products	Agenda
Input: <ul style="list-style-type: none"> • Combat Power • Direct support stock status • Logistics requirements • Current operations • Running estimates Output: <ul style="list-style-type: none"> • Logistics synchronization matrix • Sustainment graphics • Updated common operational picture • Updated running estimates • Fragmentary Order 	Roll call (SPO) Enemy situation (S-2) Upcoming mission (S-3) Current log status (SPO) Sustainment next 24 to 72 hours Convoys SASMO Issues

Legend	FSC = Forward support company
BSB = Brigade support battalion	PBO = Property book office
SASMO = Sustainment automation support management office	SPO = Support operations officer
	XO = Executive officer

The quad chart is a best practice for developing the content, structure, and composition of your meetings and working groups.

Major Jim Bunyak is currently a student at the Army Command and General Staff School. He was previously assigned to Operations Group Foxtrot, Battle Command Training Program, at Fort Leavenworth, Kansas. He has a bachelor’s degree in international studies from Frostburg State University and a master of logistics management degree from Florida Institute of Technology. He is a graduate of the Logistics Executive Development Course and the Army Knowledge Management Qualification Course.



Ten changes have been made to the bottom photo, Can you spot them?
Solution in next issue





A RNZALR Soldier has been named in the 2011 Queen's Birthday Honours.

Warrant Officer Class One Ian Ponse, Royal New Zealand Army Logistic Regiment, is to receive the NZ Distinguished Service Decoration.

The Distinguished Service Decoration recognises distinguished military service by regular, territorial and reserve members of the New Zealand Defence Force, including command and leadership and service in an operational environment, or in support of operations.

Warrant Officer Class One Ponse serves as Quartermaster of the 16th Field Regiment, Royal New Zealand Artillery. In this appointment, he has managed three projects introducing new capabilities for operational deployments. He completed the building of specialised lines for the Very Low Level Air Defence Capability, which was completed on time and on budget. He was then instrumental in raising 39 Mortar Battery at Burnham and ensured that it quickly became operationally capable. He has also been involved throughout with the development of the KAHU Unmanned Aerial Surveillance Battle-Lab, from its experimental stages to first successful deployment in 2010. The introduction to service of all three assets have significantly improved the Army's operational capabilities.

Chief of Army Commendations and been awarded to the following RNZALR members in 2010/2011

Private N.B. Lock, RNZALR on 26 January 2010 – for his assistance to road accident victims on 11 June 2009.

Staff Sergeant Neil James Kearns, RNZALR on 23 February 2010: for his outstanding leadership during 2009 as the Second In Command Repair Parts Stores Section, 2nd Logistics Battalion Linton Camp.

Major Gary Thomas Shanley, RNZALR; awarded 20 May 2010 for his role as the Programme Manager, Capability Combat Service Support Immediate Need Programme,

Staff Sergeant Matthew David Clow, RNZALR; awarded 30 June 2010: For his role as the non-commissioned officer in charge of the Motor Trades Platoon, 2nd Workshop Company, 2 Log Bn during the period January to July 2008.

Staff Sergeant Mark Joseph Sullivan-Jones, RNZALR; awarded 30 June 2010: in recognition of the assistance he gave to accident victims in Palmerston North in May 2010.

Colonel P.J. Collett, awarded 13 September 2010: For his role as ACGS (Capability) from January 2007.

Staff Sergeant Errol Ambrose Brown, RNZALR awarded 19 January 2011: For his contribution to the youth in Waiouru, especially the establishment of the youth centre (The Sugar Shack).

Equipment Management Group (Light Armoured Vehicles) and Directorate of Land Engineering, Defence Logistics Command, Trentham Military Camp; 29 March 2011; for their role in the upgrade of the light armoured vehicles in response to the increase in threat levels in New Zealand's area of operations in Bamian Province, Afghanistan. This complex programme was completed on time, under budget, and produced a greatly enhanced survivability of New Zealand light armoured vehicles in Afghanistan.

WO1 Tama Erua Hiroti, RNZALR

15/12/62 -14/1/11



Chris, Josh and Isaac would like to express their heartfelt thanks to all NZ Army both military and civilian personnel for the constant care and support shown to our family during Tama's illness.

We would like to personally thank TRSB, LTCOL S Piercy, LTCOL R Weston, MAJ S Cooper, WO1 S Bougen, WO1 Waiariki, WO2 J Burt, WO2 T McGeough, and SSGT F Read. They were there on a daily basis and assisted us with whatever needed doing. The kindling and wood never ran out and helped ensure Tama was comfortable and that my needs were also considered.

To NZDF Archives in Trentham, thank you for the behind the scenes support, the gift baskets, flowers, the phone calls and allowing me to have the much needed time off work so I was able to fulfil Tama's wishes to be nursed at home.

To the Catering Platoon and the Q Store that stepped in from the day Tama died continuing throughout the days till after the funeral; our families are forever grateful for the superb food you competently prepared, cooked and delivered. Also, the respect you showed our families during this difficult time will always be remembered.

To CHAPCL3 Kevin Brophy (Father Brother), you have been an amazing friend to Tama and myself. I know how personally difficult it was for you. Everyone we have spoken to has remarked on the beautiful service. I know your good friend Tama (Brother Father) would have been thrilled.

To the bearer party: WO2 J.J King, WO2 Tim Kareko, WO2 Bojo Kareko, WO2 Ray Kareko, WO2 Paul Stephens, WO2 Terry McGeough, WO2 Joe Burt, SSGT Noel Kahui, CPL Remy Ledingham, and SSGT Ian Preisig; SGT Wallace (IC) and the firing party from TRSB, I know each of you have in some way had a personal connection with Tama and Isaac and this made for a very moving experience.

A special thank you to WO2 John Mills for coming out of retirement to play his bugle in tribute of Tama.

To the many people and Units who gave us flowers and koha your gift was gratefully received.

To the CO and RSM 5WWCT, thank you for opening your facility. Your warm hospitality was very much appreciated.

A very special thank you to WO1 Louise Waiariki. You gave a lot of your own time to offer me personal support. I consider you a very special friend.

To MAJ Roz Michie who I only met once but you sent me the greenstone pendent that I have worn and taken comfort from on many occasions, I thank you. I hope I can pay it forward to someone else in need as you did. Your kindness will always be remembered.

Tama was a soldier and a gentleman to the end. He would have been very proud of the amazing tribute and send off you professionally and respectfully honoured him with. It certainly made us a proud family and proud to be part of the NZDF family.

THANK YOU

Chris, Josh and Isaac Hiroti

Private Scott Paranihi Tamapo RNZALR

28/9/90 – 4/5/11



Members of 3 Transport Company recently farewelled one of their young comrades.

Private Scott Tamapo after he passed away on 4 May, following a courageous battle with cancer.

Private Tamapo enlisted into the NZ Army as a driver on the 27th August 2008. After completion of his All Arms Recruit Course he was posted to 31 General Service Transport Platoon, part of 3 Distribution Company of the 3rd Logistics Battalion. In 2009, Private Tamapo completed his Junior Drivers Course and qualified as an RNZALR Driver.

Private Tamapo was a quiet and professional young soldier who let his actions speak and was always measured and considered in his comments. He had a love of reggae, rugby and pig hunting and was a proud son of Ngati Porou. Scott was fluent in Te Reo Maori and did much of his schooling at Te Kura Kaupapa Maori O Te Waiu O Ngati Porou.

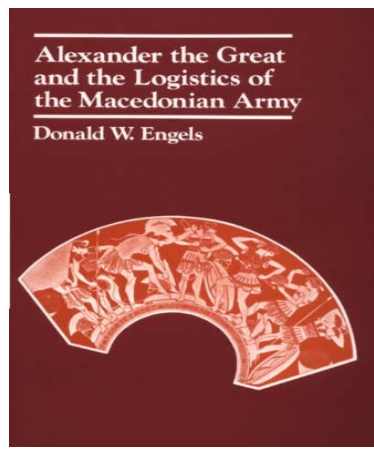
Scott's Tangi was held at his home Marae at Waipiro bay on the East Coast over the period 5 – 7 May. Members of the NZ Army and 3 Transport Company including the Company Sergeant Major, Warrant Officer Class Two Rogers Devery attended his Tangi, as well as the Regimental Sergeant Major of the 3rd Logistics Battalion, Warrant Officer Class One Richie Milner. His comrades within 3 Transport Company and other members of the wider NZ Army were given the honour of carrying his casket at the conclusion of the Tangi. Other members of the 3rd Logistics Battalion held a service for Private Tamapo at the All Saints Garrison Church in Burnham.

Scott will always be remembered by the members of his Company and our thoughts and prayers go out to Liz, Andre and all the Tamapo Whanau.

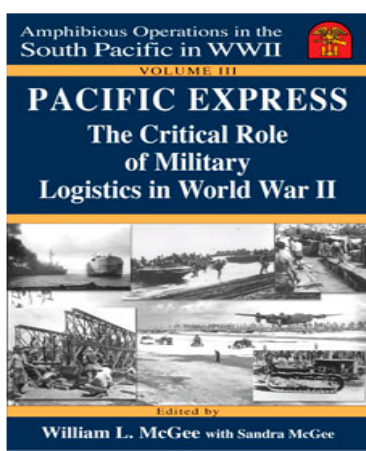


Alexander the Great and the Logistics of the Macedonian Army

"The most important work on Alexander the Great to appear in a long time. Neither scholarship nor semi-fictional biography will ever be the same again. . . .Engels at last uses all the archaeological work done in Asia in the past generation and makes it accessible. . . . Careful analyses of terrain, climate, and supply requirements are throughout combined in a masterly fashion to help account for Alexander's strategic decision in the light of the options open to him...The chief merit of this splendid book is perhaps the way in which it brings an ancient army to life, as it really was and moved: the hours it took for simple operations of washing and cooking and feeding animals; the train of noncombatants moving with the army. . . . this is a book that will set the reader thinking. There are not many books on Alexander the Great that do."--*New York Review of Books*



Pacific Express: The Critical Role of Military Logistics in World War II, Vol. III (Amphibious Operations in the South Pacific in WWII series)



Victory is won or lost in battle, but all military history shows that adequate logistics support is essential to the winning of the battle. In World War II, 16.1 million men and women served in the U.S. Armed Forces. For every ONE who served in combat, TEN served in a support role.

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THE SUSTAINER - *Journal of the RLC*
ORDNANCE - *Journal of the RAAOC*
RAEME CRAFTSMAN—*Journal of the RAEME*
THE CRAFTSMAN— *Magazine of the REME*

On the Internet

US Army Sustainment Magazine, Quarterly periodical, was formally Army Logician and QM Professional Bulletin
www.almc.mil/alog

UK Army Rumour Service, unofficial site but full of lots of interesting information
www.arrse.co.uk



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WRITING FOR ARMY SUSTAINER

If you are interested in submitting an article to *Army Sustainer*, here are a few suggestions that may be helpful. Keep your writing simple and straightforward (try reading it back to yourself or to a colleague). Attribute all quotes. Identify all acronyms and technical terms. *Army Sustainers* readership is broad; do not assume that those reading your article are necessarily Soldiers or that they have background knowledge of your subject. Do not worry too much about length; just tell your story, and we will work with you if length is a problem. However, if your article is more than 4,000 words, you can expect some cutting.

The word limit does not apply to *Foresight* articles. *Foresight* is a feature of *Army Sustainer* intended to present researched, referenced articles typical of a scholarly journal. Foresight articles can be longer than standard feature articles and are published with footnotes.

Do not submit your article in a layout format. A simple Word document is best. Do not embed photos, charts, or other graphics in your text. Any graphics you think will work well in illustrating your article should be submitted as separate files. Make sure that all graphics can be opened for editing by the *Army Sustainer* staff.

Instructions for Submitting an Article

Photos are a great asset for most articles, so we strongly encourage them. Photos may be in colour or black and white. Photos submitted electronically must have a resolution of at least 300 dpi (.jpg or .tif). Make sure to include a description of what each photo depicts. Please try to minimise use of PowerPoint charts; they usually do not reproduce well, and we seldom have the space to make them as large as they should be.

Ask your command chain for approval for open publication before submission to *Army Sustainer*. **Approval from the command chain should accompany your submission.** Exceptions to the requirement for clearance include historical articles and those that reflect a personal opinion or contain a personal suggestion. If you have questions about this requirement, please contact us at DTELN 347 7307.

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If you send your article by mail, please include a copy on CD if possible. We look forward to hearing from you.

Article Deadline for the next issue is 15 Feb 2012

Logistics must be simple--everyone thinks they're an expert.

Anonymous

