



## Crew Endurance Management Newsletter

an information resource about the Crew Endurance Management System (CEMS) for its practitioners and those interested in learning more about it

### Crew Endurance Resources

Welcome to the Crew Endurance Management Newsletter, where we continue to bring you the latest in sleep and endurance-related information to support your personal knowledge of Crew Endurance Management and implementation.

#### READER INTERFACE NOTE:

When reading on the Internet, the symbol to the right indicates a hyperlink for the subject matter indicated in blue, underlined text. Readers with printed copies can visit our website for more information:



<http://www.uscg.mil/hq/g-m/cems/index.htm>



Much of the information in this issue originally appeared in the National Sleep Foundation's weekly *Alert* – if you'd like to receive this information regularly, sign up with them [here](#) – it's free!

Please be sure to pass this information along to others so that they can [register](#) with us.

### This Issue:

Increase in CEMS Coaches	1	News in Other Transportation Modes	4
On The Road With CEMS	2	Training Sessions	5
Physical Stressor	3	Web Site Information	5

## CEMS coaches' numbers rising fast

By **DAVE MCCALLUM**

Throughout maritime history, the standard operating procedure for dealing with fatigue was accomplished by using standing watches, hour glasses and ship's bells to let the crew know it was time for a shift change.

Now, the Crew Endurance Management System, or CEMS, is helping to shed light on fatigue issues such as sleep fragmentation, diet, ergonomics and wake-sleep cycles. These risk factors and others play a significant role in crew members not being at the top of their game. That, in turn, can lead to casualties and fatalities.

One of the key components to ensuring the success of CEMS is having a coach on board to answer questions from the crew and to make sure the program is running smoothly.

Having at least one coach on each international vessel when it leaves its

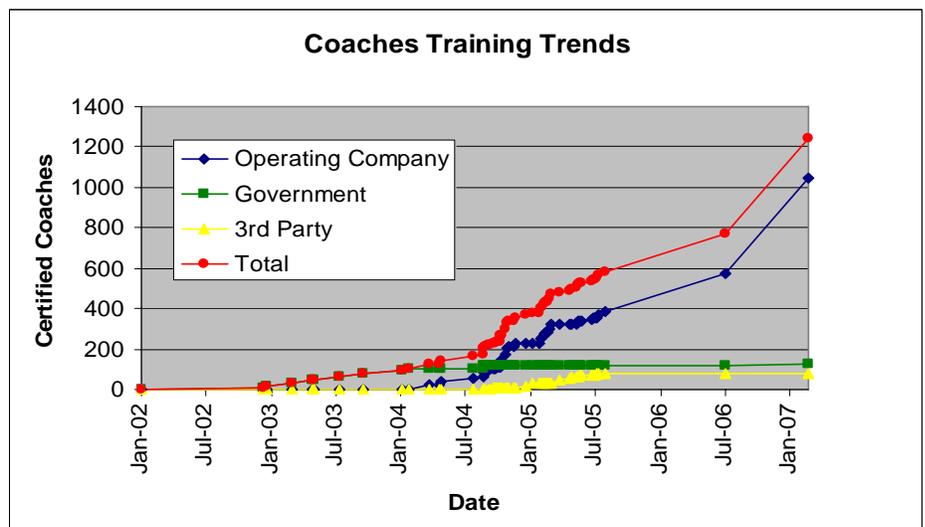
berth is one of the goals for program leader LCDR Vivianne Louie. And if the recent upward trend in the number of coaches is any indication, that goal will one day become a reality.

In the past nine months, the total number of coaches has increased by 33 percent, from 800 to just more than 1,200. Of that amount, the number of coaches on towing vessels has risen from just under 600 to approximately 1,100.

"It is an exponential increase in the number of coaches on towing vessels," Louie said. "Having a coach on each vessel was the goal when the demonstration project began. And we know the only way to make that happen is to have more coaches from the operating companies (i.e., towing vessel), and that is what is happening."

When the demonstration project

See *COACHES*, Page 4



## Spreading the CEMS gospel from coast to coast

Jo Ann Salyers is an independent consultant and trainer with Salyers Solutions, LLC, a company she started in September of 2006 to focus on marine safety and training issues. She is a National Safety Council certified Safety Professional who has held positions with Tidewater Marine, Midland Enterprises, National American Commercial Lines, and, most recently, Blessey Marine Services. Her background includes certification as both a Shipyard Competent Person and a Qualified Individual (for spills), and she has taught classes on Deckhand Training, Incident Command System, Hazardous Waste Operations and Emergency Response Standard (HAZWOPER), and CPR/First Aid, among others.

In her current role, Jo Ann travels the country spreading the CEMS gospel by providing CEMS Awareness and Coaches training to a variety of companies who, as Jo Ann put it, “recognize ( the) need to improve endurance and reduce risks for their most valuable assets—their employees.” In addition, she also assists as an instructor for CEMS’ Experts training course.

What follows in Jo Ann’s own words is a recap of her experiences this year in helping to improve the safety of operations and quality of life for crewmembers in the marine industry.

### By JO ANN SALYERS

After 30 years in the marine industry, I followed the Zen saying “leap and the net will appear” and started my own business. I enjoy the diversity of ideas and experiences working with different companies in the areas of my background: Crew Endurance Management System (CEMS), Safety, and Training. My experiences showed that these three areas overlap and are for the most part inseparable—concentrating on one necessarily meant delving into the others. So it made sense that my business would focus on all three.

Concerning CEMS and looking forward for the year, I plan on holding coaches training sessions with inland and coastal companies in different parts



Photo courtesy of Salyers Solutions

Jo Ann Salyers, a Crew Endurance Management System (CEMS) training expert, talks with employees of the Canal Barge Company about Crew Endurance Plans during a spring workshop.

of the country. Currently, I’m putting together some specific information aimed at “dinner bucket” fleet boat crews and shore tankerman. The scope of their operations coupled with the routine of going home every day after work present unique challenges that need to be addressed.

Since February of this year, I have partnered with the Inland Waterways Academy in Huntington, WV, to hold CEMS Coaches Training classes at their facility on a regular basis and specifically when requested by individual companies. In the near future, I plan to include a CEMS Awareness training session in the deckhand and tankerman training classes to provide these individuals with a basic education and understanding of CEMS.

I have been working with many companies during their captains and managers meetings to provide CEMS Awareness training. I see this acceptance as a very positive indication that more companies are recognizing the value of CEMS and taking that critical first step—education—to begin a crew endurance program.

In March and April, I held Crew

Endurance Plan (CEP) workshops with the Canal Barge Company’s wheelman during their annual VOW (Vessel Operators Workshop) meetings. Most of these vessel managers had already voluntarily attended a coaches training session and have since put in place a CEP on their vessels. During the workshops, we evaluated each individual plan and its status. Wheelmen who already had CEPs in place received the benefit of hearing about what did and didn’t work well on other vessels. Those who did not yet have a CEP in place were able to leave with a rough draft to start them off with their working group.

March also saw Tidewater Barge in Vancouver, WA, make a commitment to hold a voluntary coaches training class for 19 of their employees. As an inland company operating on the Columbia and Snake Rivers, the Tidewater Barge operation is unique in my experience, since my work with inland towing companies until that time had been confined to the upper and lower Mississippi, Ohio, and Illinois Rivers and to the Intracoastal Waterways in the south. Introducing CEMS to Tidewater Barge’s

See SALYERS, Page 3

## Physical Stressors

# It's all about the rhythm: Circadian, that is

### BY STEVEN SPEARMAN

To readers familiar with the Coast Guard's Crew Endurance Management System (CEMS), the results of a recent study should come as no surprise: circadian rhythms won't be denied.

Circadian rhythms, the body's internal biological clock, regulate the 24-hour cycle of physiological processes, such as sleep and waking activity. The role of circadian rhythms in coordinating the timing of internal bodily functions and in helping us cope with the external world is still being explored. What is known today is that changes in sleep and work routines (a process known as desynchronization) can disrupt circadian rhythms, causing a decline in physical health, emotional wellbeing, mental focus, performance and produc-

tivity.

A new study from Stanford University looked at 312 patients who were classified as either morning, intermediate, or evening circadian types (or "chronotypes") according to their scores on a morningness-eveningness composite scale. This scale represents a continuum along which participants are ranked based on their preferred time range for different activities.

Of the group, the evening chronotypes—in particular, the "night owls," insomniacs who prefer the evening time for their activities—reported experiencing the most sleep and wake disturbances and the greatest degree of insomnia. This was true even when these night owls compensated for their insomnia by sleeping longer and getting

more total sleep time. The bottom line? Sleeping in accordance with circadian rhythms may be just as important as getting sufficient sleep.

As the author of the study, Jason C. Ong, PhD, put it: "Our findings indicate that further research should investigate the relationship between circadian rhythms and insomnia, especially with the severity of the 'night owl' group. These factors may serve to perpetuate the insomnia disorder, and might be particularly important to consider when treating this subgroup of insomniacs."

Links:

<http://www.sciencedaily.com/releases/2007/04/070415110108.htm>

<http://www.aasmnet.org/jcsm/ViewAbstract.aspx?citationid=3204>

### SALYERS, From Page 2

operation was an enjoyable and positive learning experience, one that gave me valuable insight into the diverse challenges facing various operations on a daily basis. U.S. Coast Guard Lieutenant Commander Vivianne Louie provided welcomed assistance with this coaches training session.

Recently in Vancouver, WA, I had the opportunity to meet with researchers from the Oregon Health and Science University to discuss their health promotion research with firefighters. Although the CEMS program is specifically tailored to the special concerns of the maritime industry, there are many components that can be applied to other occupations and even to our personal lives when we are away from work.

So what's next on the agenda? In October, I'm planning to introduce CEMS during a 90-minute presentation at the National Safety Council's Annual Congress & Expo in Chicago. The focus will be on the proven practices of CEMS and the practicality of the process.

To contact Salyers, call her at 504-236-4962 or send an email to her at: [salyers\\_solutions@hughes.net](mailto:salyers_solutions@hughes.net)



Photo by Jo Ann Salyers

LCDR Vivianne Louie, right, talks with employees of the Tidewater Barge Company in Vancouver, WA, during a recent Crew Endurance Management System training session. There will upcoming training sessions in Huntington, WV, in June and July. There are also classes scheduled in Houston, TX, in June and August, and Baton Rouge, LA, in July and September.

## News In Other Transportation Modes

# NTSB sends recommendations to Federal Aviation Administration

## *In hopes of reducing fatigue and workloads on air traffic controllers*

In hopes of lessening fatigue and reducing the workload on already overworked air traffic controllers, the National Transportation Safety Board (NTSB) sent two recommendations on April 10 to the Federal Aviation Administration (FAA).

The recommendations included revising work scheduling policies and creating fatigue awareness and countermeasure training programs. The recommendations come on the heels of statements made by the air traffic controller and airline pilot unions that fatigue played a major role in the Aug. 27, 2006, crash of Comair Flight 5191 in Lexington, Ky., which killed 49 of the 50 people on board.

In addition to the recommendations to the FAA, the NTSB also asked the National Air Traffic Controllers Association (NATCA) to work with the FAA in reworking schedule policies and shift rotations for controllers so they can have longer rest periods.

Dr. Gregory Belenky, a sleep performance expert, performed a study commissioned by NATCA which showed the Comair 5191's pilot and first mate, and the air traffic control officer on duty, were all fatigued prior to the early-morning crash and not at their top level of

performance.

The plane, which was to take off from a 7,000-foot long runway, instead attempted to take off from Blue Grass Airport's other runway which measured only 3,500 feet long. The plane crashed into a wooded area on the airport property, killing everyone on board with the exception of the first mate, who suffered serious injuries.

Each union has their own opinion as to who was responsible for the crash, but the bottom line according to the study is that the air traffic controller, pilot, and first mate all had fatigue issues, especially in the amount of sleep they had before the accident occurred.

The study showed that the air traffic controller had only two hours of sleep between his two shifts prior to the accident. The pilot had only 5-1/2 hours of sleep before the accident, and the first officer and the only person to survive the crash, had only six hours of sleep.

In addition to the lack of sleep, all three showed other signs of fatigue including being at the low point of their performance cycle only 30 minutes before the plane's scheduled departure, according to Dr. Belenky.

**COACHES**, From Page 1

began, there were seven towing companies involved. As of January 2007, there are 110 companies participating in the program who have at least one certified coach. Four companies (Kirby Inland Marine, Ingram Barge, ACBL/ACL and AEP Memco) have at least 100 coaches.

CDR David Bird, head of the Human Element and Ship Design Division in which the CEMS program is based, is ecstatic with the progress being made.

"I am thrilled to see that the seeds planted over the past few years are beginning to sprout. Given that this is a non-regulatory program, it was anticipated it would take time for the program to grow, but it has accelerated beyond our expectations," he said.

Bird sees several reasons for the program's success thus far, including how successful the demonstration project was and an increased interest from vessel operators looking to improve their crew's alertness and well-being, but he believes the biggest factor is "common sense."

"It (CEMS) simply makes good common sense. CEMS is backed by science and can improve the life of mariners while underway - it has a big 'what's in it for me' element down at the deck plate level," he said. "Things like weight loss, better quality rest, and improved diet at the individual level can translate into less employee turnover and fewer sick days for operating companies.

"Mitigating risk factors that negatively impact crew endurance and alertness can also reduce insurance costs. Once people understand it, the CEMS program sells itself. It just takes time to get the word out."

*We want to hear from you as to why CEMS works for your company and for you individually. Send your stories to:*

[Vivianne.W.Louie@uscg.mil](mailto:Vivianne.W.Louie@uscg.mil),

[Steve.Spearman@uscg.mil](mailto:Steve.Spearman@uscg.mil) and

[David.N.McCallum@uscg.mil](mailto:David.N.McCallum@uscg.mil). We will

begin publishing your responses in our Summer newsletter.

### Did You Know?

**That motion sickness is caused by an internal conflict in the brain. The brain gets confused being on something other than solid ground and it has to be reacquainted to being in a different environment.**

## CEMS Training Update and Upcoming Sessions

### Upcoming Coaches Training Classes

#### Inland Waterways Academy

Huntington, WV

**June 20-21**

**July 25-26**

Contact Jo Ann Salyers or  
John Whiteley for more details:

Jo Ann Salyers

Email: [salyers\\_solutions@hughes.net](mailto:salyers_solutions@hughes.net)

Phone: 504-236-4962;

John Whiteley

Phone: 304-697-5616

Email: [whiteley@marshall.edu](mailto:whiteley@marshall.edu)

#### Kirby Corporation

Houston, TX

**June 28-29**

**Aug. 9-10**

Baton Rouge, LA

**July 19-20**

**Sept. 6-7**

Contact Kelly Parker for  
more details:

Email: [kelly.parker@kirbycorp.com](mailto:kelly.parker@kirbycorp.com)

Phone: 713-435-1775

## Upcoming Experts Training Classes

**An Experts Class  
Will be Held in the Fall**

Please contact **LCDR Vivianne Louie** for  
more details: ☒

E-Mail: [Vivianne.W.Louie@uscg.mil](mailto:Vivianne.W.Louie@uscg.mil)

Phone: 202-372-1358

### Crew Endurance Management Editorial Staff

**Editor-in-Chief:**  
CDR David Bird

**Content Specialist:**  
LCDR Vivianne Louie

**Editing Team:**  
Dave McCallum  
Steve Spearman

#### Websites:

<http://www.uscg.mil/hq/g-m/cems/index.htm>

<http://www.uscg.mil/hq/g-w/g-wk/wks/CEM.htm>

(Internal Coast Guard site)

#### Membership Info:

<http://www.uscg.mil/hq/g-m/cems/register.htm>



The **Coast Guard CEMS Website** continues to be updated with additional CEMS information and resources.

Thoughts and suggestions are always welcome regarding content and information. Please forward these to:

[HQS-PF-flidr-G-PSE@uscg.mil](mailto:HQS-PF-flidr-G-PSE@uscg.mil), or call us at 202-372-1358.