MILITARY TOXIC EXPOSURE GUIDE

A RESOURCE GUIDEBOOK ON NAVIGATING LIFE AFTER WAR

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EDUCATE
ADVOCATE
EMPOWER

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Design by Aaron Provost

Burn Pits 360
Veterans Organization
A 501(c)(3) Non-Profit

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BurnPits 360 would like to thank
Philips for supporting this guide.

PHILIPS

INTRODUCTION

PURPOSE OF THIS GUIDE

This guide represents the latest findings from our advocacy work and research efforts, and we hope that it will serve as a valuable resource for military personnel and veterans who were exposed to burn pits, as well as for their families, healthcare providers, and the public at large.

In the following pages, we will explore the health effects of burn pit exposure in detail, including the types of toxic fumes that were released by the burn pits, and the health conditions that have been linked to exposure. We'll continue to update the guide with the latest findings from our research. We will also provide information on how military personnel and veterans can get help with their health, including resources for treatment and support.

Our goal is to provide the information and resources that military personnel and veterans need to manage their health, and to raise awareness about the dangers of burn pit exposure. We hope that this book will serve as a valuable resource for everyone who is concerned about the health effects of burn pit exposure.

A NOTE FROM THE FOUNDERS

Burn Pits 360 Founders Le Roy and Rosie Torres with their service dog Hope at the Burn Pits 360 headquarters in Robstown, Tx.

In 2007 Le Roy was deployed to Camp Anaconda where he was exposed to one of the largest burn pits in operation. He returned home plagued with illnesses, denied health care forcing us to exhaust our life savings then forced out of his Career as a State Trooper for the Texas Dept. of Public Safety – Highway Patrol Service until he was forced to resign due to war-related illnesses following his 14 years of state service. After losing two careers and a journey of delay and denial for compensation & healthcare, Le Roy and I co-founded Burn Pits 360

In 2010, at the Torres home and residences across this nation, we and other families were dealing with the invisible wounds of war.

We began advocating for service members and their families plagued by this generation's Agent Orange. We were living proof of the damage already done. We demanded accountability. As Americans we knew that it is our moral obligation to take care of our nation's war heroes. We advocated with the hopes that one day VA would find a way to work this issue into their budget.

Our government decided to leave our fate at the hands of Congress. While families buried their loved ones, we were left to fend for ourselves.

We urged the President and Congress to stop the injustice immediately and stand in solidarity with us.

In 2014 after years of our advocacy, President Barack Obama signed a bill into law

Introduction

A Note From The Founders (Continued)

that mandated the VA to create the Airborne Hazards Open Burn Pits Registry.

We went on to win a monumental Uniformed Services Employment and Reemployment Rights Act (USERRA) case before the United States Supreme Court.

Our staunch efforts led to the passage of the 2013 Open Burn Pit Registry bill, the Texas Service Member and Veteran Open Burn Pit Registry Act (HB 306). After years of advocacy, We stood alongside President Joe Biden as he signed the Sergeant First Class (SFC) Heath Robinson Honoring Our Promise to Address Comprehensive Toxics (PACT) Act of 2022.

We continue our work through our own independent registry which allows registrants the ability to later report a decline in health function, and their survivors to record mortality information including the cause of death.

It is our hope and prayer that this guide will serve as a beacon of hope as you navigate life after war. After years of advocacy we organized documents that have helped serve as a guide in accessing specialized healthcare and benefits.

Le Roy & Rosie Torres

Letter from Dr. Tomaska, Scientific Advisory Board Chair

As the Chairman of the Burn Pits 360 Scientific Committee, I am pleased to contribute to this guidebook on the health effects of burn pit exposure. The use of burn pits as a means of waste disposal on military bases during the wars in Iraq and Afghanistan has raised serious concerns about the long-term health effects of exposure to toxic fumes. Despite growing evidence of the dangers of burn pit exposure, many military personnel and veterans are still seeking answers about the best course of action for treatment and the impact on their health.

The Burn Pits 360 Scientific Committee was created with the purpose of providing evidence-based information on the health effects of burn pit exposure. Our Committee is composed of experts in the field of environmental health, toxicology, and epidemiology as well as healthcare professionals and advocates for military personnel and veterans. We are dedicated to understanding the health impacts of burn pit exposure and to providing the information and support that military personnel and veterans need to manage their health.

The Committee's focus is to provide a comprehensive understanding of the long-term health effects of burn pit exposure and to help identify emerging trends in monitoring and treatment for those affected. Additionally, the Committee works to gather scientific evidence on the long-term impacts of burn pit exposure, including the mechanisms of toxicity and the potential health consequences.

The Committee's advocacy work is critical for raising awareness about the dangers of military toxic exposures and advocating for the health needs of impacted veterans. Through its efforts, the Burn Pits 360 Scientific Committee is working to ensure that military personnel and veterans receive the support and resources they need to manage their health, educate their medical providers on the issue and to address any health problems related to their toxic exposures.

We are proud of the progress we have made in our research and advocacy efforts, but there is still much work to be done. We need your help to raise awareness about this important issue and to ensure that military personnel and veterans receive the care and support they need.

I would like to thank our Committee members for their continued dedication and hard work, and I encourage you to learn more about the work of Burn Pits 360 and to support our efforts in any way that you can.

Sincerely,

Julie Tomaska

Julie Tomaska, PhD
Chairman, Burn Pits 360 Scientific Committee

ABOUT BURN PITS 360

Our Mission

Burn Pits 360 seeks to ensure that no other service member or Veteran suffers his fate and to ensure that we would make the invisible visible. One of the greatest disservices to those who served is to become invisible. Over the years, Rosie and Le Roy established an independent Veterans exposure registry where thousands of war heroes and their families reported the same suffering and denial of health care and benefits. Le Roy and Rosie combined bring over 40 years of experience working with Veterans and active duty service members and families. Rosie worked for the U.S. Department of Veteran Affairs for 23 years. Together they co-founded Burn Pits 360.

Independent

Burn Pits 360 is the only 501(c)(3) nonprofit organization to offer an independent burn pit exposure registry in which family members can record the names of warriors who served the nation but have passed away due to illnesses from toxic injury. We are entirely dedicated to improving post-deployment health outcomes for current and former military personnel, especially those who are suffering from emerging, complicated, or unexplained post-deployment health concerns arising from service in our post-9/11 wars and previous conflicts.

BURN PITS 360 LEADERSHIP

CORE TEAM

CPT LE ROY TORRES
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U.S. Army Reserve (Ret.) /
Texas Highway Patrol
Governance Board Member

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Co-Founder
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TAMMY A. BUTTERICK, PHD
Health Science Specialist
Minneapolis VA
Health Care System

WHAT'S BEEN DONE?

2009 Military Personnel War Zone Toxic Exposure Prevention Act, (HR 2419) introduced by Bishop and Shea Porter.

2010 Burn Pits 360 establishes independent registry.

2013 President Obama signs national burn pit registry into law.

2017 Burn Pits 360 hosts the 1st Annual Burn Pit Congressional Hearing.

2018 Burn Pit Hearing, U.S. House of Representatives, Committee on Veterans Affairs, Subcommittee on Health.

2019 Burn Pits 360 hosts the 2nd Annual Burn Pit Registry in Washington.

2019 Gov. Abbott signs HB 306 Texas Open Burn Pit Registry Act.

2020 Military Toxic Exposure Virtual Conference with Grunt Style.

2021 Press Conference in D.C. – Warfighter Presumptive Bill.

2022 After veterans stand Firewatch at the US Capitol, the PACT Act bill is passed. Burn Pits 360 at the signing of this historic law.

2023 VA and Burn Pits 360 Military Toxic Exposure Conference

"...burn pits inherently create health issues and should be terminated as soon as practical, in order to protect the life, health and safety of USECENTCOM and coalition personnel."

-CENTCOM Contingency Environmental Guidance, 2009

The Tactical Value of Asking Why

By Dan Sharp

"Ours is not to question why,
ours is but to do and die."
-Lord Alfred Tennyson

I am so tired of hearing this quote. This phrase, or some variation of it, has been regurgitated ad nauseum to our troops, and in modern considerations, it is hypocritical at best. At worst, it can be used as manipulative propaganda.

During my nearly 12 years as a Marine Corps Infantryman, the chaotic nature of war made communication a matter of life and death. Long bouts in Iraq and Afghanistan taught me how important it is to understand the reasoning behind assignments. "Commander's Intent" is arguably the most important portion of any combat briefing you will receive.

It is a concise statement of purpose and outlines the desired endstate of any mission. Essentially, it acknowledges the "Fog of War" and allows subordinate leaders flexibility to accomplish the overall goal. This also allows a measure of mutual understanding among maneuvering units. Blindly pursuing arbitrary checkpoints, despite all evidence of their irrelevance, is a terrible leadership philosophy. That is not just my opinion, it is military doctrine.

Official USMC photograph by Cpl. Samuel D. Corum

According to Marine Corps Doctrinal Publication 1 (MCDP-1), the entire reason leaders are required to provide their commander's intent is to allow all subordinates the freedom to exercise their judgment. All Marines are expected to take initiative when faced with obstacles and unforeseen circumstances. In fact, subordinates are encouraged to offer feedback on plans, until a final decision is reached. Marine Corps history is filled with examples of individuals recognizing a point of failure, and improvising until they


Photo provided by Dan Sharp

accomplished the commander's intent. Additionally, understanding the reasoning behind the actions of higher, and adjacent units, will make you a more effective leader. This also includes learning the motivation behind your enemy's actions, and why they would attack certain objectives, or use specific tactics. Using all information at hand to make a sound and timely decision can save lives.

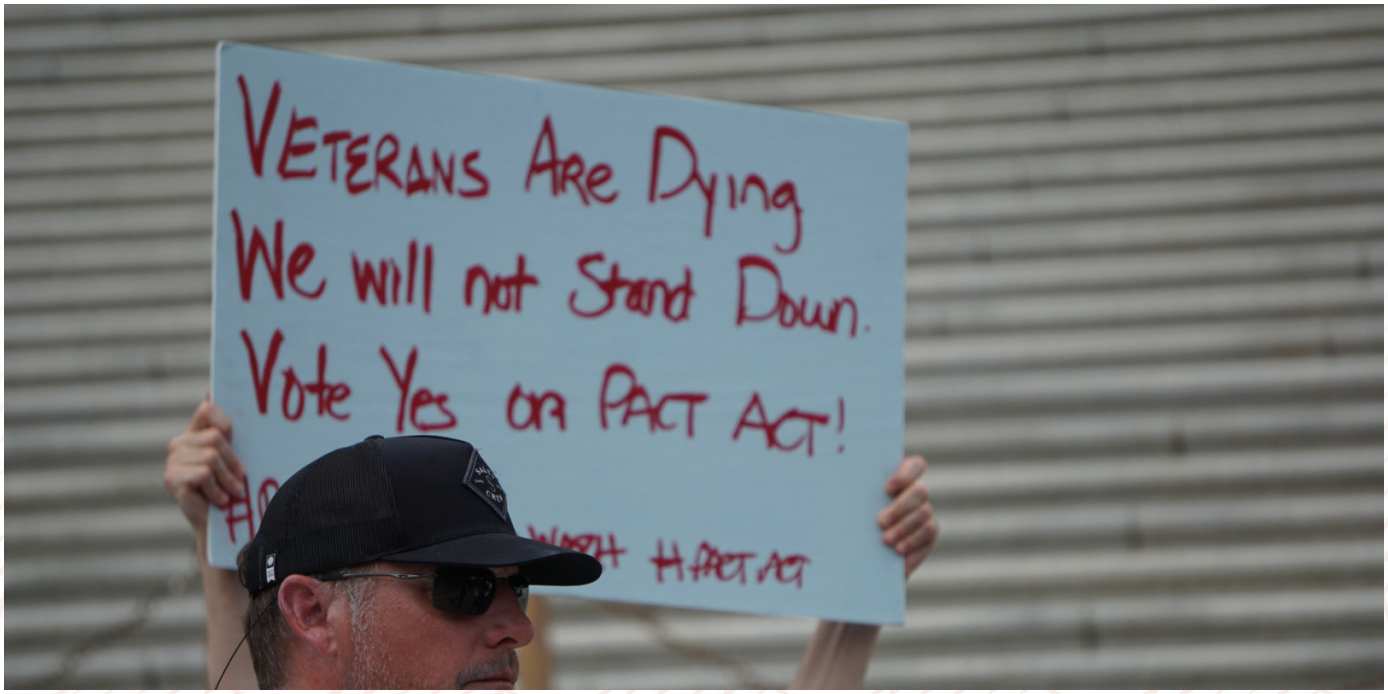
Clearly there will be times where instant willingness and obedience to orders is critical. However, the ability to disregard personal safety to follow orders is developed and enhanced by the cohesion of a unit. A private flippantly asking "Why are we doing this?" during a lull in operations, may seem like subtle belligerence, but an experienced leader can use that as an opportunity to expand that subordinate's understanding of the situation. Thus, making them a greater asset to the team. It may also identify a lack of clarity in the brief, which will afford the leader an opportunity to ensure the rest of the unit understands the desired endstate, avoiding potential failures in communication. It takes a certain type of bravery to admit a lack of understanding, and leaders ought not to reactively punish this, but embrace the benefits of an inquisitive mind. Afterall, MCDP-1 also states that "yes-men" should not be tolerated.

From a more pragmatic perspective, it is vital that leaders have a factual understanding of battlefield tangibles. The allocation of assets, status of logistics, and availability of munitions paints a realistic picture of the situation at hand. Many times, in Iraq and Afghanistan, I was forced to make the most of what resources I was given. To the occasional chagrin of my Marines, I endeavored not to be wasteful, even if doing so would have made life much easier in the moment. This approach frequently allowed me to facilitate the completion of arduous or impromptu follow-on missions, in compliance with my commander's intent.

"...We must seek accountability,and we must be brave enough to continue to ask the question 'why?'"

Typically, when this happens Marines get medals pinned to their chest. So why is it that you are rewarded for understanding the "why" behind a mission at the tactical level, but so many troops were left scratching their heads when the "why" was questioned at the strategic and operational level?

Introduction



Burn Pits 360 photo of the PACT Act Firewatch in 2022 on the steps of Capitol Hill.

For that matter, so many of us found ourselves asking "why?" at so many levels.

- "Why are we sleeping right next to where we burn trash?"
- "Why are these companies not following the regulations for disposing of toxic material?"
- "Why won't the VA recognize the data that links burn pits to health issues?"
- "Why are so many politicians so hesitant to take a stand and help us?"
- "Why has it been decades before certain conditions were covered?"

My entire military career, I was taught, nay ordered, to question the "why" behind things, so I could better accomplish the overall mission. Yet, when those questions inconvenience those at a higher level, they somehow become taboo?

There are multiple generations of warfighters that were trained to understand the importance of knowing why we did things. Blindly following orders can lead to ruin, evident by the fact that certain policies ruined the health of a large portion of combat veterans who suffered from toxic exposure. Much of this can be traced back to a lack of accountability, for those who were supposed to be explaining why we did things.

To paraphrase ancient wisdom, a prudent man sees danger and takes refuge, but a simple one keeps going and suffers for it. Running headlong into a minefield for the sake of following orders is inadvisable. As such, we must not blindly follow paths that lead to detrimental consequences. The lack of critical questioning at higher levels has perpetuates a system where the well-being and treatment of veterans are secondary to optics and public perception.

Now that we have buried countless brothers and sisters due to cancer and other illnesses, many truths are coming to light, and they paint an ugly, and familiar picture. Those who served in previous generations

know the challenges of asking for transparency, and accountability to be prioritized. As the Editor-in-Chief for Pop Smoke Media, I can attest that it is incredibly difficult to get even the simplest official statement regarding mundane occurrences on military installations. Let alone matters that have implications to millions of veterans. This is unacceptable, and we as a community, cannot let the next generation suffer the same "sling and arrows of outrageous fortune" that so many previous veterans have endured.

Transparency seems like a simple request. Granted, there are complex factors involved with ensuring the safeguarding of protected information. However, anyone who has spent any amount of time dealing with our government knows that few officials want to go on the record, lest they eventually be called to testify. Please, if you have time, watch a few press briefings at the Pentagon and see how many times the spokesperson side steps a direct question. This elusive behavior led to the creation of a drinking game among groups of veterans watching the disastrous withdrawal of Afghanistan be downplayed and minimized. This disconnect can make it incredibly challenging for our nation's heroes to get honest, straightforward answers about important matters. They are proud to have served their country, but so many veterans are left feeling jaded by the difficulties of obtaining basic information. Not only is this disrespectful to their service, but it also paints a bleak picture for what the next generation is to expect.

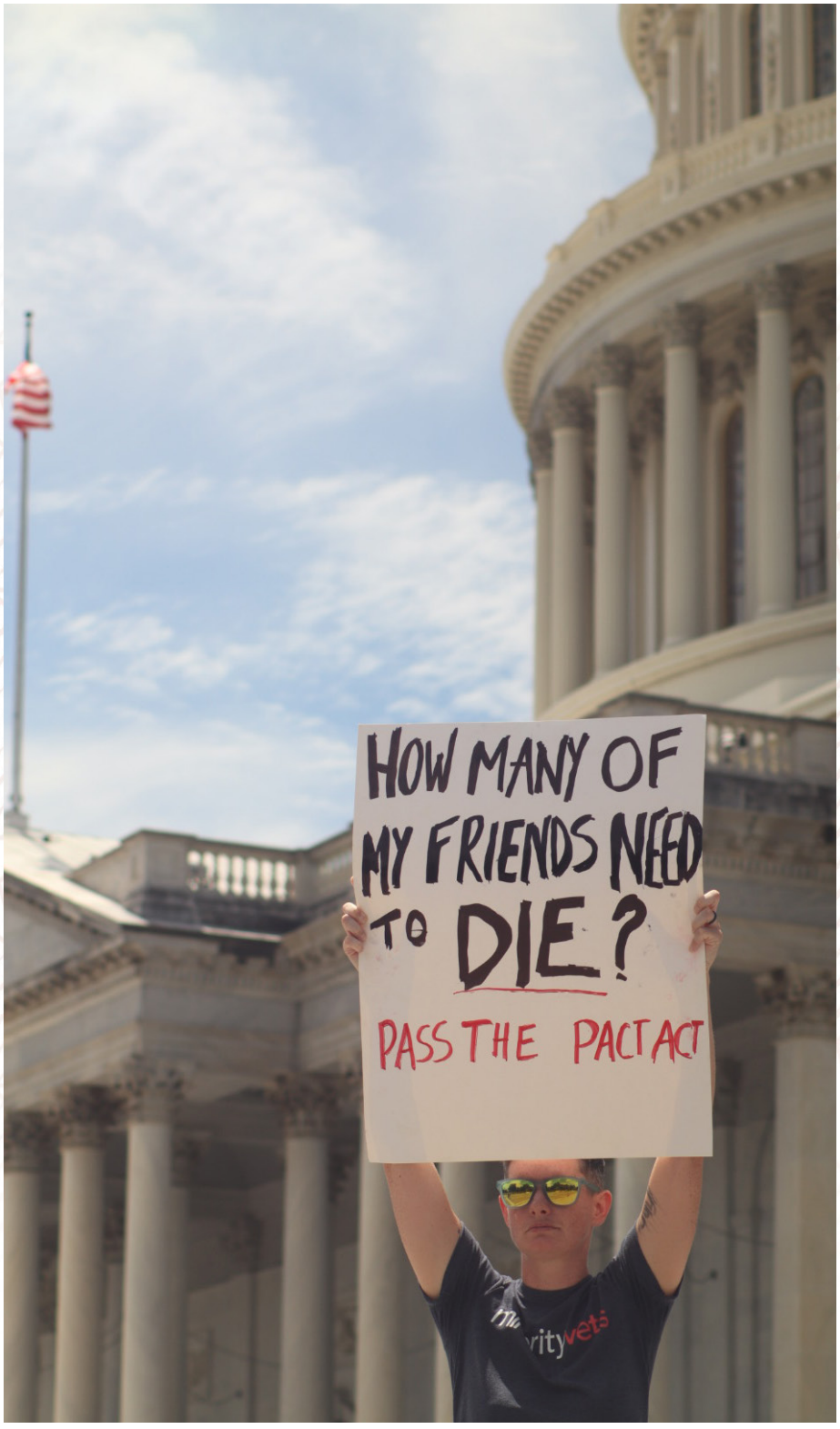
In 1932, two-time Medal of Honor recipient, Major General Smedley Butler USMC, was famously dejected after his service and even helped lead massive protests in Washington DC. The availability of information in modern times

Introduction

has shined a light on many other recent first-hand accounts of service members who felt let down or betrayed by their government. Not only is this heartbreaking, but it should also instill a strong sense of worry about the future of our national security. If you ever get a chance to talk to E5 on recruiting duty, ask their honest opinion about the state of things. Not the canned "corporate approved" answer they are required to give, but the real answer. You may dismiss this as anecdotal evidence to your own peril, but many of the recruiters that I have spoken to are miserable. The fact that recruiting numbers have been dangerously low is readily available data, and has made life extremely hard for those who are responsible for recruitment.

Why is that?

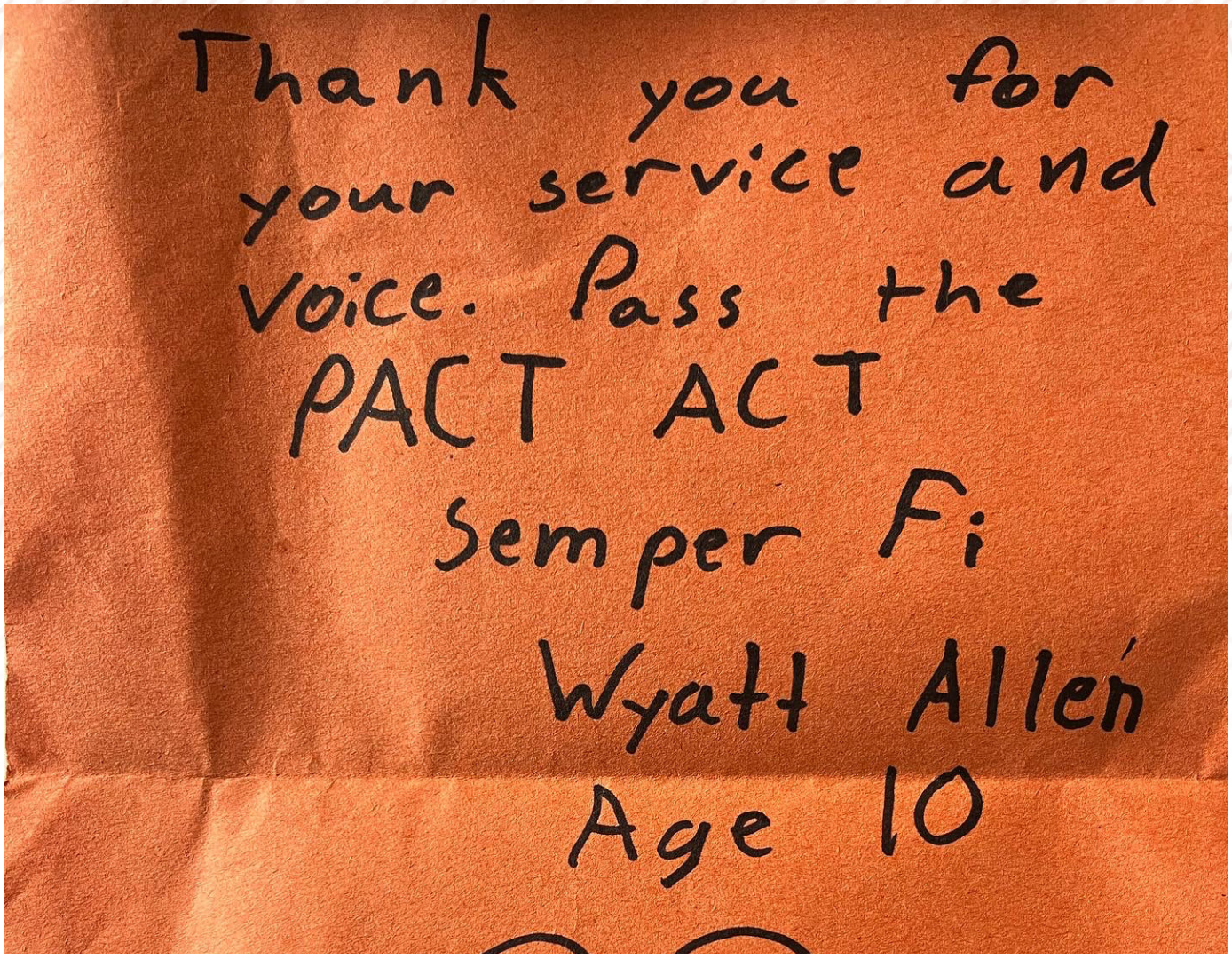
Maybe it is because potential recruits remember seeing Global War on Terrorism veterans having to sleep on the steps of the capitol building to get healthcare legislation passed for toxic exposure? Maybe it is because they see veteran legislators, refusing to offer input or advocacy for such a bill? Or perhaps it's because they see opponents to such legislation, offering boisterous criticisms, but offering no real solutions to the overall problem?



Firewatch 2022. Burn Pits 360 and supporters stayed on the steps of Capitol Hill until the PACT Act was passed after lawmakers blocked its passing earlier that week. The bill would eventually be signed into law by President Joe Biden on August August 9th, 2022.

From the perspective of someone with their whole life ahead of them, this might seem like an undesirable profession. Particularly because you must sign a contract that legally removes your ability to quit if you are being forced to work in conditions that lead to toxic exposure. According to an April 2023 article by Jim Garamone for DOD News, titled 'Vice Chiefs Talk Recruiting Shortfalls, Readiness Issues,' it has been reported that recruiting numbers have come up short by several thousands, further highlighting the struggles faced by recruiters in maintaining readiness.

Although a full comprehensive solution to this problem is multifaceted and could span several chapters, I offer only one. Veterans, and like-minded citizens, must come together and continue to ask for accountability. Once specific problems have been identified, there must be a unified effort to demand accountability of our public leaders. It is imperative that the attention, and emphatic efforts, of the military community be channeled to those in a position to make change. This mainly consists of exercising constitutional rights to inform our elected officials of our displeasure with the way veterans have been



Letter from Wyatt Allen, age 10, sent to Burn Pits 360 supporters during Firewatch 2022.

treated. During the efforts to pass the Sergeant First Class Heath Robinson Honoring our Promise to Address Comprehensive Toxics Act of 2022 (PACT Act) into law, we were fortunate to gain some key legislators as invaluable allies. Unfortunately, we also learned not all representatives were as altruistic. In several meetings, we were simply told that unless an issue was perceived to potentially impact an office's reelection bid, sparse time or effort would be invested towards it, beyond the rhetoric that supports campaign donations. During my time walking the halls of the capitol, several staffers told me they would not participate in any discussion of toxic exposure healthcare, because none of their constituents had called them to say it was a concern. It is a disheartening reality, but it is merely an obstacle for us to adapt and overcome. We know our intent is to help veterans, and this allows us flexibility necessary to engage a system that is designed to mute voices of opposition.

Thomas Jefferson once said, "I never considered a difference of opinion in politics, in religion, in philosophy, as cause for withdrawing from a friend." Thus, I believe diverse perspectives are essential to the respectful exchanges that foster greater understanding. As you might expect, it is hard to abide regurgitated fallacies that have fermented within the confines of an echo chamber. However, all points of merit will expand my understanding of a situation and strengthen my own argument. We must seek our commonalities and join together to end the stoic romanticism of blindly following orders. It is imperative that we continue the dialogue and incorporate the lessons of our past to create a future where veterans are prioritized and respected. For the sake of those Americans yet to be born, we must seek accountability, and we must be brave enough to continue to ask the question "why?".

The opinions expressed are those of the author, and theirs alone. They do not reflect the opinions or views of the DOD, BurnPits 360, Pop Smoke Media, or any affiliates.

“As our Motto says, ‘the war that followed us home’, has been a reality and dreadful journey for many veterans and their families. These invisible wounds of war took a toll on my health and cost me my military and civilian career as a Texas State Trooper. We should not have to bear the burden alone due to illnesses or injuries caused by an instrumentality of war.”

Le Roy Torres
Co-Founder of Burn Pits 360

EXPOSURE OVERVIEW

What are Burn Pits?

It all burned...

Sgt. Richard Ganske, 84th Combat Engineer Battalion uses a bulldozer to manuever refuse into the burn pit.

Hundreds of tons of waste produced on Coalition bases in Iraq and Afghanistan were burned in football field-sized hollows of roiling flame and unceasing smoke, propelled by jet and diesel fuels – as American soldiers lived, worked, and slept on site.

It is well established that burning regular household waste releases carcinogens, neuro-disruptors, and heavy metals that can have devastating effects on the lungs, heart, brain, thyroid, and immune system. Both federal and state government agencies have compiled decades of research linking these toxins to diseases and birth defects. It's why using burn pits on American soil is against the law.

During the OEF and OIF wars, government contractors burned up to 227 metric tons of hazardous waste at forward operating bases using jet fuel in large ground pits. Items burned included: batteries, medical waste, amputated body parts, plastics, ammunition, human waste, animal carcasses, rubber, chemicals, & more. Exposure to these toxins has caused a traumatic impact on the lives of our service members and their families. Some of the devastating health conditions suffered by Veterans exposed include: neurological disorders, pulmonary diseases, rare forms of cancer, and many unexplained symptoms. There have been thousands of deaths resulting from the invisible wounds of war.

The items depicted here are just some of the hazardous items burned in the pits. Typically, they were burned using JP8 Fuel.

Known Burn Pit Locations

AFGHANISTAN [99]:

Bagram Air Base
Camp Bastion Airfield
Camp Blessing, Kunar Province
Camp Clark, Khost Province
Camp Dwyer, Helmand Province
Camp Eggers, Kabul
Camp Kabul, Kabul
Camp Leatherneck, Helmand Province
Camp Nathan Smith, Kandahar City
Camp Nolen, Kandahar
Camp Phoenix, Kabul
Camp Spann, Balkh Province
COP Able Main, Kunar Province
COP Bak, Khost Province
COP Bakwa, Farah Province
COP Baylough, Zabul Province
COP Chergotah, Khost Province
COP Comanche, Sherzad
COP Ghundy Ghar, Kandahar Province
COP Miri, Ghazni Province
COP Monti, Kunar Province
COP Munoz, Paktika Province
COP Najil, Laghman Province
COP Reilly, Helmand Province
COP Sayed Abad, Wardak Province
COP Senjaray, Senjaray
COP Sherzad, Nangarhar Province
COP Sperwan Ghar, Panjwayi District
COP Spin Ghar, Nawa-i-Barakzai
COP Talukan, Panjwayi Province
COP Tere Zayi, Khost Province
COP Xio Haq, Laghman Province
COP Yousef Khel, Paktika Province
COP Zerok, Paktika Province
COP Zormat, Paktika Province
Firebase Nawa, Ghazni Province
Firebase Saenz, Helmand Province
Firebase Tycz, Uruzgan Province
FOB Airborne, Wardak
FOB Altimur, Logar Province
FOB Anaconda, Uruzgan Province
FOB Andar, Ghazni Province
FOB Apache, Zabul Province
FOB Arian, Ghazni Province
FOB Asadabad, Konar Province
FOB Azizullah, Kandahar Province
FOB Bostick, Kunar Province
FOB Baylough, Zabul Province
FOB Camp Wright, Asadabad
FOB Chapman, Khost Province
FOB Cobra, Oruzgan Province
FOB Delaram, Delaram District
FOB Delhi, Garmsir
FOB Edinburgh, Helmand Province
FOB Farah Airfield, Farah Province
FOB Fenty, Jalalabad
FOB Geronimo, Helmand Province
FOB Ghazni, Ghazni Province
FOB Hansen, Marja District
FOB Hero, Helmand Province
FOB Howz-E-Madad, Kandahar
FOB Joyce, Kunar Province
FOB Kalagush, Nuristan Province
FOB Lagman, Qalat

Known Burn Pit Locations (Continued)

FOB Lightning, Paktika Province
FOB Lwara (also known as FOB Tillman)
FOB Maimaneh, Faryab Province
FOB Marjah, Helmand Province
FOB Mehtar Lam, Northern Laghman
FOB Morales-Frazier, Kapisa Province
FOB Orgun-East, Paktika
FOB Pasab, Kandahar Province
FOB Payne, Helmand Province
FOB Price, Helmand Province
FOB Qalat, Zabul Province
FOB Ramrod, Kandahar
FOB Rhino, Registan Desert
FOB Salerno, Khost Province
FOB Shank, Logar Province
FOB Sharana, Paktika Province
FOB Shikvani, Sangin District
FOB Shindand, Herat Province
FOB Smart, Zabul Province
FOB Tarin Kowt, Uruzgan Province
FOB Thunder, Paktika Province
FOB Tiger II, Kandahar Province
FOB Torkham, Nangarhar Province
FOB Walton, Kandahar
FOB Waza Kwah, Paktika Province
FOB Wilson, Kandahar
FOB Wolverine, Qalat
FOB Wright, Kunar Province
ISAF HQ, Kabul
Jalalabad
Kabul
Kandahar Airfield, Kandahar
Patrol Base Boldak, Helmand Province
PRT Lashkar Gah, Helmand Province
Shindand Air Base, Herat

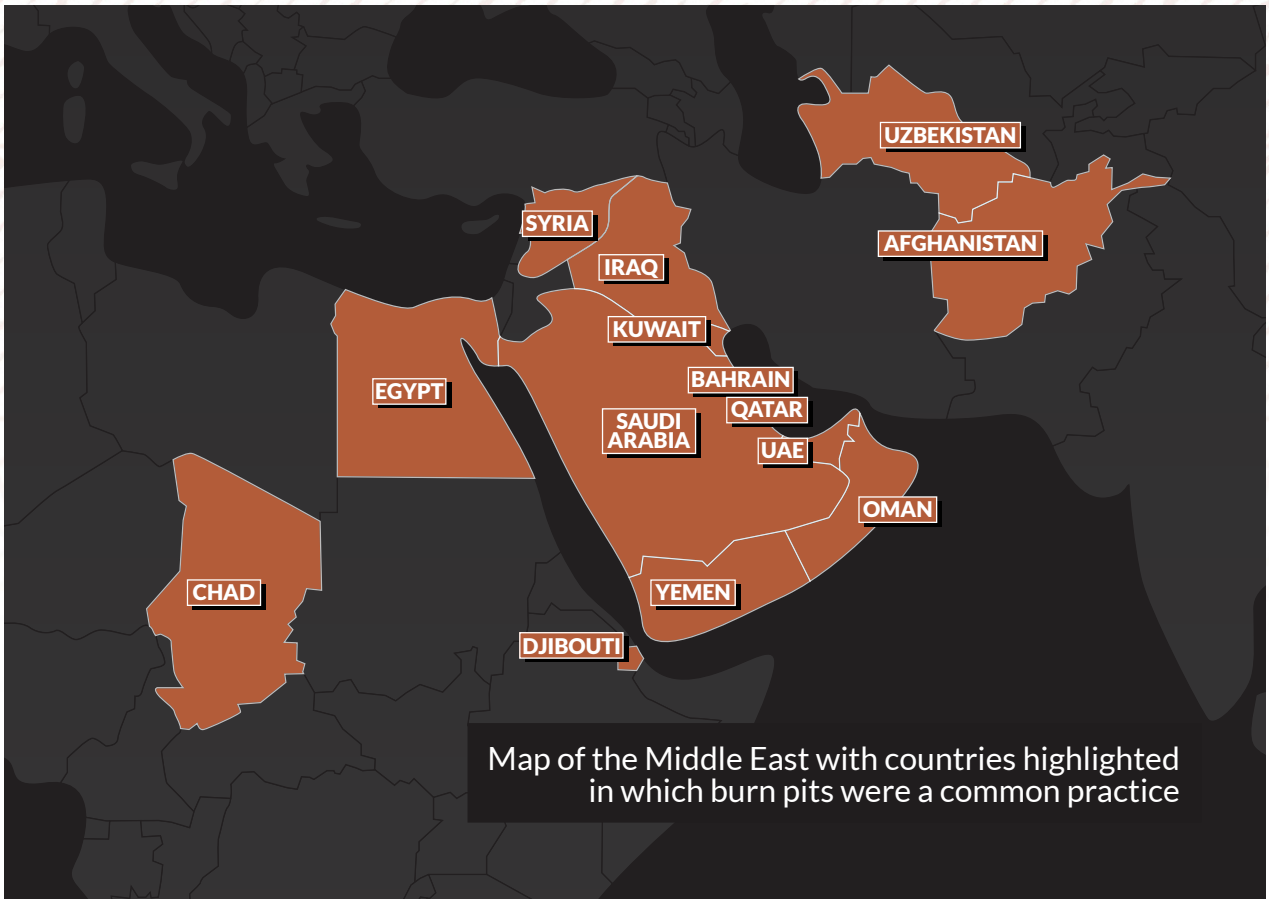
IRAQ [152]:

Abu Ghraib Prison
Al Asad Air Base
Al Basrah Air Base
Al Hillah
Al Kasik
Al Qaim
Al Quo
Al Taqaddum (Ridgeway)
Al Taqaddum Air Base, Fallujah
Ali Air Base (formerly Talil Air Base)
Al-Sahra aka Camp Speicher
Ar-Rutbah, Al Anbar Governate
Baghdad Green Zone
Baghdad International Airport (BIAP)
Baiji Oil Refinery
Balad Air Base
Camp Adder, Talil Air Base
Camp Al Taji (Army Airfield)
Camp Anderson, Diwaniyeh
Camp Ar Ramadi
Camp Babylon, Al Hillah
Camp Baharia, Fallujah
(also known as FOB Volturno)
Camp Blue Diamond
Camp Bucca, Umm Qasr
Camp Cedar I and II, Talil Air Base
Camp Chesty, Kut Al Hayy Air Base
Camp Corregidor, Ramadi
Camp Courage, Mosul
Camp Cropper, BIAP
Camp (FOB) Delta, Al Kut
Camp Dogwood, al-Iskandaryah
Air Base (also known as FOB Chosin)
Camp Echo, Diwaynia
Camp Fallujah, Fallujah
Camp Gannon, Husaybah
Camp Geiger
Camp Habbaniyah, Al Taquaddum
Camp Hurricane Point, Ar Ramadi
Camp Liberty (aka Camp Trashcan)
Camp Loyalty, Al Rasheed Air Base
Camp or LSA Anaconda
Camp Ridgeway, Al Taquaddum
Camp Rustamiyah
(formerly Muleskinner)
Camp Sather, Baghdad
Camp Scania, Nippur
Camp Shield, Baghdad

Exposure Overview

Known Burn Pit Locations (Continued)

Camp Slayer, Baghdad
Camp Speicher aka Al Sahra Airfield (formerly FOB)
Camp Striker, BIAP
Camp Victory, BIAP
Combat Outpost, Ramadi
COP 763, Sadr City
COP Apache, Adhamiyah
COP Carver, Salman Pak
COP Ellis, Barwana
COP Falcon, Ramadi
COP Knight/IMN, Mosul
COP Meade, Camp Liberty
COP Milladge, Diyala
COP North, Iraq-Syria border
COP Nepsa, Hechel
COP Ocotal, Anah
COP Rawah, Al Anbar Province
COP Rock, Mosul
COP Sword, Ramadi
COP Viking, Al Anbar
COS Garry Owen, Maysan Province
Diwaynia
Fallujah
FOB Al Walid
FOB Bernstein, Tikrit
FOB Black, Fallujah
FOB Brassfield-Mora, Samarra
FOB Caldwell, Diyala Province
FOB Cedar II, Nasiriyah
FOB Cobra, Diyala Province
FOB Danger, Tikrit
FOB Delta, Kut
FOB Dibis (outside Kirkuk)
FOB Dogwood (between Fallujah and Karbala)



Map of the Middle East with countries highlighted in which burn pits were a common practice

Known Burn Pit Locations (Continued)

FOB Endurance
(Qayyarah Airfield West/
Saddam Air Base)
FOB Falcon, Camp Al-Saqr
FOB Freedom, Kirkuk
FOB Gabe, Baqubah
FOB Gaines Mills, Kirkuk
FOB Garry Owen, Al Amarah
FOB Grizzly / Camp Ashraf
FOB Hammer, Besmaya District
FOB Headhunter
(renamed FOB Independence, 2004)
FOB Hit, Al Anbar
FOB Hope, Sadr City
FOB Hotel, Najaf
FOB Hunter, Maysan Province
FOB Independence,
Baghdad (formerly FOB Headhunter)
FOB Iskandariyah, Babil Governate
FOB Iskan, Iskandariva
FOB Kalsu, Iskandariya
FOB Loyalty, Baghdad
FOB MacKenzie, Samarra
FOB Mahmudiyah
FOB Marez, Mosul
FOB McHenry, Hawija
FOB Normandy, Muqdadiyah
FOB Oryan, Balad
FOB Packhorse, Tikrit (later
renamed FOB Remagen)
FOB Paliwoda, Balad
FOB Razor, Samarra
FOB Rough Rider, Kirkuk
FOB Rustamiyah, Baghdad
FOB Summerall (Bayji and Taji)
FOB Sykes (Tall' Afar)
FOB Viking, Fallujah
FOB Warhorse, Baqubah
FOB Warrior, Kirkuk
Green Zone or International Zone
Habbaniyah Airbase
Haditha Dam
Haditha City
Jalibah Airfield
JSS Babil
JSS Tarmiyah
JSS Zafaraniyah
Kalsu
Kirkuk
Kurdish Support Camps, No. Iraq
Kut Al Hayy Airbase
Logistics Base Seitz
(aka Log Base Seitz near Baghdad
International Airport)
LSA Bushmaster, Najaf
Mosul
Navstar
OP Horea, Ar Ramadi
Patrol Base Andrea, Sulaimanya
Patrol Base Dolby, Adwaniyah
Patrol Base Doria, Kirkuk
Patrol Base Dragon, Rushdi Mullah
Patrol Base Hamiyah, Babil
Patrol Base Lion's Den, Babil
Patrol Base Murray, Bagdad Province
Patrol Base Olson, Samarra
Patrol Base Stone, Kalsu
Patrol Base Uvanni, Samarra
Patrol Base Woodcock, Ad Dawr
Q-West, Qayyarah Airfield
West/Saddam Air Base
Radio Relay Point 9, So. Iraq
Radio Relay Point 10, So. Iraq
Radio Relay Point 11, So. Iraq
Radio Relay Point 12, So. Iraq
Sahl Sinjar Airfield, Nineveh
Scania
Taji
Talil Air Base (now is Ali Air Base)
Tall' Afar

Known Burn Pit Locations (Continued)

KUWAIT [14]:

Ali Al Salem
Camp Arifjan (Camden Yards)
Camp Buehring (formerly
Camp Udairi)
Camp Commando
Camp Coyote
Camp Doha
Camp Matilda
Camp New York
Camp Pennsylvania
Camp Spearhead
Camp Victory
Camp Victory South
Camp Virginia
Kuwait Naval Base

SOMOLIA [4]:

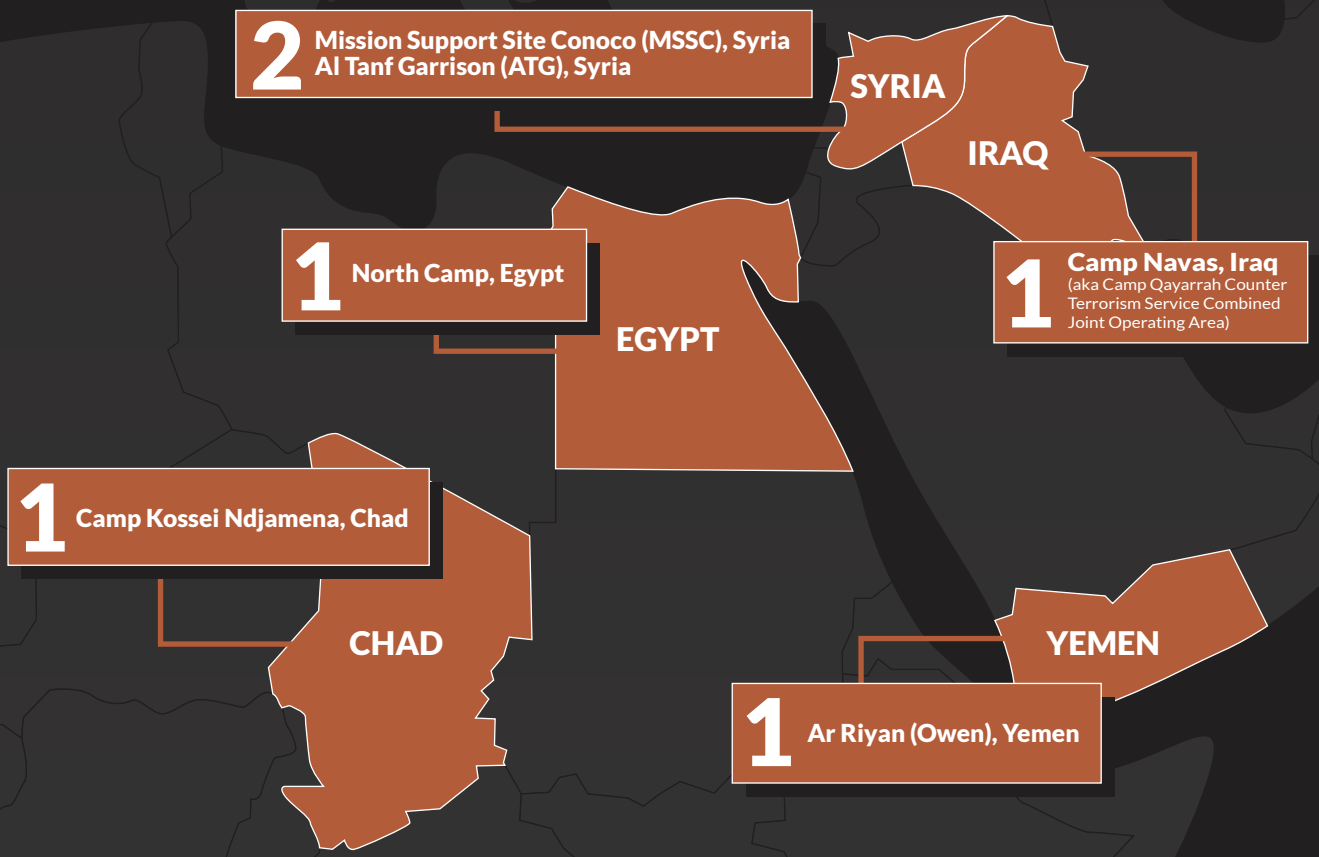
Mogadishu
Kismayo
Baidoa
Baledogle

OTHER SITES [28]:

Albania (Operation NOBLE ANVIL)
Al Dhafra Air Base,
United Arab Emirates
Al Udeid Air Base, Qatar
Batman, Turkey
Bosnia-Herzegonvia
(Operation Joint Endeavor, HHC 17th Signal Battalion, 22nd Signal Brigade, 1995-96)
Camp Able Sentry, near Skopje, former Yugoslavian Republic of Macedonia
Camp Bondsteel, Ferizaj, Kosovo
Camp Monteith, Gnjilane, Kosovo
Diego Garcia
(near U.S. Navy Support Facility)
Djibouti, Africa
Doha, Qatar
Ganci Air Base, Bishkek,
Kyrgyzstan (also known as Manas Air Base and Transit Center at Manas)
Haiti
(Operation Uphold Democracy, 1994)
Incirlik Air Base, Adana, Turkey
(Operation Northern Watch)
King Abdul Aziz Airbase,
Dhahran, Saudi Arabia
King Khalid Military City, Saudi Arabia
(Oct. 1990 to June 1991)
Jordan
(FOB at classified location during Iraq War)
MFO North Camp, Sinai Peninsula, Egypt (1991)
MFO North Camp, Sinai Peninsula, Egypt (1994 and 1995)
MFO South Camp, Sinai Peninsula, Egypt (1991 and 1992)
MFO South Camp, Sinai Peninsula, Egypt (2010 and 2011)
Morón Air Base, Sevilla Spain
(Operation Desert Storm/Shield, 1991)
National Training Center,
Fort Irwin, California
(reported between 1993-96)
Shahbaz Air Base, Jacobabad, Pakistan
Shamsi, Pakistan
Muzaffarabad, Pakistan
(Earthquake relief, Naval Mobile Construction Battalion 74, 2005)
Taif Air Force Base, Saudi Arabia
Tuzla Air Base, Bosnia-Herzegovina

END OF KNOWN BURN PIT SITES

Known Active Burn Pit Locations



DoD data shows that six contingency locations are still using open air burn pits in 2022, all of which are operated by host nations or local defense forces.

SUMMARY OF BURN PITS, SANDSTORMs, IEDS, METALS, AND OTHER AIRBORNE HAZARDS

Since the 1980's, the Environmental Protection Agency's (EPA) has been aware of the damaging effects burning garbage has on human health. In a 1980 health-assessment of a municipal solid waste incinerator in Ohio, the EPA found dangerous levels of toxins and particulate matter in the surrounding residential area. Further, it was discovered that the proximity to the garbage-burning incinerator spiked the predicted lifetime cancer risks of the nearby neighborhoods and, thus, triggered immediate regulatory activity.

There are several toxins and particulates that are released during the burning process: (1) carcinogenic polycyclic aromatic hydrocarbons; (2) volatile organic compounds,which can worsen existing respiratory and heart conditions causing further damage to the liver, kidneys, and central nervous system; (3) hexachlorobenze, which can cause cancer and lead to kidney and liver damage; and (4) other small particulate matter. Inhalation of small particulate dust (~10 µg/m3) can trigger asthma even in the absence of allergic sensitization.

Most U.S. soldiers deployed during Operation Iraqi Freedom and the other campaigns involved in the War on Terror served extended or multiple tours of duty. The unique climate of Iraq and the Middle East leads to frequent and severe sandstorms and exposed these soldiers to unfavorably dusty conditions. Measured air pollution levels in the ambient air of Balad, Iraq, between Jan. 2004 – Apr. 2006, were recorded several 10-fold higher than acceptable particulate limits.

Additional sundry airborne hazards include: inhalation of improvised explosive devices (roadside bombs), vehicle improvised explosive devices, blast overpressure from friendly and combatant mortar fire leading to shear stress on delicate lung tissue, as well as tank fired rounds, sandstorms, known as Shamal and Sharq, oil well and sulfur fires, and seasonal pollen counts.

REGISTRIES

Burn Pits 360 Registry

The registry is a comprehensive and confidential health survey that will allow us to better understand the health outcomes of our service men and women exposed to Airborne Hazards and burn pits.

The data collected through the registry will allow us to collaborate with independent researchers and medical institutions to track and investigate illness, recovery and deaths. This will allow us to publish data that will help us develop clinical guidelines, identify health care gaps, develop specialized health care models and develop data driven policy and legislation. Most importantly this data will help save the lives of millions of war fighters.

The Burn Pits 360 Registry also tracks mortality outcomes of registrants, a statistic not currently tracked by the VA.

Find it at:

https://burnpits360.org

VA Registry

The VA established their registry in 2014 to put data to work for Veterans and help us better understand the potential health effects of exposure to airborne hazards during military service. By joining the registry, you can provide information that will help VA provide better care to all Veterans.

Find it at:

https://veteran.mobilehealth.va.gov/AHBurnPitRegistry/

Why Two Registries?

In 2013 Congress enacted Public Law 112-260, directing the Department of Veteran Affairs to establish and maintain the Airborne Hazards and Open Burn Pit Registry for Service Members who may have been exposed to toxic airborne chemicals and fumes generated by open air burn pits.

At the time, the VA's stance was that research did not show evidence of long-term health problems from exposure to burn pits. The VA registry also does not permit service members to submit updated health information or for a dependent to submit a death entry by proxy.

Burn Pits 360 established our own voluntary independent registry to monitor the health of war fighters exposed to deployment related toxic exposures such as burn pits. The Burn Pits 360 registry allows eligible Veterans and active service members to document their exposures, report health concerns, update information on changes to comorbidities through an online questionnaire that allows us to access information about the health, legal, or social service needs of registrants and thus follow up with individuals to provide critical resources, referrals, or direct care.

While the PACT Act has passed, veterans and service members exposed to burn pits have immediate needs. And failure to connect to a provider or advocate and obtain vital information bridging the gap between unmet needs and service delivery access can leave warriors frustrated, isolated, and with a continued loss in quality of life and potentially premature death.

If you're a Veteran with symptoms you suspect may be related to environmental exposures or airborne hazards, we encourage you to sign up for the Airborne Hazards and Open Burn Pit Registry, and speak to your primary care physician. Even without symptoms, consider signing up if you served in Operations Desert Storm/Desert Shield, New Dawn, Iraqi Freedom, or Enduring Freedom. Your participation helps put data to work for Veterans, to better understand the potential health of effects of exposure to airborne hazards during military service.

WE URGE SERVICE MEMBERS TO SIGN UP FOR BOTH REGISTRIES.

“We went there to find weapons of mass destruction. And when they weren’t there, we made our own.”

Jon Stewart,
The Problem with War With Jon Stewart,
2022

HEALTH IMPACTS

COMPILED FROM BURN PITS 360 REGISTRY AND CURRENT MEDICAL LITERATURE

According to recent estimates by the U.S. Government Accountability Office and the Department of Defense, there were at least 230 burn pits in Iraq and Afghanistan. Further, it is estimated over 3.5 million military personnel have been exposed to the burn pits.[1] The largest of these burn pits were located at Balad Air Base, Iraq, (Camp Anaconda) and comprised 10-acres of burning trash 24-hours a day, 365-days a year, from 2003-2009.

All U.S. military personnel entered Iraq by flying into this airbase. Many military personnel, private contractors, and civilian workers have all been negatively affected by burn pits and as a result, have developed several serious health issues. Under certain conditions, military personnel can go to the VA for support, however, oftentimes private contractors and civilian workers have nowhere to turn.[2]

> "...10-acres of burning trash 24-hours a day, 365-days a year..."

Although there is a registry for veterans and military personnel, there needs to be a more comprehensive registry for contractors and civilian workers who developed health problems due to their burn pit exposure. Ideally, a comprehensive registry would facilitate remedial action and benefits for those who manifested illness and provide a record for those who develop related issues later in life.

Moreover, the fallout from burn pits will likely continue into future generations. This was the first campaign that saw women serving in combat and studies have shown maternal exposure to airborne hazards has been linked to preterm birth and restricted fetal growth. Meaning that, deployed women exposed to these conditions run the risk of having future childbirth issues. There has also been evidence of increased birth deformities for Iraqi children born near burn pit locations.[3]

Sources:
[1] A. Bennet (2019). America's 'sacred obligation.' 3.5 Million Troops Exposed to Airborne Toxins Since 9/11. ConnectingVets.com
[2] D. Sagalyn (2014). Photo Essay: The Burn Pits of Iraq and Afghanistan. PBS (2014)
[3] Melody, S. M., Ford, J., Wills, K., Venn, A., & Johnston, F. H. (2019). Maternal exposure to short-to medium term outdoor air pollution and obstetric and neonatal outcomes: A systematic review. Environmental Pollution, 244, 915-925.

Veteran Profile

Will Thompson

SSG William Thompson served 23 years with the U.S. Army and WVARNG. Deploying twice to Iraq.

Stationed at Camp Stryker on the Victory Complex, his symptoms started with frequent coughing while still in Iraq, which doctors treated as allergies.

Upon returning to Fort Stewart, he was found to have bilateral pneumonia. Following up one week later it was found he had pulmonary fibrosis with pulmonary nodules. He had the lungs of an 80 year old coal miner. Admitted to WRAMC, he was tested for 6 months to include an open lung biopsy and informed he had titanium, magnesium, iron and silica in his lungs.

Will was diagnosed with Hypersensitivity Pneumonitis with Pulmonary fibrosis. Denied additional benefits because his disease didn't fit the parameters and were not classified as combat related, he became a staunch advocate for The PACT ACT. He passed away December 2021. He is survived by his wife and two children.

Reported Symptoms

Sourced from Burn Pits 360 Registry
Not all symptoms listed are recognized by the VA and DOD

Listed in alphabetical order

A
Abdominal Pain
Autoimmune

B
Behavioral Changes
Blisters
Blood in Stool
Blood in Urine
Blurred Vision
Body Aches

C
Chest Pain
Choking
Confusion
Congestion
Constipation
Chronic Cough

D
Diarrhea
Diarrhea-Severe
Difficult or Painful Urination
Difficulty Breathing
Difficulty Swallowing
Dizziness
Drooling
Drowsiness

E
Edema
Excessive Tearing
Eye Problems
(including discomfort, irritation, and
redness)

F
Facial Paralysis
Fatigue
Fever
Foot and/or Ankle Pain
Foot and/or Leg Swelling
H
Headache
Heartburn
Heart Palpitations
High Blood Pressure
Hip Pain

I
Indigestion
Infertility

J
Joint Pain

K
Knee Pain

Reported Symptoms

Sourced from Burn Pits 360 Registry
Not all symptoms listed are recognized by the VA and DOD

Listed in alphabetical order

L
Loss of Appetite
Loss of Muscle Control
Loss of Smell
Low Back Pain
Low Blood Pressure
Low Vitamin D
Low Testosterone

M
Memory Loss
Migraines
Minor Skin Irritation
Muscle Twitching

N
Nasal Congestion
Nausea or Vomiting
Neck Pain
Night Sweats
Numbness/Tingling in extremities

P
Paleness (pallor)
or Flushed or Yellowish Skin
Pelvic Pain: Female
Pelvic Pain: Male

R
Rapid Heart Rate
Rectal Bleeding
Reflux
Runny Nose

S
Seizures
Shortness of Breath
Shoulder Pain
Skin Changes
Skin Lesions or Rashes
Sleep Apnea
Sore Throat
Soreness/Stiffness in Joints
Stomach Cramps
Stomach Distension/Bloating
Sweating

T
Thirst (excessive)
Thyroid Imbalances
Trembling

U
Urinary Issues

W
Weakness
Wheezing

Veteran Profile

Amie M. Muller

Technical Sergeant Amie M. Muller served in the Active Duty Air Force in Security Forces, and in the Minnesota Air National Guard as a military photojournalist.

She deployed twice to Balad, embedded with a military intelligence squadron. At Balad, the burn pits were more than 10 acres in size. The pit burned at all hours and consumed 100 to 200 tons of waste per day. Amie's barracks were near the burn pits.

When she returned home in 2007, she began experiencing health problems that were unusual for a woman in her 30s. She felt fatigued and suffered from constant migraines. She then started to suffer from abdominal pain and gastrointestinal problems. When she was hospitalized for the pain, the doctors found a tumor on her pancreas.

Amie was diagnosed with Stage III pancreatic cancer, and nine months later she passed away. She was only 36. She is survived by her husband and three children.

Cancers Reported

Self Reported Illnesses
Sourced from Burn Pits 360 Registry
Not all cancers listed are recognized by the VA and DOD

Top 10 Reported Cancers

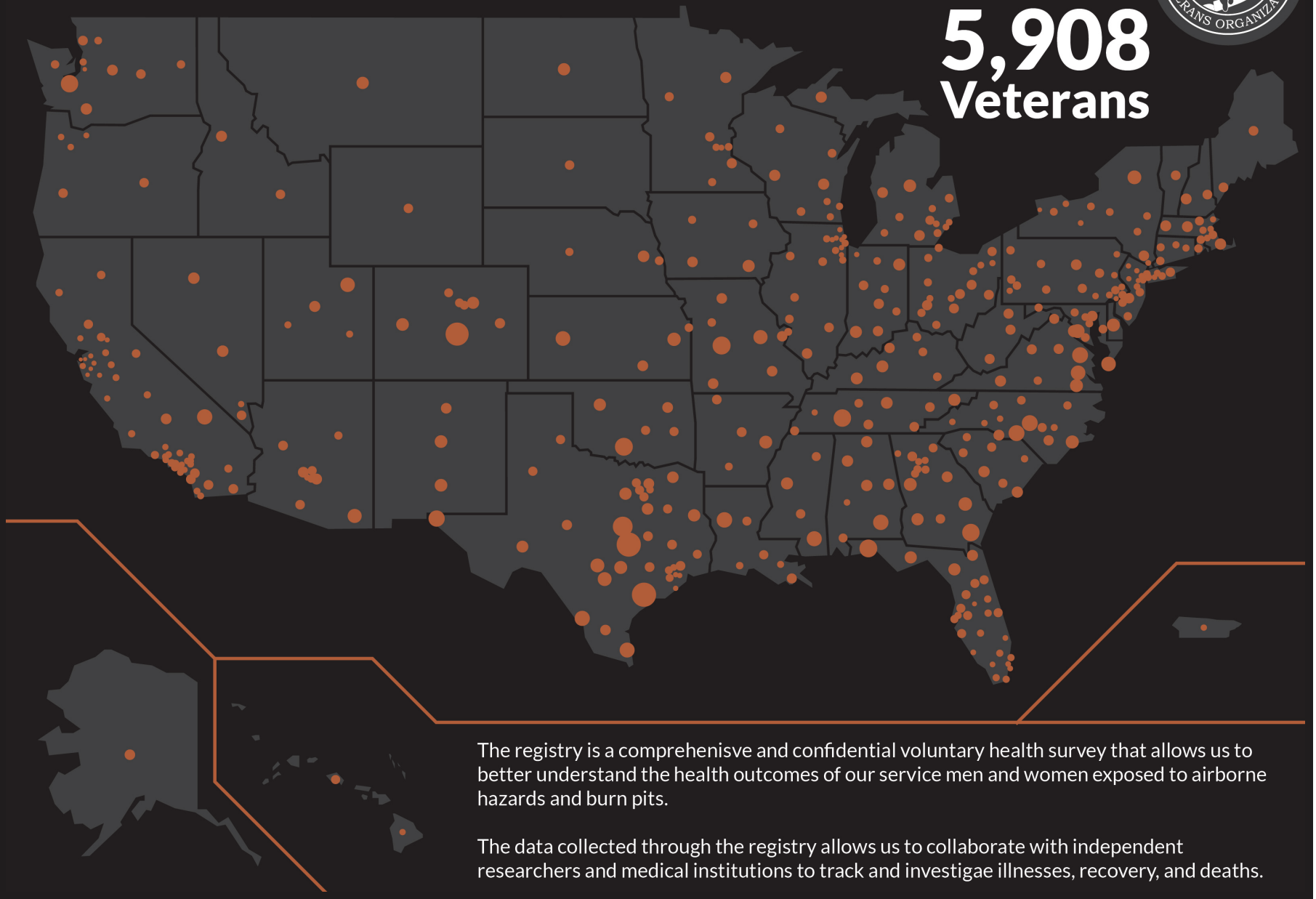
Skin
Brain
Esophageal
Leukemia
Lymphoma
Lung
Soft Tissue Sarcoma
Testicular
Prostate
Blood

Other Cancers (2011-2018)

Acoustic neuroma blastoma
Acute Lymphoblastic Lymphoma
Acute myeloid leukemia
Adenoid Cystic Carcinoma
Anaplastic Astrocytoma
Anaplastic Astrocytoma
Aplastic Anemia
Bladder
Breast Cancer
Chordoma - Skull base
Chronic Lymphatic Leukemia
Chronic Lymphocytic Leukemia b-cell Stage 0
Chronic Myelogenous Leukemia
Dermatofibrosarcoma Protuberans
Diffuse Large B-Cell Lymphoma
Dysgerminoma (Ovarian Cancer
Epithelial Mucinous Cancer (ovarian cancer)
Esophageal Leukoplasia
Ewings Sarcoma
Gastroesophageal adenocarcinoma
Glioblastoma
Hemochromatosis
Hepatoid adenocarcinoma
Hodgkins lymphoma
Large Cell Lymphoma
Liver
Lymphatic Cancer
Medulloblastoma
meningioma brain tumor
Neuroendocrine carcinoma
Non Hodgkins Diffuse Large Cell Lymphoma
Pancreatic
Polycythemia Vera
Renal Cell Carcinoma
Round Blue Cell
Soft tissue sarcoma
Soft Tissue, Leiomyosarcoma
Squamous cell mouth
Synovial sarcoma
Testicular
Thyroid

Burn Pits 360 - Burn Pit Registry Map

Based on data collected via the Burn Pits 360 Independent Registry 2010-2020.



The registry is a comprehenisve and confidential voluntary health survey that allows us to better understand the health outcomes of our service men and women exposed to airborne hazards and burn pits.

The data collected through the registry allows us to collaborate with independent researchers and medical institutions to track and investigae illnesses, recovery, and deaths.

Toxic exposure table

This Toxic Exposure Table is based on the VA Training Letter 10-03 which was created in 2010 in order to educate regional office employees about specific environmental hazards that presented potential health risks to service members and Veterans. It also provided guidance to VA employees on handling claims for disabilities that may have resulted from environmental hazards while on Active Duty. Finally the VA Training Letter 10-03 also provided "Fact Sheets" that could be used as a resource for VA examiners when they conduct Compensation and Pension (C&P) examinations. These "Fact Sheets" listed the identified toxic substances that service members were exposed to. We have compiled these toxic substances and included them in the exposure table below. Our scientific commitee reviewed the listed toxic substances and outlined the possible health effects that are currently supported by peer reviewed literature.

Chemical	Target Organs/Systems	Possible Health Effects
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)		
Acenaphthene	Liver and Kidneys	Irritation of nose, throat and lungs upon inhalation. May affect liver and kidneys(1).
Anthracene	Multisystem: Skin, blood, stomach, liver, intestines, lymph	Burning, itching and edema, a buildup of fluid in tissues, headaches, nausea, loss of appetite, inflammation or swelling of the stomach and intestines (2)
Benzo(a)pyrene	Hematological, Immunological, Neurological	Mucous membrane, irritation, dermatitis, bronchitis, cough, dyspnea, conjuctivitis, photosensitization, aplastic anemia, allergic reactions, keratoses, discoloration of the cornea and epithelioma lid margin in chronic exposure, pulmonary edema, reproductive effects and leukemia (9) Genotoxic effects
Benzo(b)fluoroanthene	Hematological, Immunological, Neurological	Probable human carcinogen. Has shown lung, skin, and liver cancers in animal models. Skin and eye irritation (10). **Breathing benzene can cause drowsiness, dizziness, and unconsciousness; long-term benzene exposure causes effects on the bone marrow and can cause anemia and leukemia. Benzene has been found in at least 1,000 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA)**

Toxic Exposure Table (Continued)

Chemical	Target Organs/Systems	Possible Health Effects
Benzo(k)fluoroanthene	Hematological, Immunological, Neurological	Probably carcinogen. Eye and skin irritant(11). **Breathing benzene can cause drowsiness, dizziness, and unconsciousness; long-term benzene exposure causes anemia and leukemia. Benzene has been found in at least 1,000 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).**
Dibenz (a,h) anthracene	Hematological, Immunological, Neurological	Dizziness, vomiting, unconsciousness, cancers, and other health effects from prolonged exposures. Genotoxic in mammalian cells (3).
Fluorene	Hematological	Decreased red blood cells, packed cell volume and hemoglobin (4).
Naphthalene	Hematological, Liver, Neurological, Lungs, Eyes	Headache, nausea, vomiting, diarrhea, malaise, confusion, anemia, jaundice, convulsions, coma, cataracts, retinal hemorrhage, hemolytic anemia (EPA, 5)
Pyrene	Lungs, Neurological, Renal, Liver, Bone/Marrow	Probable human carcinogen. Depending on type of exposure (i.e. Tar, Coal, Smoke, Etc.) cancer of the kidneys, lungs, skin, brain, and bone (12, 13)
Acenaphthylene	Multisystem Cancer	The CDC warns to treat all the material as carcinogens. Samples and unused standard (extremely small doses) are considered Toxic Waste. Health effect is cancerous (13).
Benzo(a)anthracene	Hematological, Immunological, Neurological	Probable carcinogen. Aplastic anemia and reproductive effects seen in animal models (14). **Breathing benzene can cause drowsiness, dizziness, and unconsciousness; long-term benzene exposure causes anemia and leukemia. Benzene has been found in at least 1,000 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).**

Toxic Exposure Table (Continued)

Chemical	Target Organs/Systems	Possible Health Effects
Benzo(g,h,i)perylene	Unknown	Unknown carcinogenicity (15). Similar PAH have demonstrated carcinogenic and reproductive effects in animal models (16). **Breathing benzene can cause drowsiness, dizziness, and unconsciousness; long-term benzene exposure causes anemia and leukemia. Benzene has been found in at least 1,000 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).**
Chrysene	Immune System	Increased risk for tumor and cancer exposure (17).
Fluoranthene	Skin, Bone, Lung, Brain, Neurological, Hematological	Irritant. Contact burns, nausea, tachycardia, cardiac arrhythmias, liver injury, pulmonary edema, and respiratory arrest (18). Potential endocrine disruptor. Limited evidence of carcinogenicity (19.)
Indo(1,2,3,-cd)pyrene	Multisystem Carcinogen	Increased allergic inflammation and airway eosinophilia (20). Carcinogen (21).
Phenanthrene	Unknown	Inadequate studies to determine carcinogenic properties. Currently considered a non-carcinogenic PAH, but structurally similar to carcinogenic PAHs (22). Irritant (23).
VOLATILE ORGANIC COMPOUNDS (VOC)		
Acetone	Neurological	CNS depression, dermatitis, dizziness, headache, eye irritation, nose irritation, irritation of the throat, delayed reaction times, nephropathy through oral exposure (EPS, 6).

Toxic Exposure Table (Continued)

Chemical	Target Organs/Systems	Possible Health Effects
Benzene	Immune System, Blood	Drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Eating or drinking foods containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, and death. Long-term exposure to high levels of benzene in the air can cause leukemia, particularly acute myelogenous leukemia, often referred to as AML (24). **Breathing benzene can cause drowsiness, dizziness, and unconsciousness; long-term benzene exposure causes anemia and leukemia. Benzene has been found in at least 1,000 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).**
Cholorodifluoromethane	Respiratory System, Cardiovascular System, Central Nervous System, Liver, Kidneys, Spleen	Irritation respiratory system; confusion, drowsiness, ringing in ears; heart palpitations, cardiac arrhythmias; asphyxia; liver, kidney, spleen injury; liquid: frostbite (26).
Acrolein	Cardiovascular, hematological, ocular, respiratory	Irritation of upper respiratory tract and eyes, respiratory congestion, dyspnea, cyanosis, fever (27). Supporession of immune responses, may play a role in lung cancer (28, 29)
Carbon Disulfide	Central nervous system, peripheral nervous system, cardiovascular system, eyes, kidneys, liver, skin, reproductive system	Chest pain, respiratory problems, vomiting and nausea, polyneropathy, nerve conduction abnormalities, increased risk of toxic encephalopathy, blisters with contact, cardiovascular disease, gastritis, retinopathy, Parkinson's-like symptoms (26, 31, 32).
Chloromethane	Liver, Neurological, Renal, Reproductive System	Dizziness, nausea, vomiting' visual disturbance, stagger, slurred speech, convulsions, coma; liver, kidney damage; potential reproductive, teratogenic effects, potential occupational carcinogen (26, 33).
Ethylbenzene	Developmental (effects during periods when organs are developing), Nerological	Cacinogen. Neurological changes or defects with birth. Potential increase for cancers related to exposures. Irritation of eyes, skin, mucous membrane; headache; dermatitis; narcosis, coma (26, 34, 35).

Toxic Exposure Table (Continued)

Chemical	Target Organs/Systems	Possible Health Effects
Hexachlorobutadiene	Eyes, Skin, Respiratory System, Kidneys	In Animals: Kidney failure, blood issues, fluid retention. Potential human carcinogen (26, 36)
Methylene Chloride	Eyes, Skin, Cardiovascular System, Central Nervous System	Irritation eyes, skin; lassitude (weakness, exhaustion), drowsiness, dizziness; numb, tingling sensations in limbs; nausea; potential carcinogen (26, 37).
Propylene	Unknown	CNS toxicity, hypersmolarity, hemolysis, cardiac arrhythmia, and lactic acidosis (38, 39, 40, 41).
Toluene	Immunological, Neurological, Eyes, Skin, Respiratory	Irritation to eyes, skin, nose, throat; choke, paroxysmal cough; chest pain, retrosternal soreness; nausea, vomiting, abdominal pain; bronchitis, bronchospasm, pulmonary edema; dyspnea, asthma; conjunctivitis, lacrimation; dermatitis, skin sensitization; ataxia, tremors, seizure, potential carcinogen; fetotoxic in animal studies (26, 42). Toluene may be contaminated with benzene (42, 43).
Hexane	Central Nervous System, Eyes, Skin, Respiratory Systems	Brain and neurological changes and effects, neuropathy (44). n-Hexane: irritation eyes, nose; nausea, headache; peripheral neuropathy: numb extremities, muscle weak; dermatitis; dizziness; chemical pneumonitis (aspiration liquid) (26). Hexane isomers: irritation eyes, skin, repiratory system; headache, dizziness; nausea; chemical pneumonitis (aspiration liquid); dermatitis (26).
m/p-Xylene	Eyes, Nose, Throat, Lungs, Skin, Brain	High levels of xylene in air can cause eye and mucous membrane irritation, dyspnea, and central nervous system effects, such as headaches, dizziness, forgetfulness, delayed reaction times, and poor coordination (ATSDR, 2007).
Pentane	Eyes, Skin, Respiratory System, Central Nervous System	Irritation eyes, skin, nose' dermatitis; chemical pneumonitis (aspiration liquid); drowsiness; In animals: narcosis (26).

Toxic Exposure Table (Continued)

Chemical	Target Organs/Systems	Possible Health Effects
Styrene	Multisystem	Changes in color vision, tiredness, feeling drunk, slowed reaction time, concentration problems, or balance problems. Hearing loss has been observed in animals exposed to extremely high concentrations of styrene. Changes in the lining of the nose and damage to the liver has also been observed in animals exposed to high concentrations of styrene. Irritation of eyes, nose, respiratory system; headache, confusion, malaise, drowsiness, unstead gait; narcosis; detatting dermatitis; possible liver injury; reproductive effects. Anticipated human carcinogen (26, 45).
TOXIC ORGANIC HALOGENATED DIOXINS AND FURANS		
1,2,3,4,6,7,8 HPCDD	N/A	Eye irritation, chloracne, liver damage. Insufficient data to support carcinogenic properties (46).
1,2,3,4,7,8,9 HPCDF	Multisystem Carcinogen	Carcinogen
1,2,3,4,7,8 HXCDF	Multisystem Carcinogen	Carcinogen
1,2,3,6,7,8 HXCDF	Multisystem Carcinogen	Carcinogen
1,2,3,7,8,9 HXCDF	Multisystem Carcinogen	Carcinogen
1,2,3,7,8 PECDF	Multisystem Carcinogen	Carcinogen, skin cancer, lung cancer, brain cancer.
2,3,4,7,8 PECDF	Multisystem Carcinogen	Carcinogen
2,3,7,8 TCDF	Multisystem Carcinogen	Carcinogen
Octachlorodibenzofuran	N/A	No human data to support carcinogenic properties found from this chemical
1,2,3,4,6,7,8 HPCDF	Brain, Central Nervous System, Lungs, Others not specified due to lack of evidence	ALS, Cancer
1,2,3,4,7,8 HXCDD	Unknown	Carcinogen

Toxic Exposure Table (Continued)

Chemical	Target Organs/Systems	Possible Health Effects
1,2,3,6,7,8 HXCDD	Unknown	Carcinogen
1,2,3,7,8,9 HXCDD	Unknown	Carcinogen
1,2,3,7,8 PECDD	Unknown	Acute toxicity, long term exposure toxic
2,3,4,6,7,8 HXCDF	Eyes, Mucus Membranes, Other Soft Tissues and Moist Organs	Eye irritation, serious eye damage, long lasting harmful effects to aquatic life are noted, acute toxicity.
2,3,7,8 TCDD	Developmental (teratogen), Immune, Hepatic, Lymphatic, Respiratory Systems	Allergic dermatitis, chloracne, lung cancer, soft tissue sarcomas, lymphoma, stomach carcinoma; GI distress In animals: carcinogen, hemorrhage, kidney damage, liver damage. Eye irritant, porphyria, possible reproductive effects, possible teratogenic effects (7, 8).

Toxic Exposure Table (Continued)

DIOXIN-LIKE CHEMICALS	
Octachlorodibenzo-p-dioxin	Of the dioxins and furans measured in the U.S. representative subsamples of NHANES 1999-2000, 2001-2002, and 2003-2004, octachlorodibenzo-p-dioxin typically was present in the highest concentration, but contributed little to the TEQ, with the other commonly detected dioxin and furan congeners being more than eight-fold lower in concentration. Levels of octachlorodibenzo-p-dioxin that were similar to slightly higher than those in these NHANES subsamples were seen in a representative pooled sampling New Zealander residents aged 15 years and older obtained during 1997-1998 and also in a small convenience sample of German residents aged 18-71 years in 1996 (Bates et al., 2004; Papke et al., 1998; CDC, 2013). Similar levels were also found in 232 Belgian blood donors in 2000 (Debacker et al., 2007)
Hexachlorodibenzo-p-dioxins	The three major hexachlorodibenzo-p-dioxins are assigned equal TEF values, but the 1,2,3,6,7,8-hexachlorodibenzo-p-dioxin often demonstrated multifold higher concentrations than the other two hexachlorodibenzo-p-dioxin; about six times higher in the NHANES 2001-2002 subsample (CDC, 2013). The unadjusted geometric mean levels of the 1,2,3,6,7,8-hexachlorodibenzo-p-dioxin in 2003-2004 and in 2001-2002 were 34.6 vs 17.2 pg/g of lipid, respectively. The geometric mean levels of 1,2,3,6,7,8-hexachlorodibenzo-p-dioxin in the 2001-2002 subsample were slightly higher than levels in either the German or New Zealand study mentioned above (Bates et al., 2004; Papke et al., 1998). A convenience sample of Japanese men and women aged 20-76 years studied during 1996-1997 also showed lower median levels than levels in the NHANES 2001-2002 subsample (Arisawa et al., 2003; CDC, 2013).
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	In prior NHANES surveys, 1,2,3,7,8-pentachlorodibenzo-p-dioxin concentrations were nearly 60-fold lower than octachlorodibenzo-p-dioxin levels (at the comparable percentiles) (CDC), 2013), but because of a 10,000-fold greater TEF (equal to that of TCDD), the contribution of 1,2,3,7,8-pentachlorodibenzo-p-dioxin to the total TEQ would be about 160 times greater than the octachlorodibenzo-p-dioxin. Levels of 1,2,3,7,8-pentachlorodibenzo-p-dioxin for the total population at the 95th percentile in the NHANES 2001-2002 and 2003-2004 subsamples were 15.8 pg/g and 11.0 pg/g lipid, respectively. In 1996, a convenience sample of German residents aged 18-71 years showed that levels of 1,2,3,7,8-pentachlorodibenzo-p-dioxin at the 95th percentile were 9.9 pg/g lipid (papke et al., 1998). The 95th percentile of a group of workers with distant past trichlorophenol exposure was about twice as high as the 95th percentile for adults in NHANES 2001-2002 (CDC, 2013; Collins et al., 2006).

Toxic Exposure Table (Continued)

Mono-ortho-substituted PCBs	Of the mono-ortho-substituted PCB congeners, the most frequently detected in general population studies are PCBs 118 and 156. Of these, PCB 118 levels were higher than levels of PCB 156 in the NHANES 1999-2000, 2001-2002, and 2003-2004 subsamples, although PCB 156 contributes more to the TEQ because its TEF is five-fold greater than the TEF of PCB 118. Although these PCBs are relatively less potent (i.e. , lower TEFs), their contribution to the total TEQ in the U.S. population is about 25% (Ferriby et al., 2007) since they are present in much higher concentrations than are the coplanar PCBs, dioxins, and furans. In a convenience sample of the U.S. population in 1988 (Patterson et al., 1994), levels of PCB 118 were five-fold higher than in the NHANES 1999-2002 subsamples (CDC, 2013). Comparable levels of PCB 156 levels in NHANES 1999-2000 were slightly lower than those reported for a Canadian population study in 1994 (Longnecker et al., 2000). In a referent population of 311 residents in northern Italy during 2001-2003, the 95th percentile levels of PCB 156 and PCB 118 were two to three times higher than for the NHANES 1999-2002 subsamples (Apostoli et al., 2005; CDC, 2013). Levels of PCB 156 and PCB 118 were slightly higher in a Swedish study of 150 men than in the NHANES 1999-2000 subsample, possibly due to higher fish intake in the Swedish populations (Glynn et al., 2000; CDC, 2013). However, in fish-consuming Japanese men and women studied during 1996-1997, PCB 118 levels at the 75th percentile were similar to levels in the NHANES 2001-2002 subsample (Arisawa et al., 2003). Finding a measurable amount of one or more of the polychlorinated dibenzo-p-dioxins, dibenzofurans, coplanar or mono-ortho-substituted biphenyls in serum does not mean that the level of one or more of these chemicals causes an adverse health effect. Biomonitoring studies of serum polychlorinated dibenzo-p-dioxins, dibenzofurans, coplanar or mono-ortho-substituted biphenyls provide physicians and public health officials with reference values so they can determine whether or not people have been exposed to higher levels of polychlorinated dibenzo-p-dioxins, dibenzofurans, coplanar or mono-ortho-substituted biphenyls than levels found in the general population. Biomonitoring data can also help scientists plan and conduct research on exposure and health effects.

Veteran Profile

David McCracken

David McCracken grew up in New Castle, Pennsylvania. He was the son of a Korean War veteran and a homemaker. As a child, David loved school and was highly intelligent. He went on to be an industrial hygienist and his love for the military drove him to enlist in the Army.

David and Tammy were married for 16 years and met while working at the United States Military Academy in West Point, NY. According to his wife Tammy, David was always fit and lean. He was an avid weightlifter and runner before he left for his tour in Iraq. When David returned from Baghdad in 2009, he developed a dry cough. The cough persisted and soon headaches began plaguing him. His situation worsened as he started to develop cognitive issues, disorientation, and confusion. In 2011, doctors discovered an aggressive brain tumor. He was only 46.

David passed within a few months of the tumor's discovery. He is survived by his wife and three young children. Tammy suspects that David's exposure to burn pits caused his tumor. David was stationed at the same base and time frame as Former Vice President Joe Biden's son, Beau Biden. Both men developed glioblastoma multiforme, a lethal form of brain cancer.

Veteran Profile

Le Roy Torres

I served a dual role as a Texas State Trooper (14 years) and a United States Army Soldier (23 years). I was deployed to Balad, Iraq from 2007 to 2008 where I was exposed to toxic chemicals from one of the largest open-air burn pits which was 10 acres in size.

Returning home from war only to face a system of delay and deny, an employer unwilling to accommodate a war injury resulting in the involuntary end of my police career, foreclosure letters, repossession notices and denial of compensation claims.

As a military combat Veteran and First responder my mission to serve is etched in my soul and heart and I will do so until that flag is draped over my coffin. Since returning from Iraq I have had over 250 medical visits and was hospitalized immediately upon returning from Iraq.

The lack of specialized health care services from the VA and DOD forced me to exhaust my life savings to access specialized health care. I was diagnosed with war lung disease (constrictive bronchiolitis), a toxic brain injury that has the same effects of CTE brain injury found in NFL football players and many other illnesses that debilitate my body's ability to function.

The mental and emotional trauma is from being shamed and treated like a defendant having to prove that I should have the right to keep my job after being injured in war. My employer The Department of Public Safety came to my house and stripped me of my credentials and my patrol car in front of my family like a criminal. I was punished. for serving my country.

THE SERGEANT FIRST CLASS HEATH ROBINSON PROMISE TO ADDRESS COMPREHENSIVE TOXICS (PACT) ACT OF 2022

What is the PACT Act?

The Sergeant First Class Heath Robinson Promise to Address Comprehensive Toxics (PACT) Act of 2022

is a new law that expands VA health care and benefits for Veterans exposed to burn pits and other toxic substances. This law helps us provide generations of Veterans—and their survivors—with the care and benefits they've earned and deserve.

The PACT Act :

- Expands and extends eligibility for VA health care for Veterans with toxic exposures and Veterans of the Vietnam era, Gulf War era, and Post-9/11 era.
- Expands eligibility for benefits for Veterans exposed to toxic substances.

PACT Act Key Components

The Act **expands and extends eligibility for VA health care for Veterans with toxic exposures** and Veterans of the Vietnam era, Gulf War era, and Post-9/11 era.

VA **will improve the decision-making process** for determining what medical conditions will be considered for presumptive status.

Every enrolled Veteran **will receive an initial toxic exposure screening** and a follow-up screening every five years. Veterans who are not enrolled, but who are eligible to enroll, will have an opportunity to enroll and receive the screening.

VA health care staff and claims processors will receive **toxic exposure-related education and training.**

The Act **requires research studies** on the mortality of Veterans who served in Southwest Asia during the Gulf War; Post-9/11 Veteran health trends; and Veteran cancer rates.

The Act will help VA **build a stronger, more skilled workforce** to meet the growing demand for benefits and services.

The Act **authorizes 31 new facilities** across the country, providing greater access to VA health care.

What is the PACT Act? (Continued)

Gulf War Era and Post-9/11 Eligibility

If a Veteran served in any of these locations and time periods, they are eligible for the new Gulf War-related presumptions.This includes the airspace above any of these locations.

On or After August 2, 1990:

- Bahrain
- Iraq
- Kuwait
- Oman
- Qatar
- Saudi Arabia
- Somalia
- The United Arab Emirates (UAE)

On or After September 11, 2001:

- Afghanistan
- Djibouti
- Egypt
- Jordan
- Lebanon
- Syria
- Uzbekistan
- Yemen

Conditions Presumed to be Service-Connected

As of August 10, 2022, a long list of new conditions are presumed to be service-connected due to various in-service toxic exposures. APPLY NOW at VA.gov/PACT to expedite your claim and benefits.

- **Asthma (diagnosed after service)**
- **Brain cancer**
- **Chronic bronchitis**
- **Chronic obstructive pulmonary disease (COPD)**
- **Chronic rhinitis**
- **Chronic sinusitis**
- **Constrictive bronchiolitis or obliterative bronchiolitis**
- **Emphysema**
- **Gastrointestinal cancer of any type**
- **Glioblastoma**
- **Granulomatous disease**
- **Head cancer of any type**
- **High blood pressure (hypertension)**
- **Kidney cancer**
- **Lymphomatic cancer of any type**
- **Lymphoma of any type**
- **Melanoma**
- **Monoclonal gammopathy of**
- **undetermined significance (MGUS)**
- **Neck cancer**
- **Pancreatic cancer**
- **Pleuritis**
- **Pulmonary fibrosis**
- **Reproductive cancer of any type**
- **Respiratory (breathing-related)**
- **cancer of any type**
- **Sarcoidosis**
- **Interstitial lung disease (ILD)**

What is the PACT Act? (Continued)

Health Care Enrollment Eligibility

Veterans who served in the following locations and time periods can enroll in VA health care NOW:

- **Republic of Vietnam** (between January 9, 1962 and May 7, 1975)
- **Thailand at any US or Royal Thai base** (between January 9, 1962 and June 30, 1976)
- **Laos** (between December 1, 1965 and September 30, 1969)
- **Certain Provinces in Cambodia** (between April 16, 1969, and April 30, 1969)
- **Guam or American Samoa or their territorial waters** (between January 9, 1962 and July 31, 1980)
- **Johnston Atoll, or a ship that called there** (between January 1, 1972 and September 30, 1977)

Vietnam-era Veterans are now able to apply for two new Agent Orange presumptive conditions:

- **Monoclonal gammopathy of undetermined significance (MGUS)**
- **Hypertension (high blood pressure)**

New Radiation Presumptive Locations

If you were called to respond to one of the listed cleanup and response missions below, you may be eligible for radiation exposure presumptives under the PACT Act.

Response Effort	Dates
Cleanup of **Enewetak Atoll**	January 1, 1977-December 31, 1980
Cleanup of the Air Force B-52 bomber carrying nuclear weapons off the coast of **Palomares, Spain**	January 17, 1966-March 31, 1967
Response to the fire onboard an Air Force B-52 bomber carrying nuclear weapons near **Thule Air Force Base in Greenland**	January 21, 1968-September 25, 1968

What is the PACT Act? (Continued)

Filing Claims to Receive Benefits

Veterans can file a claim for the new presumptive conditions:
- **New Claim**—Veteran has never filed for the presumptive condition
- **Supplemental Claim**—the presumptive condition was previously denied but is now **considered to be presumptive**

- If VA denied one of the new presumptive conditions in the past but the Veteran may now be eligible for benefits, VA will try to contact them. There is no need to wait to file a Supplemental Claim.
- VA is prioritizing the claims of Veterans with cancer to make sure they get timely access to the care and benefits they need.
- Pending Claims: If a Veteran's condition was added to the list of presumptive conditions* after the claim was filed, VA will consider it on a presumptive basis.

*Presumptive conditions do not require proof that the military service caused the condition. Veterans only need to meet the service requirements and have a current diagnosis of the presumptive condition. Veterans should submit any supporting documentation to assist with their claim.

Other Affected Veterans and Survivors

What about additional benefits and care for other Veterans and their survivors?

Under the PACT Act, survivors may be eligible for VA benefits, including Dependency and Indemnity Compensation and Burial benefits.
- **Dependency and Indemnity Compensation**
- **Burial Benefits**

When or How Should I File a Claim?

What if I have previously been denied?

Veterans previously denied a toxic-exposure related claim are encouraged to file a supplemental claim. Once a supplemental claim is received, VA will review the claim under the new law.

For more info, visit VA.gov/PACT or call 1-800-MyVA411

PRESUMPTIVE CANCERS RELATED TO BURN PIT EXPOSURE

BRAIN CANCERS:

The VA considers these types of cancers presumptive:

- Brain and brain stem cancers (including glioblastoma and other brain cancers)
- Head cancers of any type (including cancers of the scalp, face, mouth, aural areas, lips, and hard or soft palate)
- Neck cancers of any type (including cancers of the neck, pharynx, and larynx)
- Spinal cord cancers

Note: This isn't a complete list of brain, head, neck, and nervous system cancers.

Examples of Brain Cancers considered presumptive:

Presumptive glioblastomas:
- Primary glioblastoma
- Secondary glioblastoma

Presumptive astrocytomas:
- Anaplastic astrocytoma
- Brain stem glioma
- Diffuse astrocytoma
- Pilocytic astrocytoma
- Pineal astrocytic tumors
- Subependymal giant cell astrocytoma

Other presumptive brain cancers:
- Ependymomas (cellular, clear cell, papillary, RELA fusion-positive, and tanycytic)
- Malignant pineal gland
- Mixed gliomas (Oligoastrocytoma)
- Oligodendrogliomas
- Pituitary carcinoma

Note: This isn't a complete list of presumptive brain cancers.

EAR AND EYE CANCERS:

The VA consideres these ear cancers presumptive:

- Ceruminous adenoma
- Rhabdomyosarcoma

Presumptive eye cancers:

- Carcinoid tumors of the orbit and ocular adnexa
- Eye and ocular adnexa cancers (ciliary body, eyelid, iris, optic disc, retina, vitreous, and orbit tumors)
- Melanomas of the eye (choroidal melanoma, conjunctival melanoma, and iris melanoma)
- Neuroendocrine tumors of the orbit

Note: This isn't a complete list of presumptive ear and eye cancers.

Presumptive cancers related to burn pit exposure (cont.)

MOUTH, NECK, AND THROAT CANCERS:

The VA considers these types of mouth, neck, and throat cancers presumptive:

- **Hypopharyngeal cancer** (including adenoid cystic carcinoma, lymphoma, mucoepidermoid carcinoma, and squamous cell carcinoma)
- **Jaw cancer** (including ameloblastic carcinoma, clear cell odontogenic carcinoma, ghost cell odontogenic carcinoma, multiple myeloma, odontogenic carcinosarcoma, odontogenic sarcoma, osteosarcoma, primary intraosseous carcinoma, and squamous cell carcinoma)
- **Laryngeal cancer** (including adenocarcinoma, chondrosarcoma, lymphoma, plasmacytoma, sarcoma, and squamous cell carcinoma)
- **Oral cavity squamous cell carcinoma**
- **Oropharyngeal cancer** (including lymphoepithelioma, lymphoma, minor salivary gland tumors, salivary gland cancer, squamous cell carcinoma, and tonsillar cancer)

They also consider these cancers presumptive:

- **Pharyngeal cancer** (including basaloid squamous cell carcinoma, keratinizing squamous cell carcinoma, and non-keratinizing squamous cell carcinoma)
- **Salivary gland cancer** (including acinic cell carcinoma, adenoid cystic carcinoma, adenocarcinoma not otherwise specified or "NOS," mucoepidermoid carcinoma, polymorphous adenocarcinoma, and secretory carcinoma)
- **Thyroid cancer** (including anaplastic, follicular, medullary, and papillary)
- **Tongue cancer** (including adenoid cystic carcinoma, mucoepidermoid carcinoma, and polymorphous low-grade carcinoma)

They also consider these skin cancers of the mouth and neck presumptive:

- Basal cell carcinoma of the skin
- Melanoma
- Squamous cell carcinoma of the skin

Note: This isn't a complete list of presumptive mouth and neck cancers.

NOSE CANCERS:

The VA considers these nasopharyngeal cancers presumptive:

- Keratinizing undifferentiated carcinoma
- Non-keratinizing undifferentiated carcinoma
- Squamous cell carcinoma

Presumptive paranasal sinus and nasal cavity cancers:

- Adenocarcinoma
- Adenoid cystic cancer
- Lymphoma
- Neuroendocrine carcinoma
- Olfactory neuroblastoma
- Plasmacytoma
- Squamous cell carcinoma

Presumptive skin cancers of the nose:

- Melanoma
- Squamous cell carcinoma

Presumptive cancers related to burn pit exposure (cont.)

Presumptive sarcomas:

- Fibrosarcoma
- Leiomyosarcoma
- Rhabdomyosarcoma
- Undifferentiated pleomorphic sarcoma

Note: This isn't a complete list of presumptive nose cancers.

SARCOMAS:

The VA considers these sarcomas presumptive if malignancy is in the head or neck areas:

- Fibromatosis
- Liposarcoma
- Malignant ganglioma, mesenchymoma, and schwannoma
- Osteosarcoma

Presumptive rare sarcomas if malignancy is in the head or neck areas:

- Dermatofibrosarcoma
- Ectomesenchymoma
- Ewing sarcoma (endocrine)
- Fibrosarcoma
- Leiomyosarcoma
- Low-grade fibromyxoid sarcoma
- Rhabdomyosarcoma

Presumptive sarcomas in the blood vessels:

- Angiosarcoma
- Hemangioendothelioma and hemangiopericytoma
- Solitary fibrous tumor
- Vascular sarcoma

Note: This isn't a complete list of presumptive sarcomas.

SPINAL CORD CANCERS:

The VA considers these spinal cord cancers presumptive:

- Lymphoma
- Malignant schwannoma
- Multiple myeloma
- Osteosarcoma
- Solitary plasmacytoma

Presumptive rare spinal cord cancers:

- Chondrosarcoma
- Chordoma
- Ewing's sarcoma
- Malignant peripheral nerve sheath tumor

Note: This isn't a complete list of presumptive spinal cord cancers.

Presumptive cancers related to burn pit exposure (cont.)

GASTROINTESTINAL CANCERS:

The VA considers these gastrointestinal cancers presumptive:

- **Anal cancer** (including adenocarcinoma, basal cell cancer, carcinoma in situ or "Bowen's disease," melanoma, and squamous cell cancer)
- **Colorectal cancer or colon cancer** (including adenocarcinoma, carcinoid, gastrointestinal stromal tumor, and lymphoma)
- **Esophageal cancer** (including adenocarcinoma and squamous cell carcinoma)
- **Liver cancer** (including hepatocellular carcinoma of the liver and intrahepatic tract)
- **Pancreatic cancer** (including adenocarcinoma of the pancreas)

Presumptive gastrointestinal cancers:

- **Salivary gland cancers** (including acinic cell carcinoma, adenoid cystic carcinoma, adenocarcinoma not otherwise specified or "NOS," mucoepidermoid carcinoma, polymorphous adenocarcinoma, and secretory carcinoma)
- **Small intestine cancers** (including adenocarcinoma, carcinoid tumor, gastrointestinal stromal tumor, lymphoma, and sarcoma)
- **Spleen cancers** (including primary tumors of the spleen)
- **Stomach cancers** (including carcinoid tumors, diffuse adenocarcinoma, gastrointestinal stromal tumor, intestinal carcinoma, and lymphoma)
- **Tongue cancer** (including adenoid cystic carcinoma, mucoepidermoid carcinoma, and polymorphous low-grade carcinoma)

Note: This isn't a complete list of presumptive gastrointestinal cancers.

KIDNEY CANCERS:

The VA considers these kidney cancers presumptive:

- Renal cell carcinoma (including chromophobe, clear cell, clear cell papillary, collecting duct, medullary, papillary, and unclassified types)
- Non-renal cell carcinoma (including renal sarcoma and Wilms tumor)

Note: This isn't a complete list of presumptive kidney cancers.

LYMPHOMAS:

The VA considers these cancers presumptive:

- B-cell lymphoma (including diffuse B-cell lymphoma, follicular B-cell lymphoma, other non-Hodgkin mature B-cell lymphoma, and small cell B-cell lymphoma)
- Hodgkin's lymphoma

Presumptive rare cancers:

- Anaplastic large cell lymphoma
- Burkitt lymphoma
- Lymphoblastic lymphoma
- Mantle-cell lymphoma
- Mycosis fungoides
- Non-Hodgkin's lymphoma

Presumptive cancers related to burn pit exposure (cont.)

- T-cell lymphoma

Note: This isn't a complete list of presumptive lymphomas.

MELANOMA:

The VA considers these melanomas presumptive:

- Melanomas of the eye (including choroidal melanoma, conjunctival melanoma, and iris melanoma)
- Melanomas of the skin (including acral lentiginous melanoma, lentigo maligna melanoma, nodular melanoma, and superficial spreading melanoma)
- Mucosal melanoma (melanomas that originate in tissues that line internal areas of the body)

Note: This isn't a complete list of presumptive melanomas.

PANCREATIC CANCERS:

The VA Considers these pancreatic cancers presumptive:

- Exocrine pancreatic cancers (including adenocarcinoma, adenosquamous carcinoma, colloid carcinoma, and squamous cell carcinoma)
- Neuroendocrine pancreatic cancer

Note: This isn't a complete list of presumptive pancreatic cancers.

EPRODUCTIVE CANCERS:

Female reproductive cancers

The VA considers these female reproductive cancers presumptive:

- Cancer of the paraurethral glands
- Breast cancer
- Cervical cancer
- Ovarian cancer
- Urethral cancer
- Uterine cancer
- Vaginal cancer
- Vulvar cancer

Male reproductive cancers

The VA considers these male reproductive cancers presumptive:

- Breast cancer
- Penile cancer
- Prostate cancer
- Testicular cancer
- Urethral cancer

Note: This isn't a complete list of presumptive reproductive cancers

Presumptive cancers related to burn pit exposure (cont.)

RESPIRATORY CANCERS:

Respiratory cancers are any cancers found from the area of the nose to the space between the between the lungs and beneath the chest wall (called the pleural space). These cancers include cancers of the bronchus, larynx, lung, pharynx, and trachea.

Note: This isn't a complete list of presumptive respiratory cancers.

Examples of presumptive respiratory cancers

Bronchial cancers

Presumptive bronchial cancers presumptive:

- Adenocarcinoma
- Large-cell carcinoma
- Squamous cell carcinoma

Note: This isn't a complete list of presumptive bronchial cancers.

Laryngeal cancers

Presumptive laryngeal cancers:

- Adenocarcinoma
- Chondrosarcoma
- Glottis, laryngeal neuroendocrine, subglottis, or supraglottis neoplasm
- Lymphoma
- Plasmacytoma
- Sarcoma
- Squamous cell carcinoma

Note: This isn't a complete list of presumptive laryngeal cancers.

Lung cancers

Non-small cell lung cancers

Presumptive non-small cell lung cancers:

- Adenocarcinoma
- Carcinoid tumor
- Large cell carcinoma
- Pleomorphic carcinoma
- Salivary gland carcinoma
- Squamous cell carcinoma (epidermoid carcinoma)
- Unclassified carcinoma

Small cell lung cancers

Presumptive small cell lung cancers:

- Combined small cell carcinoma
- Small cell carcinoma (oat cell cancer)

Other lung cancers

Presumptive other lung cancers:

- Adenosquamous carcinoma of the lung
- Sarcomatoid carcinoma of the lung
- Sarcomoid carcinoma of the lung
- Typical and atypical carcinoid of the lung

Note: This isn't a complete list of presumptive lung cancers.

Presumptive cancers related to burn pit exposure (cont.)

Nasopharyngeal cancer

Presumptive nasopharyngeal cancers:

- Keratinizing undifferentiated carcinoma
- Non-keratinizing undifferentiated carcinoma
- Squamous cell carcinoma

Note: This isn't a complete list of presumptive nasopharyngeal cancers.

Paranasal sinus and nasal cavity cancer

Presumptive paranasal sinus and nasal cavity cancers:

- Lymphoma
- Melanoma
- Neuroendocrine carcinoma
- Plasmacytoma
- Squamous cell carcinoma

Presumptive rare paranasal sinus and nasal cavity cancers:

- Adenocarcinoma
- Adenoid cystic cancer
- Fibrosarcoma undifferentiated pleomorphic sarcoma
- Leiomyosarcoma
- Olfactory neuroblastoma
- Rhabdomyosarcoma

Note: This isn't a complete list of presumptive paranasal sinus and nasal cavity cancers.

Pharyngeal cancers

Presumptive pharyngeal cancers:

- Basaloid squamous cell carcinoma
- Keratinizing squamous cell carcinoma
- Non-keratinizing squamous cell carcinoma

Note: This isn't a complete list of presumptive pharyngeal cancers.

Throat (oropharyngeal) cancers

Presumptive throat cancers:

- Lymphoepithelioma
- Lymphoma
- Minor salivary gland tumors
- Salivary gland cancer
- Squamous cell carcinoma
- Tonsillar cancer

Note: This isn't a complete list of presumptive throat cancers.

Trachea cancers

Presumptive trachea cancers:

- Adenocarcinoma of the trachea
- Squamous cell carcinoma of the trachea

Note: This isn't a complete list of presumptive trachea cancers.

PACT Act Presumptive Condition Diagnostic Codes

Sourced from Veterans Affairs Job Aid

These pages provide a listing of the PACT Act presumptive conditions and their associated diagnostic codes

Burn Pits and Other Toxins, Including Fine Particulate Matter (BPOT) Presumptive Disabilities BPOT Conditions under 38 U.S.C. §1120		
Disease	Code	CS - Identified Diagnostic Conditions
Asthma	6602	asthma, bronchial
Chronic Bronchitis	6600	bronchitis, chronic
Constrictive Bronchiolitis or Obliterative Bronchiolitis	6600	bronchitis, chronic
	6601	bronchiectasis
	6602	asthma, bronchial
	6603	emphysema, pulmonary
Chronic Obstructive Pulmonary Disease	6604	chronic obstructive pulmonary disease
Emphysema	6603	emphysema, pulmonary
Granulomatous Disease	6820	neoplasms, benign
	6524	granulomatous rhinitis
	6828	eosinophilic granuloma
Interstitial Lung Disease	6825	fibrosis of lung, diffuse interstitial
	6826	desquamative interstitial pneumonitis
	6827	pulmonary alveolar proteinosis
	6828	eosinophilic granuloma
	6829	drug-induced, pneumonitis & fibrosis
	6830	radiation-induced, pneumonitis & fibrosis
	6831	hypersensitivity pneumonitis
	6832	pneumoconiosis
	6833	asbestosis
Pleuritis	6732	pleurisy, active or inactive
	6845	pleural effusion or fibrosis
Pulmonary Fibrosis	6825	fibrosis of lung, diffuse interstitial
	6826	desquamative interstitial pneumonitis
	6827	pulmonary alveolar proteinosis
	6828	eosinophilic granuloma
	6829	drug-induced, pneumonitis & fibrosis
	6830	radiation-induced, pneumonitis & fibrosis
	6831	hypersensitivity pneumonitis
	6832	pneumoconiosis
	6833	asbestosis
	6845	pleural effusion or fibrosis
Sarcoidosis	6846	sarcoidosis
Chronic Rhinitis	6501	(historic)
	6522	allergic or vasomotor rhinitis
	6523	bacterial rhinitis
	6524	granulomatous rhinitis
Chronic Sinusitis	6510	sinusitis, pansinusitis, chronic
	6511	sinusitis, ethmoid, chronic
	6512	sinusitis, frontal, chronic
	6513	sinusitis, maxillary, chronic
	6514	sinusitis, sphenoid, chronic

PACT Act Presumptive Condition Diagnostic Codes (cont.)

Head Cancers	5012	bones, neoplasm, malignant, primary or secondary
	5329	sarcoma, soft tissue
	6014	malignant neoplasms of the eye, orbit, and adnexa (excluding skin)
	6208	malignant neoplasm
	7123	soft tissue sarcoma
	7712	multiple myeloma
	7818	malignant skin neoplasms
	8540	soft-tissue sarcoma (Neurogenic origin)
	9918	neoplasm, hard and soft tissue, malignant
Neck Cancers	5012	bones, neoplasm, malignant, primary or secondary
	5329	sarcoma, soft tissue
	6819	neoplasms, malignant
	7123	soft tissue sarcoma
	7712	multiple myeloma
	7818	malignant skin neoplasms
	7914	malignant neoplasm
	8021	malignant
	8540	soft-tissue sarcoma (Neurogenic origin)
Respiratory Cancers	6819	neoplasms, malignant
Gastrointestinal Cancers	7343	neoplasms, malignant
Reproductive Cancers	7528	malignant neoplasms
	7627	malignant neoplasms of gynecological system
	7630	malignant neoplasms of the breast
Lymphoma	7709	Hodgkin's lymphoma
	7715	Non-Hodgkin's lymphoma
Kidney Cancer	7528	malignant neoplasms
Brain Cancer	8002	malignant
Melanoma	7833	malignant melanoma
Pancreatic Cancer	7343	neoplasms, malignant
Glioblastoma	8002	malignant

New Herbicide Presumptive Disabilities		
Disease	Code	CS - Identified Diagnostic Conditions
Hypertension	7101	hypertensive vascular disease
Monoclonal gammopathy of undetermined significance (MGUS)	7712	multiple myeloma

When deciding service connection for a disability due to herbicide exposure, consider if the evidence establishes service in a qualifying location outlined in 38 U.S.C. 1116, and the Veteran has a qualifying disability. Please note, the statute does not require newly recognized disabilities to manifest to a degree of disability of 10 percent or more to qualify as a presumptive disease.

HEALTH CARE

Toxic Exposure Screening

Toxic exposure screenings are available at VA health facilities across the country.

Every Veteran enrolled in VA health care will receive an initial screening and a follow-up screening at least once every 5 years. Veterans who are not enrolled and who meet eligibility requirements will have an opportunity to enroll and receive the screening.

The screening will ask you if you think you were exposed to any of these hazards while serving:

- **Open burn pits and other airborne hazards**
- **Gulf War-related exposures**
- **Agent Orange**
- **Radiation**
- **Camp Lejeune contaminated water exposure**
- **Other exposures**

Screeners can then give you information about any benefits, registry exams, and clinical resources you may need.

Ask about the screening at your next VA health care appointment. If you don't have an upcoming appointment, or if you want to get the screening sooner, contact your local VA health facility. Ask to get screened by the toxic exposure screening navigator.

Find out more at:
https://www.va.gov/resources/the-pact-act-and-your-va-benefits/

Facts About The Toxic Exposure Screening

If you're enrolled in VA health care, you can now receive the toxic exposure screening at VA medical centers and clinics across the country. If you're not enrolled but meet eligibility requirements to enroll, you will have an opportunity to receive the screening after you enroll.

During your screening, you'll be asked if you believe you experienced toxic exposures during your military service. If you answer yes, you may be connected to support and resources, including a review by your primary care team or provider.

Get to know the process

As the screening becomes a regular part of your health care, you may have some questions. Here are some quick facts to get to know the process:

- It's quick. The screening is a series of questions that takes around 5-10 minutes and can occur as part of one of your regular health care appointments.
- It documents a variety of exposures. There are several types of possible exposures or hazards you may have experienced during your military service. This includes open burn pits and airborne hazards, Gulf War-related exposures, Agent Orange, radiation, Camp Lejeune contaminated water exposure and others.
- It helps support your long-term care plan. The purpose of the toxic exposure screening is to make your VA health care team aware of any potential exposures to toxins during your military service. This allows for ongoing care that ensures early diagnosis and treatment of any health concerns that may arise in the future related to your exposure(s). If you report a potential toxic exposure, it will be noted in your health record. Your primary care team will be made aware of your concerns and will connect you with resources to address your follow-up questions.
- You'll receive additional information. After your screening, you will also receive information about benefits, registry exams, and clinical resources to address any concerns you may have.
- You can ask about the toxic exposure screening at your next VA health care appointment. If you do not have an upcoming appointment or want to be screened sooner, contact your local VA facility and ask to be screened by the Toxic Exposure Screening Navigator.
- You'll be screened at least once every 5 years. Even if you don't have concerns today, you may in the future. This helps keep your records up to date and ensures exposure concerns are part of your long-term care plan.
- You can decline. If you choose not to be screened, you will have the option to decline until the following year.

Additional information to keep in mind:

- It's not diagnostic. The screening identifies and documents potential exposures. If there is a need, it will support you in connecting with your health care team.
- It's not part of the VA benefits claims process.
- Being screened is separate from joining a VA environmental health registry. You'll receive information about registry participation after your screening.

What is Deployment-Related Respiratory Disease (DRRD)?

Military personnel and veterans who have deployed to Afghanistan, Iraq, and parts of Southwest Asia (SWA) since 1990 are at risk of developing a range of respiratory symptoms and deployment-related respiratory diseases (DRRDs). The term “DRRD” provides a broad descriptor encompassing a range of postdeployment respiratory findings.

These hazards include exposure to open-air burn pits, desert dust and sandstorms, industrial fires and emissions, vehicular diesel exhaust, IED blasts, combat dust debris, and extreme desert climates with high temperatures and humidity. These factors contribute to the development of DRRDs.

Common respiratory conditions linked to deployment include unexplained shortness of breath, upper airway disorders, asthma, eosinophilic syndromes, and small airways diseases like bronchiolitis.

Diagnosis of these conditions involves a thorough medical evaluation that may include a detailed occupational and medical history, a comprehensive physical exam, lung function and exercise testing, laryngoscopy, bronchoscopy, chest CT scans, effective noninvasive diagnostic technology, and in some cases, lung biopsy.

Treatment should be tailored to each patient based on their specific diagnosis and the severity of their condition.

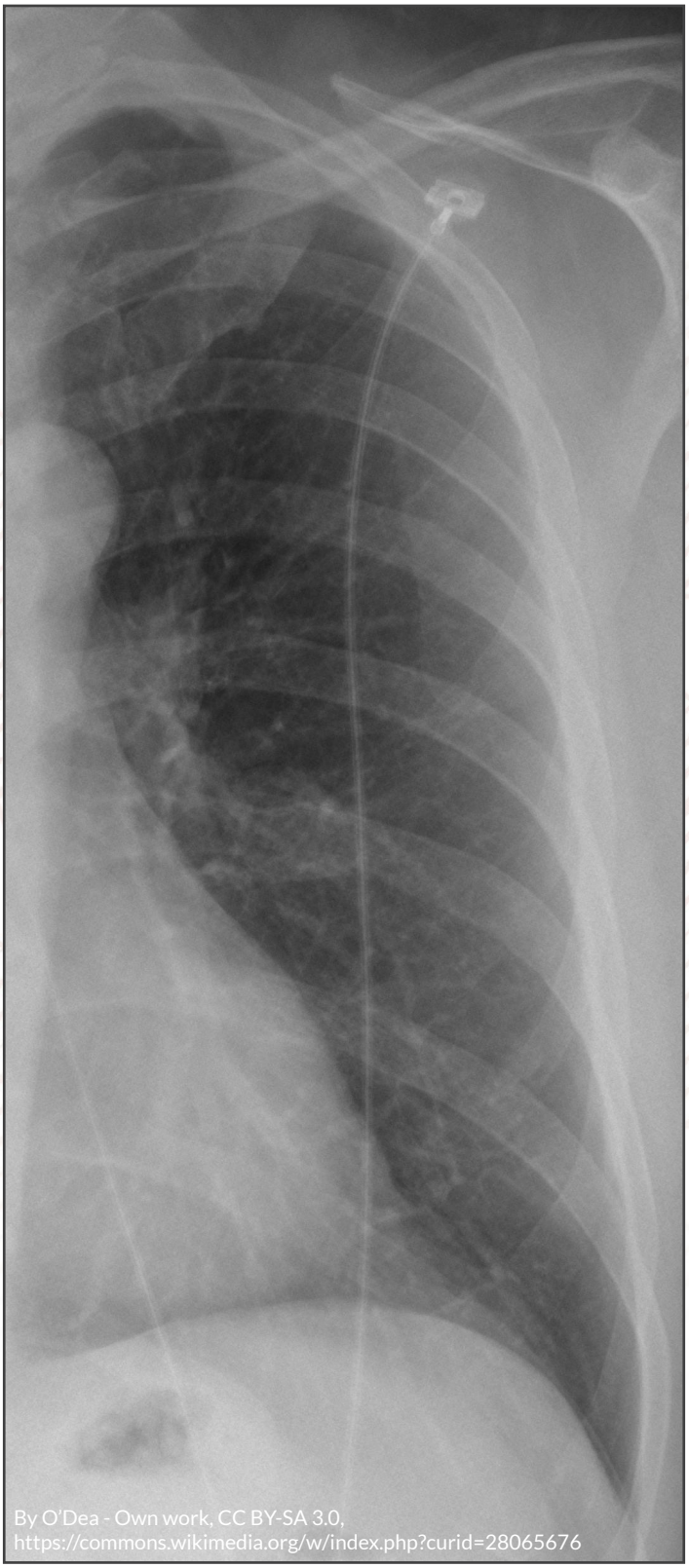
What is Constrictive Bronchiolitis?

Constrictive Bronchiolitis (CB) is a small airway fibrotic respiratory disease characterized by the inflammation of small airways. Sufferers of CB often have persistent cough and dyspnea.

It is difficult to diagnose and extremely uncommon. Patients with CB can have shortness of breath when they exert themselves, but also have normal chest x-rays and pulmonary funtioning test results. To correctly diagnose CB, patients must undergo a surgical lung biopsy, an invasive procedure that can confirm their diagnosis. Unfortunately, since CB is uncommon and difficult to diagnose, the VA frequently rates veterans with this condition incorrectly.

Constrictive Bronchiolitis (CB) can be caused by various toxic exposures, including chemicals such as diacetyl, sulfur dioxide, nitrogen dioxide, ammonia, chlorine, thionyl chloride, methyl isocyanate, hydrogen fluoride, hydrogen bromide, hydrogen chloride, hydrogen sulfide, phosgene, polyamide-amine dyes, mustard gas, and ozone.

As of September 2024, The VA has taken a crucial step by proposing the creation of a specific diagnostic code for Constrictive Bronchiolitis (CB). This new code aims to enhance the VA's ability to track and identify cases of CB in order to properly compensate veterans suffering from the disease.



By O'Dea - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=28065676

The Airborne Hazards and Open Burn Pit Registry Number of Participants

The Airborne Hazards and Open Burn Pit Registry allows eligible Veterans and service members to document their exposure to airborne hazards such as burn pit smoke through an online questionnaire. In total, 289,297 Veterans and service members completed the questionnaire since the start of the registry in June 2014 through the 1st six months of Fiscal Year 2022 (March 31, 2022).

Number of Participants* by Location
June 2014 through 2nd Quarter Fiscal Year 2022

U.S. State /Territory	Number of Participants
Alabama	7,242
Alaska	2,270
American Samoa	31
Arizona	7,398
Arkansas	2,945
California	18,044
Colorado	8,622
Connecticut	1,513
Delaware	1,136
District of Columbia	560
Florida	21,692
Georgia	13,068
Guam	313
Hawaii	3,281
Idaho	1,916
Illinois	6,313
Indiana	3,874
Iowa	2,183

U.S. State /Territory (continued)	Number of Participants
Kansas	3,960
Kentucky	4,549
Louisiana	3,647
Maine	1,271
Maryland	7,131
Massachusetts	3,092
Michigan	4,657
Minnesota	4,101
Mississippi	2,863
Missouri	5,276
Montana	1,416
Nebraska	2,336
Nevada	4,117
New Hampshire	1,284
New Jersey	3,644
New Mexico	3,575
New York	7,213
North Carolina	15,277

U.S. State /Territory (continued)	Number of Participants
North Dakota	963
Ohio	7,070
Oklahoma	6,089
Oregon	2,279
Pennsylvania	7,192
Puerto Rico	1,374
Rhode Island	741
South Carolina	6,999
South Dakota	1,519
Tennessee	8,216
Texas	35,466
Utah	2,691
Vermont	961
Virginia	17,317
Washington	8,331
West Virginia	1,639
Wisconsin	3,814
Wyoming	936

Other Armed Forces locations outside the U.S.					
Americas	12	Europe	793	Pacific	327

*Participants are Veterans and service members who have submitted a complete questionnaire.

VA | U.S. Department of Veterans Affairs

Environmental Coordinators

Veterans may contact their local VA Environmental Health Coordinator about registry evaluations or health concerns related to military exposures. You may also wish to see the directory for the lead Environmental Health Coordinator in each Veterans Integrated Service Network (VISN).

The directory contains the latest information received from VA health care facilities and is updated as changes occur.

To find an Environmental Coordinator in your area visit:
https://www.publichealth.va.gov/exposures/coordinators.asp

The War Related Illness and Injury Study Center

About the WRIISC

The War Related Illness and Injury Study Center (WRIISC) is a national program dedicated to Veterans' post-deployment health concerns and unique health care needs. We develop and provide post-deployment health expertise to Veterans and their health care providers through clinical care, research, education, and risk communication. As a tertiary care center, we partner with referring providers and their health care teams to support the care of Veterans. The WRIISC is part of VA's newly designated Health Outcomes Military Exposures (HOME) formerly Post Deployment Health Services (PDHS). The VA is uniquely qualified to care for Veterans with health concerns related to potentially toxic exposures.

CA WRIISC
VA Palo Alto Health Care System
3801 Miranda Ave.
Mail Code 151Y
Palo Alto, CA 94304
1-888-482-4376

DC WRIISC
VA Medical Center
Room 3B 203
Mail Stop 127
50 Irving St., NW
Washington, DC 20422
1-800-722-8340

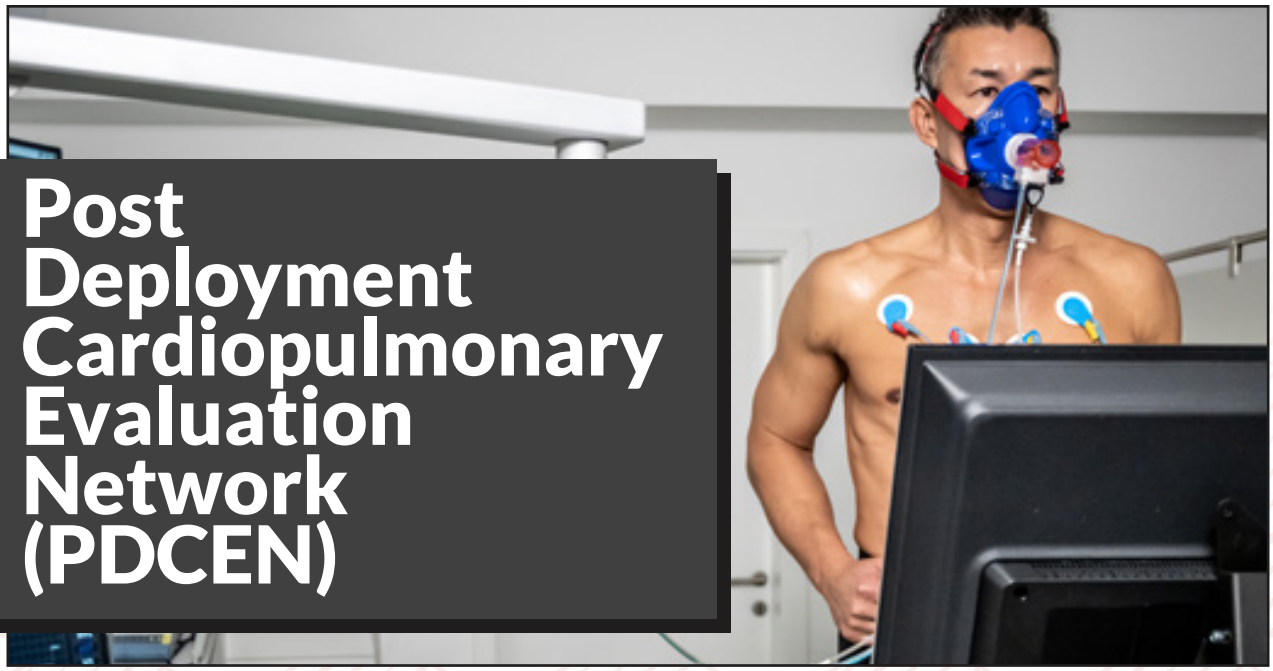
NJ WRIISC
VA New Jersey Health Care System
385 Tremont Ave.
Mail Stop 129, 11th floor
East Orange, NJ 07018
1-800-248-8005

About the WRIISC

WRIISC researchers and clinicians work to identify new problems in returning Veterans and respond to their health concerns. Using the knowledge generated by their research to identify treatments and the most current evidence based care for Veterans.

WRIISC research interests cover a wide range of topics including environmental exposures and post deployment health, long-term health effects of combat, memory and mood difficulties, traumatic brain injuries, neurological diseases, integrative health and wellness approaches, disabilities resulting from deployment illnesses or injuries, women Veterans' health, and risk communication of deployment related concerns.

For more about the WRIISC visit:
https://warrelatedillness.va.gov/



Post Deployment Cardiopulmonary Evaluation Network (PDCEN)

Specialized Care and Consultation

To expand and standardize specialized clinical evaluations for Veterans with specific respiratory health issues across the nation, The Airborne Hazards and Burn Pits Center of Excellence established a network of experts clinicians and researchers in respiratory health. This network is referred to as the Post-Deployment Cardiopulmonary Evaluation Network (PDCEN). The Center of Excellence is a part of this network and leads efforts to develop clinical approaches, best practices and research that pertains to the broader questions of respiratory health and airborne hazard exposures.

For Veterans who are selected for specialty evaluation from the Airbone Hazards and Open Burn Pit Registry, the PDCEN allows Veterans to be evaluated at a site closest to where they reside. Findings from each evaluation are then shared with the Center of Excellence for further research and information dissemination.

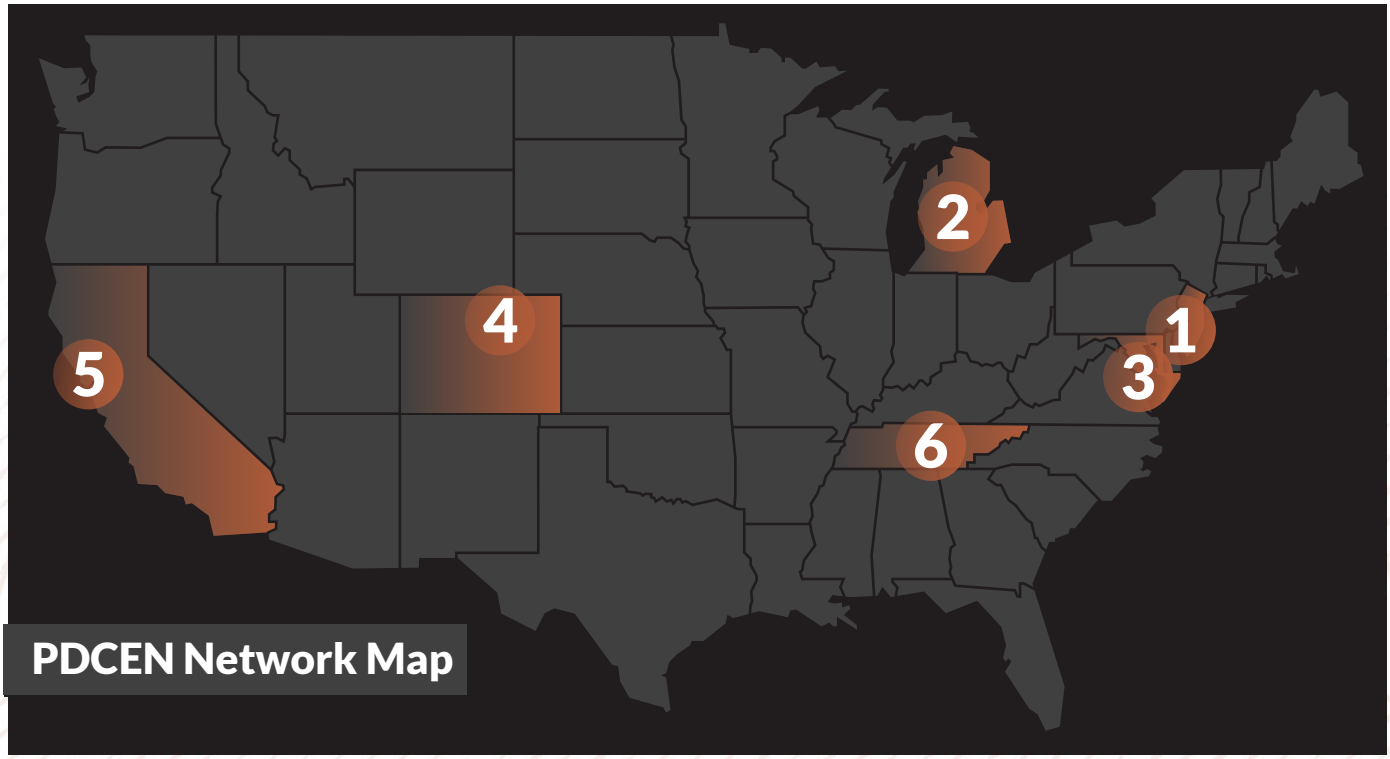
About the PDCEN

The network consists of VA physician scientists who conduct specialized research and clinical evaluations for Veterans with concerns about their post-deployment health, including unexplained shortness of breath or difficulty breathing.

In support of the Airborne Hazards and Burn Pits Center of Excellence's mission to advance the health and care of Veterans through research, clinical care and education, the Post-Deployment Cardiopulmonary Evaluation Network (PDCEN) is committed to clarifying and refining diagnoses, as well as determining their relationship to exposures, by providing comprehensive standardized clinical evaluations. Knowledge gained from these evaluations allows the PDCEN to inform care providers on best practices including treatment recommendations, support research efforts, and provide information to various stakeholders to improve the health and care of Veterans with military exposures.

Health Care

Post Deployment Cardiopulmonary Evaluation Network (PDCEN) (Continued)



1

VA New Jersey Health Care System,
AHBPCE

385 Tremont Ave.,
Mail Stop 129
East Orange, NJ 07018
1-800-248-8005

VA Ann Arbor Health Care System
Ann Arbor, MI

Site Director:
John Osterholzer, MD

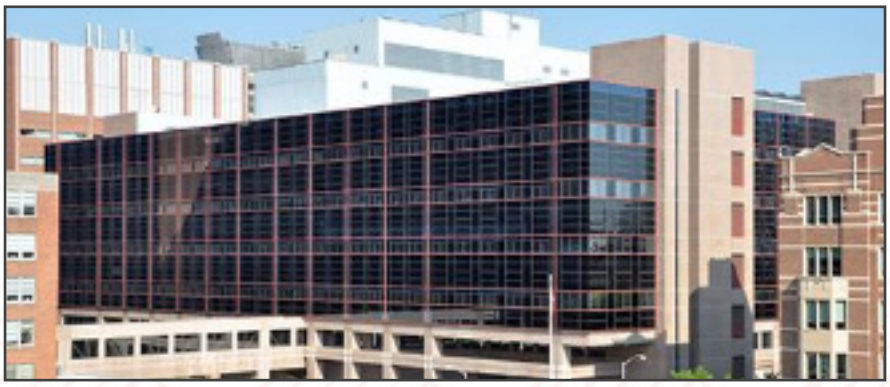
2

Post Deployment Cardiopulmonary Evaluation Network (PDCEN) (Continued)

3

Baltimore VA Medical Center
Baltimore, MD

Site Director:
Stella Hines, MD, MSPH



Rocky Mountain Regional VA Medical Center
Aurora, CO

4

Site Director:
Silpa Krefft, MD, MPH

5

San Francisco VA Health Care System
San Francisco, CA

Site Director:
Mehrdad Arjomandi, MD

Nashville VA Medical Center
Nashville, TN

6

Site Director:
Bradley Richmond, MD, PhD

Post Deployment Cardiopulmonary Evaluation Network (PDCEN) (Continued)

All current PDCEN site directors have unique expertise and interest in health issues that may be connected to airborne hazards exposure. They also have academic appointments at affiliated universities. Each site leverages unique resources from their university affiliates, including clinical and research training opportunities for university students, to enhance the network.

The network works collaboratively with the Center of Excellence to develop research questions, gather data and conduct research that supports the development of new clinical care guidelines for Veterans who have been exposed to airborne hazards and burn pits.

How Clinical Work Improves Veteran Care

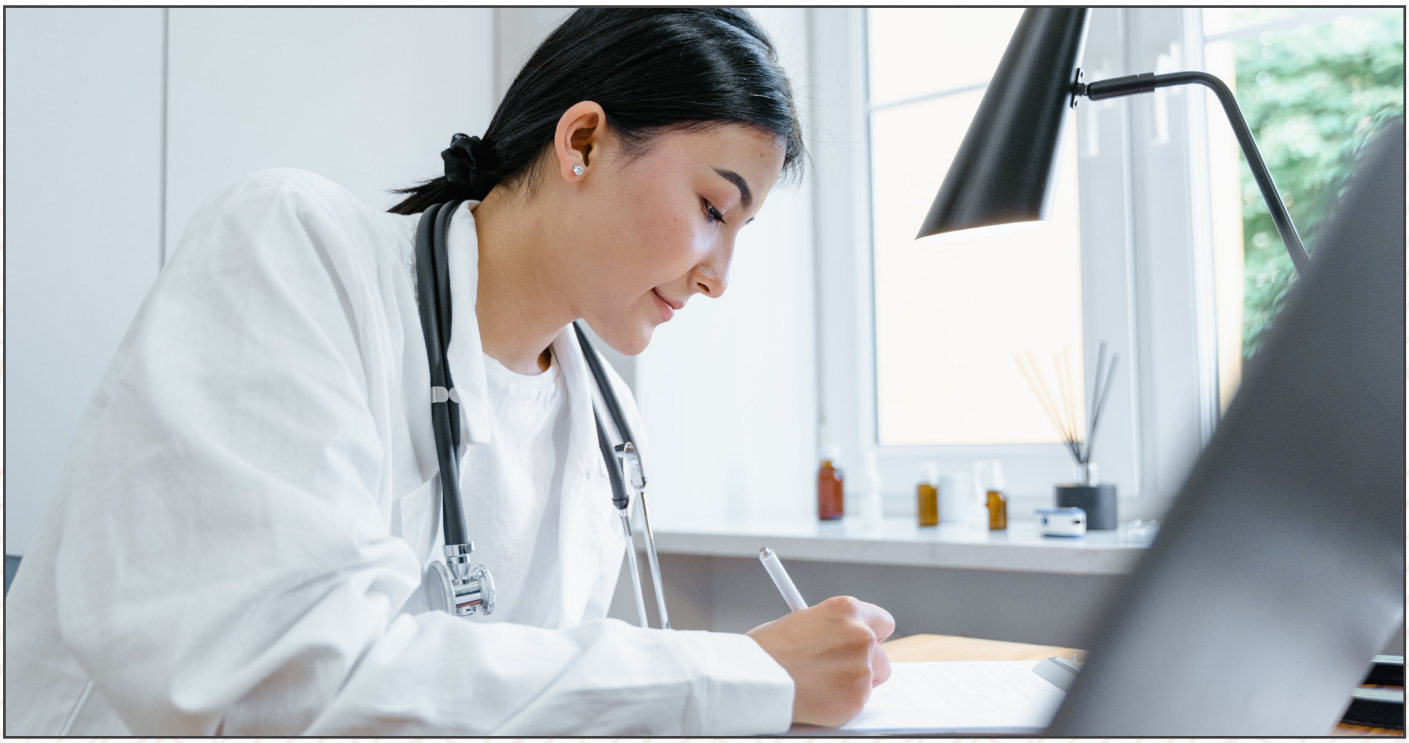
Observations gained through the clinical process—either through the PDCEN or at the Center of Excellence have allowed our researchers to identify hypotheses and form research questions that can dig deeper into the effects of airborne hazard and burn pit exposure. As trends are recognized and effective treatment protocols are established, this research brings us closer to a higher standard of quality care for our nation's Veterans.

For more information about the PDCEN visit:

https://www.warrelatedillness.va.gov/WARRELATEDILLNESS/AHBPCE/network.asp

or search "Post Deployment Cardiopulmonary Evaluation Network (PDCEN)"

Veterans Exposure Team - Health Outcomes Military Exposures (VET-HOME)



The Veterans Exposure Team-Health Outcomes Military Exposures (VET-HOME) provides environmental health registry evaluations for Veterans via telehealth.

VET-HOME consists of an intake center and a geographically distributed network of clinicians specially trained in military environmental exposures. Eligible Veterans can have a free VET-HOME telehealth evaluation from anywhere in the country. VET-HOME clinicians can even do early morning or late afternoon telehealth appointments to best meet your needs.

You can contact VET-HOME by calling 833-633-VTHM (833-633-8846) or by chatting with a live VET-HOME agent on our portal. If you prefer an in-person registry evaluation instead, you can call an environmental health coordinator to schedule an evaluation at your local VA facility.

4DMedical™

Veteran Patient Brochure

Navigating Unexplained Shortness of Breath (Dyspnea)

Many previously deployed veterans may experience breathing difficulties or shortness of breath—known as **dyspnea**—without a clear cause. Traditional lung imaging methods, such as standard X-rays or CT scans, don't always provide enough information about lung structure or function. That lack of information can make it challenging for your doctor to find the right treatment plan.

The Challenge with Traditional Imaging

Traditional imaging techniques have been the cornerstone of medical diagnoses for decades. However, when it comes to unexplained dyspnea, these methods can fall short because they:

- **Lack Detail:** They may not capture the subtle changes in lung function or blood flow.
- **Offer Static Images:** These methods provide still snapshots, not showing how your lungs work over time or during breathing cycles.
- **May Miss Early Signs:** Early or mild forms of lung disease can go undetected, delaying essential treatment.

4DMedical's XV LVAS Software Provides Physicians with a Wealth of Information

This cutting-edge software technology is designed to help veterans like you get a clearer picture of your respiratory condition. It processes traditional imaging to provide your doctors with much more information about your lung health.

- **Dynamic Visualization:** Unlike traditional imaging, XV LVAS captures the movement and function of your lungs as you breathe, offering a dynamic, four-dimensional view.
- **Enhanced Detection:** This technology can detect subtle changes and abnormalities in lung function at a very early stage, often before symptoms worsen.
- **Ventilation Analysis:** The software provides detailed data on lung ventilation (how air moves in and out of your lungs), aiding in a more accurate diagnosis.

Your XV LVAS Scan

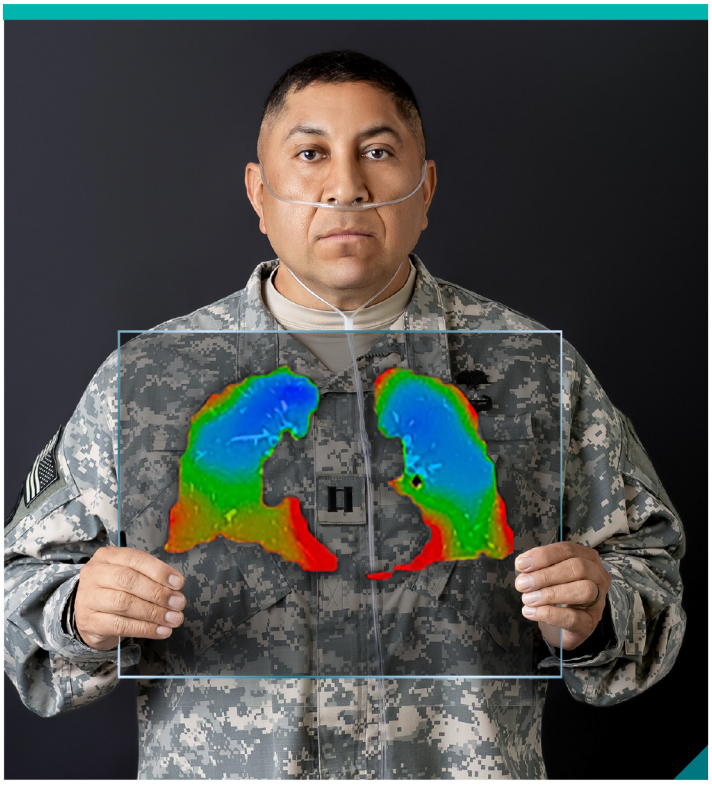
Here's what to expect:

1. **Preparation:** Similar to getting ready for a traditional X-ray, you may be asked to remove any metallic objects. There's no need for a special diet or fasting beforehand.

2. **The Scan:** During the scan, you'll be asked to breathe normally or follow specific breathing instructions. The process is non-invasive, painless, and usually takes less than 10 minutes.

3. **After the Scan:** You can resume your regular activities immediately. Our team will analyze the data, and your healthcare provider will discuss the findings with you, exploring potential treatment options or next steps.

This brochure is for informational purposes only and should not replace professional medical advice. Always consult with your healthcare provider for diagnosis and treatment options that are right for you.



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LEGAL ASSISTANCE

NVLSP

NATIONAL VETERANS LEGAL SERVICES PROGRAM

National Veterans Legal Services Program is a 501(c)(3) nonprofit organization that has worked since 1981 to ensure that the government delivers to our nation's 22 million veterans and active duty personnel the benefits to which they are entitled.

In October 2021, NVLSP expanded its representation of veterans to include cases before the VA on claims for service-connected disability benefits for diseases arising from exposure to burn pits overseas. If you or someone you know served on a base where burn pits were used to dispose of paint, medical/human waste, metals, plastics, rubber, etc., and you are currently seeking service-connected compensation for a condition, respiratory or otherwise, that you believe resulted from your exposure to these burn pits, NVLSP may be able to help. NVLSP provides legal services at no cost to the veteran.

For more information on starting your claim and additional pro-bono legal services visit them at NVLSP.org

Mailing address:
National Veterans Legal Services Program
1100 Wilson Blvd. Suite 900
Arlington, VA 22209

Phone: 202.265.8305
Email: info@nvlsp.org

The Defense Base Act

Contractors have no VA registry to turn to - and a registry is hardly a guarantee of getting any justice for this horrible affliction. But contractors have another option: filing for workers' compensation relief under the Defense Base Act. For civilian contractors who are injured while working overseas or on a military base, the Defense Base Act entitles them to benefits to cover their lost income as well as their medical expenses. The DBA is an extension of the Longshore and Harbor Workers' Compensation Act (LHWCA) which provides disability compensation and medical benefits to employees and death benefits to eligible survivors of employees of U.S. government contractors who perform work overseas.

For more information visit the the Defense Base Act information page at:
https://www.dol.gov/agencies/owcp/dlhwc/lsdba

ADDITIONAL RESOURCES

Additional Resources

Below you will find additional resources that may be helpful to you or a loved one going through the VA claims process, dealing with the effects of burn pits, or navigating life after the military.

Veterans Crisis Line
DIAL 988 then PRESS 1

WWW.VETERANSCRISISLINE.NET

- 24/7, confidential crisis support for Veterans and their loved ones
- You don't have to be enrolled in VA benefits or health care to connect.

VA BURIAL BENEFITS & MEMORIAL ITEMS

www.va.gov/burials-memorials/

VA burial benefits can help service members, Veterans, and their family members plan and pay for a burial or memorial service in a VA national cemetery. Family members can also order memorial items to honor the service of a Veteran. Find out how to apply for the burial benefits you've earned, and how to plan for a burial in advance or at time of need.

Additional Resources

This episode takes a deep dive into the horrifying realities of burn pits — giant holes that get filled with all kinds of trash, from plastic bags to entire trucks to human body parts and then gets lit on fire with jet fuel. The U.S. military routinely used burn pits to dispose of trash during our wars in Iraq and Afghanistan, among others. In the process, some 3.5 million soldiers were potentially exposed to the carcinogen-laden smoke released by these massive burning piles. Now many of those soldiers have developed rare respiratory problems and cancers as a result of their exposure to burn pits. There is ample science showing that the chemicals released by burn pits are linked to these diseases, but for a long time the Department of Veterans Affairs claimed there wasn't yet enough science to prove the service connection. This allowed the VA to deny benefit claims for these vets and to deprive them of the care they desperately needed. To put it nicely, it was a total mess.

https://www.theproblem.com/episode-1-the-problem-with-war/

HOFSTRA NORTHWELL
SCHOOL of MEDICINE
AT HOFSTRA UNIVERSITY

May 5, 2015

Dear Senators and Representatives,

Please help soldiers with Iraq Afghanistan War Lung Injury (IAW-LI), who are returning from combat with titanium in their lungs, polarizable crystals, and lung fibrosis. In addition, we see veterans with constrictive bronchiolitis, new-onset asthma, as well as a constellation of persistent respiratory symptoms. These severe and disabling medical conditions warrant addition to the VA Compensation Code Lists in order to properly acknowledge the sacrifice these patriots have made in service for our United States of America.

The VA's antiquated method of evaluation utilizes chest X-rays, spirometry, and exercise testing. However, these tests have not kept pace with newer, sophisticated technology, which is better able to detect consequences of microscopic changes associated with inhalation of Iraq dust, burning trash, and improvised explosive devices—IEDs. Even chest X-rays are unable to detect microscopic pathology. Spirometry only evaluates the larger airways and completely ignores smaller, distal peripheral airways. Exercise testing is futile if one is too short of breath to run and if there is no baseline comparison test from prior to deployment. Newer technologies, such as exhaled breath condensate nitric oxide, impulse oscillometry, and geological analyses of lung tissue for metals, are more sensitive and specific.

President Abraham Lincoln founded the VA with the challenge that we care for soldiers "who shall have borne the battle." In this age of global terrorism, our obligation to fulfill Lincoln's commitment is of paramount importance!

Sincerely,

Anthony M. Szema, M.D.

Anthony M. Szema, M.D., FCCP, FACAAI, FAAAAI, FACP
Director, International Center of Excellence in Deployment Health and Medical Geosciences
Clinical Assistant Professor of Occupational Medicine, Epidemiology and Prevention
Attending Physician, Division of Pulmonary and Critical Care, Northwell Health
Attending Physician, Division of Allergy/Immunology, Northwell Health

VANDERBILT UNIVERSITY MEDICAL CENTER

Hillsboro Medical Group at Vanderbilt

November 12, 2015

To: Senator Patty Murray
Captain Leroy Torres, Ret
Rosie Torres

Re: Veterans Administration Compensation Code for Constrictive Bronchiolitis

I am writing to support adding constrictive bronchiolitis to the VA compensation code. This is an otherwise rare pulmonary condition that has been linked to service in Iraq and Afghanistan. The current code does not allow compensation for the typical patient with this service-connected illness.

I began seeing Ft. Campbell soldiers with constrictive bronchiolitis in 2005. The typical service member deployed as an elite athlete and returned from deployment incapable of completing a two mile run. In most cases, their inability to meet the Army's physical fitness standard ended their eligibility to remain in the armed forces. Service members with constrictive bronchiolitis typically experience exercise limitation, chest tightness and cough. Despite these symptoms and severely abnormal biopsies, they usually have normal x-rays, CT scans and pulmonary function testing. These findings have been widely accepted by academia and have been published in the *New England Journal of Medicine* (July, 2011). The United States' Defense Health Board Deployment Pulmonary Health Report agrees that constrictive bronchiolitis among service members is a medical condition which is usually missed by routine x-rays, CT scans and pulmonary function testing.

The current VA Compensation Code requires abnormal x-rays, pulmonary function testing or cardiopulmonary exercise testing to provide a disability rating for a service member or veteran. The system fails to provide compensation for the vast number of veterans diagnosed with constrictive bronchiolitis.

I am writing to support legislation that would change the code to allow service members with constrictive bronchiolitis an appropriate rating even in the setting of their having normal non-invasive studies. This condition is very rare and is clearly related to deployment exposures. It is not fair to dismiss this diagnosis which is what is done with the current Veterans Administration Compensation Code.

Thank you for your consideration.

Sincerely,

Robert Miller, M.D.
Associate Professor of Medicine

1215 21st Avenue South
Medical Center East, Suite 6134
Nashville, TN 37232-8288

tel 615.936.3636
fax 615.936.3635
www.VanderbiltHealth.com

National Jewish Health™
Science Transforming Life®

Main Health Campus
1400 Jackson St.
Denver, CO 80206

303-388.4461
800.423.8891

njhealth.org

To Congressional Staff 06.01.2018

Regarding: Small Airway Injury Due to Deployment Related Lung Disease (DRLD), Airborne Hazard exposures and VA Disability Evaluation Criteria

Background

Over 2.5 million US service men and woman have honorably served in Iraq and Afghanistan in support of OIF and OEF since 2001. Forty percent of those returning from service rely on VA providers and a significant number of those seeking care have experienced respiratory symptoms and diseases associated with deployment. While the specific cause(s) for deployment related lung disease (DRLD) have not been proven, there are many significant exposures which have been implicated. The air quality in those regions is poor due to; high levels of ambient air particulates, industrial air pollution, combat operations and open air burn pits used for disposing of medical waste, metals, plastics, electronics and other combustible products (1). The first incinerators were not placed in Iraq until 2009. These activities contribute to high levels of air particulate matter ($PM_{2.5}$), an exposure which is linked to several cardiovascular and pulmonary disorders (2). The Department of Defense has consistently documented airborne $PM_{2.5}$ concentrations throughout Iraq and Afghanistan that exceed US Military Exposure Guidelines (3). These high levels of particulate matter carry toxins, noxious agents and microbes that can lodge in the small airways of the lung and result in diseases such as asthma, constrictive bronchiolitis, emphysema and other disorders (4).

Both DOD and civilian academic medical centers have described respiratory diseases associated with military deployment. The Millennium Cohort Study, which surveyed 46,000 deployers, reported a higher incidence of respiratory symptoms in deployers compared to non-deployers. Other studies have shown an increased incidence of asthma, eosinophilic pneumonia, constrictive bronchiolitis, granulomatous lung disease and emphysema in deployers, many of whom were never smokers (5-10). Unfortunately, the magnitude of the problem is not quantified as there are no longitudinal studies to adequately determine the long-term health consequences of veterans exposed to inhalation hazards due to OIF and OEF deployments.

There are a number of unique challenges in diagnosing lung diseases following deployment to Southwest Asia, particularly for those diseases affecting the small airways of the lungs. Non-invasive studies such as pulmonary function testing (PFTs), high resolution computed tomography (HRCT) and cardiopulmonary exercise testing (CPET) are normal in some patients. For many, the only definitive diagnostic test has been surgical lung biopsy. This disparity between non-invasive testing and more invasive lung biopsy is well-recognized in patients

suffering from small airways disease such as constrictive bronchiolitis and was acknowledged by the United States Defense Health Board in its 2014 study on (DRLD) (11-12). One large DOD facility, which did not pursue video-assisted thorascopic surgical lung biopsies (VATS), was unable to identify the cause of respiratory symptoms in 40% of their deployers (13). Symptomatic deployers may face discharge from military service because they are unable to pass mandatory fitness testing (8).

In summary, a substantial number of service members have returned from OIF and OEF with respiratory diseases that are both unique to deployment and difficult to diagnose. This group of veterans requires specialty care which is not consistently found throughout the VA system. Moreover, the current VA disability guidelines do not adequately address some of the respiratory disability issues affecting service men and women returning from OIF and OEF.

Recommendations

1. The diagnosis of deployment-related lung disease (DRLD) requires specialized pulmonary evaluation and testing, which may include metabolic exercise testing, complete pulmonary function testing, high resolution chest CT scans that are interpreted by thoracic radiologists and sometimes surgical lung biopsy. Since these capabilities are not available at most VA medical centers, the VA should encourage providers to refer veterans suffering from these complex exposure related pulmonary disorders using the "VA Choice" option to academic or tertiary referral centers with expertise in DRLD.

2. The current VA disability criteria for DRLD and, specifically, small airways disease should be revised (14). Current clinical disability guidelines requiring resting PFTS and oxygen saturation testing for bronchitis, asthma and COPD are not sufficient for assessing small airway injury due to Southwest Asia inhalation exposures.

Richard Meehan, MD
CAPT, MC, USN (ret)
Co-Director, NJH Center for Deployment Related lung Disease
Professor of Medicine
Rheumatology Division
National Jewish Health
1400 Jackson St
Denver, CO 80206

FIRE DEPARTMENT

9 METROTECH CENTER BROOKLYN, N.Y. 11201-3857

DAVID PREZANT, MD **Phone: 718-999-2696**
Chief Medical Officer **Fax 718-999-0665**
Special Advisor to the Commissioner on Health Policy
Co-Director World Trade Center Health Program
Room 8N-7 **David.Prezant@fdny.nyc.gov**

May 2, 2022

Senate Armed Services Committee
Senate Veterans Affairs Committee

Dear Senators,

I am writing in support of https://www.congress.gov/bill/117th-congress/house-bill/3967 a bill that would provide healthcare coverage to veterans exposed to Burn Pit emissions during the Iraq War

My name is David Prezant, MD, Medical Director of the Fire Department of New York City (FDNY) and Professor of Medicine at Albert Einstein School of Medicine.

My team led the FDNY/Emergency Medical Service (EMS) medical response to the World Trade Center Disaster on September 11, 2001 from the two jet planes containing JP-8 jet fuel, which crashed into the twin towers, igniting a months-long plume.

I am also aware of burn pit research regarding garbage fires lit with jet fuel JP-8 at military bases in Iraq and Afghanistan. Soldiers living and working amidst these airborne hazards certainly have an analogous and possibly greater exposure to airborne health hazards, with an even greater risk of deleterious health consequences.

We know from our experience with World Trade Center Monitoring Programs funded by CDC NIOSH that children, adult residents, and rescue workers all may have experienced long-term, chronic health effects that range from not only asthma and rhinitis/sinusitis and gastroesophageal reflux but also a plethora of cancers.

It is more likely than not that soldiers exposed to burn pits and related airborne hazards of war may experience the same ailments we see among those from 9/11, so I encourage you to do the right thing and grant presumption for medical conditions beginning and post deployment to Iraq and Afghanistan among those soldiers deployed by burn pits.

These medical conditions should include but are not limited to known downstream events from particulate air pollutions such as cardiovascular diseases (heart attacks and stroke), asthma, COPD, as well as numerous other respiratory conditions and cancers.

Just as World Trade Center dust and plume was inhaled and swallowed and absorbed via the skin, so too is the plausibility of dust storms, burn pit plumes and improvised explosive devices in war theater.

Sincerely,

David Prezant, MD
Chief Medical Officer, FDNY
Special Advisor to the Fire Commissioner on Health Policy
Co-Director FDNY World Trade Center Medical Monitoring & Treatment Program
Director FDNY World Trade Center Data Center

DEPARTMENT OF THE ARMY
COMBINED JOINT INTERAGENCY TASK FORCE (CJIATF)-435
TASK FORCE PEACEKEEPER
BAGRAM AIRFIELD, AFGHANISTAN
APO AE 09354-9998

REPLY TO
ATTENTION OF:

CJIATF-435-TFPK-MED

15 April 2011

MEMORANDUM FOR RECORD

SUBJECT: Air Quality Summary on Bagram Air Field (BAF)

1. The purpose of this memorandum is to summarize the results of air samples taken here on BAF, which includes Camp Sabalu-Harrison, and the potential long term effects that the air quality here may have on Service Members. Results of air samples taken over approximately the last eight years indicate that there may be an increased risk of long term adverse health conditions as a result of the poor air quality here on BAF.

2. Preventive Medicine (PM) teams take weekly air samples of Particulate Matter 10 and 2.5 micrometers in size (PM_{10} and $PM_{2.5}$). U.S. Army Public Health Command analyzes the air samples and summarizes them in the *Periodic Occupational Exposure Monitoring Summary* (POEMS). The draft POEMS for Bagram Air Field (BAF), Afghanistan covers the 2002-2010 time period. According to the draft POEMS, the average air quality for PM_{10} and $PM_{2.5}$ was 302 $\mu g/m^3$ and 110 $\mu g/m^3$ respectively. The National Ambient Air Quality Standard set by the Federal Government for PM_{10} and $PM_{2.5}$ is 150 $\mu g/m^3$ and 35 $\mu g/m^3$ respectively. The Air Quality Index associated with the levels summarized for the average concentration here on BAF during the time period in the draft POEMS for PM_{10} and $PM_{2.5}$ is 174 and 177 respectively. Per U.S. Environmental Protection Agency standards, air quality indexes in the range of 151-200 are considered "Unhealthy".

3. The primary contributor to the elevated PM_{10} and $PM_{2.5}$ was a burn pit which services the trash generated on BAF with a population of up to 40,000 Service Members and contractors. Throughout the deployment the burn pit smoke plume drifted over the LSA exposing Service Members to increased air contaminants.

4. The long term health risk associated with air conditions on BAF from $PM_{2.5}$ and PM_{10} indicates there is a potential that long-term exposure at these levels may increase the risk for developing chronic health conditions such as reduced lung function or exacerbated chronic bronchitis, chronic obstructive pulmonary disease (COPD), asthma, atherosclerosis, or other cardiopulmonary diseases. This does not mean that service members that served on BAF will acquire adverse long term pulmonary or heart conditions but that the risk for such is increased.

5. If service members feel they have developed adverse health conditions due to something they were exposed to during their deployment, they should seek medical advice from the Veteran's Administration health care facilities in their local area. The medical providers at these facilities will have access to the data compiled by Public Health Command and will be able to make a determination if the adverse health condition that the service member is concerned about is a result of the exposure they received during their time on BAF.

6. The point of contact for this memorandum is the undersigned and can be reached at 318-481-9063 or gerold.m.pratt@afghan.swa.army.mil or mike.pratt@us.army.mil.

G. MICHAEL PRATT
CPT, MS
Environmental Science Engineering Officer
Preventive Medicine OIC

DEPARTMENT OF THE AIR FORCE
332D AIR EXPEDITIONARY WING
BALAD AIR BASE IRAQ

20 Dec 06

MEMORANDUM FOR 332 EAMDS/SGP

FROM: 332 EAMDS/SGPB

SUBJECT: Burn Pit Health Hazards

1. The burn pit at Balad AB (Logistics Support Area Anaconda) has been identified as a health concern for several years in numerous after action reports, Standard Form 600s (Environmental/Occupational Health Workplace Exposure Data (EOHWED), attached) in addition to other Bioenvironmental Engineering continuity documentation. During the Environmental Health Site Assessments conducted January – April 2006 by the US Army Center for Health Promotion and Preventive Medicine (USACHPPM), open burning of solid waste was identified as the number two most common environmental health finding. Balad's burn pit was quoted as being "the worst environmental site I have personally visited, and that includes 10 years working RCRA/CERCLA clean-up for the Army and DLA", by one of the assessment team members.

2. We have not yet been able to quantify contaminants that exceed the Military Exposure Guides (MEG) for most of the chemicals of concern. This data gap is a result of our inability to collect "worst case" data due to the dynamic nature of the burn pit's plume. Contributing to the difficulty of conducting a thorough scientific investigation are ongoing ground and air combat operations and the remoteness of the base. Army Technical Guide (TG) 230 specifically states that the guidance in TG 230 is not a "substitute for having trained preventive medicine personnel onsite or in theater".

3. The Air Force documents exposure to the burn pit for those stationed at Balad AB as an environmental health hazard by placing detailed information in each Airman's medical record during their post-deployment medical outprocessing. This is a permanent part of their medical record and is a mandatory document that assists the Air Force in complying with Presidential Review Directive 5. It is amazing that the burn pit has been able to operate without restrictions over the past few years without significant engineering controls being put in place. I would hope in the future that issues such as burn pits are identified early on and engineering controls such as incinerators would be used to mitigate these hazards. It seems that money has been the issue of why engineering controls are not currently in place.

4. The smoke hazards are associated with burning plastics, Styrofoam, paper, wood, rubber, POL products, non-medical waste, some metals, some chemicals (paints, solvents, etc.), and incomplete combustion by-products. A list of possible contaminants includes: acetaldehyde, acrolein, arsenic, benzene, carbon dioxide, carbon monoxide, dichlorofluoromethane, ethylbenzene, formaldehyde, hydrogen cyanide, hydrogen chloride, hydrogen fluoride, various metals, nitrogen dioxide, phosgene, sulfuric acid, sulfur dioxide, toluene, trichloroethane, trochloropropane, and xylene. Many of these chemical compounds have been found during past air sampling. Burn pits may have been an acceptable practice in the past, however today's solid waste contain materials that were not present in the past that can create hazardous compounds such as those listed above. Open pit burning may only be practical when it is the only available option and should only be used in the interim until other ways of disposal can be found. This interim fix should not be years, but more in the order of months.

5. In my professional opinion, there is an acute health hazard for individuals. There is also the possibility for chronic health hazards associated with the smoke; thus the information is being made a permanent part

"Tip of the Spear"

of each Airman's medical record. I base this assessment on the data that I have reviewed and on-site smoke plume assessments (boots on the ground). My background includes a Doctor of Philosophy in Engineering (Environmental), registered and licensed as a Professional Engineer in Arkansas and Utah respectively and seventeen years of conducting health risk assessments.

6. I am writing this memo to translate what I see is an operational health risk to those that have been, are now and will be deployed to Balad AB (LSAA). It is my recommendation that engineering controls, such as the anticipated incinerators, should be *expedited* to solve this problem.

DARRIN L. CURTIS, Lt Col, USAF, BSC
Bioenvironmental Engineering Flight Commander

cc:
332 EAMDS/CC

1st Ind., 332 EMDG/SGP 20 Dec 06

MEMORANDUM FOR 332 EMDG/CC

I concur with Lt Col Curtis' risk assessment. In my professional opinion, the known carcinogens and respiratory sensitizers released into the atmosphere by the burn pit present both an acute and a chronic health hazard to our troops and the local population.

JAMES R. ELLIOTT, Lt Col, USAF, MC, SFS
Chief, Aeromedical Services

cc:
CENTAF(F)/SG Bioenvironmental Engineer

UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301-4000

JUL 30 2013

PERSONNEL AND READINESS

MEMORANDUM FOR DIRECTOR OF THE JOINT STAFF

SUBJECT: Waiver of Requirement to Include Occupational and Environmental Monitoring Summaries in Individual Medical Records

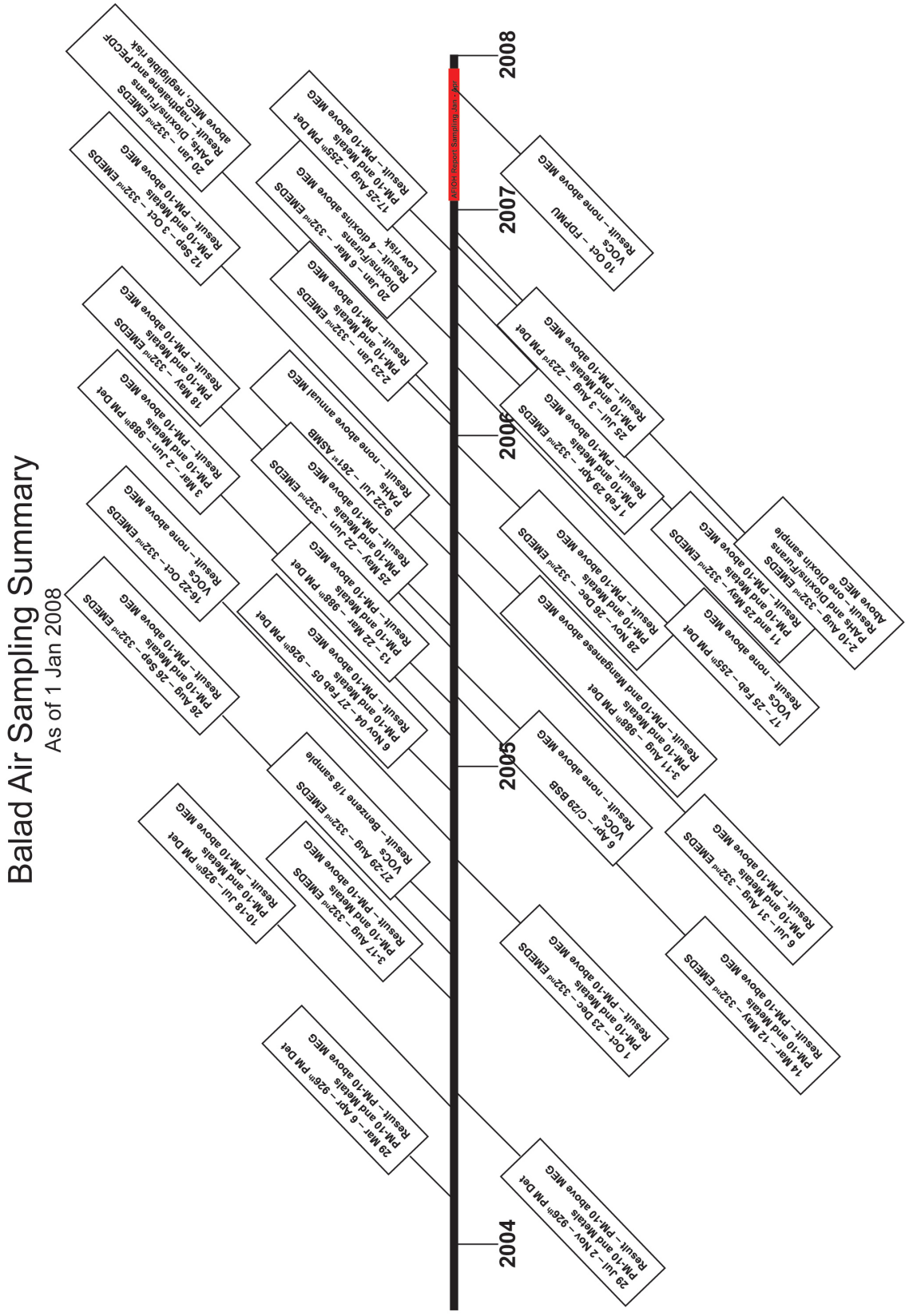
I approve a 2-year extension of the waiver from the requirement in Department of Defense Instruction (DoDI) 6490.03, "Deployment Health," dated August 11, 2006 (paragraph E4.A2.7), to document occupational and environmental health (OEH) monitoring summaries on Standard Form 600, "Chronological Record of Medical Care," and include them in individual medical records because:

1. OEH monitoring summaries address population-level health risks, not individual exposures. Including this information in individual medical records may result in biased assessments of exposure and health risk, faulty association between exposure and adverse health outcomes, and support for disability claims for chronic illnesses that may not be due to exposure.
2. Individual exposures to occupational, environmental, chemical, biological, or radiological health threats that are verified through personal sampling, biomonitoring, or medical examination will continue to be documented in individual medical records per DoDI 6490.03 paragraphs 5.7.7. and 6.4.3.1. OEH monitoring summaries and data will continue to be archived in the Military Exposure Surveillance Library in accordance with DoDI 6490.03, paragraphs 5.7.10., 6.4.3.2., and E4.A2.2.
3. Extending the waiver permits time to publish Change One to DoDI 6490.03, removing the requirement to include OEH monitoring summaries in individual medical records.

This waiver extension is effective immediately. It applies to the Military Services and to all the Combatant Commands for military operations that qualify as deployments. The point of contact for this issue is Dr. Craig Postlewaite. Dr. Postlewaite may be reached at (703) 681-8384, or Craig.Postlewaite@tma.osd.mil.

Jessica L. Wright
Acting

cc:
Assistant Secretary of the Army
(Installations, Energy and Environment)
Assistant Secretary of the Navy
(Energy, Installations and Environment)
Assistant Secretary of the Air Force
(Installations, Environment and Logistics)
Assistant Secretaries of the Military Services
(Manpower and Reserve Affairs)


Balad Air Sampling Summary
As of 1 Jan 2008
2008
2007
2006
2005
2004
AEHA Report Sampling data .ppt
10 Oct – FDPMU
Result – none above MEG
VOCs
1 Feb 29 Apr – 332nd EMEDS
PM-10 and Metals – 223rd PM Det
25 Jul – 3 Aug – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
2-10 Aug – 332nd EMEDS
PAHs and Dioxins/Furans
Result – one Dioxin sample
Above MEG
11 and 25 May – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
17 – 25 Feb – 253rd PM Det
Result – none above MEG
VOCs
28 Nov – 26 Dec – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
3-11 Aug – 988th PM Det
Result – PM-10 and Manganese above MEG
PM-10 and Metals
6 Apr – C/29 BSB
Result – none above MEG
VOCs
6 Jul – 31 Aug – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
14 Mar – 12 May – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
1 Oct – 23 Dec – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
29 Jul – 2 Nov – 926th PM Det
Result – PM-10 above MEG
PM-10 and Metals
28 Mar – 6 Apr – 926th PM Det
Result – PM-10 above MEG
PM-10 and Metals
10-18 Jul – 926th PM Det
Result – PM-10 above MEG
PM-10 and Metals
27-29 Aug – 332nd EMEDS
Result – Benzene 1/8 sample
VOCs
3-17 Aug – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
26 Aug – 26 Sep – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
16-22 Oct – 332nd EMEDS
Result – none above MEG
VOCs
6 Nov 04 – 27 Feb 05 – 926th PM Det
Result – PM-10 above MEG
PM-10 and Metals
13 – 22 Mar – 988th PM Det
Result – PM-10 above MEG
PM-10 and Metals
25 May – 22 Jun – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
9-22 Jul – 261st ASMB
PAHs
Result – none above annual MEG
3 Mar – 2 Jun – 988th PM Det
Result – PM-10 above MEG
PM-10 and Metals
18 May – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
2-23 Jan – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
20 Jan – 6 Mar – 332nd EMEDS
Result – 4 dioxins above MEG
Dioxins/Furans
Low risk
17-25 Aug – 253rd PM Det
Result – PM-10 above MEG
PM-10 and Metals
12 Sep – 3 Oct – 332nd EMEDS
Result – PM-10 above MEG
PM-10 and Metals
20 Jan – 332nd EMEDS
Result – Naphthalene and PECDF
above MEG, negligible risk
PAHs Dioxins/Furans

FOR AN UPDATED VERSION OF THE GUIDE VISIT BURNPITS360.ORG

TOXIC EXPOSURE TABLE CITATIONS

Toxic Exposure Table Citations

Toxic Exposure Table (Continued from Page 50)

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Notes

1. **Toxic Organic Halogenated Dioxins and Furans:** Specific information regarding many of the individual compounds is difficult to locate. Most have not been well studied and may simply be lumped together with other dioxins and furans. Chlorinated dibenzo-p-dioxins (CDDs) are regarded as human carcinogens based on sufficient animal data. Other health effects include chloracne; a severe dermatological condition characterized by acne-like lesions. Rashes, skin discoloration, and liver damage are also possible complications from exposure. CDDs have varying harmful effects and have been divided into eight groups based on the position of chlorine molecules. Exposure may occur through inhalation, orally, or with direct skin contact. How CDDs are broken down by the body is not well understood though CDDs may be found in higher concentrations in liver and adipose tissue after exposure (47). Chlorodibenzofurans (CDFs) have not been characterized for their ability to cuase cancers and have not been shown to cause cancer in animal studies. Health effects in humans include dermatological conditions, eye irritation with discharge, vomiting, diarrhea, anemia, lung infections, numbness, nervous system effects, and liver changes. Children born to exposed mothers had skin irritation and more difficulty learning (48).

Special thanks to the following organizations:

“I remember crying in my kitchen one time and I was asking God, why did you choose us to take this cross up? Because it’s such a heavy one.”

Rosie Torres,
Co-Founder of Burn Pits 360

BURNPITS360.ORG

EDUCATE - ADVOCATE - EMPOWER