

THE ENGINEERING EDGE



EDGEWOOD CHEMICAL BIOLOGICAL CENTER

Inside This Month's Issue:

TREB Team Nominated for Team of the Award	1
Leadership Interview with COL Galarraga (Ret.)	1
Why I Love BSC	2
HR Tip: Training	5
Engineering Value of the Month	5
Stress Awareness	6

TREB Nominated for 2009 AMC's Outstanding Integrated Product/Weapon System Team of the Year Award

An Engineering Chemical Biological Center team was nominated for the 2009 Army Materiel Command's Outstanding Integrated Product/Weapon System Team of the Year Award.

The Test, Reliability & Evaluation Branch (TREB) Field Integration and Verification Team's nomination highlighted significant contributions the team made in designing, fabricating, delivering, integrating, verifying, and planning sustainment of the U.S. Air Force's Intercontinental Ballistic Missile (ICBM) Chemical, Biological, Radiological, and Nuclear (CBRN) filtration system product improvement program.

Overcoming numerous challenges during the integration and verification of this program, the TREB team managed to provide quality products and service to the

ICBM Project Manager, within cost and a 2-year schedule.

The Air Force had been using an ICBM CBRN filtration system, at various Air Force ICBM sites, with a wooden-framed High Efficiency Particulate Air (HEPA) and carbon filters. The carbon (gas) filter system on those systems uses one 2-foot by 2-foot, 400-Cubic Feet per Minute (CFM) carbon filter, and the HEPA component uses a single a 1,000-CFM HEPA filter.

Replacing the carbon filter proved costly and impractical for the Air Force. The manufacturer terminated production of this type of filter. Serious problems can occur when filters become contaminated by CBRN agents and replacement of the filters becomes necessary.

The Air Force didn't want to replace this system since it had been qualified for a specific use. Re-qualifying this system would have been a major impact, both in time and expense. To improve the maintenance and logistics of this system, the TREB recommended the filters to be replaced with a common, readily available fixed installation filter. This option required

Continued on Page 4...

Leadership Interview Series: Colonel Humberto Galarraga, USA, Retired

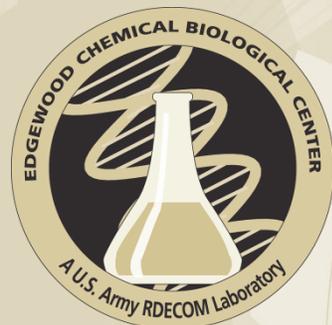


In this month's Engineering Edge, we welcome COL Humberto Galarraga, USA, Retired to the Engineering Branch. We recently sat down with Galarraga to talk about his new role as Chief of the Detection Decontamination Engineering Division (DDED) and share his thoughts on leadership.

EE: How would you describe your current position?

HG: As the Detection Decontamination Engineering Division (DDED) Chief, I support the mission of the Joint Project Manager for Nuclear, Biological Chemical (NBC)

Continued on Page 3...



This newsletter was published through the Balanced Scorecard.

For article suggestions, questions or comments please contact Ed Bowen at ed.bowen@us.army.mil

The Balanced Scorecard

WHY I LOVE BSC:

*A Discussion with
Leanne Argue Chacon*



EE: What initiative are you involved with?

LC: I am involved with Strategic Initiative C2 (Develop effective partnerships and networks), specifically to Develop and Implement a networking program. While it [C2] is set up for a formal networking program, the original idea of a networking database has been on the back burner for awhile.

We felt that SharePoint was the best avenue to implement this networking program, but we are still waiting for things to be firmed up with SharePoint, governance rules, set up for all of ECBC, etc. Lately we have focused on informal networking by trying to advertise for the MWR sports leagues. The leagues are popular up at Aberdeen, but no one here at Edgewood knows they exist here.

They [the leagues] are available if people are interested. Last summer was our first attempt with a softball league held at Edgewood on Tuesday and Thursday nights. We ended up having eight teams, members from various organizations across base (ECBC, JPM's, Edgewood police).

We also had a flag football league this past fall. We are looking forward to holding volleyball here in the spring, to start at the beginning of March. One of our team members, Ed Rychwalski, started an intramural website on the ECBCIntranet. We also try to advertise on the main page of ECBCIntranet and EdgeNet - https://cbnet.apgea.army.mil/emp_tools/sports/index.html.

Continued on Page 5...

BSC NEEDS YOU!

P4 Initiative

Institute Accountability
and

Responsibility Standards:

How to Manage Problems Employees

*To join this initiative team please
contact Ed Bowen at ext. 4091*

The Engineering Edge

Alvin D. "Ajay" Thronton
Director, Engineering Directorate

Bill Klein
Associate Director,
Business Management and
Systems Engineering,
Engineering Directorate

Ed Bowen
Branch Chief, Strategic Planning
and Business Operations Branch

Teresa Newberry (BAH)
Justine Smith (BAH)
Editors

The Engineering Edge is the ECBC Engineering Directorate's monthly newsletter. It is produced for ECBC staff by the Engineering Directorate's Strategic Planning and Business Operations Branch as part of the Balanced Scorecard Initiative. Unless otherwise noted, all stories, photographs and graphics are produced by the Engineering Directorate's Strategic Planning and Business Operations Branch.

Submissions: We need your stories, photographs, comments and suggestions. If interested, contact *The Engineering Edge* staff concerning ongoing and future products and submissions to *The Engineering Edge* Newsletter. Submit your stories or ideas via e-mail them to ed.bowen@us.army.mil.



Galarraga (cont'd from page 1)

Contamination Avoidance, Joint Project Manager for Decontamination, Joint Project Manager for Bio Defense, TACOM, and the Defense Threat Reduction Agency Joint Science Technology Office.

The Detection and Decontamination Engineering Division focuses on providing the Warfighter and government agencies chemical and biological detection and decontamination technical engineering and sustainment support with quality, innovation, and excellence. The services provided by the Detection and Decontamination Engineering Division are led by a multi-disciplined team of scientists and engineers.

As DDED Chief, my goal is to support the development of future business planning, organizational alignments, and mid- to long-term program shifts that support the group's goal of maintaining its prominence as the premiere chemical and biological engineering organization.

To maintain its excellent reputation, and expand its footprint across a wider cross-section of clients and stakeholders for current and future needs, [we need to leverage] the expertise of [our] engineers, scientists and other specialists in an effort to facilitate the Warfighters' ability to survive, fight, and win in CBRN environments.

EE: *What are some of the challenges that come with being the Chief of the Detection Decontamination Engineering Division?*

HG: I understand that people are the most important asset of an organization. But just as importantly is how well those individuals work together to accomplish the mission. Whether an organization has thousands of people working in various locations worldwide or just a handful of staff working in one small office, teamwork is vital to success. One of the challenges I'm faced with is to ensure that our teams of scientists and engineers are performing at their fullest potential to meet the needs of our customers.

As leaders, we must learn how to understand the unique attributes and differences of each team member to identify their work styles and ensure that they fully integrate with the group.

You also need to look at the inherent strengths of each person and ensure that individuals are

being used in the best way across the team. Every member of our team is more than just the sum of their expertise and professional background; the personal intangibles that make us who we are, also play a key role in the composition of a professional.

Once you understand the team members, you can leverage each individual's strengths for the make-up of a dynamic team that works at its highest potential. Only then will teams reach goals that have been unattained by individuals, work at levels of productivity no single person can achieve, or impact the bottom line more effectively as a group.

EE: *What kind of advice would you give to members of the Engineering workforce who would someday like to see themselves in a leadership position?*

HG: In order to achieve success in any endeavor, we need to follow a path of dedication to our work, our team, and to personal integrity. Don't be afraid to show initiative, take risks, and step into a leadership role.

My advice is to meet challenges with great enthusiasm and a positive attitude. I am of the opinion that teamwork

is the key to success. In a diverse organization such as ours, each team member compliments each other. We build on each other's strengths, so no one fails, and everyone succeeds.

EE: *What other advice would you offer to members of the Engineering workforce that want to advance within the organization?*

HG: The skills that I believe are necessary to become successful and advance within the organization are the ability to motivate others around you in a positive way that fosters productivity; being a self starter and taking the initiative to do what needs to be done; having the ability to communicate well with the management team, colleagues, subordinates, and supervisors; demonstrating organizational skills and planning capabilities; using good decision making skills; having the ability to adjust to change; setting solid goals and working to achieve them; and, most importantly, having a great attitude. ⚙️

"I am of the opinion that teamwork is the key to success. In a diverse organization such as ours, each team member compliments each other. We build on each other's strengths, so no one fails, and everyone succeeds."

TREB*(cont'd from page 1)*

only the design of an additional adapter into the existing space claim. This adapter drops into the intended space which minimizes operational impact during installation. Downtime is no longer than that required for any simple filter change.

The ICBM program is a product improvement program in which the CBRN filters used in ICBM site filtration systems were obsolete and were not available in the national stock.

A request for proposal was submitted by the USAF for an upgrade to the CBRN filtration system. The commercial bid for this program was over \$5 million to complete this task. The Test, Reliability & Evaluation Branch (TREB) completed this task using only \$1 million.

The original Air Force logistics plan for the CBRN filtration system was limited in scope and lacked a sustainment plan for the CBRN filtration system.

The service had replacement filters on hand, but these had long since expired, the average shelf life is approximately five years, and would be ineffective. A manufacturer tag found on a carbon filter installed in the system indicated the carbon filters were made in the year 1966, long since expired by today's standards.

Surveillance testing confirmed there was no filtration capability left in the installed filters. The new ICBM filter set now has a National Stock

Number (NSN) to facilitate reordering.

As a cost -saving measure, a Special Packaging Instruction (SPI) was produced which reconfigured the existing reusable M49 Frame Ionite Filters (FIF) filter packaging to allow the required filters to be packed. To prepare these systems for contingency operations, 50 spare filter sets were packed and provided to the USAF at the close of the program.

Design of a filter adapter proved to be a difficult challenge. There was a large amount of uncertainty in the design tolerances due to poor documentation of the original design. This limitation forced the TREB to reverse-engineer the system to provide acceptable filters to fit the intended space.

The redesign was based on one example provided by the USAF at the beginning of the program in November 2005. The new adapter had to adhere to strict tolerances based on this one example to ensure proper fit at the 54 sites. A failure to adhere to tolerances would have a tremendous impact to the program schedule. A 100 percent quality inspection of the adapters ensured minimal issues encountered in the field.

Many activities had to come together to yield a successful product with an effective logistical plan. Close coordination with USAF ICBM Program Manager and ICBM sites, Pine Bluff Arsenal (the filter and filter adapter manufacturer), Tank-Automotive and Armaments Command - Rock Island Arsenal (TACOM-RI) (the filter item manager), and commercial sources (the HEPA filter manufacturer) yielded successful product integration in a short two-year period which was completed in December 2007.

One of the major obstacles to this program is the remoteness of 50 sites, plus four simulation/test facilities. During the course of this program, the Air Force decommissioned six sites (including a test site), for a total of 48 sites to be upgraded.

The services CBRN filtration system item manager also required the upgrades to be completed within six months to avoid supporting two system configurations.

In addition, the time required to complete the installation and testing of the filters needed to be shortened to allow multiple locations to be installed and tested in a single day.

The logistics to carry out this task had to be improved to meet the six-month allowance. To accomplish this, the installation and testing procedure was streamlined to allow a three to four hour task to be completed within two hours.

The TREB team was highly motivated to meet the schedule, which inspired the ICBM ground crew to work alongside TREB members at the same rigorous pace. Because of this confluence of activity, there was enough time for the deploying teams to service three to four sites per day, while staying within a regulated work schedule. ⚙️

**Test, Reliability & Evaluation
Branch (TREB) Intercontinental
Ballistic Missile (ICBM) Field
Integration and Verification Team**

Team Members:

Do Nguyen – Team Leader/Task
Design-Integration Lead,
Kenneth Eng – Project Engineer/
Production Manager
Derek Mancinho- Test Engineer-
System Integration
Robert J. Miller – Test Engineer
John Fok – Test Engineer
Angel Cruz – Test Engineer
Jerry Ford – Test Engineer

BSC (cont'd from page 2)**EE: Why did you decide to join the BSC?**

LC: I decided to join because I was involved with the mentoring program here at ECBC and we had to do a white space project... basically come up with an idea to make any process or any part of the workplace better.

My original idea was to have a networking database for the employees, kind of like a social networking site for the professional setting. The site could be used for both professional and social purposes. For professional purposes, it could be used to look for someone that knows about/ has a mass specialty or some type of technology you're interested in.

That idea came up when I worked in research and we were wondering if anyone on base had a specific instrument that could have helped us with our project. We didn't really know where to go, how to find out, if there was a networking site that you could search terms and then if that term came up it could link to a specific individual or team here on base.

And for social purposes, it could be used for people who just started working here, or were looking to see if anyone else is interested in the same sport as you. If you're looking to join a group or carpool you can search terms and find individuals that are interested in those similar activities.

EE: How did you find out about the BSC?

Sabre Harper,
Engineering HR
Representative

Sabre Harper's HR Tip of the Month: Training

Mandatory annual training can be accessed through the Total Employee Development (TED). TED is a web based paperless training tool used to request, schedule, approve, resource, monitor and report training requirements for each employee in the organization. It is accessed by individual associates, supervisors, administrative and financial personnel.

For more information please contact Engineering Human Resources Representative Sabre Harper at extension 5-2722. ⚙️

LC: I found out about BSC through my mentor at the time, Randy Laye. Since I was in Research and he was in Engineering, he was always open about exposing me to different opportunities and invited me to various Engineering Directorate events. He mentioned that he was attending the Balanced Scorecard Meeting and I decided go. After listening to all the initiatives, the C2(4) seemed to apply to what I was interested in.

EE: What is the most rewarding part about being involved with the BSC?

LC: The most rewarding part about being on BSC team is that people are willing to help. It's nice when people come up to me after a BSC meeting saying they are interested in helping out with the initiative. I also thought the work of the team was obvious after the successful softball league last summer. We're always looking for new members and people that

can help. The more the merrier, especially since some people's schedules get so busy that people can't always be 100 percent involved. So if you want to help and you have some ideas of various networking events we could get involved with, let me know!

For More Information about the Balanced Scorecard contact Leanne Argue Chacon at Leanne.argue.chacon@us.army.mil or by phone at 410.436.1430. ⚙️

**April 15 is Tax Day
File Your Taxes For Free with the IRS**

Free File is the fast, easy, and free way to prepare and e-file your federal taxes online.

The Free File program provides free federal income tax preparation and electronic filing for eligible taxpayers through a partnership between the Internal Revenue Service and the Free File Alliance LLC, a group of private sector tax software companies.

Many companies offer free or paid state tax preparation and e-filing services. Some companies may not offer state tax preparation and e-file services for all states.

For more information about this service visit the IRS's website at: <http://www.irs.gov/efile/article/0,,id=118986,00.html?portlet=7>. ⚙️

April is Stress Awareness Month



April is designated as National Stress Awareness Month, and once again we want to remind everyone how important it is to manage your stress level. The American Institute of Stress estimates that 75 - 90 percent of all visits to primary care physicians are for stress related problems.

Other research supports that 90 percent of all people are under some type of stress. While degrees of stress vary from individual to individual, our current times are challenging for everyone. We can become stressed over a busy schedule, an argument with a friend, a traffic jam, or a mountain of bills,

Juggling our personal and professional lives can be very challenging for most of us. Whether it's about money, personal problems, or emotional stress, stress not only harms the body but also effects the brain and human thinking power.

Our bodies can react to stress just as strongly as if you were facing a life-or-death situation. As a result, there are many health problems caused or exacerbated by stress, including:

- Pain of any kind
- Heart disease
- Digestive problems
- Sleep problems
- Depression
- Obesity
- Autoimmune diseases
- Skin conditions, such as eczema

So this April, we are asking everyone to take a look at their lives and find healthy ways to manage and control the stress that affects all of us. Once you are able to recognize stress in your life, the next step is to find what works for you to control your stress.

Each person's ability to tolerate stress depends on multiple factors, including the quality of your relationships, your general outlook on life, your emotional intelligence, and genetics.

According to Dr. Jeanne Segal, Managing Editor and Co-founder of the non-profit organization Helpsguide.Org, there are four main things we all can do to manage stress in our lives:

Learn to manage your stress by learning how to respond to stress. Stress management involves changing the stressful situation when you can, changing your reaction when you can't, taking care of yourself, and making time for rest and relaxation.

Strengthen your relationships.

Make sure you have a strong support network to help you manage stress. When you have trusted friends and family members you know you can count on, life's pressures don't seem as overwhelming.

Learn how to relax. You can't completely eliminate stress from your life, but you can control how much it affects you. Relaxation techniques such as yoga, meditation, and deep breathing activate the body's relaxation response, a state of restfulness that is the opposite of the stress response.

Invest in your emotional health. Just as it requires time and energy to build or maintain your physical health, so it is with your emotional well-being. The more you put in to it, the stronger it will be. People with good emotional health have an ability to bounce back from stress and adversity.

This April we want everyone to examine the stressors in your life and start to, if you haven't already, effectively manage it. National Stress Awareness Month is the time to think about ways to manage your stress. ⚙️

Top Ten Stressful Life Events

- | | |
|-----|---------------------------|
| 1. | Spouse's death |
| 2. | Divorce |
| 3. | Marriage separation |
| 4. | Jail term |
| 5. | Death of a close relative |
| 6. | Injury or illness |
| 7. | Marriage |
| 8. | Fired from job |
| 9. | Marriage reconciliation |
| 10. | Retirement |

Source: Holmes-Rahe Life Stress Inventory