Volume 4 **3rd Quarter 2011** **Issue 3**

Engineers and Friends of Engineers,

In case anyone has not yet heard, on August 12th, BGen Nelson assumed command of the Engineer School's higher headquarters, Training Command (TRNGCMD), taking us back to three Marine general officers who came up as engineers. The other two are LtGen Panter, who is the Deputy Commandant for Installations and Logistics (DC I&L) and LtGen Wissler, who is the Deputy Commandant for Programs and Resources (DC P&R).

A couple of other key officer assignments include Col Dave Ottignon, who recently became the Executive Assistant to DC I&L, and Col Rob Couser, who assumed duties as LPE – the senior dedicated engineer staff position in the Marine Corps.

Hopefully by now you all know that the "USMC Engineer and EOD Campaign Plan" was signed in August by DC I&L, thus making it official. I encourage all of you to read it to get a feel for where the engineer community is headed and how we intend to get there. A copy of the Campaign Plan will be posted at the Marine Corps Engineer School website (http://www.marines.mil/unit/tecom/mces/Pages/default.aspx). Work is now underway on an Advocate Campaign Plan for the engineer and EOD community, which should be published by early 2012.

There are a number of interesting articles in this issue. I'd like to draw your attention to a couple of them. One is Mr Boyd's article on Engineer Advocacy over the past ten years from the vantage point of where it all comes together at the HQMC "action officer" level – specifically at LPE. Read it to get a feel for some of the major accomplishments of the past decade and how things really have gotten better for us. The other is Maj Macander's article on how best to organize and employ MLG engineers in support of the MAGTF. The ESB is the largest and most versatile of the Marine Corps' engineer units, and a unit that provides a significant capability to mass engineers in support of a MEF commander's priority of effort – be that building a major logistical hub, maintaining MSRs, breaching/clearing obstacles in support of maneuver units, constructing an expeditionary airfield, executing civic action projects in support of Phase 0 operations or COIN, etc. There are some, however, who believe that the need for ESBs has past and that the structure would be better employed in creating another CLB headquarters, with the engineer companies permanently distributed among various CLBs. Maj Macander's article makes the case, based upon combat experience, that we need to maintain a robust ESB.

I think that I speak for all of us in welcoming home 1st CEB and 8th ESB, after their highly successful deployments to Afghanistan, during which they built heavily on the accomplishments of their predecessors. We wish the Marines of 3rd CEB and 9th ESB the very best as they get ready to go down range again. Godspeed and we look forward to your safe return.

For those of you serving on the east coast don't, forget about the Walk to Defeat ALS on September 17th, 2011 on Emerald Isle. Our inspiration for this is one of our own, combat engineer Maj Randy Hebert (USMC Ret), who has been heroically fighting Lou Gehrig's Disease for almost two decades now.

Semper Fidelis, Colonel Ramey

Walk to Defeat ALS®
The ALS Association
because you can

September 17 2011

Emerald Isle, NC

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1. New Training Available:

Mr. Greg Simpson, Training & Education Branch Head

New Training Available!

AFCS/TCMS Training

The Army Facilities Components System (AFCS) provides support to engineers, logisticians and DOD mission partners worldwide. AFCS is used for planning, design, and management of contingency construction missions in a theater of operations and for emergency construction support during disaster relief operations.

The AFCS design data repository (TCMS data system) currently contains well over 1,400 facility designs, 213 component designs, and 5,800 drawings. Included in these designs are 36 Navy facilities with 95 unique Navy/Marine Corps drawings.

Some of the designs include base camps, barracks, heads, Containerized Housing Units (CHUs), roads, admin, hospitals, power, petroleum storage and distribution facilities, and ammunition storage facilities.

Training is sponsored by the Army Corps of Engineers (AFCS Program Manager) at no cost to the supported units. Three Mobile Training Teams (MTTs) are available and will travel to your location to conduct training.

Courses offered:

- AFCS Basic Course - 16 hours (2 days) targeting functional users with AFCS data and TCMS software applications.
- AFCS Leadership - 4 training hours targeting planners with a comprehensive understanding of AFCS software capabilities and outputs.

Unit support requirements:

- Computers w/screens (2 persons per computer)
- TCMS software (loaded on computers, provided by the MTT)
- AutoCAD software (optional - needed for design modifications)

Units desiring training please contact Mr. Barry Autry, MCEC Training and Education branch, at (910)440-7671 DSN 758-7671 or barry.autry@usmc.mil with proposed dates, location and number of personnel to be trained.

MarineNet Training

- Combat Engineer Courses Available

  New Courses:

  - Drainage (CE07DR0000)
  - Vertical Take Off & Landing (CE10VT0000)
  - Construction Management (CE10CM0000)
  - Route and Area Clearance (CE18RC0000)

  Existing Courses:

  - Airfield Damage Repair (CE11AD0000)
  - Breaching Planning and Assets (CE19BP0000)
  - Building Layout (CE03BL0000)
  - Concrete Construction (CE06CC0000)
  - Demolition Targets (CE16DT0000)
  - Fuel Operations (CE25FO0000)
  - Military Demolitions (CE15MD0000)
  - Obstacle Planning (CE24OP0000)
  - Production Estimation (CE08PE0000)
  - Utilities Equipment (CE26UT0000)

- These interactive courses address planning and supervisory actions across a range of missions assigned to combat engineer supervisory level personnel and units.

  - Enrollment open to all MarineNet military users: Active and Reserve
  - Study Hours; 3-15 hours
  - Courses record successful completions on Marine OnLine Education page
  - Each course includes online end of course examination

College of Distance Education and Training 1.888.4DL.USMC (1.888.435.8762)

TOP

2. 8th ESB, Camp Leatherneck, Afghanistan:

Maj Michelle Macander, Operations Officer, 8th E S B

Engineering Efforts Within the Marine Logistics Group – Why the Concept of Fair Share Does Not Work

> "Operating under centralized control, the [engineer support] battalion gives depth to the overall engineering effort by providing the GCE and ACE engineer support that exceeds their organic capabilities."
>
> **- MCWP 3-17 Engineering Operations**

As the Marine Corps faces the certainty of an impending reduction of forces in Afghanistan, the expectation will remain to maintain the current mission set, operational tempo, effects, and capabilities. This reality requires an honest assessment of engineering capacity throughout the Marine Air-Ground Task Force (MAGTF) writ large and, specifically, the Marine Logistics Group (MLG). This will ensure engineers are employed efficiently and appropriately across the MAGTF's battlespace. The current organization of engineering units within the MLG, with task-organized engineer companies attached to the Direct Support (DS) Combat Logistics Battalions (CLBs), is neither efficient nor appropriate. The preponderance of personnel and equipment assigned can be more capably and effectively employed as a part of the Engineer Support Battalion (ESB). The current construct detracts from the MAGTF's ability to surge engineering efforts by bleeding off engineering capabilities from the MAGTF's GS formation.

Fair Shared Engineering Structure

The ESB is designed, manned, and equipped to provide a General Support (GS) engineering capability for the entire MAGTF. The battalion provides the engineering support necessary to meet the combat and general engineering, bulk liquid, Explosive Ordnance Disposal (EOD), and utility support requirements of the MAGTF. There is also a robust horizontal and vertical construction, organic motor transportation, and second echelon maintenance capability. In garrison the battalion is comprised of three engineer line companies, a Bridge Company (8th ESB is the only active duty ESB with a Bridge Company), Bulk Fuel Company, EOD Company, Engineer Support Company and Headquarters and Service Company. Since 2004 in support of Operation Iraqi Freedom, this considerable capability has been drastically reduced from MLGs attaching the preponderance of their engineer line companies to CLBs in DS of regimental combat teams (RCTs). This method of organization provides each supported RCT with two engineer companies to support operations; a general support engineering capability within the DS CLB and a combat engineer company from the Marine Division. The engineering capability provided to the RCT, however, has an associated cost in terms of the engineering support provided to the MAGTF as a whole. This cost is CLB engineers not getting tasked to support priorities outside of their supported RCT and the overall inefficiency of engineering throughout the MLG. The DS engineer companies provide support strictly to the RCT and are "off limits" for MAGTF taskings outside of this relationship. They can more suitably be in a DS relationship to the RCT as a part of the ESB, capable of providing identical support but able to reinforce the MAGTF commander's priorities.

The partitioning of engineering assets and personnel within the MLG and provisioning of organic engineering capability within the DS CLB affords more control over engineering efforts by

the supported RCT. This construct, however, inefficiently manages assets and expertise that is in high demand but limited throughout the entire MAGTF. Amassing engineering assets at the regimental level at the expense of the MAGTF reduces the flexibility of engineering in support of the MAGTF main effort. This is anathema to the tenants of maneuver warfare as the MAGTF commander must retain the capability to mass assets in support of his or her main effort. The fair share mentality in regards to engineering, however, means an RCT's main effort is supported by engineer capability at the expense of the MAGTF as a whole. To illustrate this, a deployed MEF (forward) in Afghanistan has five engineer line companies in its table of organization. Four of them, or 80 percent of the MAGTF's combat engineers, are in direct support of RCTs – one company each from the Combat Engineer Battalion (CEB) and one company each from the DS CLBs. This leaves only one company to serve as the general support combat engineer capability for the MEF Headquarters, MLG, Wing, Division, Joint or Coalition formations assigned to the MEF. If the CLB engineer companies were brought back under the ESB structure, they could provide functionally identical support to the RCTs. The overall engineering capability would be far more tactically agile and responsive in supporting emerging priorities. MCDP 4, *Logistics*, states a logistical system must possess the

> "flexibility and agility that enable us to exploit opportunities as they present themselves. It must be able to anticipate developments and position resources to support future requirements, in effect staying one phase ahead of the current battle. At the same time, the logistics system must adapt to unforeseen circumstances and be able to shift the logistic focus in concert with any shift in the main effort."

MLG's current construct in regards to engineering does not meet this requirement. Migration of the engineer companies from the DS CLBs to the ESBs, however, provides the adaptability and flexibility required of a MAGTF GS formation.

CLB Engineer Company Manning

One of the problems with the DS CLB construct is the manning structure is not based on an independent mission analysis for each deploying formation. Regardless of whether CLB engineers are operating in Sangin or Musa Qalah in the North or in the southernmost portions of the Area of Operations (AO) near the 'Fishhook' of the Helmand River, the respective manning documents were identical and their tables of equipment differed only slightly. Engineers with CLB-2 (then CLB-8) focused on force protection, Combat Outpost (COP) expansions and construction in the highly kinetic areas of Sangin and Musa Qaleh, with no route improvements assigned or conducted during their deployment. Simultaneously, engineers with CLB-3 (then CLB-7) operated in a more permissive environment allowing for the execution of several route improvements in addition to vertical construction and survivability tasks. Vastly differing mission sets require vastly differing task organizations. The solution instead became to fill out the mirrored manning documents and attempt to make the missions fit the manning and equipping, not the other way around.

CLB engineer companies are built around combat engineers and engineer equipment operators, but are also given a modest utilities, bulk fuel, maintenance, and motor transportation structure to execute assigned missions. All of these capabilities within a 135-Marine company means CLB engineers can theoretically execute horizontal and vertical construction tasks, build and man bulk fuel and water sites, provide organic maintenance for heavy equipment and motor transport assets, and move the equipment from one project to another. In reality, however, the structure provided is too shallow to simultaneously execute these advertised mission sets to standard. For example, the ESB deploys with an MOS 1390 Bulk Fuels Officer and two Staff Non-commissioned Officers, while the senior Marine bulk fueler within a CLB is a sergeant. This Marine may be motivated and knowledgeable, but there is an unrealistic expectation for the management of multiple fuel sites, ensuring proper accountability and tracking of fuel, and serving as the quality control and safety expert for the CLB in all bulk fuel matters. Additionally this sergeant must take the lead in building a new fuel site from the ground up. Without the quality control capability and experience resident in the ESB, this Marine is not set up for success. If instead

assigned as a team lead within the ESB responsible for a singular bulk fuel site and provided with the reach-back capability to his SNCOs and officers, the level of experience and expertise would be appropriate for the assigned mission. The same argument can be made for utilities, heavy equipment and heavy equipment maintenance – the structure of the CLBs does not have the depth needed to carry out its assigned missions. If instead these Marines and their associated equipment were resident within the ESB, they would be suitably employed and properly supervised for the missions assigned.

Utilization within the ESB

The engineer company within a CLB can be better utilized as a component of the ESB, DS to the respective RCT, vice an independent engineering formation. The ability to task organize a unit for the mission – whether a COP build, road improvement project, or a water or fuel point construction – is far greater within the ESB than the engineer company of a CLB. This construct allows the ESB to surge engineering support when and where needed. The ESB provides a robust design and quality control component not available in the shallow structure of the CLBs. Engineering experience within the ESB far surpasses resident knowledge and experience in the CLB engineer company.

CLB engineers have limited manpower and equipment to execute simultaneous missions. The focus of the Combat Logistics Battalion is (and should be) on distribution, vice engineering, support to the RCT. In order to focus on engineering effects, an associated reduction in other logistical functions is incurred – if a vertical construction team and related construction material require organic movement to an outpost, those motor transport assets are out of play to move Class I and repair parts required by the supported unit. For an ESB, with no DS relationship to any unit, the focus is exclusively on general engineering support to the MAGTF. In addition to the obvious benefit of manpower and equipment – an ESB manning document is 634 vice a CLB engineer company manning of 135 – the engineering design capability far outweighs what a logistical formation can provide.

Precedence in OEF

Assigning engineers as DS elements vice attaching them is not an untested concept – the Marine Division is currently doing it in theater. CEBs recently modified supporting relationships in order to best manage engineering assets, establishing habitual relationships as companies directly supporting RCTs, not as attached companies. While functionally a unit in DS provides a similar level of support to an RCT as an attached unit does, keeping units in DS allows the Division the flexibility to surge efforts if required, while attaching units precludes this. Lieutenant Colonel Andrew Niebel, Commanding Officer of 1st CEB, writes

> "This [change in relationship] immediately provided the Division Commander the much needed flexibility to mass engineers and properly manage a problematic maintenance and supply program of engineer equipment. It did not detract from combat engineer effects required of a battle space owner – this change in support relationship remained completely transparent to Battalion and Regimental Commanders."[1]

Immediately upon assuming command as the unit responsible for providing GS engineering to Regional Command Southwest (RC(SW)), 8th ESB's involvement in Operation Outlaw Wrath in the Sangin District provided an opportunity to demonstrate how this construct worked in support of an engineering-intensive operation. 1st CEB, with two engineering line companies in DS of RCTs 1 and 8, provided a 200-man breaching task force in support of 3d Battalion, 5th Marines' clearing operation of Route 611. Whatever damage the explosive and mechanical breaching force caused the road, 8th ESB was tasked with repairing with a heavy horizontal construction team. The fact is CEB's support – essential to the success of Outlaw Wrath – would have been impossible had their companies been fair-shared between the RCTs. This point was not lost to either CEB or ESB, and its application to the MLG is clear. Engineer line companies within the MLG can and should be in a DS relationship with their RCTs under the ESB. This supporting structure would allow the DS companies to provide the same level of support the RCTs have become accustomed to, but would also ensure the MAGTF's engineering capability was responsive

enough to mass efforts in support of emerging priorities.

Pulling capabilities out of the DS CLBs into a GS formation is also not an untested concept in theater. CLBs are designed per their manning document to provide an Intermediate Maintenance Activity (IMA) capability. In theater, though, it was determined that consolidating maintenance within the GS Maintenance Battalion, where the expertise and capacity was far greater, was a better support structure than thinning the GS maintenance capability. The same should be done with the engineering capability in theater – bring the engineer companies back to the ESB where they can better support both Division and MAGTF requirements simultaneously.

Photo 1: 8th ESB engineers repairing a local non-standard bridge in the Kajaki District.

Photo 2. 8th ESB engineers emplacing footers for an ESB designed and built steel and timber non-standard bridge, with the Medium Girder Bridge (MGB) that it will replace in the background.

Recommendations

In order to effectively and efficiently manage engineer capacities across the battlespace in accordance with emerging priorities for GS mobility, counter-mobility, and general engineering effort, the MLG structure should be modified so all of the MLG engineers are resident within the ESB. This precludes operational agility in the application of engineer effort from being sacrificed in order to provide relatively permanent engineer capability at the regimental level. The engineer structure within the CLB is currently too modest to accomplish all of its assigned missions but too big to be manned and equipped without further impacting GS engineering support to the MAGTF. Migrating the engineer line companies to the ESB and tasking them as DS vice attached to CLBs will provide the support RCTs have become accustomed to, but without the rigidity and inflexibility of the current structure.

NOTES

1. Niebel, Andrew,"Division Combat Engineering: Lessons Learned and Maximizing Employment in Helmand Province for OEF 11.1 and Beyond" (point Paper, February 26, 2011).

TOP

3. A Decade of Engineer Advocacy:

By Mike Boyd,
HQMC Engineer Advocate Deputy Branch Head

Fellow Engineers,

On the ten year anniversary of the Engineer Advocate Branch, just a short note to thank everyone for the past ten years of outstanding support as the Engineer and EOD Advocate Branch has labored to make our Engineer and EOD Community better. This has been a decade of change as we formed the Branch up about a month before 9/11. I guess we should have looked on that as an omen of the upcoming changes in our world, but here are just a few highlights categorized under our Title X responsibilities:

Organizing We have grown active duty Marine Engineer structure from two to three Active Duty CEBs, more than doubled EOD, eliminated the fabric repair MOS and reduced our facilities billets substantially. Overall, active duty structure increased from about 10,500 in 2001 to more than 13,000 now. All, while the other Services were cutting their engineer structure despite being at war. Career enhancement-wise, promotions achieved stellar proportions through your mentorship in evaluating and counseling your

Marines, ensuring their reports resonate with selection and promotion boards. Sitting on boards, albeit painful, community is a must, as having two seats on the 2002 Command Selection Board garnered 11 Battalion command slots for Engineers that year (out of 20 for "logistics" officer MOS's). It makes a difference when the engineer community has a voice at the table, key to ensuring we groom the right young lions for our future senior leadership!

Training Our Engineer School leadership has been aggressive in advancing its peacetime and wartime training, doctrine, and Beltway actions support, becoming the "go to" place for C-IED trainers and R2C. Innovatively forming the Marine Corps Engineer Center as a separate but collocated command, they have already contributed immensely to the engineer universe, partnering with the Commandant's Energy Efficiency Office (E2O), and supporting or representing HQMC on a myriad of OAG's, Working Groups, and IPTs that continue to make an incredible difference as the Marine Corps trains to be ready when the rest of the country is not. The EOD School continues to evolve as well with Advanced C-IED curriculum, and Training Command will standup the EOD Advanced Training Course (ATC) at 29 Palms this next fiscal year for advanced EOD skill sets. Our Engineer and EOD traineing leadership, innovation, and dedication is epic, and continues to evolve to the new and emerging operating concepts that the MAGTF will face in coming years!

Equipping The partnership of MCCDCs Combat Developers and Marine Corps Systems Command's Engineer Systems Acquisition Warriors consistently turn up the heat as they have rapidly responded to the needs of the warfighter in developing and buying new, state of the art, and quickly fielded Engineer and EOD equipment. Unsung heroes that daily labor to ensure the right material solutions are furnished to the warfighter in a timely fashion, Engineer and EOD equipment readiness has never been higher, and their development of warranties sets a Marine Corps standard as they take the burden of routine maintenance off the back of the maintainers standing in the redeployment door. As an example of their prowess, the Assault Breacher Vehicle (ABV) went from a POM 02 concept to January 2010 combat operations in Afghanistan, and the ABV has proven their worth repeatedly in combat with the only US survivable breaching platform on the battlefield. Lest we forget, MRAPs were originally designed and procured to provide force protection for Marine Engineers and EOD personnel in their C-IED mission, a testimony to our acquisitioners leading innovation in support of the Operating Forces!

Alumni It has been a privilege to advocate for a community that demonstrates its leadership and prowess on the battlefield and around the world each and every day, but the strength of this community is combat multiplied through the former Engineers and EOD Marines who participate through the efforts of the Marine Corps Engineer Association (MCEA). In the last few years, we have formed a strong partnership with the Society of American Engineers (SAME), and work to recognize your unit and individual efforts through both the MCEA and SAME annual awards program. The achievements of Marine Engineers and EOD personnel are the stuff of legend, and make the advocate effort a humble pleasure and honor!

Last, we are extremely excited to have Colonel Robert A. Couser checking in to Head up the Engineer and EOD Advocate Branch! Having served as an Engineer in every MAGTF element in peace and war, he brings a world of Marine and Joint Staff Engineer experience to take us charging into the new millennia with renewed energy and zeal to exploit every new opportunity!

Thanks for your support and to make the community better over the past decade, and never accept the status quo, always keep pushing for the future!

Engineers and EOD up!

Mike Boyd
HQMC Engineer Advocate Deputy Branch Head

TOP

4. Light weight Water Purification System:

Maj Dev Spradlin Utilities Instruction Company Commander

The USMC has recently begun to field the Lightweight Water Purification System (LWPS). As with all new pieces of equipment many questions arise about new equipment. The most recent has been in regards to the types of oil used in the High Pressure Pump. Below is an illustration of the types of oil and where it is used.

USMC LWPS High Pressure Pump Module

High Pressure Pump TECWAR®/Wanner D-10 Use Only Hydra – Cell EPDM Industrial Pump Lubricant 30W/40W	TECWAR® 2:1 Reduction Gear Box Use Only 80W-90 Gear Oil	High Pressure Pump Engine - Yanmar L70 Use Only 15W/40 CI4 Diesel Engine Oil

TOP

5. MCEC Doctrine Branch Update:

By Glenn Gerichten, Doctrine Branch Head

Since the last issue the doctrine team has been working on several projects. Most notably:

a.) **JP 3-1**5 – Barriers, Obstacles and Mine Warfare for Joint Operations; revised and republished (17 June 11).

b.) **JP 3-34** – Joint Engineer Operations; revised and republished (30 June 11).

c.) **MCWP 3-17.8** - Combined Arms Mobility Operations, an Army/Marine Corps pub, has been approved and is being printed/digitally copied. Anticipate hard copies will be available in next 60-90 days. Digital copy will be available at USMC Doctrine website (in similar timeframe).

d.) **MCWP 3-17.1** and **MCWP 3-17.3** – Combined Arms Gap Crossing Operations and MAGTF Breaching Operations, will be cancelled and replaced by MCWP 3-17.8.

e.) **MCRP 3-17.7M** – Construction Estimating, a multi-service pub, awaits DC CD&I signature/approval.

f.) **MCRP 3-17.7F** – Project Management, a multi-service pub under revision.

g.) **MCRP 4-11.8E** – Waste Management for Deployed Forces, an Army/Marine Corps pub, awaits DC CD&I signature/approval.

h.) **MCRP 3-17.7N** – Base Camps, an Army/Marine Corps pub, currently being written.

i.) **MCWP 3-17.6** and **MCRP 3-17.6A** – Survivability and Camouflage, Concealment and Decoys are Army/Marine Corps pubs that are being merged.

j.) **MCIP 3-34.03** – IED Detector Dog Handbook, a new pub being developed based upon MCWL handbook.

k.) **MCRP 3-17B** – Engineer Forms and Reports awaits DC CD&I signature/approval.

l.) **MCRP 3-17.7H** – Materials Testing, an Army/Marine Corps pub that has been revised and awaits DC CD&I signature.

m.) **MCIP 3-17.01** – Combined Arms IED Defeat Operations, an Army/Marine Corps pub has been reviewed.

If you have any doctrinal needs, questions or recommendations please call anyone on the team:

Matt Bishop –	(910) 440-7271; DSN 758
Roger Gantt –	(910) 440-7000; DSN 758
Joe Baes –	(910) 440-7016; DSN 758
Rick Hunte –	(910) 440-7413; DSN 758
Glenn Gerichten –	(910) 440-6010; DSN 758

TOP

6. VMR2 Training at Marine Corps Engineer School

by GUNNERY SERGEANT JOSEPH MURABITO

On 28 July, the Demolition Range Instructors from Combat Engineer Instruction Company, Marine Corps Engineer School conducted initial training for the VMR2 with great success. Using a similar training schedule as the AN/PSS-14 conducted here at the school and VMR2 training conducted overseas, the Demolition Instructors were able to seamlessly interject the new equipment into the existing Basic Combat Engineer Program of Instruction. The training schedule included classroom lecture, demonstration and practical application in the mine lanes at the Demolition Range. The training was broken down into the following:

Day 1: Classroom Lecture and Instructor Demonstrations with the VMR2 students
Day 2: Student practical application of set up and operation of metal detector only, Student practical application of set up, calibration and operation of GPR only
Day 3: Student practical application of set up, calibration and operation of combined mode
Day 4: Student practical application of set up, calibration and operation of combined mode
Day 5: Performance and Written Exams

The instructors found it very important during the lecture to stop and demonstrate every procedure for the students. This was especially crucial when it came to the tones, sounds and correctly pressing the key functions. The instructors use one detector per table of students during the classroom portion to allow for students to participate in the basic set up procedures.

Separating the MD and GPR is probably one of the most important steps. The students can become proficient with each mode independently and understand the tones from different targets. Learning only one tone at a time also teaches the students the fundamentals of sweeping techniques and how to adjust techniques for each mode.

The last two practical application days in the mine lanes focused on the set up to sweeping in the combined mode. If the students had any issues while operating in the combined mode, the instructors were on hand to assist each student.

Overall the initial class was a success and the Demolition Range Instructors were able to achieve all training objectives. All 34 Basic Combat Engineer Marines were successful in passing the performance based and written exams. Combat Engineer Instructor Company currently has ten VMR2's for training and ten mine lanes to operate in. The targets in the lanes are all representations of anti-tank or anti-personnel mines.

TOP

7. Engineer Advocacy Branch:

Submitted by LtCol John Osborne

Engineer and EOD Roadmap. The Engineer and EOD Roadmap has been signed, and will be available on the Engineer Advocacy Branch (LPE) SharePoint site. This document will serve as Appendix 8 to Annex C of the Marine Corps Service Campaign Plan (MCSCP), and provide the framework and direction to develop and maintain Marine Corps Engineer and EOD core capabilities to meet MAGTF and combatant commanders' requirements for the future. The Advocate Campaign Plan (ACP), a follow-on effort to the Engineer and EOD Roadmap is under contract and will be kicking-off this fall.

Information Portal. Use to Engineer Advocacy Branch SharePoint to keep up to date on new and developing information on our community at https://ehqmc.usmc.mil/org/IL/LP/LPE/default.aspx

Personnel Turnover. Col Robert Couser has PCA'd from the Joint Staff J-4, and joined the Engineer Advocacy Branch (LPE) in the long gapped billet as active duty branch head. MGySgt Jeff Griffin will execute PCS orders to Camp Pendleton, CA, during Aug 2011. MGySgt David Prutz has joined the Engineer Advocacy Branch (HQMC) as the Combat Engineer MOS Specialist, the billet formerly known as the Assistant Occupational Field (OccFld) Sponsor. Please update you distribution lists accordingly.

Joint Engineer Operations Course (JEOC). JEOC is a blended course consisting of both a distance learning (dL) phase and a resident phase designed for educating and preparing for engineer officers, senior noncommissioned officers, warrant officers, and government civilians for operational assignments in the joint environment. JEOC was developed by engineers for engineers to better prepare Engineer operational planners to serve within joint, interagency, intergovernmental, and multinational (JIIM) environments. The major focus of the course is to introduce students to joint doctrine, planning, and engineer operations, and the type of engineer staff positions and associated products engineers are required to develop. **Do not contact the Fort Leonard Wood team directly.** Contact LtCol John Osborne and MGySgt Jeff Griffin, (703) 695-9022, for USMC quotas.

Upcoming courses include:

- JEOC 11-06– Resident Phase: 19-23 Sep 2011 at Pearl Harbor HI [PACOM sponsored]
- JOEC 12-01 – Resident Phase: 29 Oct – 4 Nov 2011 at MCB Quantico

Expeditionary Energy. The Expeditionary Energy Office (E2O) will be running the next iteration of the ExFOB 15-19 Aug 2011 at 29 Palms.

Marine Corps Engineer Association (MCEA) Awards. MARADMIN 368/11. announces the MCEA 2011 Award winners and provides details for the annual awards banquet on 27Oct. Congratulations to all the nominees, and thanks to all commands for pressing forward in recognizing the superlative performance in Marine Corps Engineering.

CHIEF's CORNER

<u>Apprenticeship</u>

Our engineers are doing great work all the time throughout the Operation Forces. Just look at any After Action Report or Battle Book that's being submitted these days. They are also doing it all and sometimes way beyond the requirements of their skill level. It's time we awarded our engineers with something that they can use far beyond their time in service. Letting them know that they are true professionals and having them take ownership of their occupational specialties is one of the best tools to give them.

One of the attributes of being a professional (engineer) is to ***demonstrate expert knowledge***

within your field and engage in lifelong learning to constantly update and maintain your expertise as the world changes. The United Services Military Apprenticeship Program (USMAP) is one of the most under used programs we have and yet one of the easiest to obtain. The

program itself was started by the Marine Corps and the U.S. Department of Labor in 1977 and was further updated in 1999. All engineer occupational specialties fall under the apprenticeship program and will transfer over to the private sector.

The advantages of USMAP include:

- Positive retention tool (normally takes more than one enlistment to complete apprenticeship).
- Encourages training that is compatible to civilian trades.
- Strong morale program - it is viewed by enlisted personnel as something their military service is doing for them.
- Completion of program enhances employment opportunities while on active duty or separated.

More importantly is that Commanders now know that their Marines have all the skill sets that will insure success on any mission. The Marines themselves will have a sense of accomplishment and commitment to their continuing education. USMAP is an embodiment of this commitment, but as an added benefit, it certifies service member's technical skills.

From Utilities, Heavy Equipment, Bulk Fuel, Surveyors, Combat Engineers the Marine Corps Engineers have taken the lead in military engineering and have defined the term Expeditionary Engineering. By applying the apprenticeship program we can also demonstrate that we are taking the lead as true professionals at all levels.

NOTE: ***For the USMAP Guide and a Copy of the National Standards of Apprenticeship cut and paste the following URL into your browser:*** https://ips.usmc.mil/sites/mces/Training/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2fsites%2fmces%2fTraining%2fShared%20Documents%2fUSMAP&FolderCTID=&View=%7b559E528D%2dFD1C%2d4DCD%2d996A%2d0FB6D667EB6F%7d. You will be asked to authenticate your digital certificate, please choose your DoD email certificate. You will then be taken to the documents, just select the document you which to view.

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8. Honor Graduates of Engineer Courses

UTILITIES QUARTERLY HONOR GRAD ROSTER:

April:

6th – BWST 3-11: PFC Michael Stempien
14th– BE 4-11: PFC Philip Alavaro
19th– BEEEST 3-11: LCpl Sean Harris
29th– BWST 4-11: PFC Samuel Hahn

May:

4th – AE 2-11: Cpl Kenneth Whyel
13th– AWST 2-11: Sgt David Skiviat
16th– BEEEST 4-11: PFC Justin Lewis
25th– BE 5-11: LCpl Nakita Downes

June:

23rd– BEEEST 5-11: PFC Johnathan Longoria
30th – BE 6-11: PFC Jose Rodriguez

COMBAT ENGINEER QUARTERLY HONOR GRAD ROSTER

April:

13th – BCE 13-11: PFC Luis E Holguin
26th – BCE 14-11: PFC Michael F Thrower

May:

11th – BCE 15-11: PFC Brian S Barnett
17th - BCE 16-11: PFC Kenneth R Storvick
24th - BCE 17-11: PFC Benjamin S Landis
27th - CENCO CORE: SSgt Derek Partridge

June:

2nd – BCE 18-11: PFC Evan D William
9th – BCE 19-11: Cancelled
16th - BCE 20-11: PFC Steven V Langdon
28th - CENCO CS: Sgt Alexander H Economou
30th – BCE 21-11: LCpl Damon K Lewis

ENGINEER CHIEF'S QUARTERLY HONOR GRAD ROSTER

April:

15th – EOC 1-11: MSgt David W Dickens

ENGINEER OFFICER QUARTERLY HONOR GRAD ROSTER

April:

1st – CEO 2-11: 1st Lt Steve Martin

May:

5th – CEO 3-11: 2NDLT JACOB KREBS

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9. Marine Corps Engineer Association News:

By Col Ken Frantz, USMC (Ret)-MCEA President

Your Marine Corps Engineer Association is the only HQMC-sanctioned Association whose sole purpose is to recognize and advocate for the Marine Corps active duty and active reserve engineer, utilities, Bulk Fuel, EOD and Navy SeaBee communities. The principle goal of the Association is to provide an ever increasing set of tools to improve the quality of life of our Marines, regardless of rank, and to advocate for those communities that we serve.
How are we doing this?

- Annually, since 1998, we have recognized the "Best of the Best" in our engineer, utilities, Bulk Fuel and EOD communities. The program has grown each year and we now award individuals and units in 22 different categories including our Navy brethren, the SeaBees.
- We partnered with The Society of American Military Engineers (SAME) to make it easier for our members to improve their professional qualifications, making our members more valuable to the Corps and more employable outside the Corps.
- We partnered with *Ingenieur Executive* to provide our members, who are in transition, with proven resume development, job search and placement opportunities.
- We negotiated discounts with the Marine Corps Association and Marine Corps Historical Tours for our members.
- We developed the MCEA Financial Assistance Fund to provide financial or educational assistance to those in need.
- We acknowledge Honor Graduates of schools across the communities that we serve.
- Additional benefits include access to members' rosters, the ability to locate and reconnect with former friends, access to the "Members Only" section of our website and subscription to our annual newsletter.

NEW INITIATIVES:

Award 1 year complimentary membership & certificate to retiring Marine Engrs, Bulk Fuel, Utilities & EOD.

Award certificates, complimentary membership & other items to Honor grads at: MCES; Ft. L. Wood det; Bulk Fuel School and Ft. Knox, Assault Breacher Vehicle crew & mech.

Award complimentary membership & other items to Engr Units: Marine & NCO of the Qtr/Year; Meritorious promotions.

Offer one time, 3 year membership for $30 to AD/AR.

All Commanding Officers and other engineer POCs have been provided details on the above new initiatives. You can obtain more information and register for your discounted membership on our website: www.MarCorEngAsn.org

PS: Make your plans now to attend the annual reunion and awards banquet; 26-28 Oct, 2011 in San Diego at the Crowne Plaza, Hotel Circle. Schedule of events and registration form is located on our web, 2011 reunion page.
Check out our website: www.marcorengasn.org for all the information as well as order from our Ships store; notice our new Engineers UP tee shirts!

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10. MCEA 2011 Award Winners:

MARADMIN 368/11; DTG 291850Z Jun 11 announced the 2011 Marine Corps Engineer Association Award Winners.
Congratulations to the following individuals and units who were selected as the recipients of the 2011 MCEA Annual Awards in the categories indicated. All awards will be presented at the annual MCEA Awards Banquet at the Crowne Plaza Hotel in San Diego on 27 October, 2011.

COMBAT ENGINEER OFFICER
CAPT J.R. MONTEDORO 8TH ESB
COMBAT ENGINEER SNCO
GYSGT J.G. MORRIS 1ST CEB
COMBAT ENGINEER NCO
CPL D.R. BENEDICT 1ST CEB
COMBAT ENGINEER
LCPL J.M. PEREZ CAB
ENGR EQUIPMENT OFFICER
CWO3 A.J. REITER 3RD MAINT BN
ENGR EQUIPMENT SNCO
SSGT D.J. FLETCHER 9TH ESB
ENGR EQUIPMENT NCO
CPL O.J. GONZALES-RAMIREZ 1ST CEB

ENGR EQUIPMENT MARINE	
LCPL D.E. CONKINS	MWSS 171
UTILITIES OFFICER	
CWO4 M.S. MORRIS	8TH ESB
UTILITIES SNCO	
SSGT J.L. HOFFMAN	1ST CEB
UTILITIES NCO	
SGT R.E. BATTLES	1ST CEB
UTILITIES MARINE	
LCPL K.L. GORMAN	1ST CEB
BULK FUEL OFFICER	
CWO4 B.J. CADIZ	MWSS 172
BULK FUEL SNCO	
GYSGT G.C. PRUITT	8TH ESB
BULK FUEL NCO	
CPL K.A. RIQUINHA	9TH ESB
BULK FUEL MARINE	
LCPL O.Y. FALU	9TH ESB
EOD OFFICER	
CWO2 J.W. HERMANN	7TH ESB
EOD TECHNICIAN	
GYSGT D.G. BENDER	7TH ESB
COMBAT ENGINEER BN	CO-WINNERS
1ST CEB AND 3RD CEB	
ENGINEER SPT BN	8TH ESB
MWSS ENGINEER COMPANY	MWSS 373
NAVAL CONSTRUCTION FORCE	NMCB 5

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11. Walk to DeFeet ALS

By Matt Fletcher

Walk to Defeat ALS
The ALS Association
because you can

September 17 2011

Emerald Isle, NC

You won't want to miss this year's Walk to Defeat ALS on Emerald Isle on 17 Sept 2011. Come join over 200 US Marines in this year's event. The Walk to Defeat ALS on Emerald Isle has occurred each year since 2001. Every year Walk to Defeat ALS raises money that:

1. Brings much needed support to those afflicted with the disease by assisting in providing for their personal care.
2. Supports not only those living with ALS but also their families.
3. Supports cutting edge, global research to find a cure.
4. Encourages those afflicted with ALS and their families that they are not fighting alone.

Randy Hebert before ALS

Col Ramey, CO of the MCEC stated, "This is a golden opportunity to show support for one of our own, Maj Randy Hebert (Ret.). If you are available to support the Emerald Isle Walk to Defeat ALS event on September 17, 2011, then please do so. This event raises valuable funds to support the ongoing efforts to find a cure for this devastating disease." For those of you who do not know Randy, he and other servicemen were exposed to chemicals during the 1991 Persian Gulf War. In 1995 Major Randy Hebert, now retired, was diagnosed with ALS resulting from those chemicals. Your help is needed in the form of supporting the Walk to Defeat ALS event on 17 September 2011. Join in the fight against ALS and bring hope to many who need it.

Randy Hebert in 2009.

You can register a team, join a team, register yourself or make a donation online by going to www.CatfishChapter.org. Specific event information is available at that website also. "Walk because you can."

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Purpose of the *Operational Engineer*

To provide a useful forum for open discussion and free exchange of ideas relating to the U.S. Marine Corps Engineer Community and it's capabilities that will be published quarterly for the benefit of the entire Marine Corps Engineer community. Thoughts, suggestions, and ideas from the operating forces are essential to achieving this purpose.

SUBMISSION POLICY

• **Commentary on published material:** Submit promptly. Comments normally appear as letters 3 months after published material. Be brief.
• **Feature articles:** Normally 750 to 1,000 words, dealing with topics of major significance. Ideas must be backed by hard facts. Evidence must be presented to support logical conclusions. In the case of articles that criticize, constructive suggestions are sought. Footnotes are not necessary, but a list of any source materials used is helpful. The Marine Corps Engineer Center will call upon the operational units to provide specific commentary on issues that have relevance to the education of the occupational field.
• **Ideas and Issues:** Short articles, normally 200-300 words. This section can include the full gamut of professional topics so long as treatment of the subject is short, concise, and professional.
• **Letters:** Limit to 100 words or less. As in most newsletters, letters to the editors are an important clue as to how well or poorly ideas are being received. Letters are an excellent way to correct factual mistakes, reinforce ideas, outlining opposing points of view, identify problems, and suggest factors or important considerations that have been overlooked in previous articles. The best letters are sharply focused on one or two specific points.
• **Suggestions:** Write the way you speak. Organize your thoughts. Cut out excess words. Short is better than long.
How to submit your input: Submissions may be sent via email (preferred) or regular mail. If regular mail is used we request that you include a hard copy of the manuscript and a disk with the manuscript in Microsoft Word format. Photographs and illustrations must be in TIFF, JPG or EPS format (300dpi, 5x7 inches, color preferred) and must not be embedded in the article. Please attach photos and illustrations in a separate file. You may include the text of the article where the photos are to be placed. Include the authors full name, mailing address, telephone number, and e-mail address.
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