



# GulfNEWS

A bi-monthly newsletter serving the interests of Gulf War veterans

## Oil Well Fire Contaminants Within Safe Levels

By Barbara Goodno  
Public Affairs

One of the most dramatic conditions of the Gulf War resulted from the fires of more than 600 oil wells set ablaze by retreating Iraqi forces January through late February 1991. The huge columns of smoke were the most visible source of possible contaminants to which U.S. troops were exposed.

"We know from anecdotal evidence that the intensity of the exposure was unprecedented," Dr. Bernard Rostker, special assistant for Gulf War illnesses, said. "We know that some veterans were, on occasion, subjected to short-term exposures where they were covered with fallout from the fires. This included smoke, oil, soot and other by-products of combustion from the oil well fires. We believe it was important to take a detailed look at this exposure."

The 118-page environmental exposure report recently released is one of the most comprehensive investigations of this environmental issue, Rostker said. Analysts used a combination of scientific, historical and anecdotal information. Included were nearly 1,000 veteran's reports, special follow-on interviews, historical information, intelligence reports, air quality data bases, computer modeling to back-fill data and risk calculations. The results of this investigation were accompanied by a scientific review of the literature on the possible effects of oil fire smoke exposure prepared for the Office of the Secre-

tary of Defense by RAND. Overall, the findings from both indicate that the toxin levels were not high enough to cause short or long term health effects.

"The lofting effect created by winds and local weather conditions

combined to reduce the impact of the fires on military and civilian populations," Rostker said.

"And while exposure was sometimes intense, it was of a short duration. Air monitoring studies and a review of



records of reported adverse health effects did not reveal a widespread short-term problem."

More than 5,000 environmental samples were taken during the oil fires by U.S. and international scientists. Concentrations of contaminants were at or below levels measured in U.S. cities, and were within U.S. air quality standards, with the exception of particulates.

More than 75 percent of the particulates arose from the high background levels of sand, and not from the oil fires.

The levels of most pollutants measured in the Gulf War were below U.S. ambient and occupational standards and were much lower than those known or expected to cause short- or long-term effects, the report said.

Because of the potential for adverse health effects, there were some concerns that exposure to oil well fires might be related to increased cancer rates and other health effects, such as cardio-pulmonary, kidney, neurological or reproductive damage. Risk assessment studies indicate that for all troop units deployed to the Gulf, the potential for increased cancers and other health effects were below the risk levels established by the U.S. Environmental Protection Agency.

These findings were supported by the RAND report. The information reported in this scientific literature review was based on approximately 2,500 scientific articles. RAND concluded that, even with very conservative assumptions about exposures, the concentrations of contaminants contained in the smoke (other than particulate matter) were much lower than the levels that are currently known to cause disease in the long-term.

*(continued on page 2)*

## DoD Examines Multiple Alarms Reported by Marines

By Public Affairs staff

The Department of Defense has released the results of its on-going investigation into accounts of chemical alarm alerts reported by the 11<sup>th</sup> Marines artillery regiment during the Gulf War.

"What makes the investigation important is that there were so many chemical warfare agent alerts involving this one particular unit," said Dr. Bernard Rostker, the special assistant for Gulf War illnesses. "Many veterans of the Gulf War believe that the frequency of the alerts involving the 11<sup>th</sup> Marines may indicate that this unit experienced possible chemical agent attack."

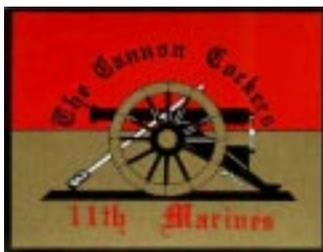
During their support of the U.S. 1<sup>st</sup> Marine Division's operations in the vicinity of southern Kuwait during Desert Storm, the 11<sup>th</sup> Marines reported a number of alerts for chemical warfare agents. Some of the 18 alerts reported over a 42-day period investi-

gated by DoD's Gulf War office originated with the 11<sup>th</sup> Marines, while other alerts subsequently reported by the unit were initiated elsewhere across a wider area of operations and were passed by radio to the artillery regiment, the report said.

"As we search for the causes of why so many Gulf War veterans are experiencing unexplained illnesses, all accounts of chemical warfare agent exposure merit close scrutiny," Rostker added.

The case narrative examines why the 11<sup>th</sup> Marines recorded so many alerts and assesses the likelihood of the presence of chemical warfare agents during the incidents reported. Unlike prior case narratives, which address specific short-term and localized incidents, the 11<sup>th</sup> Marines' narrative encompasses multiple events occurring over several weeks and many square miles of operations.

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It has been two years since I was appointed special assistant to the Deputy Secretary of Defense for Gulf War illnesses. Many of you are aware that I was also, during that time, the assistant secretary of the Navy for manpower and reserve affairs. Just last month I relinquished my Navy hat to take on new, exciting duties as under-secretary of the Army while retaining my Gulf War illnesses responsibilities.

Over the course of those two years, my investigative team has been conducting a thorough, painstaking examination of the incidents and events of the war to determine what may be causing the illnesses many Gulf War veterans are experiencing. Most recently, we have released the results of two interim reports. The first is an environ-

*From the desk of  
Bernard D. Rostker  
Special Assistant for  
Gulf War Illnesses*



mental exposure report on the effects the Kuwait oil well fires had on our service members. The second is a case narrative that takes a close look at the multiple chemical alarms reported by the 11<sup>th</sup> Marines artillery regiment during the war. Both documents can be accessed on our website, GulfLINK. I urge each of you to read these comprehensive reports.

Additionally, as our team matures, we continue to expand our veterans outreach efforts. The goal of our outreach program is to address the concerns and answer the questions of our veterans and active duty service members. Since we started earlier this year, we have visited five military installations and met with more than 6,000 veterans, their family members

and other concerned citizens. However, that's just the beginning. As we start our third year, we have arranged nine installation visits around the nation between January and August, 1999. Our next visit is slated for Fort Bliss, Texas, January 19–20, 1999. As details become available for each visit, they will be publicized on our website and here, in upcoming issues of *GulfNEWS*.

Even as we move forward with our efforts to learn from our veterans and reach out to them, I remain committed to fulfilling the three missions I was charged with two years ago. First, to ensure that Persian Gulf War veterans receive the medical care they need; second, to do everything possible to understand and explain Gulf War illnesses; and third, to make sure that the Defense Department makes whatever changes are required in equipment, policy and procedures to protect our principal resource—our people.

*(Oil Wells – from page 1)*

Some troops, who had a pre-existing lung problem, such as asthma or chronic bronchitis, may have had a worsening of their systems during their exposure to the oil well smoke. This is consistent with the types of lung problems observed in other populations exposed to air pollution.

The results of the health effects and risk assessment studies suggest that, with the exception of particulate matter, the concentrations of contaminants were at levels below those that are known to cause short- or long-term health effects. Exposures to the levels of contaminants that would lead to the development of long-term health problems are not expected, with the exception of the possibility that some pre-existing respiratory conditions might have been exacerbated.

While this information presents reassuring news for veterans exposed to the oil well fire smoke, more definitive information regarding the long-term health effects of particulate matter is needed. Rostker says this prompted additional research. A number of studies are underway or planned.

In a study conducted by the Boston Environmental Hazards Center of the Boston Veterans Affairs Medical Center, researchers are assessing respiratory status in relation to exposure to oil fire pollutants. The objective is to evaluate the relationship between measures of lung function and respiratory symptoms, and correlations of exposure. The study's results are expected in December.

Two separate but parallel studies are being conducted to assess the health impact from exposure to respirable particulate matter. In the first study, The International Center of Environmental Health is conducting a literature search on the health effects associated with exposure to silica (the principal component of sand and particulate matter in the region). Results are expected this December. In the second study, the U.S. Army Center for Health Promotion and Preventive Medicine is conducting exposure modeling to estimate the levels of particulate matter to which U.S. troops were exposed while deployed in the Gulf region. These studies will allow for an overall estimate of risk associated with exposure to particulate matter. The results of the modeling study are expected in August 1999.

“These studies are in response to important extensions of our investigation of the health effects of the oil well fires. RAND's re-

search did not reach a definitive conclusion on the health effects of particulate matter exposures. While the high level of particulate matter was mainly due to short term natural background conditions, we need to determine whether there may be long-term health impacts on U.S. troops from short-term particulate matter exposure,” Rostker said.

This is the second environmental exposure report released by Rostker's office. The first environmental exposure investigation report, released in August, focused on the effects of depleted uranium.

Rostker asks veterans to review the oil well fires report and provide feedback.

“This is an interim, not a final report. As you look through the materials, if you have comments, corrections or any information that will help us better understand the impact of oil smoke exposures, we would like to hear from you. Please call the incident reporting line toll-free at 1-800-472-6719. First-hand accounts are a valuable component of our investigation. With your help, we will be able to report more accurately on the events surrounding oil fire smoke exposures,” Rostker said. Addi-

tionally, he urged all Gulf War veterans to register with one of the programs established to provide in-depth medical evaluations of Gulf War veterans. Those currently on active duty, active in the National Guard or the Reserves, or who have retired from the military can sign up with the DoD's Comprehensive Clinical Evaluation Program at their toll-free number, 1-800-796-9699. A similar program, set up by the V.A., is available to all other Gulf War veterans and can be reached at 1-800-749-8387.

The special assistant's office continues the investigation of specific events that occurred during the Gulf War to better understand what may be causing Gulf War illnesses. Rostker plans to release findings in six additional investigations by the end of the year. Topics include: Air Campaign, Cement Factory, Edgewood Tapes, Medical Record Keeping, Vaccine Administration and the M256 Chemical Agent Detection Kit.



*Photo by Jack Heller, USACHPPM, May 1991.*

# Anthrax Vaccine is Safe, Effective and Necessary for Total Force Protection

By Douglas J. Gillert  
American Forces Press Service

WASHINGTON—Despite a few well-publicized attacks against the Defense Department's mandatory anthrax vaccination program, a senior defense health official said the vaccines are safe, effective and necessary.

"We're pleased with the progress of the vaccination program. We're following it very closely to make sure we do it right," said Rear Adm. Michael Cowan, medical readiness director on the Joint Staff.

Cowan said the anthrax program received the full backing and approval of the federal Food and Drug Administration, and that both DoD and the FDA test and approve all batches of the vaccine at the manufacturing facility in Michigan. He said adverse reactions by people receiving the vaccine have been extremely low.

"The side effect percentage is something like .0002 percent, which makes it many times safer, for example, than the diphtheria shots we give our children," Cowan said. There's been just one reported reaction by a service member who experienced Guillain-Barre Syndrome, a type of temporary paralysis associated with other vaccines, surgery and insect stings. The affected service member fully recovered, Cowan said, and the Pentagon is on the lookout for any additional cases of side effects.

Critics of the vaccine program question the safety and quality of the manufacturer, Bioport Corp. of Lansing, Mich. They cite a February FDA inspection that found deviations from FDA standards in

record-keeping and testing procedures. The report suggested that some service members have received inoculations from a 1993 batch that didn't get a required FDA revalidation before it was put to use.

"That batch was properly revalidated," Cowan said. "There has never been a batch that's gone out that has not been current and fully FDA-approved." The FDA and DoD work closely with Bioport any-time inspections find fault with production or record-keeping processes at the plant, the admiral said. The FDA and a DoD contractor test all vaccine produced by Bioport for sterility, stability, purity and potency.

Cowan attributes some of the fear and paranoia over the anthrax program to irresponsible distribution of incorrect information, mostly over the Internet.

"There's a lot of misinformation out there, and it's the responsibility of each individual to not only get information about things that affect him, but test the quality of that information," he said. He recommended service members and their families visit the DoD anthrax web site, currently located on the DoD home page at <http://www.defenselink.mil>.

"We are just as serious as we can be about protecting our forces from all ends," Cowan said. And because anthrax is easily turned into a biological weapon, he said, the vaccine will continue to be mandatory for service members.



## (11<sup>th</sup> Marines – from page 1)

Investigators determined that reports of chemical warfare alerts may have been the result of several factors, including: the unit's high state of alert to the possibility that chemical weapons might be deployed against them; the method by which the unit maneuvered; and the introduction of new, and relatively untried, chemical weapons' detection equipment.

The DoD investigation examined every chemical weapons alarm incident reported by the 11<sup>th</sup> Marines, but in a minority of the instances, the documented information available to investigators was so sparse that it appeared initially that a firm assessment might not be possible.

"In some cases, we could not find enough information to even determine who had initiated an alarm or for what reason," Rostker explained. "In all of the others, the information found through analysis of logs and reports and interviews with Marine witnesses does not lead a reasonable person to conclude that chemical warfare agents were present."

The Gulf War illnesses investigators considered the testimony of all available witnesses, and for the overwhelming majority of

the events, they conducted an extensive review of hundreds of documents, including operations and radio traffic logs, and other reports. Having reviewed all these materials, and with the understanding that there were no medical reports of chemical weapons agent-caused injuries, and finding no evidence that Iraq had the opportunity or means to deliver chemical warfare agent, investigators assessed the overall possibility that chemical weapons caused the alarms as "unlikely."

According to the report, the 11<sup>th</sup> Marines relied on detection equipment, particularly the Fox reconnaissance vehicle that first saw actual use during the Gulf War, without understanding the limits of their capabilities.

The case narrative concludes that the 11<sup>th</sup> Marines used the reports of chemical warfare agent indications they received to protect their forces from possible chemical warfare exposure while focusing on their critical mission to support the infantry units. Under those conditions, reports of chemical weapons alarms – validated or not – coming to the 11<sup>th</sup> Marines over the radio network would be sufficient to merit protective measures.

Investigators found that the same environmental and operational conditions—smoke and other petroleum contaminants—surrounding the 11<sup>th</sup> Marines could have been

responsible for false positive readings from virtually all of the detection devices available to them.

"For much of the ground campaign in Kuwait, these Marines were subjected to high concentrations of smoke and raw petroleum as a result of the massive oil well fires set by Iraqis before the Marines entered Kuwait," Rostker said. "The chemical detection and alarm equipment were not designed to operate within this type of intensely contaminated environment."

Rostker reminded veterans that this is an interim, not a final report.

"I hope that veterans will read this report. If there is an error or information that we missed, we want to know. We are committed to continue the investigation into these incidents, and any others, that could help explain why some of our Gulf War veterans are ill," Rostker said.

"We encourage veterans with additional information to call the Gulf War incident line at 1-800-472-6719 or DSN 878-3261."



# Resources for Veterans

Your ticket to the information highway — visit our GulfLINK web site at:  
<http://www.gulfink.osd.mil>

Gulf War veterans seeking information on VA benefits of all types should call the Persian Gulf Helpline at:  
**1-800-749-8387**

Anyone with information on Gulf War incidents should call the DoD Incident Reporting Line at:  
**1-800-472-6719**

Are you a Gulf War veteran (or know of one) with health problems? Call the DoD Gulf War Veterans Hotline at:  
**1-800-796-9699**



## Veteran Spotlight

A fundamental part of Gulf War investigations is the physical examination veterans receive after they register with the Defense Department's Comprehensive Clinical Evaluation Program or the Department of Veterans Affairs' Persian Gulf Registry. Gulf War veteran Gene Brink says the exams and follow-up visits, while tedious at times, are essential for anyone trying to find out what may be causing them to be ill.

"I think the only way we'll ever get to the bottom of what's happened to us is to keep going back to the doctors until they can figure out why we're ill," says Brink.

Brink, a Navy journalist during the war, followed units throughout Saudi Arabia, Kuwait and Iraq gathering material for news stories that would eventually be aired on the weekly news program, "Navy-Marine Corps News." He says he and his video team taped Iraqi ammunition bunkers being destroyed, climbed through destroyed Iraqi tanks and worked alongside many front-line outfits. However, like so many other veterans, he says he still doesn't have a clear understanding of what happened to him.

Shortly after leaving the Navy in 1992, Brink says he registered with the V.A. and

began seeking treatment for his medical problems, first in Iowa and most recently in Washington, D.C. But, he says the examiners continue to come up empty-handed.

"They do all these exams and then tell you they can't find anything wrong with you," Brink says. "You want to believe them, but you can't deny the fact that you still have the problems that brought you to the doctor in the first place. So you go back for more exams."



Brink recently participated in the V.A.'s National Health Survey of Gulf War Veterans and their Families.

The study included a telephone interview, a detailed questionnaire and a one-day clinical examination. He says the study, done at the Baltimore V.A. Medical Center, consisted of a physical, a check of his skin and an examination of how well his lungs and nerves worked. Brink says he also underwent psychological testing and some laboratory tests. He says he agreed to participate because one of the exams may hold a missing clue to the Gulf War illnesses puzzle.

"I'll hope other vets see this the same way," he says. "The exams may be inconvenient but one of them, one day, is going to make the difference and then we'll all benefit from the research."

## Conference Scheduled

The Centers for Disease Control and Prevention, the Office of Public Health and Science, the National Institutes of Health, and the Agency for Toxic Substances and Disease Registry, is sponsoring a conference on the health impact of chemical exposures during the Gulf War February 28 to March 2, 1999 at the Crowne Plaza Hotel—Atlanta Airport in Atlanta, Ga. The purpose of the conference is to provide a forum for broad public input into the development of a multi-year research plan. Please call Andrea Campagna at 1-800-780-8872, ext. 210, or visit their website at <http://www.cdc.gov/nceh/meetings/1999/gulfwar/> for additional information.



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Agencies assisting Gulf War veterans:

<http://www.afa.org/>  
Air Force Association  
1501 Lee Highway  
Arlington, VA 22209-1198

<http://www.legion.org/building.htm>  
American Legion  
1608 K St., NW  
Washington, DC 20006

<http://www.amvets.org/>  
AMVETS  
4647 Forbes Blvd.  
Lanham, MD 20706

<http://www.ausa.org/>  
Association of the U.S. Army  
2425 Wilson Blvd.  
Arlington, VA 22201

<http://www.dav.org/index.html>  
Disabled American Veterans  
807 Maine St., SW  
Washington, DC

<http://www.eangus.org/>  
Enlisted Association of the National Guard  
1219 Prince St.  
Alexandria, VA 22314

<http://www.fra.org/>  
Fleet Reserve Association  
125 N. West St.  
Alexandria, VA 22314-2754

<http://www.mcleague.org/>  
Marine Corps League  
8626 Lee Highway, #201  
Merrifield, VA 22031

<http://www.ngaus.org/>  
National Guard Assn of the US  
1 Massachusetts Ave., NW  
Washington, DC 20001

<http://www.navy-reserve.org/index.html>  
Naval Reserve Association  
1619 King St.  
Alexandria, VA 22314-2793

<http://www.navyleague.org/>  
Navy League  
2300 Wilson Blvd.  
Arlington, VA 22201

<http://www.ncoausa.org/>  
Non Commissioned Officers Association  
225 N. Washington St.  
Alexandria, VA 22314

<http://www.roa.org/>  
Reserve Officers Association  
1 Constitution Ave., NE  
Washington, DC 20002

<http://www.troa.org/>  
Retired Officers Association  
201 N. Washington St.  
Alexandria, VA 22314

<http://www.vfw.org/>  
Veterans of Foreign Wars  
200 Maryland Ave., NE  
Washington, DC 20002

<http://www.vva.org/>  
Vietnam Veterans of America  
1224 M St., NW  
Washington, DC 20005