



DEPARTMENT OF DEFENSE  
DIRECTORATE FOR FREEDOM OF INFORMATION AND SECURITY REVIEW  
1155 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1155

15 DEC 1998

Ref: 98-F-1953

Mr. Chris A. Kornkven  
The National Gulf War Resource Center, Inc.  
N6280 Highway P  
Helenville, WI 53137

Dear Mr. Kornkven:

This responds to your Freedom of Information Act (FOIA) request of July 27, 1998. Our interim response of August 24, 1998, refers.

The Office of the Special Assistant to the Secretary of Defense for Gulf War Illnesses has provided the enclosed briefing slides as responsive to your request. That office stated that no transcript was used in the briefing, and the briefing slides were the only documents used in the presentation.

There are no assessable fees for this response in this instance.

Sincerely,

A. H. Passarella  
Director

Enclosures:  
As stated

#942



*Review of the Department of  
Defense Investigation Into the  
Nature and Causes Of  
Gulf War Illnesses*

Presentation for the  
Special Oversight Board

July 16-17, 1998

epb #



# ***Why A Special Oversight Board?***

**The White House should develop a plan to ensure Gulf War veterans and the public have access to and can be represented in future deliberations about possible CBW agent exposures. To ensure full public accountability and reinforce the commitment to an independent review, an entity other than DoD should perform any oversight.**

**PAC - November 1997**



# **Special Oversight Board Charter**

**Provide advice and recommendations based on its review of Department of Defense investigations into the possible detections of, and exposures to, chemical or biological weapons agents and environmental and other factors that may have contributed to Gulf War illnesses**

*Executive Order -*

*February 24, 1998*

*William J. Clinton*



# ***Overview of Presentations***

- Introduction to Gulf War Illnesses
- Overview of the DoD's Investigations and the Office of the Special Assistant
- Organizing Theme: Review Critical

## **Issues for Consideration by the Board**

- Methodology / bias / credibility
- Declassification and dissemination of relevant Government Records
- Medical Research and the Approval Process
- Khamisiah: modeling and notification
- Depleted Uranium
- MITRE Investigation



*Overview of the DoD's Investigations and the  
Office of the Special Assistant*



# *Khamisiyah Was the "Watershed" Event for DOD Investigations*



## **NEWS RELEASE**

OFFICE OF ASSISTANT SECRETARY OF DEFENSE  
(PUBLIC AFFAIRS)  
WASHINGTON, D.C. - 20301

Deputy Secretary of Defense John White today informed Congressional leaders that the Department of Defense will redouble its efforts to investigate matters relevant to the illnesses of Persian Gulf War veterans. White's actions reflect President Clinton's direction to "leave no stone unturned" in the effort to determine the causes of the illnesses being experienced by veterans of the Gulf War.

September 25, 1996



# **DepSecDef Initiatives**

- **Reassess DoD programs**
  - Dr. Rostker, ASN (M & RA) assigned
    - » Action Team made of up of non-DOD experts
- **Strengthen DoD clinical & medical research program**
  - \$5 million of new research for low-level chemical exposure
  - Institute of Medicine to re-evaluate DoD clinical protocols
- **Review of Khamisiyah**
  - DA(IG) review events
  - ATSD for Intel Oversight to review handling of intel information
  - IDA to review "plume" modeling (Nov.'96)
- **National Academy of Sciences**
  - Oversight & advise on DoD efforts concerning force protection





# DoD Action Team

## NEWS RELEASE

OFFICE OF ASSISTANT SECRETARY OF DEFENSE  
(PUBLIC AFFAIRS)



White ordered the establishment of a DoD Action Team that will completely reassess all aspects of DoD's program. Reporting directly to White, the team will draw on additional outside analytical and management resources to help determine any necessary organizational, resource or personnel initiatives required. "New information recently gathered from a variety of sources, including veterans who served in the Gulf, demands new and different expertise," White said.

White's actions are designed to insure that DoD activities are well-coordinated and that a single focal point within the DoD exists for monitoring all actions related to Persian Gulf veterans illnesses.



Office of the Assistant Secretary for the Deputy Secretary of Defense

# *Establishment of the Office of the Special Assistant*



## **NEWS RELEASE**

OFFICE OF ASSISTANT SECRETARY OF DEFENSE

Deputy Secretary of Defense John P. White today announced that he is increasing the size of the Persian Gulf Illnesses Investigative Team from 12 to 110 people. This expanded organization is designed to add significant additional resources into learning the causes of Gulf War illnesses. He has named Bernard Rostker as the Special Assistant for Gulf War Illnesses to direct these enhanced efforts. Rostker takes on this additional assignment while serving as the Assistant Secretary of the Navy (Manpower and Reserve Affairs). ... The Assistant Secretary for Health Affairs will continue to be responsible for all clinical programs.

November 12, 1996

Special Assistant to the Deputy Secretary of Defense



# **Focus of the New Office of the Special Assistant**

- **Emphasis on the non-health issues and future force protection issues**
  - **emphasis on incidents in the Gulf, the exposure that may have occurred from those incidents, and the implications of such incidents**
    - » **we did not have sufficient emphasis with respect to the operational aspects of the war and the implications of those operations**
  - **ensure communications programs to reach out to the veterans**
    - » **we are asking veterans of their experiences in the Gulf, trying to learn from them what went on.**
- **Dr. Joseph continued in charge of all of our health-related programs**



# **Mission of the Special Assistant for Gulf War Illnesses**

- To ensure that
  - veterans of the Gulf War are appropriately cared for --
    - » "people are our first concern"
  - DoD is doing everything possible to understand and explain Gulf War illnesses
    - » "leave no stone unturned"
    - » inform veterans and public of progress and findings
  - DoD puts into place all required military doctrine and personnel and medical policies and procedures to minimize any future problem from exposure to biological and chemical agents and other environmental hazards
    - » "DoD is a proactive learning organization."



# *The PAC Final Report*

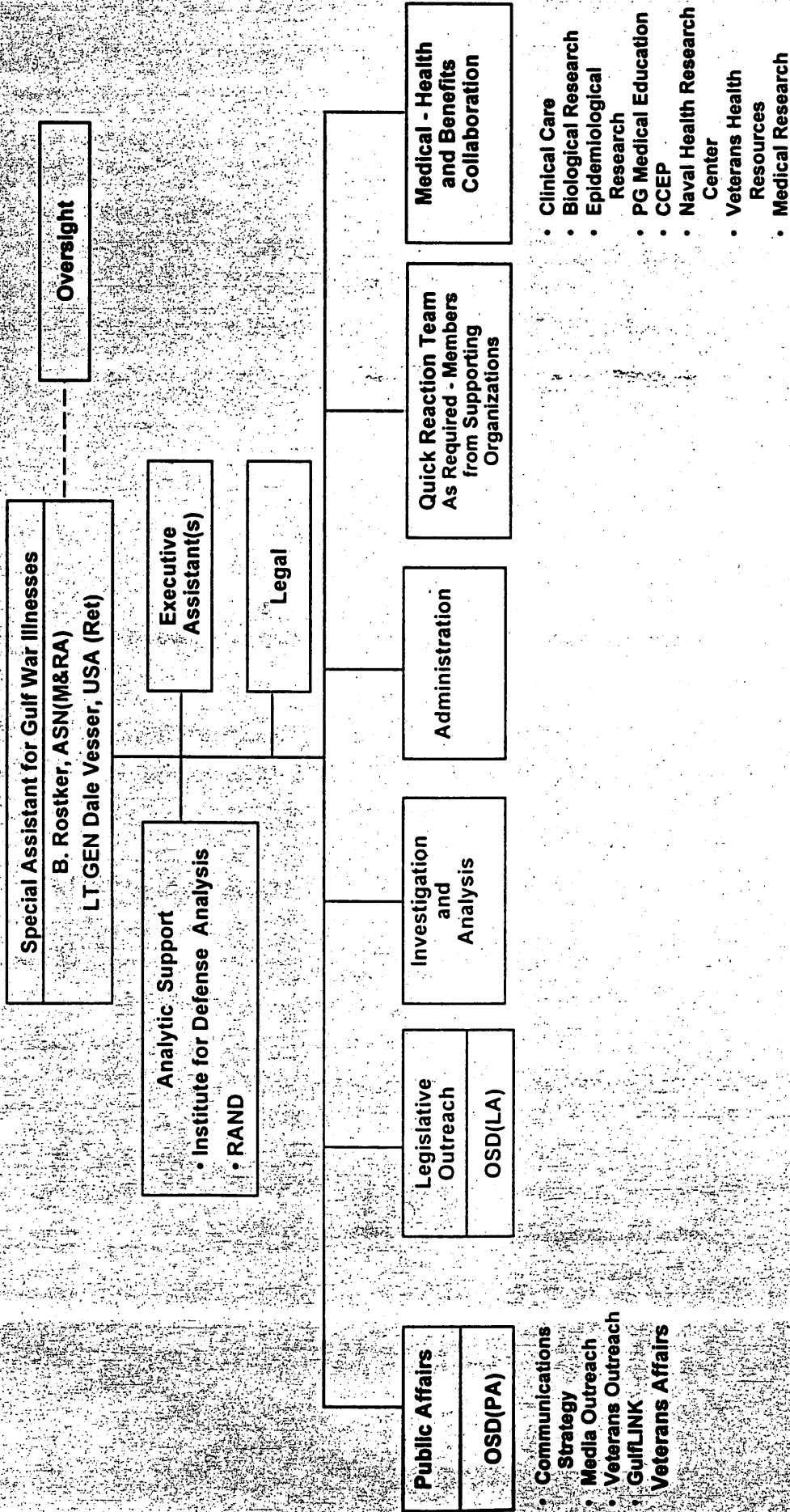
The Committee is pained by the current atmosphere of government mistrust that now surrounds every aspect of Gulf War veterans' illnesses. It is regrettable-but also understandable. Our investigation of the Department of Defense's efforts related to chemical weapons led us to conclude these early efforts have strained public trust in our government. Hence, evidence of possible chemical warfare agent exposures during the Gulf War must be thoroughly evaluated by a group independent of DoD. This process must be conducted in an open manner and include veterans. The Committee recognizes that in November 1996 DoD announced it was expanding its efforts related to low-level CW agent exposure. These initiatives-combined with independent, vigorous oversight-could begin to restore public confidence in the government's investigations of possible incidents of CW agent exposure.

December 1996



Special Assistant to the Deputy Secretary of Defense

# Office of the Special Assistant



Office of the Special Assistant to the Deputy Secretary of Defense

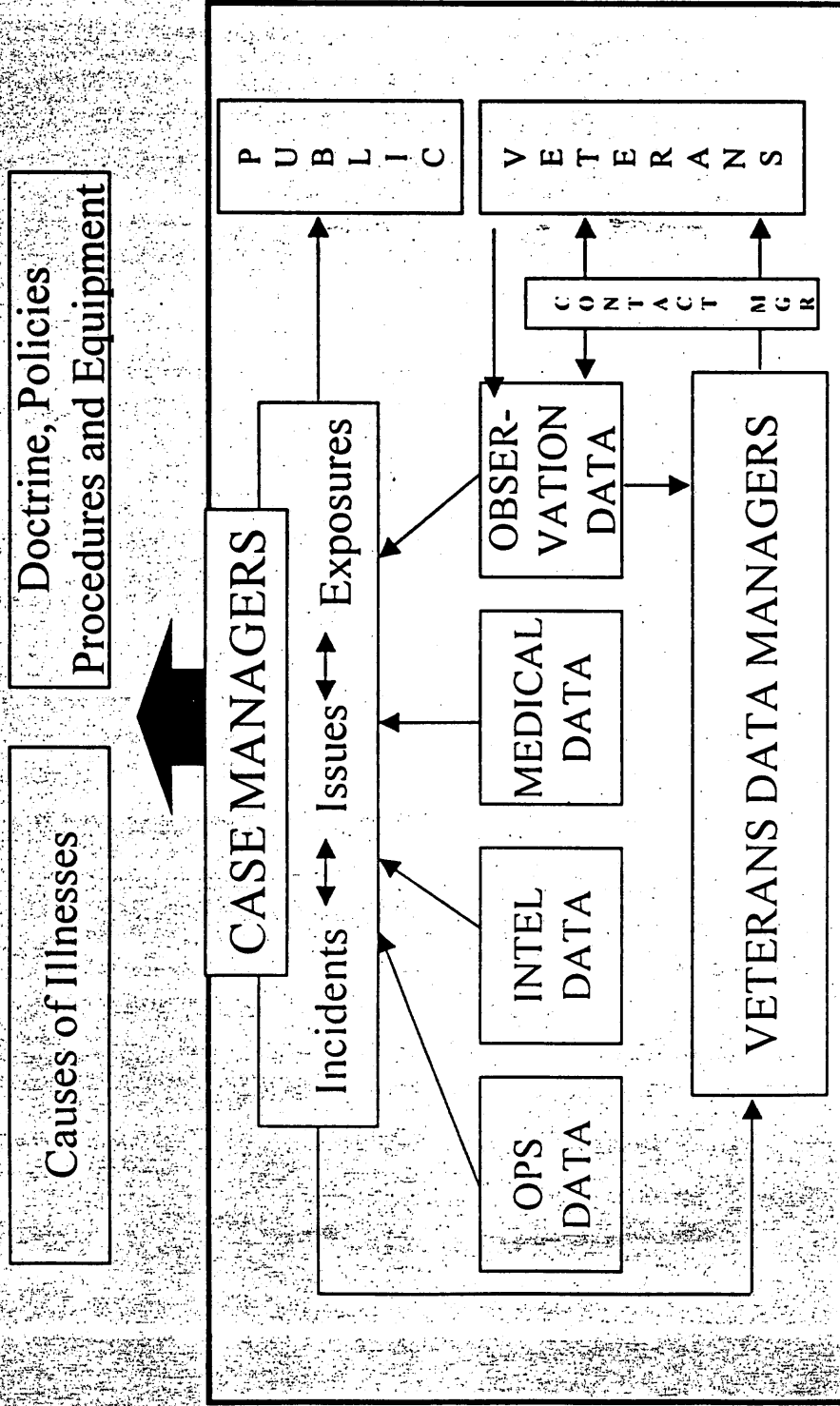
# Significant Changes

- Formal case management structure that involves Gulf War veterans in the investigation process
- Report to public and veterans by way of
  - Information Papers
  - Case Narratives
  - Environmental Exposure Reports
- Outreach
  - Press Briefings / Editorial Boards / Interviews
  - Roundtable Meetings with VSO/MSOs
  - Speeches at Local and National VSO/MSO Meetings
  - GulfLINK and GulfNEWS
  - Town Hall Meetings and Base Visits
  - Annual Report
- Extending The Inquiry To "Other Causes" for Gulf War Illnesses



Office of the Special Assistant to the Deputy Secretary of Defense

# Formal Case Management Structure That Involves Gulf War Veterans in the Investigation Process



Special Assistant to the Deputy Secretary of Defense



# *Gulf War Veterans Assisting the Investigation Process*

- Correspondence 2,156
- E-mails 4,125
- Survey/Mailing 9,593
- Telephone Contacts 5,089
- Total 20,963



Special Assistant to the Deputy Secretary of Veterans Affairs

# Report to Public and Veterans

## Case Narratives

Case Narratives are reports of what we know today about specific events that took place during the Gulf War of 1990 and 1991. These reports are from the DoD's Office of the Special Assistant for Gulf War Illnesses and other government agencies. These reports are interim and will be updated pending further investigative efforts. We hope that you will read these and contact us with any information that would help us better understand the events reported. With your help, we will be able to report more accurately on the events surrounding each case. Please contact my office to report any new information by calling:

1-800-472-6719

Bernard Rostker  
Special Assistant for Gulf War Illnesses  
Department of Defense



Office of the Special Assistant for Gulf War Illnesses, Department of Defense

# Case Narratives and Information Papers

## Medical Surveillance During Operations Desert Shield/Desert Storm

- DoD Information Paper - November 6, 1997

## Mission Oriented Protective Posture (MOPP)

- DoD Information Paper - October 30, 1997

## Possible Chemical Agent on SCUD Missile Sample

- DoD Narrative - August 13, 1997

## Reported Mustard Agent Exposure Operation Desert Storm

- DoD Narrative - August 28, 1997

## Tallil Air Base, Iraq

- DoD Narrative - November 13, 1997

## The Fox NBC Reconnaissance Vehicle

- DoD Information Paper - July 29, 1997

## US Marine Corps Minefield Breaching

- DoD Narrative - July 29, 1997

## Al Jaber Air Base

- DoD Narrative - September 25, 1997

## Al Jubayl, Saudi Arabia

- DoD Narrative - August 13, 1997

## Camp Monterey

- DoD Narrative - May 22, 1997

## Fox Detections in an ASP/Orchard

- DoD Narrative - September 25, 1997

## Khamisiyah

- DoD Narrative - April 14, 1997
- CIA Report - April 9, 1997
- Information Summary

## Kuwaiti Girls School

- DoD-UK Narrative - March 19, 1998

## M8A1 Automatic Chemical Agent Alarm

- DoD Information Paper - October 30, 1997



Special Assistant to the Deputy Secretary of Defense

# Using the Internet to Provide All the Information

## US Marine Corps Minefield Breaching

Case Narratives are reports of what we know today about specific events in 1991. This particular case narrative focuses on US Marine Corps Minefield Breaching operations in the 1st Marine Division, and by the 1st Marine Division. This is an interim report, not a final report. We hope that you will find it helpful in understanding the events reported here. With your help, we would like to better understand the events reported here. Please contact the Special Assistant to the Deputy Secretary of Defense at 1-800-472-6771.

1-800-472-6771

### Operations of the 1st Marine Division

Combat Engineers of the 1st Marine Division, working in cool, drizzly, and heavily overcast conditions due to weather, opened four assault lanes in the first minefield by 0715 hours and four more in the second minefield by 1200 hours. All 1st Division lanes in both minefields had been opened. Focus of the 1st Marine Division passed quickly to the breaches (Figure 3), encountering no resistance in the first minefield and overcoming light resistance through the second minefield. They proceeded to Al Jaber air base by evening. According to 7th Marine records, 1st Marine Force Ripper (the lead maneuver element) logged no potential or actual exposure to chemical warfare agents throughout all breaching operations.

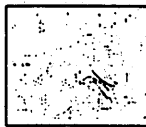


Figure 3 1st Marine Division Minefield Breaching

### Exhibit Report

After the war, CMSGT George Grass, who was the commander of the Fox reconnaissance vehicle assigned in direct support of Task Force Ripper, testified to the Presidential Advisory Committee and to subcommittees of Congress that while he was crossing the first minefield breach, his vehicle detected

... small traces of nerve agent in the air. The computer system notified us that the amount of chemical agent vapor in the air was not significant enough to produce any casualties. As a result, it was

[14] U.S. Army FM 3-101-2, NBC Reconnaissance Squad/Platoon (FOX) Operations: Tactics, Techniques, and Procedures, August 10, 1994, pp. 5-2, 5-3.

[15] Each chemical warfare agent is comprised of a unique combination of ions, called a spectrum, and the Spectrometer has the capability of evaluating the ion pattern of any detected chemical against a library of ion spectrums of chemical warfare agents.

[16] "Command Chronology for the 1st Combat Engineering Battalion, 1 Jan to 28 Feb 91," March 15, 1991.

[17] Neither the Task Force Ripper (1st Battalion, 7th Marines) Command Chronology for the Period 1 January to 28 February 1991, the "7th Marines Log" for February 24, 1991, nor the 7th Marines "Command Chronology for Period 1 January to 28 February 1991" record a reference to the 1st Battalion, 7th Marines or Task Force Ripper encountering a chemical agent during breaching operations.

Declassified/Downgraded by  
CG MCCIC IAW  
AsstSecDef Msmo 28 May 92  
Date 1/14/98 Signed *[Signature]*

UNCLASSIFIED  
UNITED STATES MARINE CORPS

1st Battalion, 7th Marines  
1st Marine Division (Mtr), PFC  
Marine Corps Air Ground Combat Center  
Twentynine Palms, California 92276-5512

TASK FORCE RIPPER

5750  
HISTORICAL RPT  
US Apr 91

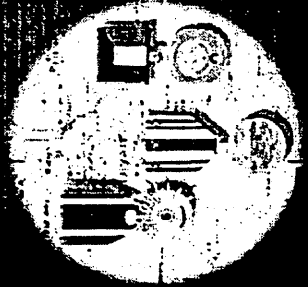
FROM: Commanding Officer, 1st Battalion, 7th Marines  
Commandant of the Marine Corps (MCC)  
Via: (1) Commanding Officer, 7th Marines (Att: Historical Officer)  
(2) Commanding General, 1st Marine Division (Att: Historical Officer)  
(3) Commanding General, Fleet Marine Force, Pacific (Att: Historical Officer)

SUBJECT: COMMAND CHRONOLOGY FOR PERIOD 1 JANUARY TO 28 FEBRUARY 1991



Special Assistant to the Deputy Secretary of Defense

# Outreach: GULFLINK/GulfNEWS



from the Special Assistant

- Search Site
- News
- Mailing List
- Topic Index / FAQs
- Declassified Documents
- Medical Information
- Navigation
- Organization
- Library
- Related Sites

## GULFLINK

Office of the Special Assistant for  
Gulf War Illnesses

- Current News
- Case Narratives
- Help for Veterans
- E-Mail

### Message from the Special Assistant for Gulf War Illnesses:

On June 25th, I addressed our military leaders who were attending the United States Army Chemical Corps' annual World Wide Chemical Conference held at Fort McClellan, Alabama. This conference was held in conjunction with the celebration of the 80th anniversary of the Chemical Corps. This was a unique opportunity to speak directly to the men and women responsible for protecting our forces in the future. I challenged them to implement the hard-won lessons learned from the Gulf War. My remarks are provided for your review.

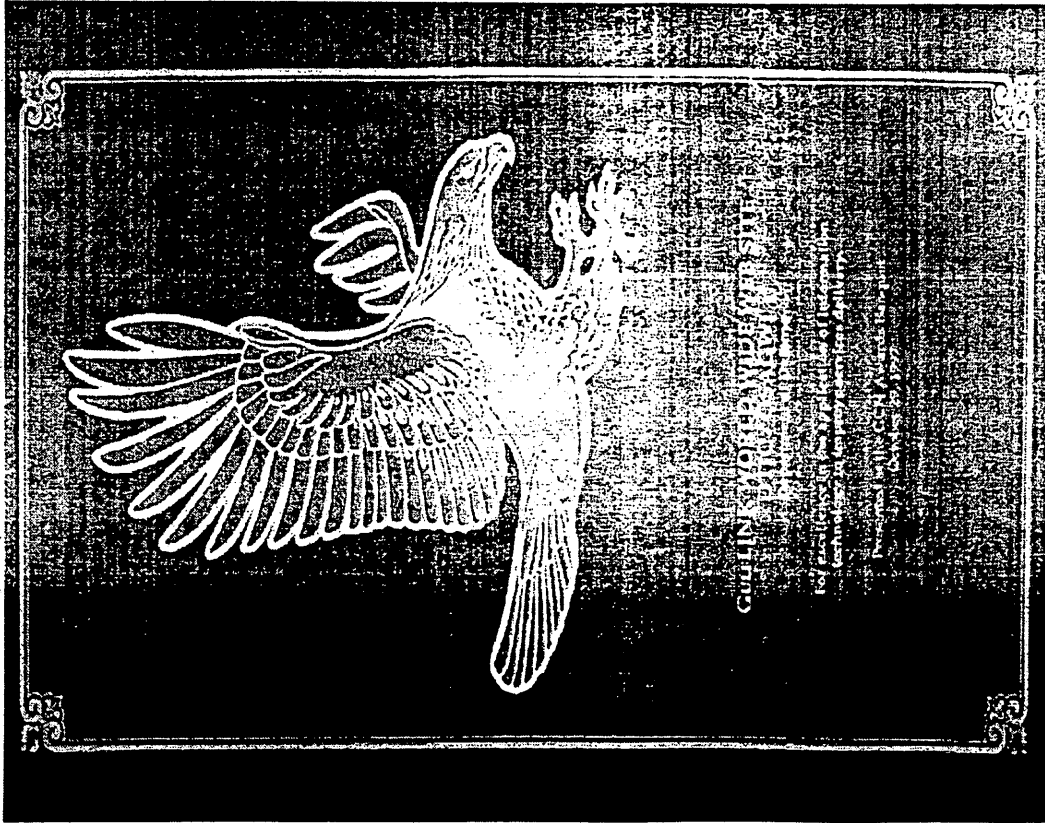
Bernard Rostker  
Special Assistant  
[brostker@gwillness.osd.mil](mailto:brostker@gwillness.osd.mil)

This service is brought to you by the  
Office of the Special Assistant for Gulf War Illnesses  
in cooperation with the  
Defense Technical Information Center.

Office of the Special Assistant for Gulf War Illnesses



# GulfLINK Awards



OFFICE OF THE VICE PRESIDENT

WASHINGTON

May 15, 1998

Dr. Bernard D. Roslker  
Special Assistant for Gulf War Illnesses  
5113 Leesburg Pike, Suite 901  
Falls Church, VA 22041

Dear Dr. Roslker:

I was delighted to read the recent article in *Government Executive* on **BEST FEEDS ON THE WEB**. I let me take this occasion to congratulate you for the excellent customer service you are providing through your web site. As you know, quality customer service is a top priority in the Clinton-Gore Administration.

Your organization continues to serve as an excellent model for other Federal agencies on how to provide an interesting and easy-to-use web site, providing consumers hassle-free access to government services. Your innovative website encourages consumers to contact your agency and to take advantage of the many services which you provide.

Again, please accept my heartfelt appreciation for your efforts to provide quality customer service. My personal commitment is to increase the trust that the American public has in our government. The only way we can achieve that goal is to restore their confidence by giving the public the best possible service. Your web site is an excellent example of why I believe that we can achieve "America @ Our Best."

Sincerely,

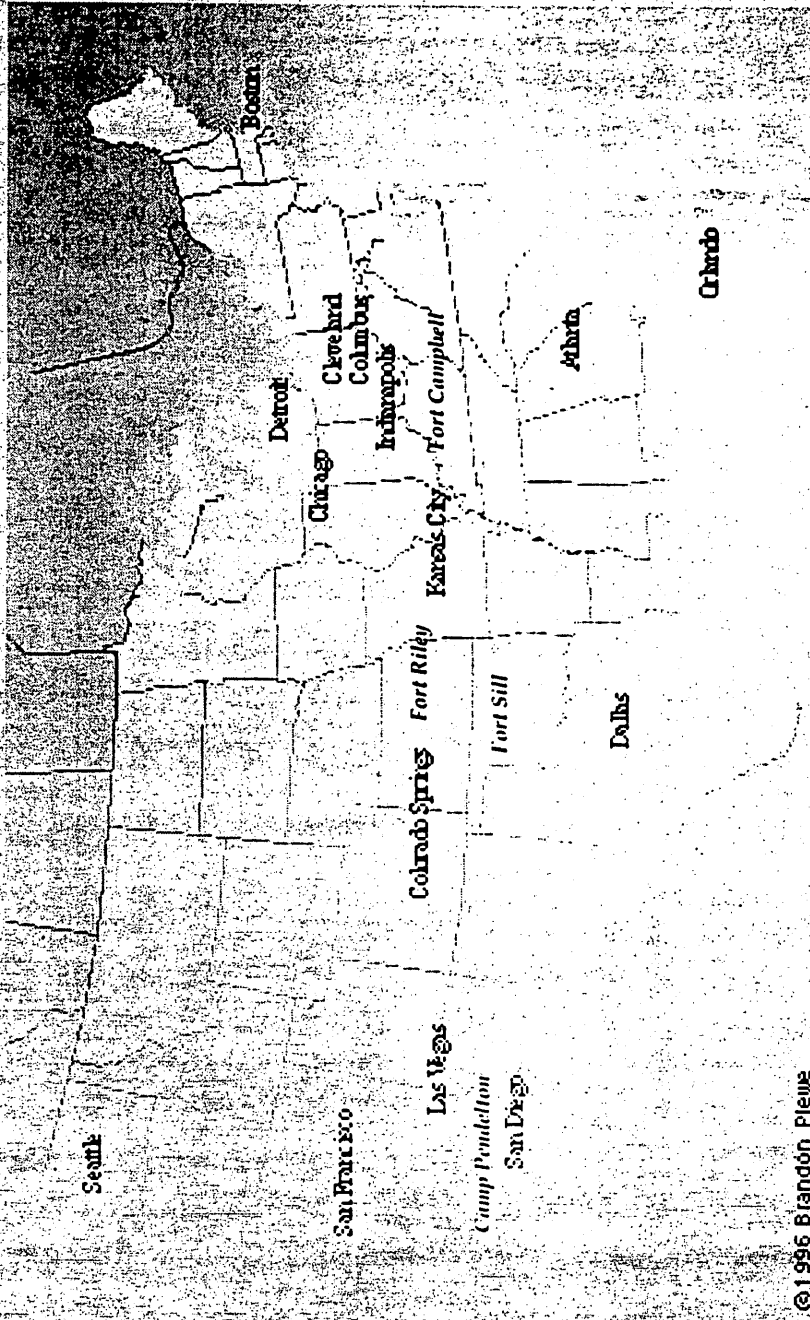
Al Gore

AG:KK



Office of the Special Assistant to the Deputy Secretary of Defense

# Town Hall Meetings, Conventions and Base Visits



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The Office of the Special Assistant to the Deputy Secretary of Defense

# Annual Report

## INTRODUCTION

### THE FIRST YEAR IN BRIEF

#### EVENT'S LEADING UP TO THE ESTABLISHMENT OF THE OFFICE OF THE SPECIAL ASSISTANT ESTABLISHING THE OFFICE OF THE SPECIAL ASSISTANT

*First Change: Listening To Our Veterans*

*Second Change: Developing An Outreach Program*

*Third Change: Investigating And Reporting On Possible Chemical And Biological Agent Exposures*

*Fourth Change: Extending The Inquiry To "Other Causes" for Gulf War Illnesses*

#### CASE NARRATIVES AND INFORMATION PAPERS OF POSSIBLE CHEMICAL AND BIOLOGICAL AGENT EXPOSURES

*Khamisiyah*

*Operations In Kuwait*

#### SIGNIFICANT ACTIVITIES WITH OTHER AGENCIES

*Army IG's Investigation Of What Happened At Khamisiyah*

*Re-Creation Of The Events At The Khamisiyah "Pit"*

*DoD IG's Investigation Of The Missing CENTCOM Chemical Logs*

*Army's Declassification Of Important Health Related Documents*

#### LESSONS LEARNED

*How To Build Trust And Confidence in DoD*

*How To Better Account For What Happened On The Battlefield*

*How To Better Protect Our People On The Battlefield*

#### PUTTING THE OFFICE OF THE SPECIAL ASSISTANT IN PERSPECTIVE

#### NEXT YEAR



Office of the Special Assistant to the Deputy Secretary of Defense



# Extending The Inquiry: Environmental Factors and Unique Occupational Risks

- Studies differ significantly from chemical incident reporting:
  - not designed to assess the likelihood that our troops were exposed to a specific agent at a specific place and time
  - a more general understanding of the hazards faced by our forces
- Now in progress:
  - depleted uranium
  - oil well fires
  - pesticides



Report to the Special Assistant to the Deputy Secretary of Defense

# Extending The Inquiry: Better Understand the State of Medical Science

- To complement our examination of what happened during the Gulf War, RAND was commissioned to prepare reviews of existing scientific literature
  - Peer-reviewed by independent scientists
  - Topics:
    - » Chemical and biological warfare agents
    - » Immunizations
    - » Pesticides
    - » Pyridostigmine bromide
    - » Stress
    - » Infectious disease
    - » Fallout from oil well fires
    - » Depleted Uranium



# Organizing Theme

- Review Critical Issues for Consideration by the Board: Claims and Issues
  - Methodology / Bias / Credibility
  - Declassification and dissemination of relevant Government Records
  - Medical Research and the Approval Process
  - Khamisiyah: Modeling and Notification
  - Depleted Uranium
  - MITRE Investigation



# Methodology / Bias / Credibility

- Methodology

- Claims:

- » PAC claims that DoD has abandoned an objective standard ... in favor of a subjective process, e.g. "Do the facts available lead a reasonable person to conclude that CW agents were or were not present?"
- » "Future investigations of possible chemical warfare agent exposures should adopt an objective standard against which all case investigations and all elements within a particular case-e.g., type(s) of detectors, eyewitness reports, secondary reference in an operational log; intelligence-are held to scrutiny. When evidence is indeterminate or ambiguous, the government's interpretation of, or decisionmaking related to, the element or investigation should weigh in favor of a presumption that ensures veterans' access to information and/or benefits."



# **Objective Standard**

## ● PAC Recommendation

- » "Future investigations of possible chemical warfare agent exposures should adopt an objective standard against which all case investigations and all elements within a particular case-e.g., type(s) of detectors, eyewitness reports, secondary reference in an operational log; intelligence-are held to scrutiny."

## ● Application by PAC itself

- » "One of the reasons obviously at this point to move forward as the Committee has been charged with looking at several site-specific exposures, and we believe it prudent to start knocking some of these off the table as the staff becomes comfortable with the current level of analysis." (PAC Meeting, Charleston, South Carolina, May 7, 1997.)



# Methodology / Bias / Credibility

## ● Methodology

- Issue for the Board:
  - » Is DoD's current methodology adequate to ensure that all evidence is "held to scrutiny?"
  - » Does the current five point scale provide an adequate interim assessment?
  - » Has the scale been consistently applied to all cases?
  - » Should any element of the current methodology be changed, and if so, how?



# Methodology / Bias / Credibility

- Bias

- Claims:

- » PAC

- DoD's current investigatory approach and reporting of specific incidents through case narratives have been less superficial than the many earlier attempts
- Deficiencies in technology and doctrine create a built-in bias against viewing any detection as credible
- Many individual OSAGWI analysts who follow elements of a case on a day-to-day basis do so without bias; we commend their efforts
- At some point, however, the evaluations succumb to an institutional culture and pervasive inclination to reimpose DoD's longstanding position



# Methodology / Bias / Credibility

## ● Bias

- » We (the PAC) note bias is not limited to analysis, but also can extend to fact finding. Lack of due diligence and objectivity mean only certain facts come to light.
  - DoD's predisposition to downplay information that contradicts existing views on CW agents and the Gulf War;
  - DoD's failure to present balancing, but conflicting, statements by its own CW detection experts; and
  - The OSAGWI failure to pursue, acknowledge, or account for information identified and analyzed by MITRE Corp., under a contract to the Assistant to the Secretary of Defense (Intelligence Oversight) (ATSD(IO)).
- » Dr. Arthur L. Caplan, Director, Center for Bioethics, University of Pennsylvania Health System
  - Pentagon officials "are inclined to see things from the point of view at which they started: deny that there were chemicals on the battlefield."





# Methodology / Bias / Credibility

- Bias
  - Issue for the Board:
    - » Are DoD reports biased?



# Methodology / Bias / Credibility

## ● Credibility

### - Claims:

- » We (the PAC) noted DoD's denials, delays, and actions had strained public trust and that, understandably, an atmosphere of government mistrust surrounded every aspect of Gulf War veterans' illnesses
- » At the same time, the primary focus of the government's efforts needs to shift from investigations to the nth degree of individual incidents, to a process that will ensure that research data and clinical improvements with a direct impact on veterans' lives



# Methodology / Bias / Credibility

## ● Credibility

- Dr. Arthur L. Caplan, Director, Center for Bioethics, University of Pennsylvania Health System and member of the PAC

- » In NY Times Sept. 6. 1997: "The Pentagon is not credible to continue inquiries that veterans and the public do not find persuasive."
- » OSAGWI is "damaging to the credibility of the Defense Department" when it appears we are ganging up on those that reported chemical incidents by investigating their claims six years after the fact, and report that we cannot substantiate their claims.
- » Given the fact that the DoD did not adequately investigate at the time, and so much time has passed, we should accept their claims as stated.
- » A finding of "likely" or "unlikely" attacks the veracity of those making a claim when the burden of proof should be with the Government.



# Methodology / Bias / Credibility

## ● Credibility

- Issues for the Board:
  - » Should DoD accept claims of chemical or biological detections as stated, as recommended by Dr. Caplan, or should it evaluate all evidence, report its findings, and as the PAC has insisted, make a summary judgment?
  - » How can DoD improve its credibility?



# Declassification and Dissemination of Relevant Documents

## ● Claims

- Four years after President Clinton ordered the declassification of all Gulf War health related documents we still have "inadequate or missing personal medical records, missing toxic detection logs, and unreleased classified documents." (Shays)
- President should order an intensified effort to declassify Gulf War documents. (Shays)
- Mr. Eddington testified under oath that he has in his possession hundreds of classified documents that deal with the presence of chemical or biological agents in the KTO and that the CIA continues to withhold some of the relevant documents.



# Declassification and Dissemination of Relevant Documents

- Issues for the Board
  - Is the DoD doing all that is possible to find and declassify all Gulf War health related documents?
    - » Review Service declassification programs.
    - » Review OSAGWI 's GulfLINK posting and search procedures for public access and use of declassified documents.
    - » Review OSAGWI's special program to find and disseminate records of those hospitalized in the Gulf during the war.



# Medical Research and the Approval

## Process

### ● Medical Research

#### - Claims

- » Medical research program is too limited. It only looks at things VA and DOD want to investigate. It should be more expansive. (Shays, et al.)
- » The medical research program seems to be looking at everything without a clear focus. (J. Kennedy)
- » Veterans have no say in what should be investigated, (United Veterans of America)
- » Research with promising hypotheses can't get funding because their ideas differ from those doing the peer review. (Shays)
- » DOD and VA should not be in charge of the research program. (Shays)



# Medical Research and the Approval Process

- Medical Research

- Issue for the Board

- » "Mr. Rudman's board faces a tough challenge in wading into that stew and recommending ways to cure the ailing veterans." Sanford Gottlieb in the Christian Science Monitor, June 1, 1998





# Medical Research and the Approval Process

- Approval Process

- Claims

- » The PAC had "grave reservations about a significant degradation in DoD's overall funding mechanism for research related to Gulf War veterans' illnesses. (They note with serious concern that a substantial amount of research-\$6.5 million for three projects-recently has been funded without undergoing external competition and peer review; it is immaterial to us that these funds did not come from the allocation set aside for the most recent solicitations and awards."



# Medical Research and the Approval Process

» The PAC recommended that ... "All research on Gulf War veterans illnesses that is funded by the government should be subjected to external competition and independent peer review. ... If and when new funds can be identified as available for redirection to scientific and clinical research on Gulf War veterans' illnesses, such monies should be used to fund those projects identified as having been meritorious but that initially did not receive funding due to insufficient funds."

- **Issue before the Board:**
  - Should DoD be excluded from using additional funds to ensure that critical hypotheses are tested without applying accepted principals of peer review?



# **Khamisiyah: Modeling and Notification**

- **Modeling**
  - **Claims:**
    - » The PAC expressed on multiple occasions its dissatisfaction with the time it took to complete modeling for the pit area.
    - » The Senate believes that we rushed to publish under pressure from the PAC before the results were peer reviewed and that other DoD agencies should have been included on the analytical team.
  - **Issue for the Board:**
    - » What models should be used to assess fallout from Khamisiyah, and the bombing campaign?



# Khamisiyah: Modeling and Notification

- Notification

- Claims:

- » The PAC recommended that DoD should identify all individuals within a 300-mile radius from the Khamisiyah pit and notify them of possible exposure.
    - » The Senate believes that we have overestimated the number of people under the plume and already unnecessarily notified too many people.

- Issue for the Board:

- » What notification program should DoD undertake?



# Depleted Uranium

## ● Claims:

- Many charges by *Swords to Plowshares*,  
*National Gulf War Resource Center*, *Military Toxics Project*

- » Department of Defense has still not implemented a depleted uranium training program.
- » Departments of Defense and Veterans Affairs and the UK Ministry of Defense are incapable of honestly investigating the relationship between depleted uranium exposures and the health problems affecting more than 100,000 Gulf War veterans and their families.
- » US military commanders failed in their duty to protect US and coalition forces from exposures to depleted uranium before, during, and after Operation Desert Storm.



# Depleted Uranium

- Many charges by *Swords to Plowshares, National Gulf War Resource Center, Military Toxics Project*
  - » Based on the available information, at least 400,000 Gulf War veterans may have inhaled, ingested, or incurred wound contamination by depleted uranium.
  - » Department of Defense has intentionally understated the number of veterans it knows were exposed to depleted uranium in friendly fire incidents, during recovery operations, as a result of the July, 1991 Doha, Kuwait munitions fire, and through contact with contaminated areas and equipment.
  - » The presence of depleted uranium contamination in areas of Kuwait, Iraq, Saudi Arabia, Bosnia, and the United States poses a long term health threat.



# Depleted Uranium

- Many charges by *Swords to Plowshares*, *National Gulf War Resource Center*, *Military Toxics Project*
  - » Many Gulf War veterans and their families are currently exhibiting symptoms of depleted uranium poisoning, including kidney and liver problems, immune system dysfunction, and reproductive problems. The long-term health effects of depleted uranium, including cancers, may not have fully manifested in exposed veterans and civilians at this time.
  - » The proliferation of depleted uranium weapons threatens to contaminate large areas of land in future conflicts and adversely impact the health of military personnel and civilian countries around the world.

# Depleted Uranium

- Many charges by *Swords to Plowshares*,  
*National Gulf War Resource Center*, *Military Toxics Project*
  - » Department of Defense has deliberately misled Gulf War veterans and their families, VA physicians, numerous federal investigations, and Congress about the health and environmental consequences of the use of depleted uranium weapons in Operation Desert Storm.
- Seymour Hersh
  - » "Eager to maintain an effective weapon, they (DoD) have refused to reconsider their reliance on DU shells and bombs, despite reports of serious contamination among allied soldiers and civilians living in the war zone in southern Iraq."





# Depleted Uranium

- Hottest current Press and Congressional Item
  - » "Just Who Was the Enemy?" San Francisco Examiner, June 30, 1998
  - » "Iraqis Blames US for Cancers: Pentagon Denies Use of Toxic Shells" Washington Post, July 5, 1998
  - » Congressional report and inquiries
  - » "Against All Enemies, Gulf War Syndrome: The War Between America's Ailing Veterans and Their Government" by Seymour Hersh
  - » UBN Talk Radio



# Depleted Uranium

- Issue for the Board:

- What is the appropriate role for the Board in reviewing DoD's inquiry into DU as a factor that may have contributed to Gulf War illnesses?
  - » Arguments *against* the Board making an independent judgment on DU
    - Executive order calls for the Board to "provide advice and recommendations" to the President through the Secretary of Defense.
    - Board shall not "conduct scientific research."
  - » Arguments *in favor of* the Board making an independent judgment on DU
    - Board cannot "provide advice and recommendations" without making its own determination of the veracity of charges.
    - The ultimate recommendation might reflect demand for the US to "lead an international effort to ban ... depleted uranium weapons."



# MITRE Investigation

- Background:
  - On Sept. 25, 1996 actions to "broadens DoD's investigative actions on Persian Gulf veterans illnesses."
    - » Directing the Assistant to the Secretary of Defense for Intelligence Oversight to investigate intelligence information received by the U.S. government about activities that occurred at Khamisiyah in 1991 including how the information was handled. The ATSD for Intelligence Oversight will report directly to Secretary White on this matter.
    - » ATSD contracted with MITRE
    - » MITRE effort incomplete at this time
      - Delayed by controversy over focus of effort and new DoD administration
      - MITRE restarted its inquiry



# MITRE Investigation

- Issue for the Board:
  - Should the Board make a judgment on how OSAGWI "incorporated" MITRE's earlier work into Case Narratives?
    - » MITRE's earlier work not related to Khamisiyah or related sites (which was the subject of the PAC's allegation of bias) was declassified and publicly released in September 1997.
  - Should the Board oversee the current MITRE study?
    - » MITRE's work is "highly classified."
    - » Represents an important DoD inquiry into "possible detections."



# Organizing Theme

## ● Critical Issues for Consideration by the Board

- ④ Methodology / Bias / Credibility
- ⑤ Declassification and dissemination of relevant government records
- ⑥ Medical Research and the Approval Process
- ① Khamsiyah: Modeling and Notification
- ② Depleted Uranium
- ③ MITRE Investigation

# Obtaining and Using Information





# Information Philosophy

- Guidance: “Leave no stone unturned.”
- Conduct an open operation subject to oversight.
- Declassify everything relevant to tell the story, but...
  - protect fielded forces and how we put intelligence together.
- Provide extensive review of results.
- Refine work but save and archive all earlier versions.





# Sources of Information

- Service records
- Intelligence records
- Archives and historical centers
- Center for the Research of Unit Records
- Defense Manpower Data Center
- Veterans and interested public
  - CCEP and VA's Registry
  - Surveys
- Gulf War coalition members







# Gaps in Information

- Incomplete operational records
  - Expected 15-23M; only 6.4 M on hand.
  - Missing CENTCOM chemical logs
  - No intelligence logs
- Unit and individual location data problems
- Withheld by those who see release as threat to US
- Medical records not created





# Filling the Information Gaps

- Interaction with veterans
- S3/G3 Conferences
- Work with CIA, DIA
- Physical searches
- Experimentation and modeling
- Inspector General investigations





# Data Base

- All available to Oversight members and staff with proper clearances.
- Will request declass and release of any material you deem relevant.
- Used for:
  - Investigative research
  - Response to inquiries
  - Privacy Act and FOIA requests
  - Legal discovery





# **Finding Information:**

## **Building A Case**

- Start with veteran's report
- Preliminary analysis of alleged incident
  - Set the operational context
  - Identify relevant technological aspects
- Search the data base: Oracle and Pathfinder
- Broaden the search; interview other veterans
- Assess whether experimentation and modeling required



# Search Engines

- Oracle
  - Powerful graphical user interface
  - Custom-built intranet search based on user requirements
  - Theme and gist capabilities
  - Retrieve both text and image
  - Interface with other GWI-unique Oracle applications
- Pathfinder
  - Intel community oriented
  - US-UK users
  - Excellent free-text search capability
  - Show linkages between multiple searches
  - Variety of analytical tools.



# SAGWI's Open Operation

- Maximum declassification consistent with security.
  - Press Services for maximum declass of health and related documents.
  - Army created award-winning declass operation.
- Protection of privacy.
- Use GulfLINK to post all released documents.
  - Includes CIA reports, IG results, and released UNSCOM material.
  - Hyper-linking case narratives to source materials.





# Information Security

- Accountability based on unique numbering system
  - what we have; when we had it; what actions we took.
- Declassification by Services
- Posting of intel releases, CIA, DIA
- Procedures reviewed by CIA and DIA
- The Privacy Act



# Record of Denied Materials

- By case narrative.
- Withholding by CIA broken by formation of Walpole Task Force.
- Privacy issues abound concerning medical info.
- Bottom line: usually find other declass sources to cite.







# Robust Outreach:

“All we know we tell.”

- GulfLINK with e-mail.
- 1-800 numbers and contact call-back.
- Letters.
- GulfNews.
- Use of media.
- Townhall meetings.
- Total Force visits.
- Work with VSOs and MSOs.
- Targeted notifications.





# Archiving Our Materials

- Legal, historical and regulatory requirements
- File plan and disposition schedule approved by National Archives
- Originals
  - Placed into searchable and viewable electronic forms by Document Management Team (DMT)
  - Maintained for sign-out
- DMT is full service
  - OCR, video (VHS, Beta, 8mm), image, slides, classified, audio



# Information: The Bottom Line

- Considering existing sources and gaps ...
- We are thorough and secure.
- We archive.
- All relevant information is released.
- There is no cover-up !





# Tour of our Workspace

- Information nerve center: Case Management Action Team (CMAT)
- Interacting with veterans: Veterans Data Management (VDM)
- Archiving: Document Management Team (DMT)
- Investigating: Investigation and Analysis Directorate (IAD)
- Outreach: Public Affairs





# Depleted Uranium (DU)

Intro: COL Daxson

Our investigation: LTG (Ret.) Vesser

Health effects: CAPT Kilpatrick

DU training: COL Lute





# DU Basics

- Used as munition and armor.
- Two potential concerns:
  - heavy metal toxicity; kidney.
  - low-level radioactivity; 40% less than natural uranium.
- Simple protective measures are effective.
- Bottom line: exposure does not equal health effects.



# Environmental Assessment

- DU expended during Gulf War: 301 tons
- 1991, CHPPM analysis: “well below US regulatory limits for general public”
- 1994, CHPPM survey: only penetration holes above background level
- Since 1994, CENTCOM collected over 7000 samples: well within US regulatory limits
- 1995, Kuwait University: “no substantial radiological hazard for Kuwaiti population”
- March 1998, Army lab dispatched for additional assessments; awaiting report.





# Potentially exposed US troops

(based on dosage)

- Level I: those struck by friendly fire
- Level II: those who later worked on DU-struck vehicles
- Level III: those with fleeting exposure

Our focus: Levels I and II





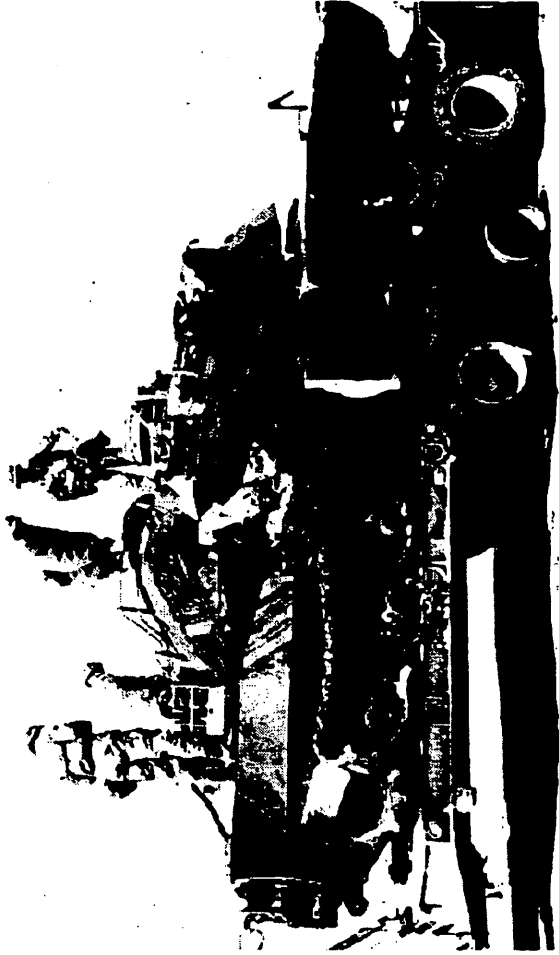
# Level I: friendly fire



- Those in or on US vehicles struck by US DU rounds and those who entered vehicles immediately afterward.
- Significance:
  - estimate 113 + (30-60) = perhaps 173 soldiers.
  - 16 soldiers had or have embedded DU fragments.
  - others may have internalized DU oxides.



## **Level II: those who later worked on vehicles**



- BDA teams, EOD, recovery personnel
- those who cleaned up after Doha fire
- Significance:
  - perhaps 800 soldiers.
  - could have internalized DU oxides.





## Level III: fleeting exposures



- Those near accidental M1A1 fires that burned DU ammo.
- Those who briefly entered DU-struck vehicles hours or days later.
- Significance:
  - unknown number of soldiers.
  - could have internalized DU oxides.



# Health Effects

- Heavy metal toxicity: renal proximal tubular damage
- Radioactivity: uranium miners; no increased cancer due to uranium.
- DoD/VA DU Medical Evaluation Program (Baltimore VA)
  - 33 from those in vehicles hit by DU friendly fire
  - those with elevated urine uranium levels have DU fragments
  - to date no measurable adverse health effects due to DU
  - all babies fathered by this cohort are normal



# Additional Health Evaluations

## Four Phases of Notification Program:

- Phase I - Recontact troops involved in friendly fire incidents, advise them of new program (9 vets).
- Phase II - Initial contact of Level I vets (riding in vehicles) not yet contacted by OSAGWI. These vets will be interviewed, advised on medical options (est. 71).
- Phase III - Contact Level I vets (who entered friendly fire vehicles for combat rescue); then Level II vets (excluding Doha) (est. 145-243).
- Phase IV - Prepare to contact vets who cleaned up at Doha (est. 600).





# **DU Medical Examination**

- Purpose: identify veterans with unrecognized imbedded DU fragments.
- CCEP or VA Registry examination
- DU exposure questionnaire
- 24-hour urine collection for uranium level





# DU Training

- Inadequate training led to unnecessary potential exposures during Gulf War.
- ✓ First battlefield use of DU.
- ✓ Little to no pre-war training; most troops unaware.
- Today DU munitions are proliferating.
- Status:
  - ✓ 1991-97: Limited progress before SAGWI initiative Sep 97.
  - ✓ Mar 98: Services submitted training plans to DepSecDef.
    - Apr-Jun 98: training materials developed or refined.
    - Jul-Aug 98: training begins.
  - ✓ SAGWI continues to monitor progress and report to DepSecDef; next report Sep 98.



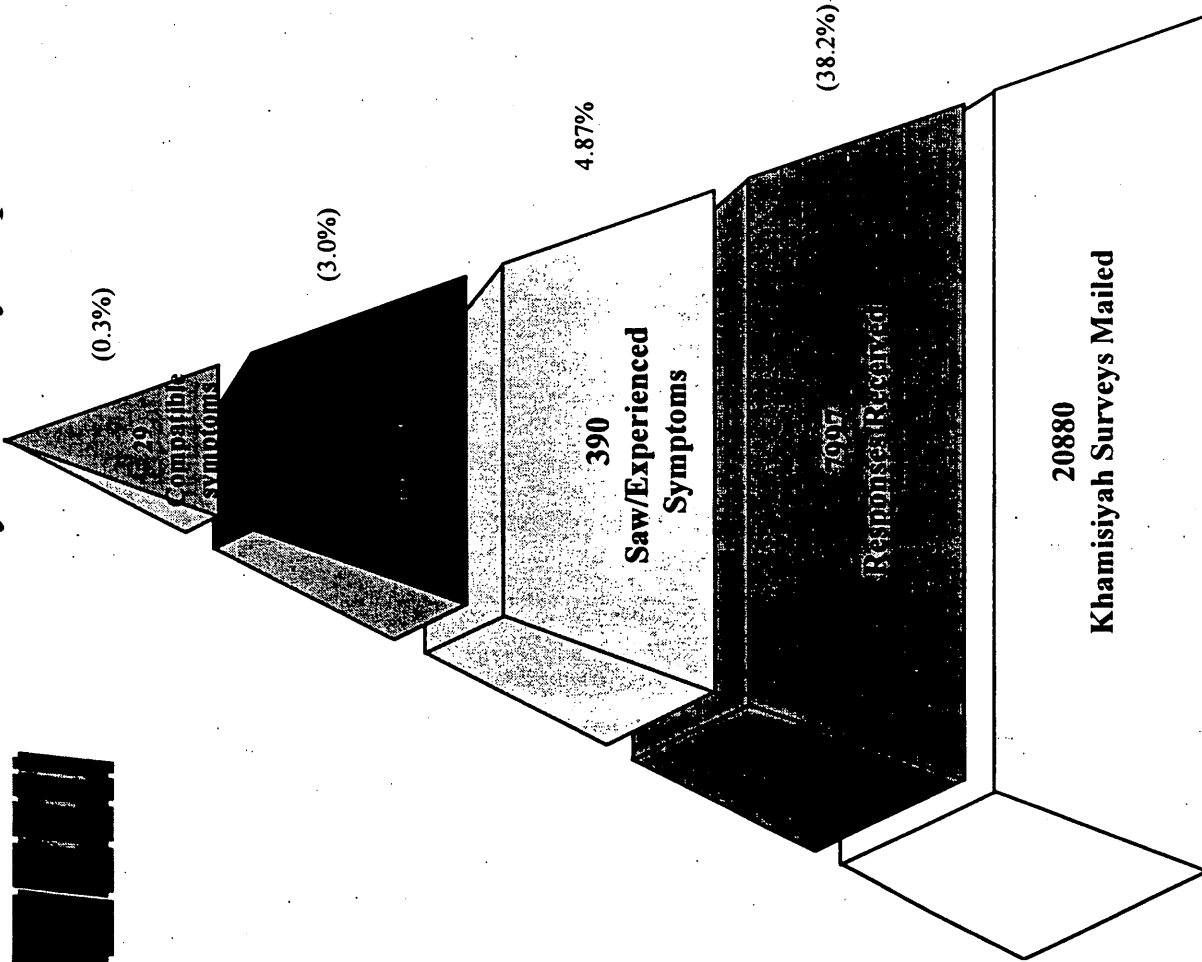
# DU Protection

- Current NRC guidelines are oriented on peacetime accidents, extremely restrictive, poorly suited to battlefield hazards.
- MOPP 4 is overkill, disproportionate to actual hazard.
- Status:
  - ✓ Training programs offer more suitable, field-expedient protection measures.
  - ✓ DoD must amend regulations.

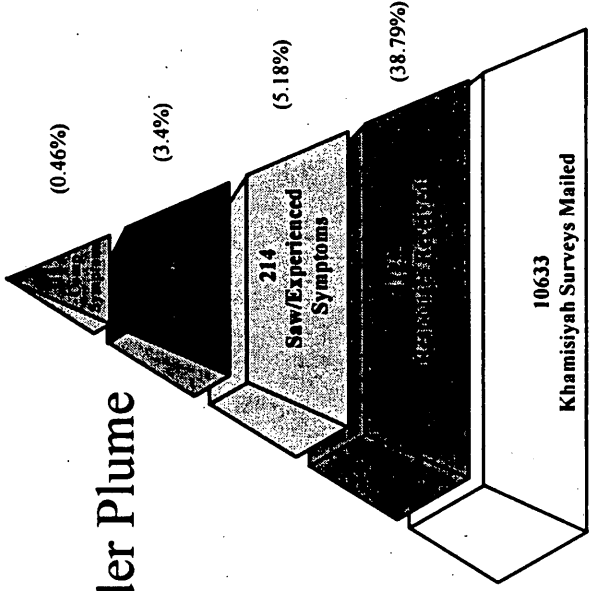




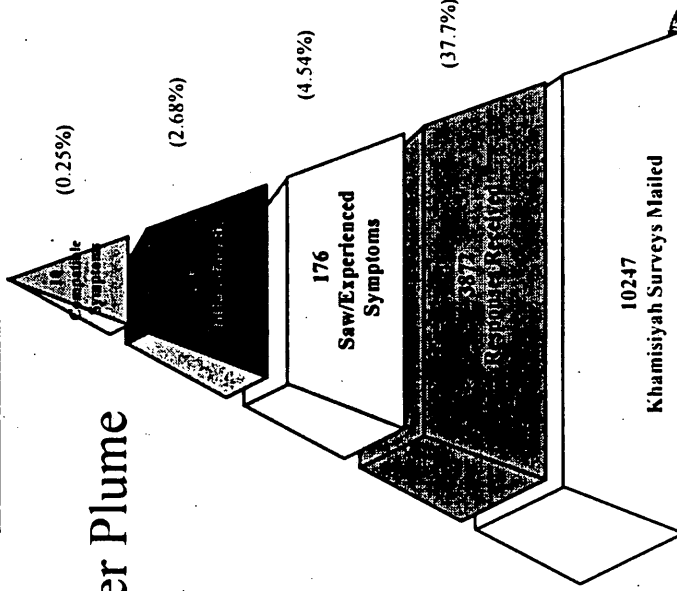
# Khamisiyah Survey Population



## Under Plume



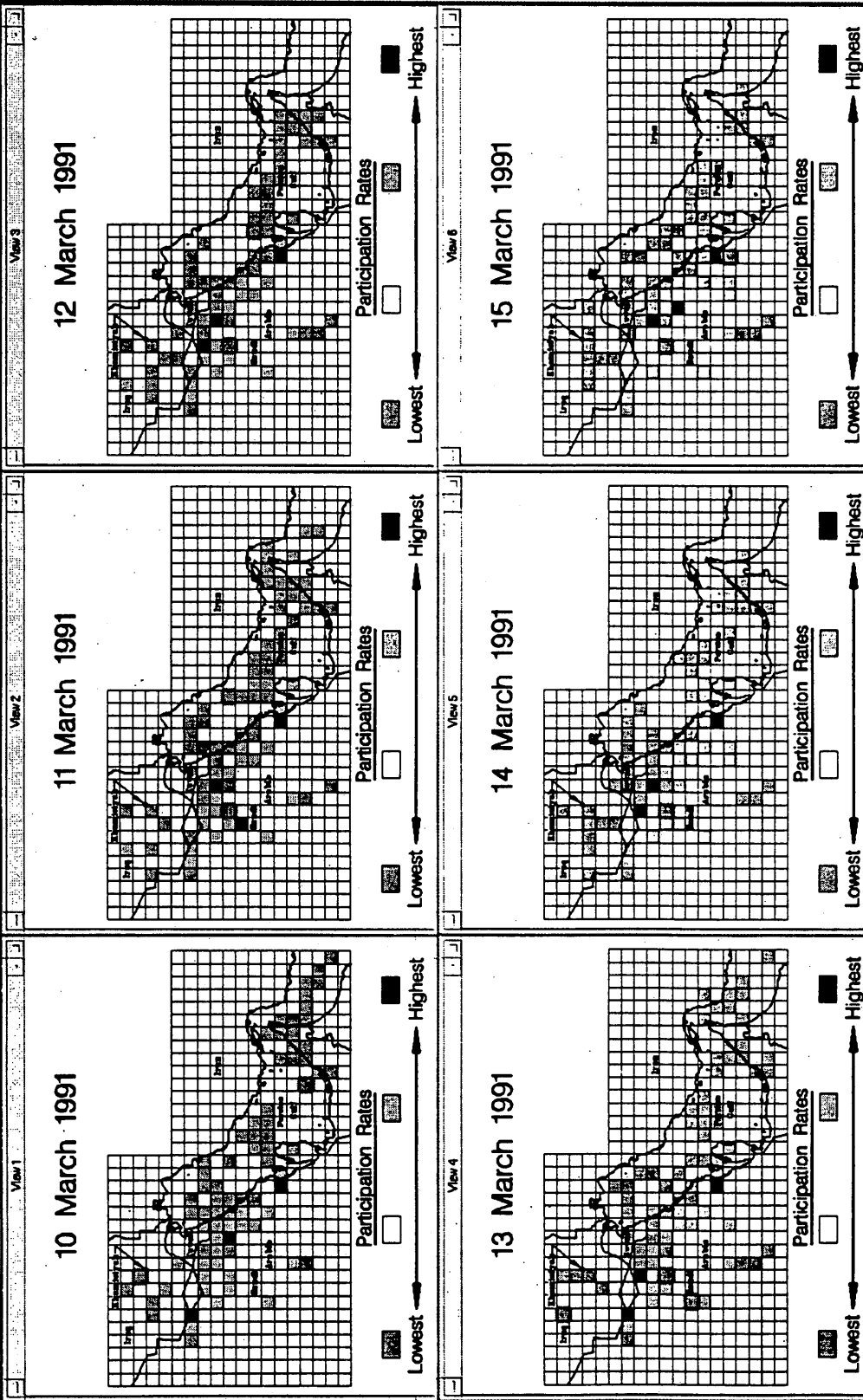
## Not Under Plume



Deployed Force  
696,531

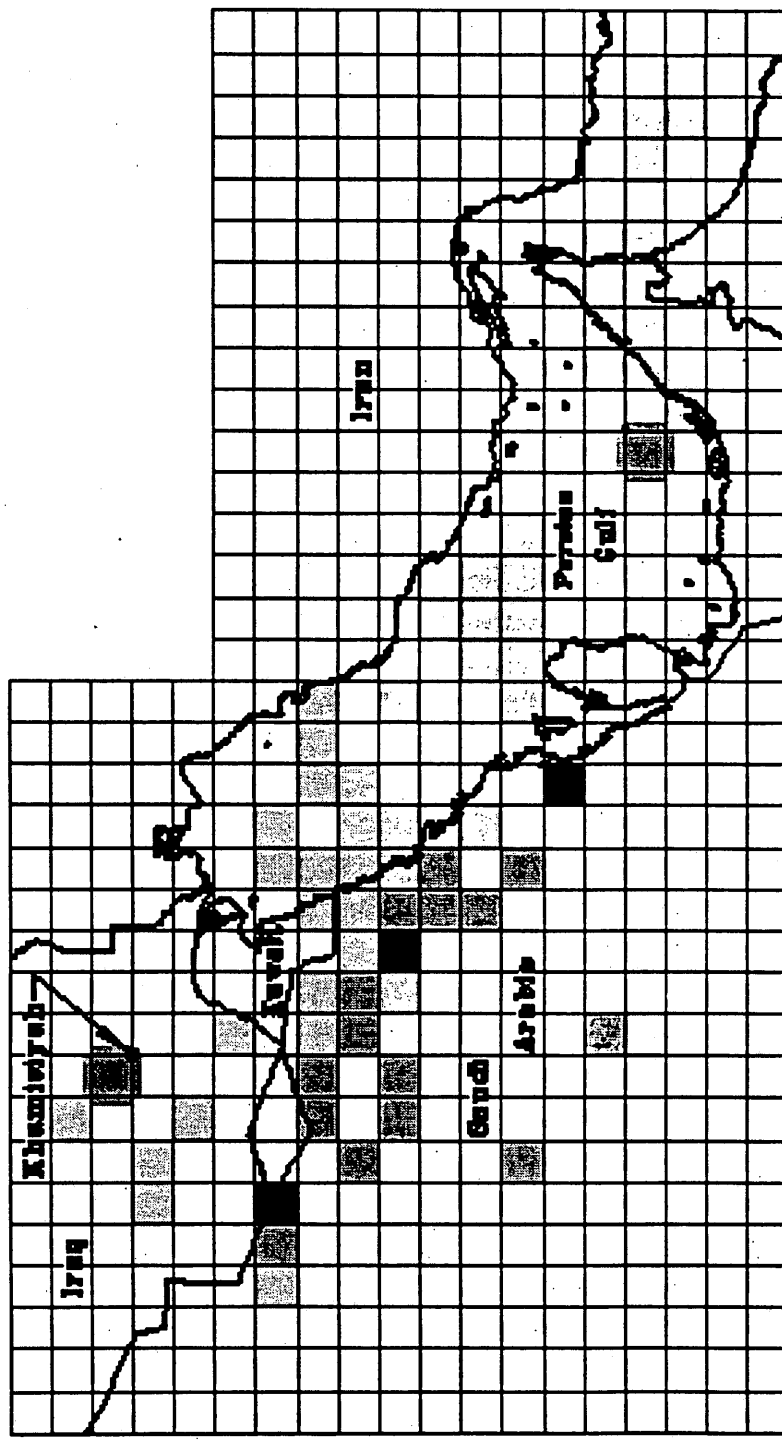


# VA /CCEP Participation Rates Among All Services





10 March 1991



Participation Rates

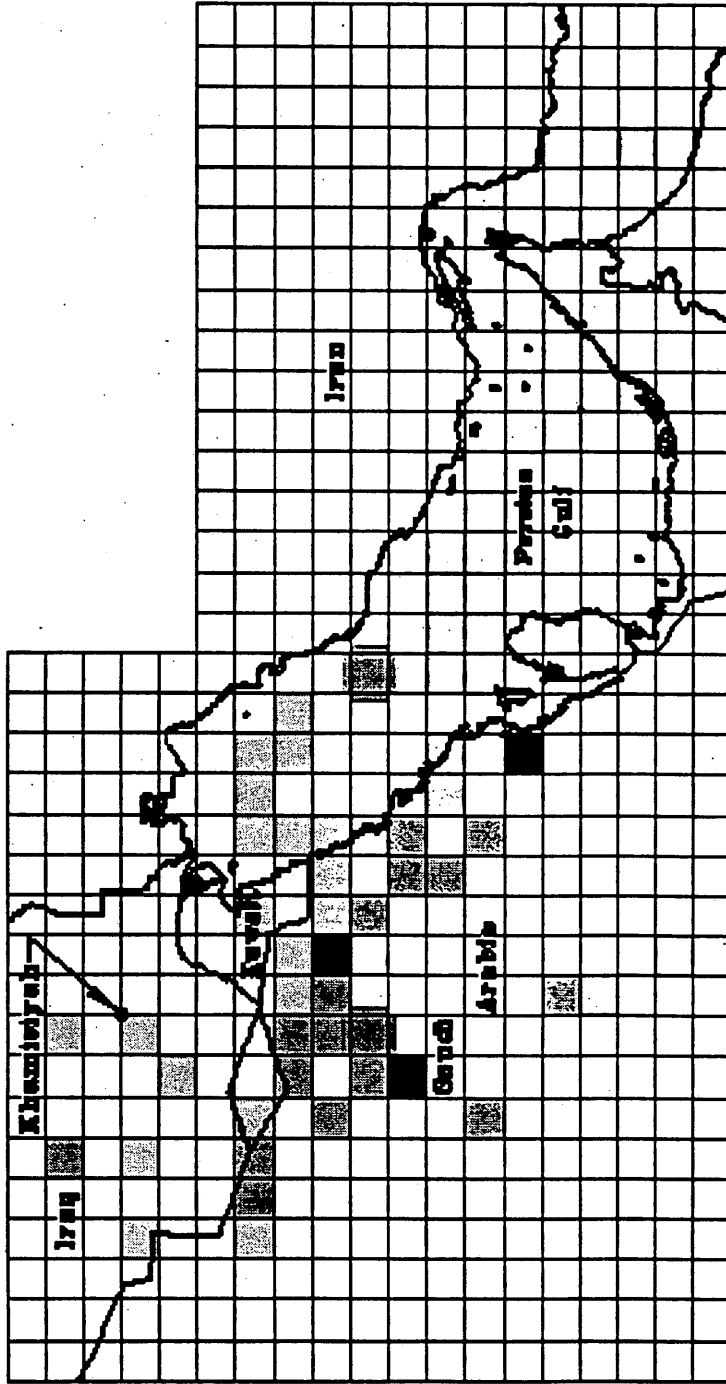


Lowest

Highest



11 March 1991



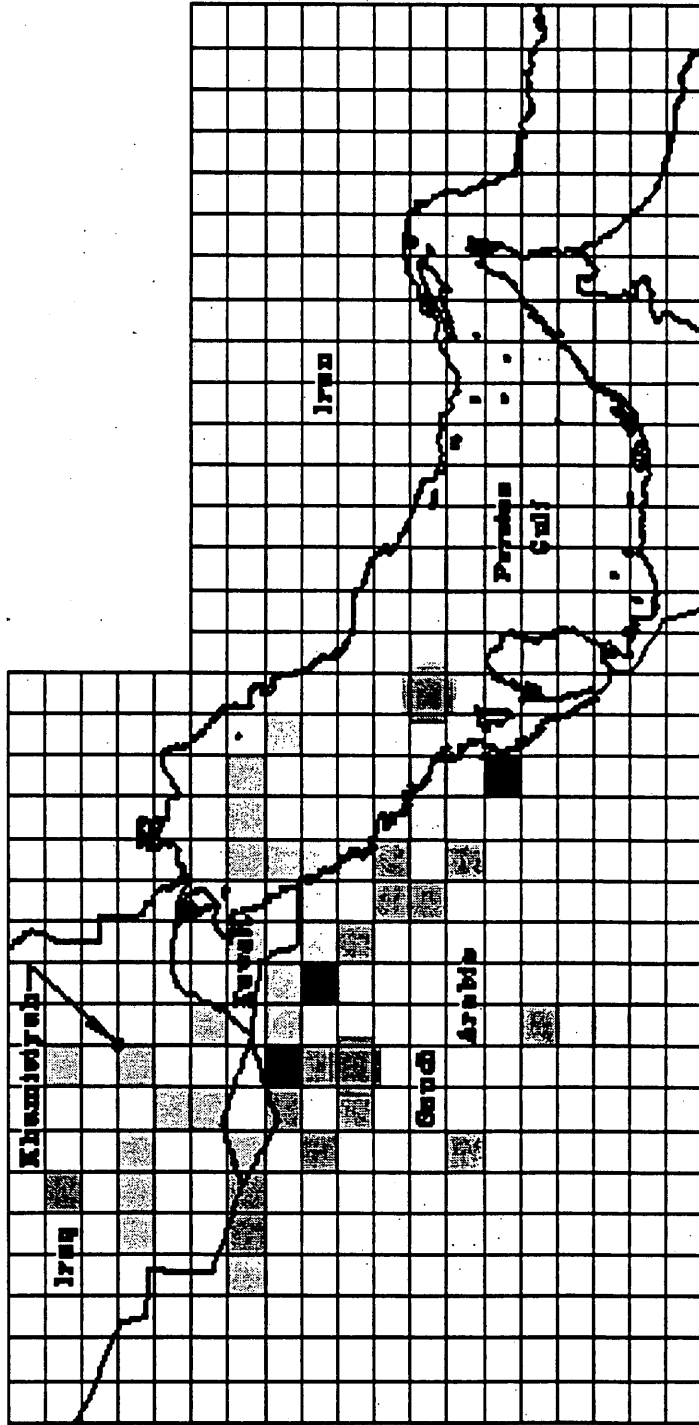
Participation Rates



Lowest ————— Highest



12 March 1991



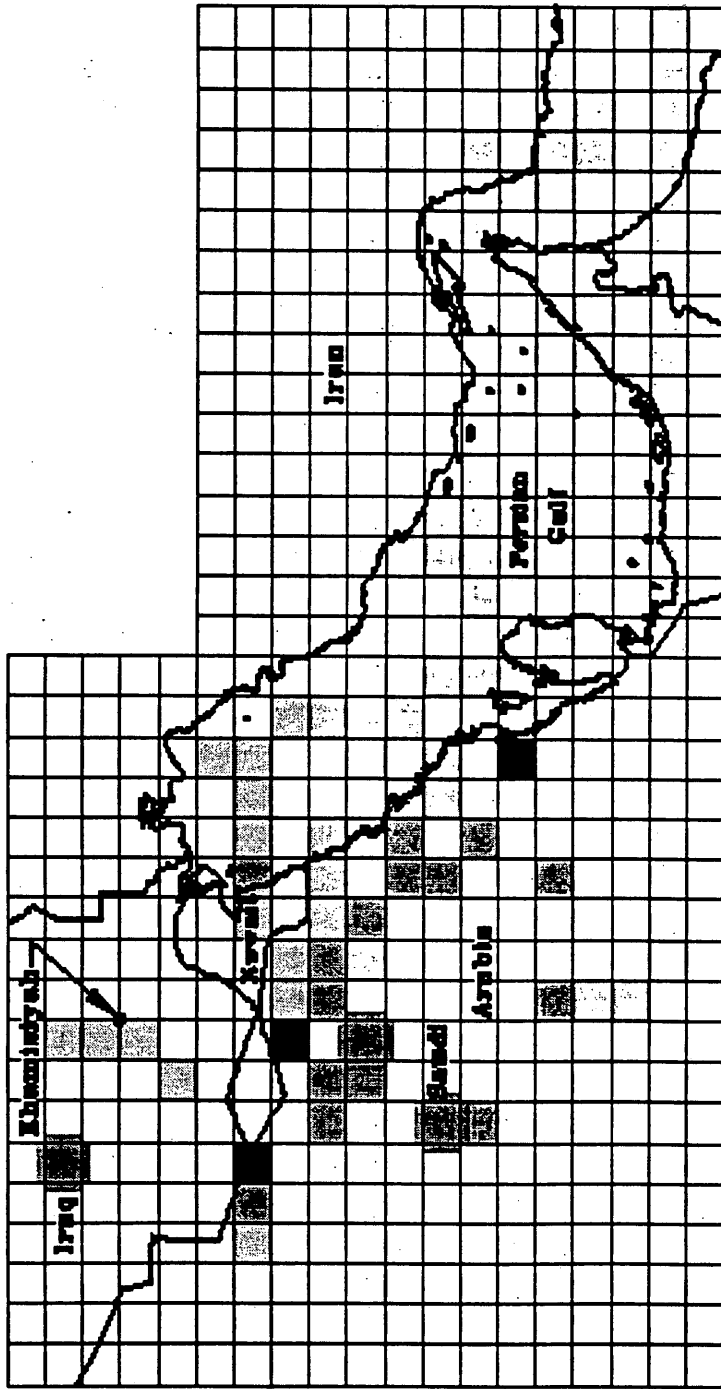
Participation Rates



Lowest ————— Highest



13 March 1991



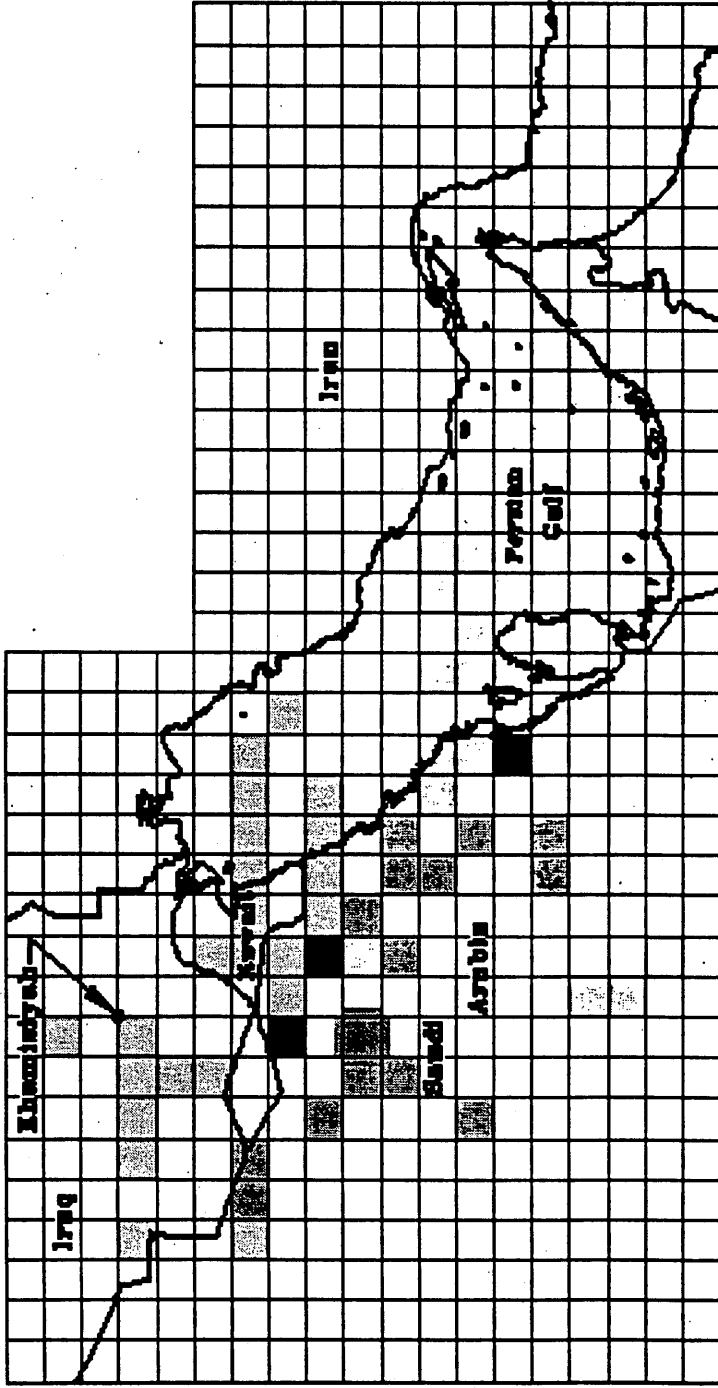
Participation Rates



Lowest ————— Highest



14 March 1991



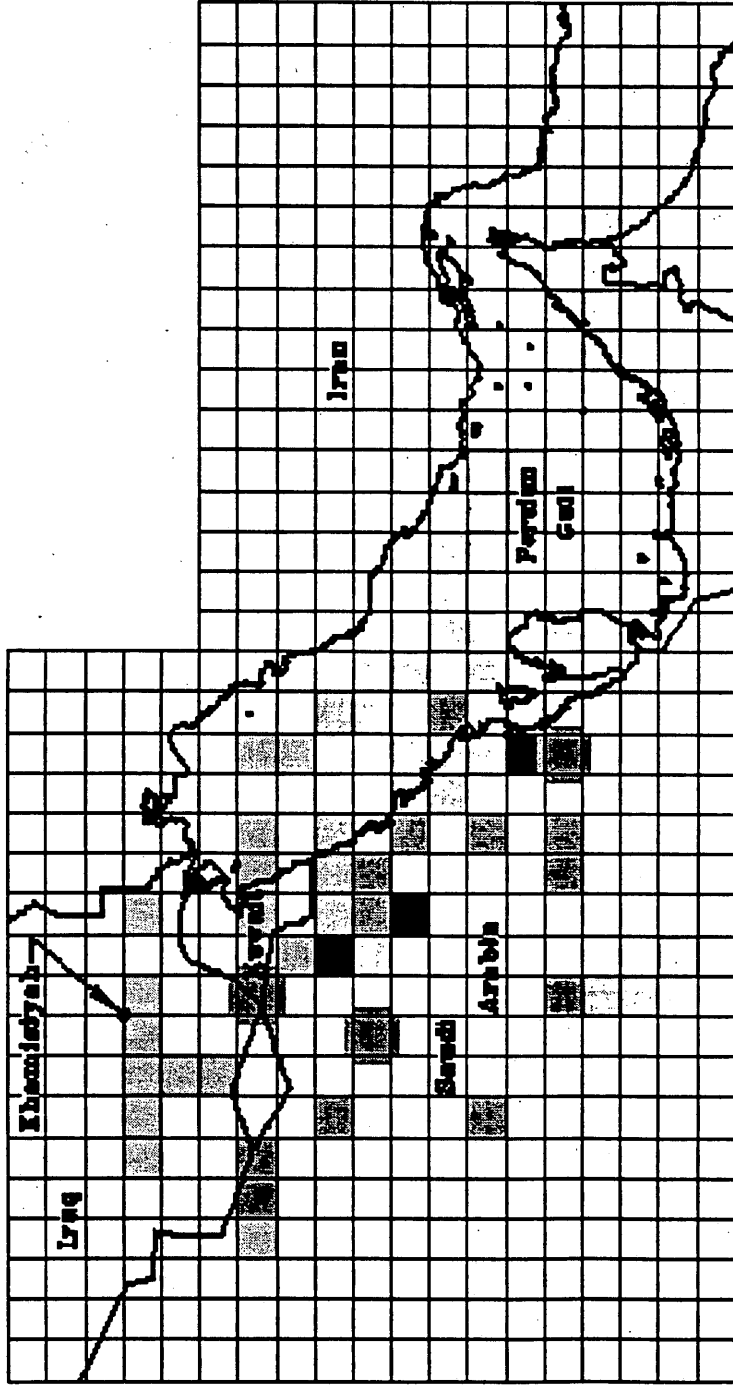
Participation Rates



Lowest ————— Highest



15 March 1991



Participation Rates







# Medical Topics & Research



# Who Served in the Gulf War

697,000 U.S. service members

|           |     |
|-----------|-----|
| ARMY      | 50% |
| NAVY      | 23% |
| MARINE    | 15% |
| AIR FORCE | 12% |

259,000 Coalition Forces

Source: Presidential Advisory Committee on Veterans Illnesses, Final Report





# Who Served in the Gulf War

## U.S. Forces

|                        |     |
|------------------------|-----|
| MALE                   | 93% |
| FEMALE                 | 7%  |
| ACTIVE                 | 83% |
| RESERVE/NATIONAL GUARD | 17% |
| OFFICER                | 10% |
| ENLISTED               | 90% |

*Average soldier 28 yr. old, married, 1.5 children*







# Symptoms

Tiredness

Rashes

Headaches

Muscle aches

Joint pains

Abdominal pain

Diarrhea

Hair loss

Memory loss

Sleep disturbance

Depression

Concentration problems





# Possible Causes

- chemical warfare
- pesticides
- vaccines
- pyridostigmine bromide
- biological warfare
- oil well fires
- depleted uranium
- infectious diseases





# Diagnosis Distribution

**CCEP (%)**  
**35,000 (18,598)**

**VA Registry (%)**  
**68,000 (52,216)**

## Categories

**Healthy**

10

12

**Symptomatic**

90

88

*Medically Unexplained*

20

20

*Medically Explained*

80

80



# Confounding Issues

- no clustering
- no symptom consistency
- variable onset
- no longitudinal evaluation







## **Limitations of CCEP/VA Registry Data**

- Self- selected
- Self-reported
- No comparison cohort
- Examinations done by multiple providers

## **Utility of CCEP**

- Spectrum and frequency of diagnoses
- Background for answering participants questions
- Only computerized medical information





# Epidemiology Studies

|  | Deployed (%) | Non-Deployed (%) |
|--|--------------|------------------|
| <b>Medical separation</b><br>(Aug 91 - Dec 93) | 2.20         | 2.56             |
| <b>Hospitalizations</b><br>(Aug 91 - Sep 93)   | 21.6         | 21.6             |
| <b>Birth Defects</b><br>(Aug 1991 - Sep 1993)  | 7.45         | 7.59             |
| <b>Mortality</b><br>(Aug 91 - Sep 93)          | .025         | .023             |





# Veterans' Concerns

- We don't care why we're sick, we just want to be treated and cured?
- Why isn't DoD believing Dr. Nicolson that this illness is due to *Mycoplasma fermentans incognitus* ?
- DoD is stating there is nothing wrong with us. Our symptoms are just due to stress. Stress not the cause.
- Why isn't DoD believing Dr. Haley that this illness is due to brain damage from toxic exposures in the Gulf ?
- The CCEP is just a program to medically separate sick Gulf War veterans. The CCEP doesn't treat us.



# Research

## **I. Responsibility**

- A. Through the Persian Gulf Veterans Coordinating Board  
[DoD, VA, HHS]
- B. By the Research Working Group (RWG)  
[VA lead, DoD, HHS]

## **II. Request for research proposals**

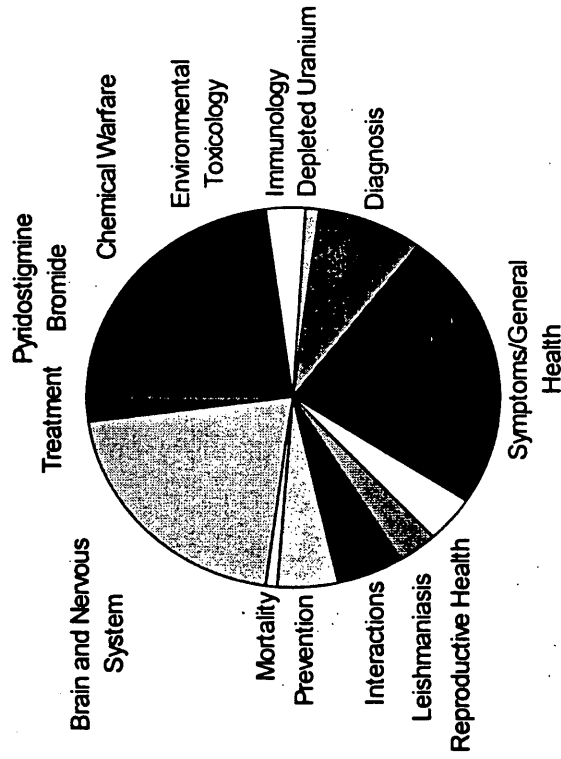
- A. Initiated by RWG
  - Recommendations by the Defense Science Board, National Institute of Health, Institute of Medicine, Presidential Advisory Committee
- B. Received and Processed by the U.S Army Medical Research Acquisition Activity (USAMRAA)
- C. Scientific peer review by the American Institute of Biological Sciences
- D. Relevance approval by Research Working Group
- E. Administered by USAMRAA

## **III. Research product**

- A. Publications
- B. Research Proposals



# Federally Funded Research Gulf War Veterans' Illnesses



As of March 1998, there are 121 ongoing or completed research projects funded by the Departments of Defense, Veterans Affairs or Health and Human Services. \$115 million.

**Research  
Focus**





# Responding to Concerns

- No longitudinal studies
  - Survey's of health status
  - VA's National Survey of Persian Gulf veterans
- No treatment protocols
  - DoD/VA treatment trial for chronic fatigue/fibromyalgia
  - Development of DoD/VA antibiotic treatment trial
- “Outside Investigators” cannot get inside system for funding.





# Garth Nicolson, Ph.D

- Highly credible research career in tumor cell biology (M. D. Anderson)
- Switched research efforts to *Mycoplasma fermentans incognitus*
  - Developed nucleoprotein gene-tracking and forensic polymerase chain reaction experimental tests
  - Recommends 6-12 months of doxycycline
- DoD contracted with him to: teach his technique, perform quality control, participate in replicability testing
- Scientific questions remaining:
  - Does *Mycoplasma fermentans incognitus* cause symptoms ?
  - Is *Mycoplasma fermentans incognitus* contagious ?
  - Specificity of experimental tests?






# Robert Haley, MD

- Hypothesis: toxic exposures have caused subtle mid-brain/brainstem damage
  - Used factor analysis to cluster symptoms
  - Initially toxin was nerve agent exposure
  - Now anything that was toxic
- Submitted multiphased research proposal for \$13 million. Not approved.
  - Responded outside of system
  - \$3M funded directly for clinical testing studies
- Latest research proposal not funded







***Briefing to the Special Oversight Board on  
Gulf War Veterans' Illnesses***

**Investigations and Analysis  
Methodology  
Assessments  
Priorities**

*July 16-17, 1998*

**Anne Rathmell Davis  
LTC Dee Dodson Morris**





# Introduction

- **Background**
- **IAD Products**
- **Why We Investigate**
- **Two Investigation Methodologies**
  - **Chemical/Biological Warfare Agent Incidents**
  - **Environmental/Occupational Exposures**
- **Investigation Observations**
- **Prioritization**
- **Case Status**



# Background

- **Khamisiyah -- a watershed event**
  - IAD Mission: To identify what happened before, during, and after the Gulf War as it relates to various potential causes of illnesses and to potential future force impacts
- **Lack of understanding of investigative approach led to documenting methodology**
- **Concern over what was DoD's evaluation led to 5-level assessment criteria**
- **Concern became standards of proof, subjectivity vs. objectivity**





# IAD Products

- **Case Narratives**
  - Investigations of suspected chemical or biological warfare agent incidents
- **Information Papers**
  - Subjects of general interest not involving specific incidents of possible exposure
- **Environmental Exposure Reports**
  - Investigations of who was exposed, to what, and how much





# Why We Investigate

- Find out what happened to answer veterans' questions and concerns
- Establish the facts concerning a given incident
- Establish if exposure resulted from incident
- Establish when/where/how much exposure
- Establish the affected population
- Identify lessons to learn



# Two Investigation Methodologies

Chem/Bio      Environmental

Exposure      TBD      Known

Discrete Events      Yes      No

Hostile Activity      Usually      No

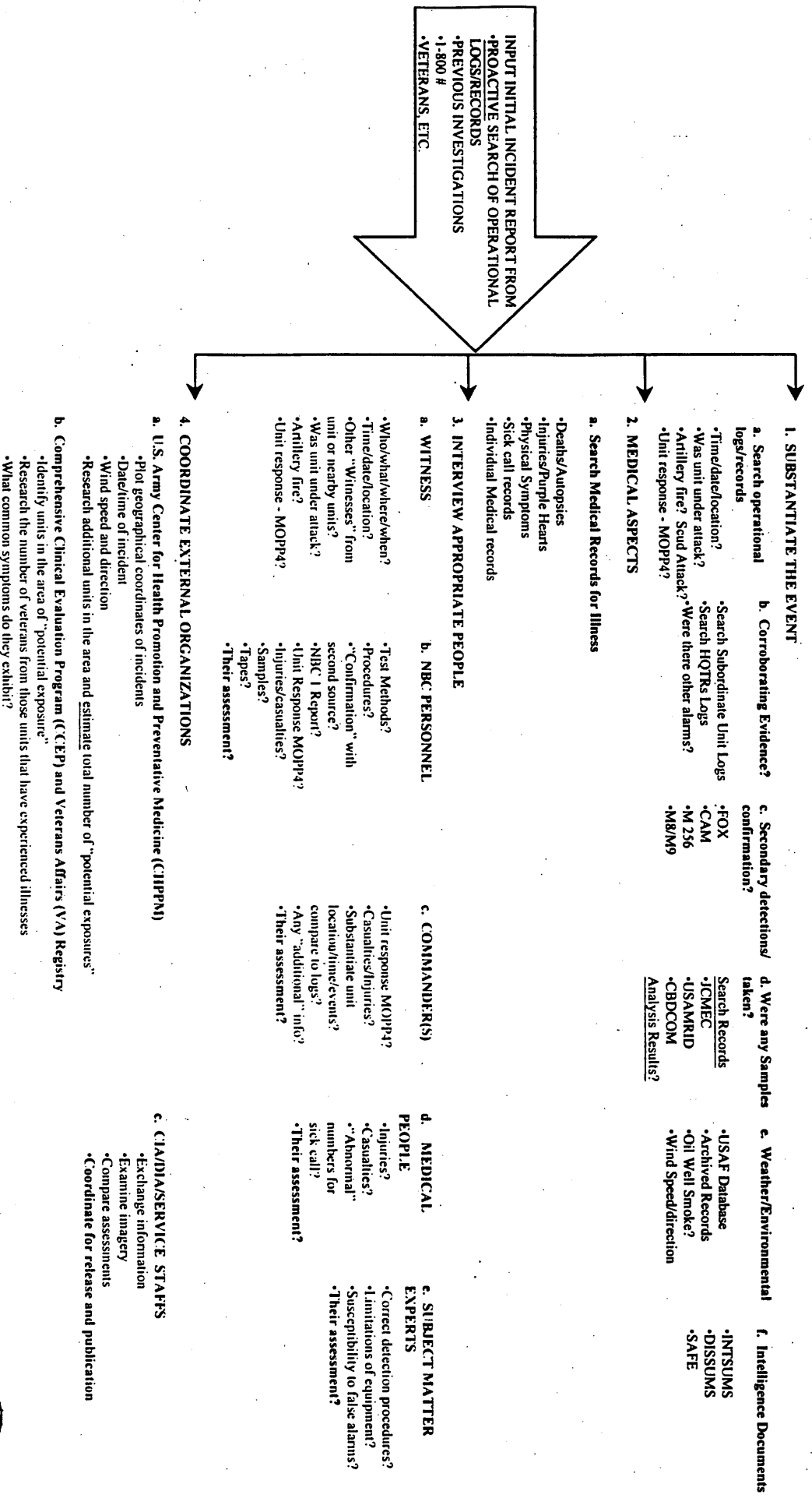
Unique to Gulf War      Yes      No

Expertise      Operational      Specialized

Assessment      Presence of Agent      Extent of Exposure



# Chem/Bio Methodology



Derived from Chemical Weapons Convention verification protocols





# Chem/Bio Methodology

- **Structured and In-depth**
  - Proactive search of records, logs, previous investigations, veterans' reports, testimony
- **Key Elements**
  - Document the incident/find evidence
  - Reports of eyewitnesses
  - Medical aspects
  - External cooperation/coordination







# **Document the Incident/ Find Evidence**

- **Assume Nothing about Validity of the Incident**
  - Blank slate
  - Search for primary sources, even hand-written
  - Memories fade, so find multiple witnesses
- **Find Evidence/Identify “Missing” Evidence**
- **Use Subject Matter Experts**
- **Importance of Veterans’ Interviews**



# Evidence -- Fox Tapes

- Provide details of detection
  - Agents detected
  - Spectrum needed for confirmation
  - Ion printout required for post-alert analysis
- Marine Breaching (shown) -- probable false positive
- Camp Monterey -- CS not CWA
- Edgewood Tapes -- no confirmations
- Cement Factory -- Xylene not CWA

|               |       |   |     |
|---------------|-------|---|-----|
| 4827/3419     | 06:21 |   | 11  |
| FAT, OIL, WAX |       | A | 4.9 |
| 4852/3471     | 06:22 |   | 12  |
| FAT, OIL, WAX |       | A | 4.9 |
| LEWISITE      |       | A | 2.9 |
| 4854/3474     | 06:22 |   | 13  |
| SPECTRUM      |       |   |     |
| FAT, OIL, WAX |       | S | 4.8 |
| 06:23         |       |   | 14  |
| FAT, OIL, WAX |       | A | 5.7 |
| SARIN         |       | A | 5.1 |
| 06:23         |       |   | 15  |
| FAT, OIL, WAX |       | A | 5.7 |
| SARIN         |       | A | 5.1 |
| 06:23         |       |   | 16  |
| FAT, OIL, WAX |       | A | 5.4 |
| HQ-MUSTARD    |       | A | 4.2 |
| 06:24         |       |   | 17  |
| FAT, OIL, WAX |       | A | 5.0 |
| 06:25         |       |   | 18  |
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| 06:26         |       |   | 19  |
| SPECTRUM      |       |   |     |
| FAT, OIL, WAX |       | S | 4.3 |





# **Evidence -- Aircraft Flight Record**

- **Al Jubayl**
  - AWACS surveillance activity was recorded
  - ATO identifies aircraft
  - Aircraft Kill Report verifies time and location of shootdown
  - SCUD and Patriot databases identify intercepts
- **Air Campaign**
  - ATO used for aircraft, targets, missions, weapons
  - Gun camera video showed actual bombing missions





# Evidence -- Samples

- **Kuwaiti Girls School**
  - Samples of material in tank analyzed by CBDE Porton Down, UK
  - Samples contained no material of chemical warfare interest
  - Assessment: Tank contents consistent with nitric acid



# **Evidence -- Maps, Logs, Souvenirs**

- **Fill in gaps where “official” reports don’t exist**
- **Khamisiyah**
  - 37<sup>th</sup> Eng Bn video of bunker inventory and demolition
  - Personal logs provided unit locations, weather data, change in missions, and names for additional leads
- **Marine Breaching**
  - Fox Tape was a souvenir
  - Personal tape recorder documents “Gas” call





# “Missing” Evidence

- **Al Jaber & ASP Orchard**
  - Tapes believed to have been destroyed
- **Czech-French**
  - Czech NBC officers took samples; US can't confirm
- **Mustard Injury**
  - Urinalysis results not available
  - Question about clothing chain of custody
- **Marine Breaching**
  - No samples taken





# Subject Matter Experts

- Necessary to interpret technical evidence
- **CBDCCOM**
  - Technical experts on alarm and detection equipment
  - Review of Fox Tapes
- **Bruker**
  - Non-DoD expert, MM-1 mass spectrometer manufacturer
  - Review of Fox Tapes
- **National Institute of Standards and Technology**
  - Non-DoD expert
  - Review of Fox tapes





# Veterans' Interviews

- **Conducted by VDM and Case Investigators**
- **Validate Data Critical to the Investigation**
  - Khamisiyah bunkers and stack of rockets in Pit
  - Details of survey of the ASP Orchard
- **Add information not in official records**
  - Day-to-day events at Khamisiyah
  - First-hand observations of Marine minefield breaching
- **Provide additional leads**
  - Initial EOD interviews for Khamisiyah led to other 60th EOD members







# Reports of Eyewitnesses

- **Khamisiyah**
  - Key players interviewed (commanders, engineers, EOD, operations officers, NBC personnel, medical personnel)
  - Two group interviews
  - Special trip to Indiana to interview 2<sup>nd</sup> principal in pit demo rigging (IAD, CIA, DAIG)
- **Marine Breaching**
  - Fox Vehicle Commander, trained NBC NCO
  - Source of theory of chemical mines
  - Provided details of breaching -- weather, ground conditions, enemy contact, order of battle
  - Led to other witnesses, one who had Fox Tape



# Reports of Eyewitnesses

- **ASP Orchard**
  - Fox Vehicle Commander, trained NBC NCO
    - » Reported chemical weapons at ASP Orchard
    - » Led EOD team to site; stated EOD team “confirmed” chemical weapons
  - Trained EOD NCO who inspected ASP Orchard
    - » Sent unsolicited letter to Rep Shays that denies chemical munitions were in the ASP
    - » CENTCOM logs contain initial report and a follow-up report that no chemicals found
    - » Rest of EOD team agrees with his account





# Medical Aspects

- **Observations of Medical Personnel are important indicators of presence of CWA**
  - Knowledgeable about condition of troops in unit
  - Reports of incidents flow through them
- **Kuwaiti Girls School**
  - Injury not consistent with CWA of the alert
  - Medical report indicated patient was fully recovered the following day and fit to return to duty
- **Mustard Injury**
  - Doctor's observations pivotal, provided photographs






# Medical Aspects

- **Khamisiyah**
  - No noticeable or reported effects among any member of demolition team-- all in MOPP2
  - EOD member picture taken in the Pit on the day following the major demolition
- **Marine Breaching**
  - Testimony to Congress and PAC
  - 1st MARDIV
    - » Troops in MOPP2 (face and hands exposed)
    - » No injuries
  - 2nd MARDIV
    - » Troops in MOPP2
    - » Single injury claim





# Coordination -- Intelligence Community

- CIA and DIA are major partners in investigations
  - Limited contact with MITRE
- Pictures
  - To identify bunkers, munitions, dates of destruction, etc.
- CIA modeling
  - Khamisiyah, Al Muthanna, Ukhaydir, etc.
- Declassification of key material
- Detailed review of narratives
  - Completeness and correctness from intel perspective



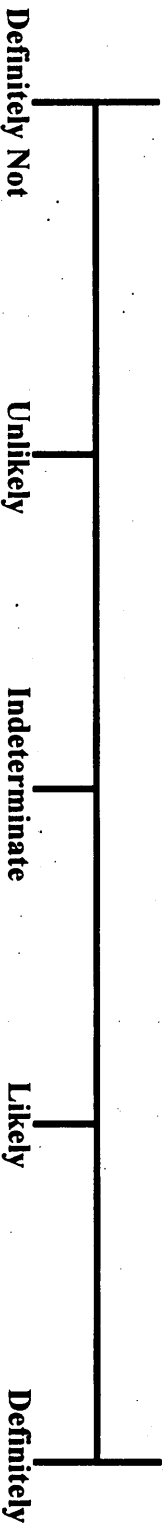


# Coordination -- Other Agencies

- **DMDC**
  - DoD Incident Hot Line
  - Database of Gulf War Veterans
  - Mailing of Khamisiah Survey and initial responses
  - CCEP database
- **CRUR**
  - Database of locations of Units
  - S3/G3 Conferences
- **CHPPM**
  - Analyses and plume laydown vs. CRUR database
- **VA, Rand, Bruker, NIST, Independent Modeling experts**
- **Joint Staff**



# Chem/Bio Assessments



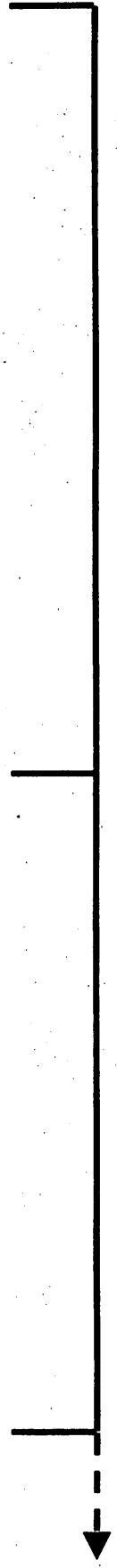
Establish the facts such that an unbiased reader would arrive at the conclusion based on common sense

- **Definitely** -- CWA/BWA present, minor discrepancies not withstanding.
- **Likely** -- CWA/BWA probably present; issues remain unanswered preventing "Definitely"
- **Indeterminate** -- Insufficient data to draw conclusion
- **Not Likely** -- CWA/BWA probably not present; some conflicting or unanswered questions.
- **Definitely Not** -- CWA/BWA not present





# Chem/Bio Assessments



**“Definitely Not”**

**Why not  
“Unlikely”**

**“Indeterminate”**

## **Camp Monterey**

- Symptoms temporary
- Fox Tapes showed CS
- Appearance consistent w/ CS
- Experts evaluated CS

## **Al Jubayl**

### **SCUD Impact**

- SCUD recovered
- Video of SCUD Recovery
- Unprotected Eyewitnesses
- Tested negative for CWA







# Chem/Bio Assessments



**“Definitely Not”**

**Why not  
“Unlikely”**

**“Indeterminate”**

**Al Jubayl  
Purple T-shirt**

Symptoms temporary  
No acute sick calls  
No hostile attack  
Known reaction of material

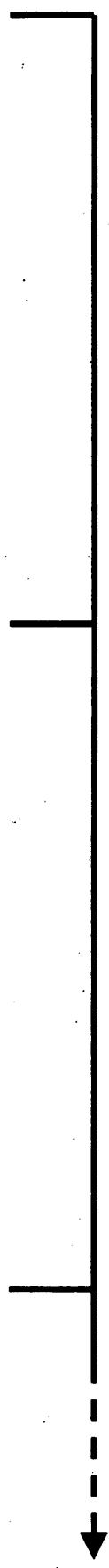
**Kuwaiti Girls School**

Agent dissolved material  
Fox tapes inconclusive  
Sample tested  
Unprotected individual not injured  
Injury inconsistent with CWA





# Chem/Bio Assessments



**Why not  
"Definitely Not"**

**"Unlikely"**

**Why not  
"Indeterminate"**

No Fox spectrum  
No samples

**Marine Breaching  
1st MARDIV**

No Fox alarm  
No warning to troops  
Troops passed unprotected  
No CWA injuries  
Logs, records, eyewitnesses

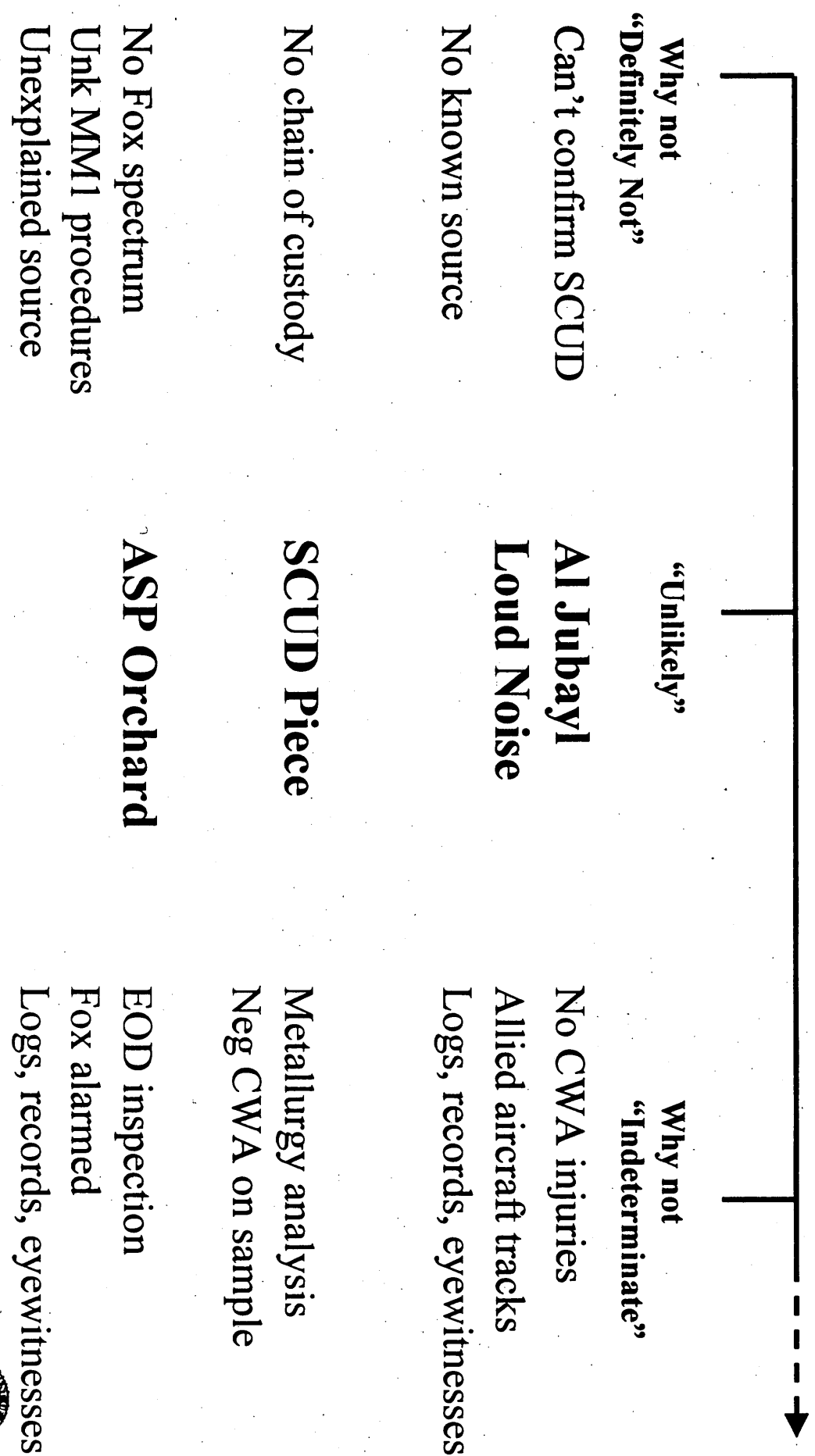
No Fox spectrum  
No samples

**Marine Breaching  
2nd MARDIV**

Fox alarmed for CWA  
Fox tapes available  
Troops passed unprotected  
No chemical mines or source  
Logs, records, eyewitnesses

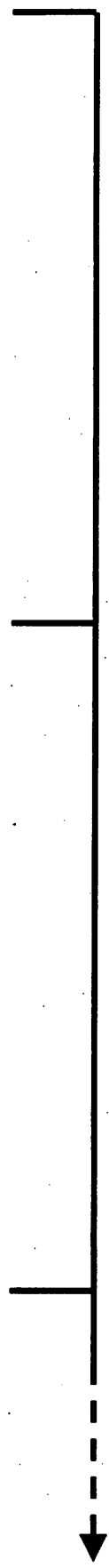


# Chem/Bio Assessments





# Chem/Bio Assessments



Why not  
 “Definitely Not”

“Unlikely”

Why not  
 “Indeterminate”

No Fox spectrum  
 No samples

**Al Jaber**

Troops unprotected  
 No CWA injuries  
 Logs, records, eyewitnesses

No documentation of  
 inspections  
 No samples  
 Incomplete reports

**Tallil**

UNSCOM reports  
 Logs, records, eyewitnesses  
 No CWA injuries



# Assessing the Fisher Case

| Why not<br>"Indeterminate"                                | "Likely"          | Why not<br>"Definitely"                            |
|---|-------------------|--|
| Soldiers reported   | Reported          | Clothing tested negative                           |
| Logs reflected  | Mustard           | in States  |
| Blisters seen by soldiers<br>and medics                   | Agent<br>Exposure | Missing chain of<br>custody for tested<br>clothing |
| Awarded Purple Heart                                      |                   | Results of urinalysis<br>not available             |
| Fox alarmed to mustard                                    |                   |  |
| Medical CWA injury<br>specialist observed and<br>reported |                   |  |



# Two Investigation Methodologies

Chem/Bio      Environmental

Exposure      TBD      Known

Discrete Events      Yes      No

Hostile Activity      Usually      No

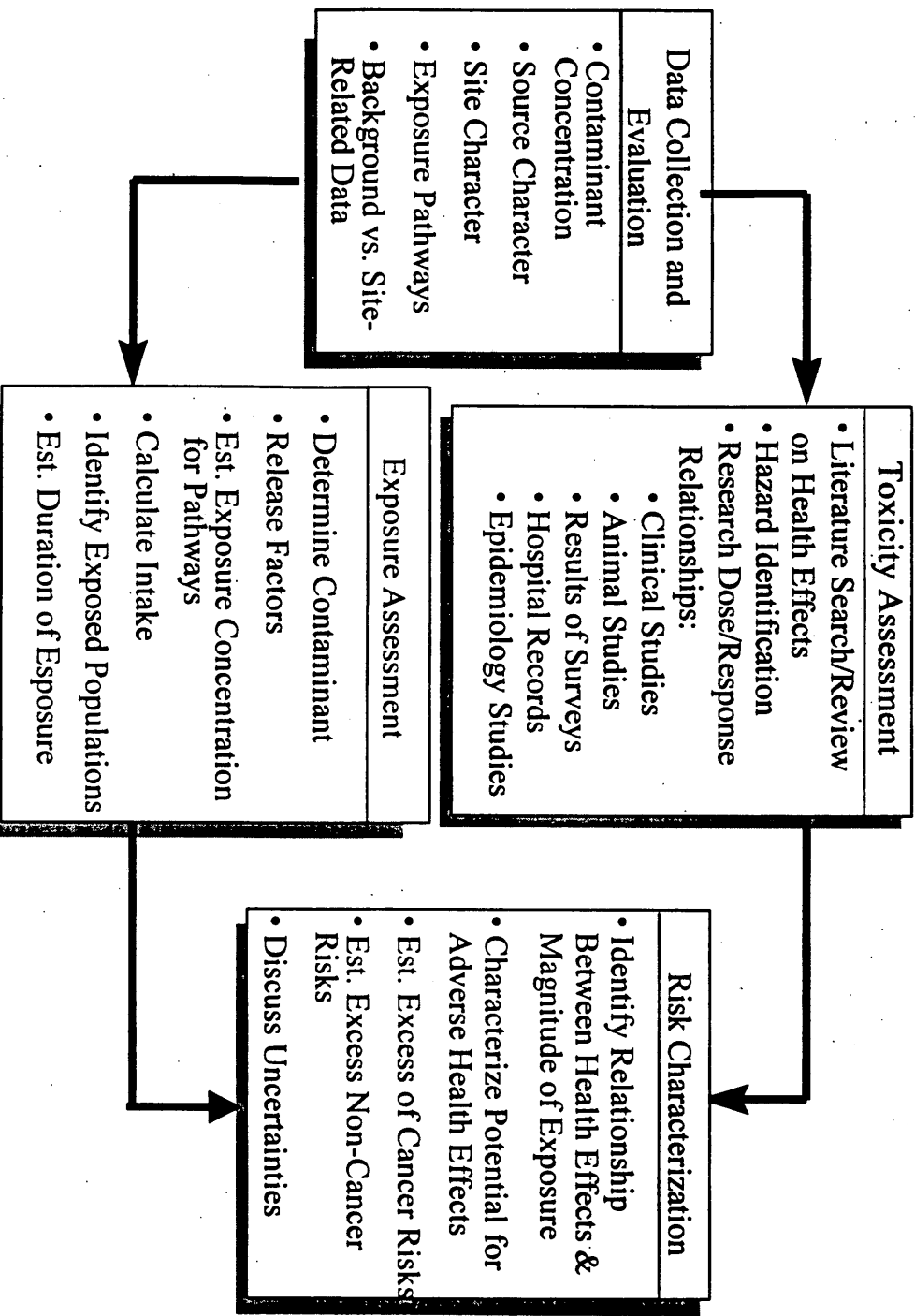
Unique to Gulf War      Yes      No

Expertise      Operational      Specialized

Assessment      Presence of Agent      Extent of Exposure



# Environmental Methodology



Uses EPA Health Risk Assessment Framework





# **Environmental Methodology - Key Elements**

- **Data Collection & Evaluation - OSAGWI**
  - What happened, types of exposures, exposed populations
  - Assess extent of exposure
- **Toxicity Assessment - RAND**
  - Literature search on health effects of exposure to particular contaminants
- **Exposure Assessment - CHPPM**
  - Dose estimates, duration, exposed populations
- **Risk Characterization - OSAGWI**
  - Relationship between health effects and exposure
  - Discuss uncertainties









# Depleted Uranium

- **OSAGWI**
  - Data collection, review of documents and interviews of 200+ veterans
  - Investigation of DU use and development of exposure scenarios.
- **CHPPM**
  - Dose assessments and risk characterization, based on OSAGWI's developed exposure scenarios
- **RAND**
  - Comprehensive literature search
- **DoD, VA**
  - Notification and evaluation of exposures to DU





# Oil Well Fires

- **OSAGWI**
  - Data collection, review of documents to establish chronology of events
  - Conditions of exposure (200+ veterans)
- **CHPPM**
  - Modeling concentrations of pollutants within the smoke plume for 272 days
  - Health risk assessment using locations of units within smoke plumes
- **RAND**
  - Comprehensive literature review to describe health effects





# Pesticides

- **OSAGWI**
  - Development of exposure scenarios from interviews and operational information (430 completed interviews)
  - Modeling of airborne concentrations and subsequent doses
  - Dose assessments and risk characterization
- **CHPPM**
  - Analysis of flybait samples from Saudi Arabia: Snip and Stimukil
- **RAND**
  - Survey of 2,000 veterans to validate scenarios and determine prevalence
  - Comprehensive literature review






# Investigation Observations

- One person's experience doesn't constitute the whole story
- First explanation isn't necessarily the only explanation
- Don't sacrifice accuracy or completeness to hurry a conclusion





# **One person's experience doesn't constitute the whole story**

- **Kuwaiti Girls School**

- Individual testified to Congress and PAC
- Participated in only 1 of 4 examinations of tank; briefed on one other; no knowledge of other two
- Not aware of subsequent testing or results
- Did not review Fox Tapes; not trained on the Fox
- Not informed of the medical outcome of UK injury





# First Explanation isn't Necessarily the Only Explanation

- **ASP Orchard**
  - Fox Vehicle Commander testified to Congress and PAC
    - » Detailed, believable, subject matter expert
  - EOD team interviewed by IAD
    - » Different account of events
  - Fox Vehicle Commander's assessment -- "Definitely"
  - EOD Team's assessment -- "Definitely Not"
  - IAD's assessment -- "Unlikely"





# **Don't sacrifice accuracy or completeness to hurry a conclusion**

- **Kuwaiti Girls School**

- PAC: chemical warfare agent exposure
  - » Announced publicly despite Special Assistant protests
  - » Conclusion relied primarily on the testimony of one witness
- UK witnesses had never been interviewed
- Key aspects not addressed
  - » E.g., reason for tank presence and contents
- Did not possess key evidence
  - » Fox Tapes obtained from UK







# Prioritization

- **Initially** -- focus on possible chemical warfare exposures
  - High visibility, e.g., Khamisiyah
  - Congressional or PAC testimony (Czech-French, Mustard Injury, Marine Cases, Kuwaiti Girls School)
  - Oversight direction (investigate all M256 and Fox detections)
  - Presidential direction leave no stone unturned
  - Veterans' concerns and questions
- **Now** -- dealing with more complex issues
  - “Low hanging fruit” gone
  - Environmental incidents involve more witnesses, more scenarios, more modeling, more external coordination
  - Completed review of 66 major studies, reports, and books to identify potential cases
  - Veterans' concerns and questions still powerful drivers






# Case Status

- **Published 10 Case Narratives, 4 Information Papers**
  - Khamisiyah, Camp Monterey, Marine Breaching, Al Jubayl, SCUD Piece, Mustard Exposure, ASP/Orchard, Al Jaber, Tallil AB, Kuwaiti Girls School, Fox Vehicle, M8A1 Alarm, MOPP, Medical Surveillance (Navy Fwd Lab)
- **5 Cases about to be published**
  - An Nasariyah, Czech/French, Depleted Uranium, Oil Well Fires, 11th Marines
- **18 Cases under active investigation**
  - Al Muthanna, Biological Warfare, Cement Factory, Edgewood Tapes, Injured Marine, M256A1 Miscellaneous Incidents, Possible Terrorist Attack on Al Jubayl, Possible Post-War Chemical Weapon Use, Ukhaydir, Pesticides, Medical Recordkeeping, Vaccine Administration, Medical Surveillance





# Case Status

- **6 Information Papers in preparation**
  - Air Campaign, Chemical Weapons Sites, M256A1, Munitions Markings, RFNA, SCUD
- **18 Cases undergoing preliminary analysis before turning them over to cognizant Division**
- **28 cases in data compilation stage**





# The End?

**How do we know when we are finished?**





# IAD Organization

