Volume 6 **January 2013** **Issue 1**

Engineers,

Happy 2013, many blessing and much prosperity in the New Year! Although the fiscal future is unclear and we are already operating under an abridged baseline budget, YOUR Marine Corps Engineer School (MCES) continues the noble effort of Training Marines and Developing Leaders! Our instructors and support personnel remain steadfast in their mission - committed to sending the operational forces the best erudite MAGTF engineers possible.

Additionally, the MAGTF Engineer Center support is unwavering to the School and the Marine Corps. We will continue, the best way possible, develop and manage doctrine, validate the MAGTF engineer gap list and current requirements, support the review of manpower and training plans, educate (in addition to training) Marines, coordinate with/advise non-MCES activities that provide engineer-related programs of instruction, support the Marine Corps engineer DOTMLPF enterprise, and serve as the Marine Corps lead for CIED DtD training.

My center of attention for your MCES remains on those entry level and skills progression activities and students. However, there are several initiatives that will also garner my team's attention over the next several months. A couple examples include: defining/transitioning the C-IED DtD training and preserving the Master Lesson Files beyond OEF per TECOM guidance; and regulating efforts and adapting organizational structure in order to support FSRG and fiscal reductions to MCES while still providing the best trained Marines to the operating forces. With the current FSRG reduction of 21 billets for MCES, coupled with almost 50% cut in required funding, we are working not to shelve or cancel any skills progression courses.

This issue of the "Operational Engineer" highlights training conducted by a few of our engineer units in various venues here at Camp Lejeune, NC. Also included in this edition of our newsletter are articles providing you some thoughts to reflect on from the MEC. Of special interest is the article giving recognition to Capt Kathryn Neff, a Marine engineer. She made Sapper history as the first Marine to graduate with the highest point total receiving the Sapper Spirit Award. Finally, we have the Marine Corps Engineer Association's announcement of their annual awards banquet to be held at Disney World this year.

The MCES migration to the new web-site is underway.

Lastly, I would like to remember our engineers forward deployed throughout the globe supporting combat operations, security cooperation, exercises and daily training. You always make a difference with your hard work, selfless sacrifice and willingness to do our nation's work where directed. May you be protected during your duties and may you continue to impress upon those we support our repute of excellence.

Semper Fi, Col J. J. Johnson
CO Marine Corps Engineer School

IN THIS ISSUE

1. 2nd Combat Engineer Battalion Uses Explosives for Training

Marine Corps Base Camp Lejeune, NC
By LCpl Phillip R. Clark

Marines with 2nd Combat Engineer Battalion, 2nd Marine Division and 8th Engineer Support Battalion, 2nd Marine Logistics Group, conducted a week long explosive training package for Marines with the units aboard Marine Corps Base Camp Lejeune, N.C., November 5-7.

The training was an opportunity for the Marines with 8th ESB to train and use explosives, which is a rare opportunity for a lot of the Marines.

"We typically don't deal with demolition charges that much, but we know how to use them," said Lance Cpl. Derek Michael, a combat engineer with 8th ESB. "I'm all for doing training no matter what it is and so far I'm having a great time being refreshed on (demolition) charges."

Marines with the units set explosives in a tree, a part of a timber charge that can be used to clear trees to make a path. Photo by: Lance Cpl. Phillip R. Clark

The purpose of the training was for the junior Marines to be refreshed on basic, advanced and expedient charges. They also used the training as a chance for Marines that hadn't used explosives before to get a feel for their capabilities.

"All training is beneficial in some way," said Michael. "You never know what kind of obstacle you will come across while deployed and what you have to do to overcome that obstacle."

A manufactured Bangalore torpedo explodes clearing a path through concertina wire. Photo by: LCpl. Phillip R. Clark

For the instructors the training is beneficial to them in a different way, mentioned Cpl. Rollie Lemons, an instructor for the demolition course.

"For us when we teach the Marines we like seeing them excel from coming in here not remembering or never having this training, and by the time they leave they have the knowledge to apply while (deployed)," said Lemons. "I plan on being a teacher when I get out of the Marine Corps and being a teacher here even benefits me by getting a chance to use different teaching methods to see which works best for the students."

The Marines spent two days in the classroom learning about the different types of explosives and then spent the rest of the week prepping explosives and then using them as the training required.

"This training can be used for a variety of things," said 1st Lt. Patrick Mayne, the officer in charge of the range. "It can be used for anything from destroying to creating. One technique we could use this for is to blow up trees in a certain way so they fall and create a road blockade."

With great training like this all of the participants from junior Marines to the instructors, only wish they could do it more often.

"What we do here has the potential to save lives and has in the past," said Lemons. "We are engineers; our job is universal from finding (improvised explosive devices) to building or destroying, and after the Marines are trained with explosives they have the knowledge they need to do their job to the best of their capabilities."

Lance Cpl. Derek Michael, a combat engineer with 8th ESB, preps a T.N.T. charge, a part of a basic explosive ring main. Photo by: LCpl. Phillip R. Clark

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2. 'Breacher You Have Control

Marine Corps Base Camp Lejeune, NC
By Lance Corporal Austin Long | January 15, 2013

A line of eight Marines sprints towards a house with closed doors and windows, one carries explosives and the others carry various tools used to gain entrance into a building. One holds the blast blanket, a flexible shield used by Marines to protect them from the initial blast and flying debris, others provide security, and two Marines plant the explosives on the door. After an instructor checks the placement and safety of everyone, he hands over control to the lead man in the group yelling out, “Breacher you have control!”

A Bangalore torpedo explodes, January 10 at Engineer Training Area 3. Marines used a manufactured Bangalore torpedo while learning the basics to preparing explosives and placing them. After reviewing the basics they moved on to expedient explosives, and then urban breaching. The main focus for Marines after getting down all the basics was learning how to use what’s around them for explosive charges, said Cpl. Rollie Lemons, of Austin, Texas, sapper instructor with 2nd CEB. Photo by: LCpl Austin Long

Immediately, a Marine replies, “Roger, I have control! Stand by, five, four, three, two, one!” With an ear-shattering roar, the door and windows erupted into a shower of debris and dirt, which rained down onto the Marines waiting to rush the building.

A fireball erupts from a ring of fire, January 10, at Engineer Training Area 3, a circuit of explosives that Marines put together moments before as part of the basics learned by Marines during the three-day classes and one day of rehearsals. What the instructors wanted the Marines to really gain from this training were the basics. Learning the basics here offers the Marines a foundation to build on for the future, said Sgt. Steven Kenner, a chief instructor with 2nd CEB. Photo by: LCpl Austin Long

January 10 was the day Marines waited for. After three days of classes and one day of rehearsals, junior Marines were able to get hands-on training with live explosives at Engineer Training Area 3. The engineers work diligently in preparation to support infantry units for future deployments.

Marines prepare a ditching shot, January 10 at Engineer Training Area 3, under the supervision of an instructor to ensure safety for the Marines and that the charge is properly put together. Marines practiced the basics before moving on to other portions of the range. Practicing the basics is what allows for them to build on and advance in their knowledge of different explosives and their many uses. Photo by: LCpl Austin Long

“The combat engineers could be doing this in country, so I felt it was important for them to get the training,” said Sgt. Richard Hill, a native of Mill, Ind., and an acting platoon sergeant with 2nd Combat Engineer Battalion. “The training went well. These guys put in a lot of class time and rehearsal time. They learned the materials and were able to put that knowledge to work.”

A sapper instructor with Engineering Training Area 3, helps a Marine lay a manufactured Bangalore January 10 at the range to gain hands-on experience in creating entrances for Marines through obstacles. What the instructors wanted the Marines to really gain from this training were the basics. Learning the basics here offers the Marines a foundation to build on in Afghanistan, said Sgt. Steven Kenner, a chief instructor with 2nd CEB. Photo by: LCpl Austin Long

Marines started with the basics; manufactured

explosives, and then they moved on to expedient explosives, and urban breaching.
The main focus for Marines after getting down all the basics was learning how to use what's around them for explosive charges, said Cpl. Rollie Lemons, of Austin, Texas, and a sapper instructor with 2nd CEB.

Marines, with 2nd CEB, 2nd Mar Div, brace in line behind a blast blanket while a charge is set off. The blanket serves as a shield between flying debris and Marines who were standing just feet away from the door after placing explosives on it. Instructors at Engineer Training Area 3 and Marines worked together, January 10, so Marines could learn basic urban breaching skills for their scheduled deployment to Afghanistan. The main focus for Marines after getting down all the basics was learning how to use what's around them for explosive charges, said Cpl. Rollie Lemons, of Austin, Texas, sapper instructor with 2nd CEB. Photo by: LCpl Austin Long

"These Marines get out what they put in," said Lemons "We're here to teach and provide safety and guidelines. Your own imagination is your own limitation."
The expedient portion of the range consisted of makeshift explosives made from material that could be found in a combat environment.
Two of the charges used during the expedient portion were the "Grape Shot" a directional charge made with an ammo can containing C-4 explosive on the bottom and shrapnel on the top and a "Frankenstein," which is a multi-directional shot made up of a roll of barbed wire with TNT in the middle of it on a timer blasting cap.

Marines and their instructor brace against the blast of a door charge, January 10, at Engineer Training Area 3. For many of the junior Marines it was their first time doing a live fire urban breaching exercise, said Sgt. Richard Hill. And it was important for them to get the training since Charlie Company wouldn't have time to go through Mojave Viper training in Twenty-Nine Palms, Calif., before their scheduled deployment. Photo by: LCpl Austin Long

After, Marines went on to the urban breaching portion, where they were able to learn the basics for blasting an entrance through doors, windows and even walls.
"Training today went well for all areas of training," said 1st Lt. Patrick Mayne, the officer in charge of ETA-3 with 2nd CEB. "These Marines have been training all week, starting with classes, rehearsals and then today with the live fire."

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3. 8th Engineer Support Battalion Conducts Dismounted Patrols

Marine Corps Base Camp Lejeune, NC
By Cpl Paul Peterson | December 21, 2012

Cpl. Heather L. Haglin, prepares a simulated improvised explosive device during the unit's dismounted patrol training aboard CLJ, Dec. 13, 2012. The unit used the IED as part of a network of defensive measures designed to counter an attack from fellow Marines during three days of simulated ambushes and patrols. Photo by: Cpl Paul Peterson

What was meant to be an overwhelming ambush quickly shifted into a rolling engagement on multiple fronts for the Marines of Charlie Company, 8th Engineer Support Battalion, 2nd Marine Logistics Group.
The first shots of the fight came from 2nd Platoon's rear flank as it waited to pounce on another group of Marines during the company's dismounted patrol training here, Dec. 13.
"You don't want to be the one that's stagnant," said 1st Lt. Thomas W. Palmer, the platoon's commander, as he debriefed his men after the fight. "Think of it like king of the hill. You are trying to take ground from him … at the end of the day, the guy on the top of the hill wins."
The company's three platoons hunkered

A combat engineer with 8th ESB, 2nd MLG provides cover at the base of a bridge during the unit's dismounted patrol training aboard CLJ, Dec. 13, 2012. The Marines got into a firefight with a rival platoon during a reconnaissance of the bridge the previous night. Photo by Cpl Paul Peterson

down in defensive positions and suffered through three days of cold and rain as they launched day and night patrols through the rough terrain near Mile Hammock Bay, N.C.

Cpl. Damon R. Ortega, a combat engineer with 8th ESB, 2nd MLG plots a route to his platoon's next objective during a training operation aboard CLJ, Dec. 13, 2012. Ortega served as a team leader during the patrol, which ended in an ambush of a rival platoon. Photo by Cpl Paul Peterson

"The initial idea was just to work on basic rifle platoon tactics, but we're also tying in training standards for engineering missions," said 1st Lt. Andrew J. Varca, one of the company's platoon commanders. "We're not normally training to patrol through this type of an environment, doing night ambushes and working on basic infantry tactics."

Each platoon launched reconnaissance missions designed to bring them into conflict with their fellow Marines. The threat of simulated improvised explosive devices and firefights waited around each bend in the road as the service-members surveyed bridges and ferries and conducted resupply operations.

A Marine with 8th ESB, 2nd MLG crosses a bridge during the unit's dismounted patrol training aboard CLJ, Dec. 13, 2012. The bridge served as one of many training sites for the unit as they conducted reconnaissance and resupply operations under the constant threat of attack from fellow Marines. Photo by Cpl Paul Peterson

"Last night, 2nd Platoon went out to conduct a [reconnaissance] of the bridge, and 1st Platoon went out to do a route reconnaissance. They intercepted each other and got into a firefight on the bridge," said 1st Lt. Christopher J. White, 3rd Platoon's commander, as he surveyed a map of the area in the cold of the command tent. "They get to embrace misery this week."

First Lt. Thomas W. Palmer (center), a platoon commander with "C" Company, 8th ESB, 2nd MLG debriefs his Marines after a firefight at the unit's training site aboard CLJ, Dec. 13, 2012. Palmer served as an observer during the battle and critiqued his Marines' performance during their ambush of a rival platoon. Photo by Cpl Paul Peterson

A platoon of Marines with 8th ESB, 2nd MLG conducts a route reconnaissance during their dismounted patrol training aboard CLJ, Dec. 13, 2012. The platoon stopped to survey terrain features during the patrol, which was designed to prepare the engineers for future operations with infantry units. Photo by Cpl Paul Peterson

Incessant rain washed out much of the road the night before, but the shell casings still marked the spot where the two platoons met in the dark.

Wet from their previous night in the field, the two units clashed again less than a mile from their previous engagement.

"Your best training always comes at a platoon or company level," noted Sgt. Justin R. Armstrong, who helped moderate the training scenarios. "You're forcing conflict, but it is more about their reaction. Most of your team leaders out here are corporals. The platoon sergeants and officers are with them to take notes, observe and evaluate."

Cpl. Damon R. Ortega, a combat engineer with 8th Engineer Support Battalion, 2nd Marine Logistics Group, calls for support during a firefight with another platoon of Marines at the unit's training site aboard Camp Lejeune, N.C., Dec. 13, 2012. Ortega served as the team leader for his platoon and laid an ambush for rival Marines just prior to the firefight. Photo by Cpl Paul Peterson

Though the company is not currently preparing to deploy, it is always a possibility the engineers will be assigned to an infantry unit, added Armstrong. The dismounted patrols are designed to prepare them to operate in an environment outside of their comfort zone.

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4. MAGTF Engineer Center, Capabilities Branch Update

Camp Lejeune, NC

The MAGTF Engineer Center (MEC) Capabilities Branch current initiatives:

The Branch is participating in the United States Marine Corps Program Objective Memorandum (POM) 14-19 process. We recently attended the Warfighting Investment Program Evaluation Board (WIPEB). The purpose of the WIPEB is to fiscally evaluate programs and their associated

timelines and maturity dates to determine the best financial approach to support the program while executing within established budgets in a resource constrained environment. In addition, we are supporting the Force Optimization Review Group (FORG) via the Engineer Advocacy Branch (LPE). LPE has been tasked with conducting a comprehensive review of engineer and Explosive Ordnance Disposal (EOD) capabilities, requirements, and unit missions to identify redundant capabilities. The desired result is to validate, balance and optimize organic direct support and general support engineering across the Marine Air Ground Task Force (MAGTF). The Capabilities Branch is also the co-host in support of Engineer Advocacy Branch for the upcoming Engineer Equipment Conference being held at Cherry Point from 29-31 January 2013. The conference will address, by commodity, all equipment and personnel concerns as well as the current status of the draft Load Test Order. The Branch has also provided technical support in developing draft Key Performance Parameters (KPP's) for the future Scalable Neutralization Capabilities Development Document (CDD).

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5. MAGTF Engineer Center, C-IED in Afghanistan and Beyond

Camp Lejeune, NC

Improvised Explosive Devices (IEDs) are the weapons of choice among insurgents and terrorist organizations because they are relatively inexpensive and easy to make, can be employed with great effectiveness, and require significant effort and costs to combat. While countering this threat over the past decade in Iraq and Afghanistan, Marines have learned a great deal about enemy IED Tactics, Techniques and Procedures (TTPs) and have become much better at operating in an IED environment. The combined result of experience, improved equipment, and focused Counter IED (C-IED) training is a reduction in Marine casualties while units effectively accomplish their mission.

Unfortunately, training camps and the internet have allowed terrorists from across the globe to efficiently share TTPs resulting in wide spread adoption of the IED as the weapon of choice. The number attacks and amount carnage caused by IED attacks outside of Afghanistan and Iraq now exceed what is occurring inside those countries. In fact, each month there are averages of 525 IED attacks and 854 casualties (319 deaths) outside of Iraq and Afghanistan, but most go unreported so the extent of the threat is largely unknown.

Marines will continue to have a global presence where the threat posed by IEDs will remain real and ever-present threat concern. The only way to ensure our Marines are prepared to meet this threat is to continue to provide robust, realistic, and relevant training.

The Marine Corps Engineer School (MCES) is assigned to lead the Marine Corps' C-IED Defeat the Device (DtD) training. Providing specialized classroom and practical application training in a building block approach, MCES trains individual Marines in C-IED fundamentals and also trains small unit leaders on a variety of planning considerations. All facets of DtD are taught, to include friendly TTPs and operation of C-IED enablers, such as: Counter Radio Controlled IED Electronic Warfare (CREW) systems, metal detectors, robots, Holley sticks and more. MCES provides units with standardized training, but also focuses training specifically tailored to meet any specific requirements that a unit may have. Though most training is provided at the home station training lanes aboard Camp Lejeune, Camp Pendleton, and 29 Palms, a mobile training cadre is also available to deliver the training anytime and anywhere that is convenient to the unit. This aggressive training has helped decrease IED casualties in Afghanistan by 28%, despite a 13% increase in IED events.

In order to continue providing Marines with the most current, relevant and timely training, the Marine Corps Engineer School has developed Counter-IED courseware that is not solely focused on Iraq or Afghanistan. This Post-OEF curriculum provides a wider scope of training that

addresses the threat from a global perspective. Units that receive this version of training will also receive a threat brief specifically tailored to the area to which they are deploying. Additionally, all practical applications associated with the training are also tailored to reflect TTPs associated with the specific area of operations to which each unit is scheduled to deploy. This broad base of knowledge coupled with the specific area threat ensures our Marines are prepared to conduct the full spectrum of operations in every clime and place.

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6. MAGTF Engineer Center Future Existence a Necessity for Our Corps

Camp Lejeune, NC

Since 2007, the MAGTF Engineer Center (MEC) has been providing standardized Defeat the Device (DtD) training and continuous engineer subject matter expertise (SME) to the Marine Corps engineer community. While our name has evolved over the past several years (MCETECOE, ECOE, MED), our primary mission and tasks have remained essentially unchanged. The MEC is an answer to the demand from advocates, proponents and the operating force for an organization that can assist in myriad areas which require dedicated, full-time SMEs who understand complex issues associated with each of our branches: Doctrine, Capabilities, Training & Education, and Explosive Obstacles & Hazards. The Engineer Roadmap and Advocate Campaign Plan (ACP) clearly envisioned this role for the MEC via MCES. Prior to the evolution of the MEC, demands for professional input from outside the dedicated advocate staffs were largely fulfilled ad-hoc with whoever could be pulled from their primary duties. Thus, the MEC does not replace the hard working engineer advocate cells at HQMC or TECOM, but rather reinforces them on key projects and requirements that demand support beyond what can be provided via their over-burdened staffs. The MEC also provides “institutional memory” and serves as a watchdog for community interests within the MAGTF, where there are manpower and training gaps, capabilities shortfalls, and doctrinal disagreements which otherwise may go unidentified or unresolved. As uniformed SMEs rotate, the MEC also provides continuity and sustains relationships with stakeholders in the MAGTF, supporting establishment, joint and coalition partners in ways that positively influence our interoperability with these organizations.

The positive impacts the MEC is responsible for are significant. Since its inception, the MEC trained nearly 200,000 Marines and allied partners in C-IED DtD requirements via nine Master Lesson Files (MLFs), re-wrote the engineer T&R manual, created an MWSS T&R manual, provided or coordinated input into numerous equipment capabilities documents, updated over 60 engineer doctrinal publications, and represented the community at hundreds of forums where engineer interests were at stake. These efforts, while often unheralded, have been critical to backstopping our advocates and maintaining community relevance in the future.

Like most other organizations in the Marine Corps, as the drawdown from OEF progresses and fiscal austerity measures take hold, the MEC will likely absorb fiscal cuts that will erode its capability to provide the support described above. In November 2012, the Commanding General of TECOM made the decision to not fund DtD training beyond FY14, though MCES will retain the DtD “lead.” This decision is significant for engineers in the MAGTF and our advocates, as well as the MEC. For the MAGTF, DtD training as it is now conducted via the MEC will likely end sometime in late 2014, and post-OEF DtD training will become the operating forces’ responsibility (presumably CEBs). How this will occur remains undetermined, though the global enduring threat to the MAGTF from IEDs will clearly remain. The majority of the MEC’s capacity comes via highly qualified contractors who work in each branch, joined by a lesser number of GS employees and uniformed Marines. As dedicated OCO contract funding dries up, MEC capacity to provide C-IED training, support engineer requirements across DOTMLPF and execute TAD will likewise drop or end entirely. A concerted planning effort is underway internally and externally to mitigate the effects of this as long as possible, but in time we will be unable to support all stakeholders in the manner they have become accustomed should new funding streams not be found.

MEC Significant Efforts and upcoming events:

- C-IED CBA and JIEDDO Training Standards conference: Explosive Obstacles and Hazards (EOH) leadership will be attending the MCWL sponsored C-IED Capabilities Based Analysis (CBA) and JIEDDO Training Standards Conference, as well as the C-IED OAG in February. These forums will allow service and joint stakeholders to collectively determine the enduring C-IED training and capabilities requirements for the MAGTF, along with potential resourcing strategies. (see EOH article regarding post-OEF C-IED training)
- MCTOG engineer integration/Advanced Engineer Operations Course (AEOC): T&E Branch is working with MCTOG stakeholders to fill the training gap within the Tactical MAGTF Integration Course (TMIC) and Ground Operations Chief Course (GOCC) to better integrate combat engineering into course curricula, to include the Spartan Advance FINEX and Spartan Resolve Battle Staff Training Exercise (BSTX). The intent is for non-engineer GCE operations officers and operations chiefs to better understand engineer capabilities, limitations, and best practices where command and control are concerned. Engineer specific training for company and field grade officers who do not attend ECCC is being met through the development of the AEOC, which will be aligned with EWS Occupational Field Enhancement Course OFEC. Initial classes will be held in spring 2013, with unit funded opportunities for non-OFEC students to participate during later iterations.
- Support to Force Optimization Review Group FORG and R2C: Capabilities is providing SME staff support to LPE by reviewing T/Os, T/Es and coordinating with engineer OPFOR units to identify potential structure redundancies or areas where efficiencies may be gained as USMC forces draw down, particularly among non-engineer units. The branch is also supporting LPE and CD&I in determining enduring MRAP capabilities for engineers in the OPFOR, as well as development of R2C Increment III and related capability requirements.

MCWP 3-17 updates: Doctrine branch is contributing to changes on multiple pubs within the MCWP 3-17 Engineer Operations series, including the inclusion of “MAGTF Engineering” verbiage into designated pubs per MCBul 5603. In addition, they are coordinating with stakeholders within CD&I, TECOM, and Army MSCOE to ensure that designated engineer reference TMs which are being designated “non-doctrinal” as a result of Army Doctrine 2015 refinements remain aligned with the USMC doctrine hierarchy. (see the link below for more specific Doctrine updates)

http://www.mces.marines.mil/Units/MAGTFEngineerCenter/DoctrineBranch.aspx

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7. Marine makes Sapper history – twice

Fort Leonard Wood, MO
By Mrs. Melissa K. Buckley | October 13, 2012

FORT LEONARD WOOD, Mo. (Oct. 11, 2012) The Sapper Leader Course has been molding superior Army engineer leaders since 1985. Now, Marine Capt. Kathryn Neff has put her mark on the elite school's history -- not once, but twice.

According to Capt. John Chambers, Sapper Leader Course chief of training, Neff is the first female Marine to graduate the course and the first Marine to be the Sapper Spirit Awardee -- the student who obtained the most points during the class, graduating with honors.

"To be the honor graduate you have to be a first time "go" on everything, and she had the highest points total. She stood out in several events," said Master Sgt. Jeremiah Gan, Sapper Leader

Course chief instructor. "She earned her place. She is going to have some bragging rights when she gets to her next unit."

Maneuver Support Center of Excellence Command Sgt. Maj. Robert Wells places the Sapper tab onto Marine Capt. Kathryn Neff's uniform. Neff is the first female Marine to graduate from the Sapper School and the first interservice graduate to win the Sapper Spirit Award.

Neff was the only Marine in a class of 37. Of them, 31 completed the course and only 14 graduated with five of them going straight through -- meaning those five students passed all of their tests the first time.

"It's an honor to be in the premier Army engineer school. My class was filled with exceptional Soldiers, it felt good to do well among my peers. Out of 1,000, points I had the most -- I was shocked," Neff said. "I'm proud to represent the Marine Corps -- not so much as a female, but as a Marine."

Females were first allowed in the Sapper Leader Course in 1999. Neff and one other female Soldier graduated on Sept. 21, making them the 53rd and 54th females to successfully pass all of the course's tests.

Chambers said Marines have been attending the course since 2000, but it officially became part of the Interservice Training Review Organization in 2010.

As a combat engineer officer for the Marine Corps, Neff first heard about the Sapper Leader Course earlier this year while attending the U.S. Army Engineer School Captains Career Course at Fort Leonard Wood.

"It sounded like a great challenge," Neff said.

Gan started teaching the course earlier this year. He said Neff was the first Marine he has had in class, and he was very impressed by her superior performance.

"She did outstanding. She is very physically fit and has a good demeanor about her. She took everything with a tad bit of humor, so she fit right in with the other engineers on Fort Leonard Wood," Gan said. "As the only Marine in the class, she grabbed a hold of that and ran with it." She might not be the biggest and strongest Sapper, but at 5'2" and 130 pounds, Neff proved size doesn't matter.

She was a very good swimmer. I actually graded her physical fitness test and she blew it out of the water," Gan said.

Being that Marines are trained to be amphibious, it's no surprise that one of Neff's favorite days during the 28-day Sapper Leader Course was Waterborne Operations.

"The water was a great time. It's an awesome team building exercise. It was hot that day, so even though it was challenging we were having a good time," Neff said.

Even though she enjoyed the aquatic challenges the most, she said everything she did during the class was important. She said she was challenged mentally and physically in the General Subjects phase and the Patrolling phase. She was certain she left the Sapper Leader Course a better leader.

"We were tired, hungry and stressed, but if you really want it you still want to be there," Neff said. "Actually getting to lead a patrol was awesome. I really found out I have what it takes to be in charge and make a mission happen. It helped me to think clearly under pressure when I was exhausted. All of the other students were exhausted as well. I had to make them want to work for me."

Neff said ITRO is important, because it teaches the individual branches of the military about their differences and how they can complement one another. Even though Marines can't wear the

respected Sapper tab on their uniforms, Neff believes that Marines can benefit from the Sapper Leader Course in other ways.

"The Army engineers are very similar to Marine engineers," Neff said. "It's helped me become a better leader, and I learned how other engineers work. I think it makes me better understand how to use my Marines and how to lead them into the fleet."

Gan was happy to report that two more Marines are headed his way in the next cycle.

"Currently, we have a Marine Corps instructor in our course. The more Marines that come through the course and the more visibility they get, the more likely they are to take the course. I think it's great," Gan said.

Neff wishes more of her fellow Marine engineers would take advantage of the prestigious course. "It's not as well known as it should be. We need to get the word out," Neff said.

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8. 7th Engineer Support Battalion Prepares for Vietnam

I MEF, 1st MLG train for humanitarian mission to Vietnam

By Cpl. Joshua Young | I MEF | January 21, 2013

Brian W. Cavolt, CEO of JBC Corp., shows Marines and sailors with I Marine Expeditionary Force and 7th ESB, 1st MLG, new tactical combat casualty care equipment at Camp Pendleton, CA, Jan. 15. The new gear is available to the service members for an upcoming humanitarian mission to Vietnam. Photo by Cpl Joshua Young

CAMP PENDLETON, Calif. - Marines and sailors with I Marine Expeditionary Force and 1st Explosive Ordnance Disposal Company, 7th Engineer Support Battalion, 1st Marine Logistics Group, attended a demining and casualty-care training exercise at Camp Pendleton, Calif., Jan. 15-19.

The training is the first step to prepare service members for a United States Pacific Command Humanitarian Mine Action Program mission taking place in July in Vietnam.

The mission of the HMA is to teach locals how to dispose of the mines safely and care for any casualties that may occur. More than 25,000 explosives were dropped in Vietnam during the war and many of the weapons never detonated, which causes a significant health risk for locals

Marines and sailors with I Marine Expeditionary Force and 7th Engineer Support Battalion, 1st Marine Logistics Group, check out new tactical combat casualty care equipment at Camp Pendleton, Calif., Jan. 15. Photo by Cpl Joshua Young

“This training is very important,” said Maj. William Nash, the HMA program manager with I Marine Expeditionary Force. “It builds capabilities throughout the countries we’re focusing on, specifically in this case South East Asia.”

Topics of the training included hypodermic needle disposal, tactical combat casualty care and the use of the demining kit. Brian W. Cavolt, CEO of JBC Corp., provided displays and training on the latest medical and safety products available to service members conducting demining missions.

“When something new comes out, I try to bring it to[the services], show it to them, and ask them what scenarios it will work for,” Covalt said. “They’re winning the hearts and minds. I’m happy to be involved in such an excellent program.”

All service members who participate in the HMA Program must be tactical combat casualty care qualified. They undergo extensive training that is beneficial when training foreign nationals.

“We’re just jumping in feet first here,” said Navy Lt. Cmdr. Brian Beale, the officer in charge of the advisory training group at 1st Medical Battalion, 1st Marine Logistics Group. “We’re getting trained up and ready to go. Once the mission comes down, we will be ready.”

In January 1997, the late Princess Diana visited Angola, a heavy mine-affected area and brought global awareness to the dangerously high amount of mines and explosives around the world. One month later, the United States established the Humanitarian Mine Action Program and has since visited dozens of countries to aid in the training of tactical combat casualty care and the removal and disposal of explosives. This HMA mission to Vietnam is the first for I Marine Expeditionary Force and opens the door for operations with other countries.

“This training isn’t just meant for Vietnam,” said Elizabeth Colina, the branch head for health services at G-4, Marine Forces Pacific. “This is also intended to train I MEF for future theater security-operation engagements for Marine Forces Pacific.”

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9. Engineer Detachment, 15th MEU get Explosive

Things that go boom: combat engineers visit demolition range

By Cpl Timothy Childers | 15th Marine Expeditionary Unit | November 29, 2012

Composite-4 attached to plywood, detonates when Marines assigned to Engr Det, CLB 15, 15th MEU, conducted a controlled detonation at a live-fire range near Camp Buehring, Kuwait, during a routine training exercise, Nov. 25. With the use of shape and cratering charges and composition C-4, the combat engineers were able to use the high explosives to demonstrate practical applications they could use in a combat environment. The 15th MEU is deployed as part of the Peleliu Amphibious Ready Group as a U.S. Central Command theater reserve force, providing support for maritime security operations and theater security cooperation efforts in the U.S. 5th Fleet area of responsibility. Photo by Cpl Timothy R. Childers

CAMP BUEHRING, Kuwait – Marine combat engineers have a contradicting job description. On one side, they play a key role in the construction of forward operating bases and defensive positions. On the other, they are called in to use high-explosives to destroy anything that stands in their way.

During a routine U.S. training exercise, Marines assigned to Engineer Detachment, Combat Logistics Battalion 15, 15th Marine Expeditionary Unit, demonstrated their skills at making things go boom at a demolition range near Camp Buehring, Kuwait, Nov. 25.

With the use of shape and cratering charges and C-4, the combat engineers demonstrated practical applications of the explosives they use in combat environments.

“We use explosives for a number of purposes,” said Lance Cpl. Charles F. Irish, combat engineer, Engineer Detachment, CLB-15, 15th MEU.

“We can breech doors, clear paths of land mines or [improvised explosive devices], erect obstacles or create tank ditches with cratering charges.”

During one detonation, they fell four wooden poles to simulate blocking a road with trees to halt enemy movement. The team also used shape charges on top of vehicle armor to test the explosive’s armor-penetrating abilities.

A cratering charge detonates when Marines assigned to Engr Det, CLB 15, 15th MEU, conducted a controlled detonation exercise at a live-fire range near Camp Buehring, Kuwait, during a routine training exercise, Nov. 25. Photo by Cpl Timothy R. Childers

Marines assigned to Engr Det, CLB 15, 15th MEU, light a fuse for a shape charge for a controlled detonation at a live-fire range near Camp Buehring, Kuwait, during a routine training exercise, Nov. 25. Photo by Cpl Timothy R. Childers

Combat engineers rarely get the chance to use explosives in training, and sometimes are only able to visit a demolition range twice a year. Practical application is an important, yet inherently dangerous, part of their job they take very seriously.

"There's a lot of safety precautions we take before going to the range," added Irish, a 21-year-old native of Concord, Ohio. "We take the appropriate stand-off distances from the area of detonation, measure and double-check our detonation burn-times and make sure to keep our detonators separate from our explosives. It's very important to do these things when dealing with explosives at demo ranges."

Their job requires them to learn many skills and continually apply them on a day-to-day basis. This is just one of many talents engineers have in their hand.

"Combat engineers are a 'jack-of-all-trades'. Demolition is just one aspect of the job," said 1st Lt. Benjamin Rapach, officer-in-charge, Engineer Detachment, CLB-15, 15th MEU. "We try to refresh their skills and training every four-to-five months by taking them out to a demo range. It's a perishable skill that they need to continuously practice. We have to hit all aspects of their training," added the Marion Center, Penn., native.

A Marine assigned to Engineer Detachment, Combat Logistics Battalion 15, 15th Marine Expeditionary Unit, prepares a fuse to use for a controlled detonation at a live-fire range near Camp Buehring, Kuwait, during a routine training exercise, Nov. 25. Photo by Cpl. Timothy R. Childers

Marines assigned to Engr Det, CLB 15, 15th MEU, measure and cut a fuse to use for a controlled detonation at a live-fire range near Camp Buehring, Kuwait, during a routine training exercise, Nov. 25. Photo by Cpl Timothy R. Childers

The 15th MEU is deployed as part of the Peleliu Amphibious Ready Group as a U.S. Central Command theater reserve force, providing support for maritime security operations and theater security cooperation efforts in the U.S. 5th Fleet area of responsibility.

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10. MCEA News:

By Col Ken Frantz, USMC (Ret)

Our 2012 reunion and awards banquet was held 10-12 October in Branson Missouri. All the details and pictures of award recipients can be found on our website: www.marcorengasn.org

The MarAdmin announcing the CY 2013 call for MCEA Awards submissions will be published in Jan/Feb timeframe with a 30 April due date. Don't miss out on the opportunity to nominate your well-deserving Marines! This year's award banquet will be held at the Royal Plaza Hotel, Disney World, Orlando, Florida on 26 September, 2013. Details and registration forms will be posted to our website.

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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 semiannually 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 6 months after published material (The next semi-annual publication). 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 School 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 GIF, JPG or PNG 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.

Regular mail to: *The Operational Engineer*, Marine Corps Engineer School, PSC Box 20069, Camp Lejeune, NC 28542-0069.