

BURN PITS

“BREATHLESS IN BAGHDAD TURNS AILING IN AMERICA”

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I. OVERVIEW OF BURN PITS

A. Background of Burn Pits.

A burn pit refers to a large open pit used by the U.S. Military to dispose of any and all waste. From MK-19 rounds to, wires, tarps, tires, nylon, bunk beds, loaves of moldy bread, batteries, packets of tabasco sauce, burlap bags, body parts, fecal matter, and the blood and clothes of the wounded, nothing was “off limits” to be *tossed* into the burn pit.¹ “Everything – all the trash of the war – was thrown in a burn pit, soaked with jet fuel, and torched.”²

Burn pits were located at every location wherein the military had positioned a Forward Operating Base (FOB). This included the major U.S. Military staging base in the country of Djibouti on the horn of Africa.³

The most well-known, and the largest burn pit was located in Iraq at Joint Base Balad. The Balad burn pit was approximately 10 acres in size (nearly the size of 10 football fields), and, according to the U.S. Army Center for Health Promotion and Preventative Maintenance (USACHPPM), estimates that it burned up to several hundred tons of waste per day.

¹ *The Things They Burned*, Jennifer Percy, November 22, 2016: <https://newrepublic.com/article/138058/things-burned>

² *Id.*

³ See Training Letter April 26, 2010 Dept. of Veteran Affairs, Veterans Benefits Administration subject: “Environmental Hazards in Iraq, Afghanistan, and other Military Installations,” Author Bradley G. Mayes, Director Compensation and Pension Service. (Hereinafter referred to as the “Training Letter.”)

These burn pits burned day and night, around the clock, seven days a week, and were located in close proximity to where soldiers and contractors dined, slept and trained. Due to this proximity, “ash spread over everything,” Leon Russell Keith, a former military contractor [KBR] medic who was stationed at Balad, testified at a Senate Hearing in 2009, “Our beds, our clothing, the floor There was nothing that KBR would not put in the burn pits. I have never heard of any KBR restrictions on what could be burned in the pit.”⁴

B. The Burn DOWN of Burn Pits.

The Department of Defense (DOD) advised the Veterans Administration (VA) that as of October 2009, the Balad burn pits were shut down and incinerators were installed. As of the date of April 26, 2010, the “Training Letter” indicated that burn pits were “still being operated at many other bases.” In fact, as of August, 2010, United States Central Command (CENTCOM) estimated that there were 251 burn pits in Afghanistan and 22 in Iraq.⁵

As of March 15, 2011,

all burn pits in Iraq, serving more than 100 individuals, have now been closed, and programs are in place in Afghanistan to replace as many of the burn pits as is feasible. While we have been unable to identify any long-term health risks, on a population-wide basis, associated with high levels of airborne particulate matter and with burn pit smoke, we do not rule out that a small number of individuals may be adversely affected.⁶

As of May 18, 2011, W. Scott Gould, Deputy Secretary, U.S. Department of Veteran Affairs Statement before the United States Senate Committee on Veteran Affairs reported that

VA is very concerned about any potential adverse health effects among Veterans as a result of exposure to toxins possibly produced by burn pits. VA

⁴ See “*Are Burn Pits in Iraq and Afghanistan Making our Soldiers Sick?*” L. Russell Keith, Senate Democratic Policy Committee. <https://www.dpc.senate.gov/hearings/hearing50/keith.pdf>

⁵ Afghanistan and Iraq: DOD should improve adherence to its guidance on open pit burning and solid waste management. GAO 11-63, October 15, 2010.

⁶ Joint Statement by Clifford Stanley, Ph.D. Under Secretary of Defense (Personnel & Readiness) and Jonathan Woods, M.D. Assistant Secretary of Defense (Health Affairs) Regarding the Military Health System Overview before the House Armed Services Committee Military Personnel Committee, March 18, 2011.

has asked the Institute of Medicine (IOM) to review the literature on the health effects of such exposures. While it is possible some Veterans could experience health problems related to exposures to toxins possibly produced by burn pits, the extent of the impact on health is unknown at this time. IOM's examination of the scientific literature related to the burn pits in Iraq and Afghanistan also will determine what substances were burned in the pits and what byproducts were produced. We expect this study to be completed by early 2012...

II. THE MEDICAL CONSEQUENCES FROM EXPOSURE TO BURN PITS

A. Smoke and Science.

Burn pits emitted plumes of smoke that spanned for a mile-high. The color of the smoke would change depending on what was being burned that day.

L. Russell Keith explained:

Sometimes the smoke was a yellowish color. But the worst was when the smoke would be a dark greenish color. On these days, the KBR medical clinic where I worked could expect an increased number of patients, all complaining of burning throats and eyes as well as painful breathing.

The ash that came from the pits looked like burned notebook paper and felt like a black, sooty snowfall. The ash covered the buildings and the grounds like pollen dust. Soot from the pits would cover your clothes and stick to the walls of the building.

The smoke from the burn pits contains "Particulate Matter ("PM"), a mixture of extremely small particles and liquid droplets. "PM" is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Although PM emissions from natural and manmade sources are generally found worldwide, the PM levels in southwest Asia are naturally higher and may present a health risk to service members."⁷

What is recognized by both the VA and experts studying this phenomena as a result of a "Working Group," a multi-disciplinary group of pulmonary experts, occupational and environmental medicine physician, epidemiologists, toxicologists, industrial hygienists, geologists

⁷ Training Letter.

and military Department of Defense, Veterans Administration and civilian academics, is the size of the particles in the air in southwest Asia is much smaller in diameter (2.5 microns) than seen elsewhere in the world. And in this case *size matters* because the size of the particles has been directly linked to the potential for causing health problems.

Particles that are 10 microns (PM10) in diameter, or smaller, are particles that can pass easily through the throat and nose, and into the lungs. “Once inhaled, these powder-like particles can affect the heart and lungs and cause serious health effects.”⁸

The source of PM in southwest Asia, includes dust storms and emissions from local industries: smelting factories, glass plants, battery manufacturers and obviously a host of businesses that were not subject to EPA emission regulations. Other sources of particulate matter include: IED blasts, battle smoke, vehicular exhaust, extremes of temperature and humidity, cigarette smoke and infectious agents. “The wide spread existence of burn pits only exacerbates the high concentrations of PM in Iraq and Afghanistan.” The Department of Defense stated in its 2008 Balad Assessment that emissions from burn pits, among other things “may increase localized concentration of 2.5 micrometer PM and other potentially toxic air pollutants.”⁹

Dr. Cecile Rose testified via deposition in *Lucas vs. SEII*, 2010-LDA-00297, that workers are exposed to the intense desert sand storms—a very fine powdery material—that often occurs in Iraq and Afghanistan. According to Dr. Rose, a comparison was made of desert sand storm particulate matter from various different sites in Iraq and Afghanistan and the sand found in the desert southwest of the United States. The investigators were able to demonstrate in an article published in the Journal of Inhalational Toxicology, that the levels of particulate matter exposure were

⁸ *Id.*

⁹ *Id.*

substantially higher in southwest Asia compared to what would be found in typical urban or rural areas in the southwestern United States.¹⁰

Dr. Rose further testified that there is concern about the enhanced particulate matter that is found in the three major sources of inhalational exposure to men and women deployed in Iraq and Afghanistan: 1) geological dust-the desert dust; 2) burn pit smoke; 3) the very metal rich components that are attributed to exposures to local industries; for example, battery reclamation facilities and smelters that may be located in proximity to FOBs or areas where military people are living and working.¹¹

B. Complaints in Camp.

While there was no escaping the smoke from the burn pits, some areas of camp were affected more than others, due to the geographical location of the burn pits and wind direction. L. Russell Keith testified at to the Senate committee regarding his experience as a medic:

The thick smoke was especially difficult for those working at the military mail office, which was directly across the road from the pits. I also noticed that the smoke would be especially bothersome to new employees who had not yet experienced what we referred to as the “Iraqi Crud.” The acute symptoms of exposure to burn pit smoke included, but were not limited to, nausea, vomiting, lung and sinus irritations, congestion, diarrhea and associated dehydration, and even some cases of individuals coughing up blood. At the KBR clinic, we provided lung decongestants and oral steroids. Unfortunately, I had patients who were so sick from the smoke that we had to take them to the Air Force Hospital or send them to Kuwait for advanced diagnostics and treatment. If their health did not improve, these individuals would be sent home.

It has been estimated that 14% of medic visits in Iraq were due to *respiratory complaints* according to a personal communication from Michael E. Kilpatrick, M.D., Deputy Director for Force Health Protection and Readiness Programs in the Office of the Assistant

¹⁰ Dr. Cecile Rose Deposition P. 37 (hereinafter referred to as “Dr. Rose depo P.____”)

¹¹ Dr. Rose depo P. 40.

Secretary of Defense for Health Affairs. The Millennium Study of soldiers in Iraq later confirmed these findings of 14% of soldiers with respiratory symptoms while in Iraq and Afghanistan.¹²

However, soldiers may not exhibit symptoms while in theatre. For example, some soldiers may not exhibit any symptomology until they arrive back on U.S. soil; this is known as a “delayed onset.”

According to Cecile Rose, M.D., M.P.H., a physician at the National Jewish Health Center, in Denver, Colorado, one of the world’s leading experts in Occupational/Environmental Medicine and Pulmonary Medicine, it is remarkable as to how many people will just soldier on without feeling particularly symptomatic when their lung disease is actually rather substantial. So, their perception of symptoms can be very variable and is not at all perfectly correlated with a person’s lung function. However, the patient will generally report a worsening of their symptoms during deployment and refer to it as the “Iraqi Crud.” When they first arrive in Iraq they notice a fairly rapid onset of upper respiratory symptoms including a cough, sometimes shortness of breath, runny nose and sinus congestion. They will often be treated by the base medic (if at all) with over-the-counter medications, occasionally treated with antibiotics with very little response. At that point in time there is not much more that can be done for them with the limited medical resources available (unless they leave theater).

The “Training Letter” also provides a reasonable explanation for a Claimant’s delay in reporting and filing a Claim for Compensation for any illness that they may have been sustained while working at various bases-avoiding the statute of limitations for an occupational disease claim.

¹² Smith B, Wong CA, Smith TC, Boyko EJ, Gackstetter GD, Margaret AK, Ryan for the Millennium Cohort Study Team Newly reported respiratory symptoms and conditions among military personnel deployed to Iraq and Afghanistan: a prospective population-based study. *Am J Epidemiol.* 2009; 170:1433–1442.

Understanding the statute of limitations in an “Occupational Disease” claim is crucial to the successful prosecution and attainment of benefits for a Claimant exposed to burn pits. Where the occupational illness does not result in immediate death or disability, claims are timely filed if done so within 2 years after the employee or claimant became aware, or in the exercise of reasonable diligence or by way of medical advice should have been aware, of the relationship between the employment, and the death or disability; or within one year of the date of the last payment of compensation, whichever is later.”¹³ Additionally, until the worker has knowledge that the condition will affect his earning capacity, the statute does not begin to run.¹⁴

C. Go With the Flow, or Go Home.

Although 14% of medic visits were due to respiratory complaints, Kellogg Brown & Root (“KBR”) ignored [threatened] its employees and their symptoms. One of the outspoken former employees of KBR, Rick Lamberth, an Army Reserve Lieutenant Colonel, was an employee for KBR in Iraq and Afghanistan from 2003 to 2009. Shortly after returning home, L. Rick Lamberth testified to a panel of Democratic senators about how KBR operated burn pits and his experience when he brought his concerns to the attention of KBR management. L. Rick Lamberth testified:

As a LOGCAP Operations Manager, it was my duty to report to KBR management when the company was in violation of guidelines and the contract Statement of Work. I witnessed burn pit violations on a weekly basis. When I tried to report violations, I was told by the head of KBR’s Health Safety and Environment division

¹³ 33 U.S.C. §913 (b)(2).

¹⁴ *Marathon Oil Co. v. Lundsford*, 733 F.2d. 1139 (5th Cir. 1984), *Newport News Shipbuilding & Drydock Co. v. Parker*, 935 F.2d 20 (4th Cir. 1991).

to shut up and keep it to myself. At one point, **KBR management threatened to sue me for slander if I spoke out about these violations.**¹⁵

What was KBR's reason for the threats? KBR's massive profits from the burn pits. It has been cited that KBR contracted with the U.S. government to provide certain services at military bases in Iraq and Afghanistan, including waste disposal and water treatment for \$35 billion.¹⁶ Clearly, KBR was not in a position to rattle any feathers with the potential of ruining their billion-dollar industry.

III. Ailing in America.

After their return, it did not take long for soldiers to begin falling ill. As early as 2004, veterans who had served near burn pits began complaining of a complex and puzzling constellation of symptoms such as: asthma, sinusitis, bronchitis, unexplained diarrhea, persistent runny nose or cough, severe headaches abdominal pain, ulcers, weeping lesions on the extremities, chronic infections, etc.¹⁷

A. The VA's "Study"

On December 19, 2012, the United States Congress was provided the Act [short title] "Dignified Burial and Other Veterans' Benefits Improvement Act of 2012." The Act's purpose was to establish an "open burn pit registry." Public Law 112-260 §201 was enacted on January 10, 2013.

¹⁵ "Are Burn Pits in Iraq and Afghanistan Making Our Soldiers Sick?" Rick Lamberth, Senate Democratic Policy Committee.

¹⁶ https://www.usaspending.gov/#/keyword_search/Kellogg

¹⁷ *Id.*

The Act stated as follows:

SEC. 201. ESTABLISHMENT OF OPEN BURN PIT REGISTRY

(a) ESTABLISHMENT OF REGISTRY.—

(1) IN GENERAL.—Not later than one year after the date of the enactment of this Act, the Secretary of Veterans Affairs shall—

(A) establish and maintain an open burn pit registry for eligible individuals who may have been exposed to toxic airborne chemicals and fumes caused by open burn pits;

(B) include any information in such registry that the Secretary of Veterans Affairs determines necessary to ascertain and monitor the health effects of the exposure of members of the Armed Forces to toxic airborne chemicals and fumes caused by open burn pits;

(C) develop a public information campaign to inform eligible individuals about the open burn pit registry, including how to register and the benefits of registering; and

(D) periodically notify eligible individuals of significant developments in the study and treatment of conditions associated with exposure to toxic airborne chemicals and fumes caused by open burn pits.

(2) COORDINATION.—The Secretary of Veterans Affairs shall coordinate with the Secretary of Defense in carrying out paragraph (1).

(b) REPORT TO CONGRESS.—

(1) REPORTS BY INDEPENDENT SCIENTIFIC ORGANIZATION.—The Secretary of Veterans Affairs shall enter into an agreement with an independent scientific organization to prepare reports as follows:

(A) Not later than two years after the date on which the registry under subsection (a) is established, an initial report containing the following:

(i) An assessment of the effectiveness of actions taken by the Secretaries to collect and maintain information on the health effects of exposure to toxic airborne chemicals and fumes caused by open burn pits. information.

(ii) Using established and previously published epidemiological studies, recommendations regarding the most effective and prudent means of addressing the medical needs of eligible individuals with respect to conditions that are likely to result from exposure to open burn pits.

(B) Not later than five years after completing the initial report described in subparagraph (A), a follow-up report containing the following:

(i) An update to the initial report described in subparagraph (A).

(ii) An assessment of whether and to what degree the content of the registry established under subsection (a) is current and scientifically up-to-date.

(2) SUBMITTAL TO CONGRESS.—

(A) INITIAL REPORT.—Not later than two years after the date on which the registry under subsection (a) is established, the Secretary of Veterans Affairs shall submit to Congress the initial report prepared under paragraph (1)(A).

(B) FOLLOW-UP REPORT.—Not later than five years after submitting the report under subparagraph (A), the Secretary of Veterans Affairs shall submit to Congress the follow-up report prepared under paragraph (1)(B).

(c) DEFINITIONS.—In this section:

(1) ELIGIBLE INDIVIDUAL.—The term “eligible individual” means any individual who, on or after September 11, 2001—

(A) was deployed in support of a contingency operation while serving in the Armed Forces; and

(B) during such deployment, was based or stationed at a location where an open burn pit was used.

(2) OPEN BURN PIT.—The term “open burn pit” means an area of land located in Afghanistan or Iraq that—

(A) is designated by the Secretary of Defense to be used for disposing solid waste by burning in the outdoor air; and

(B) does not contain a commercially manufactured incinerator or other equipment specifically designed and manufactured for the burning of solid waste.¹⁸

Public Law 112-260 includes provisions specifying that the registry would be for “eligible individuals who may have been exposed to toxic airborne chemicals and fumes caused by open burn pits” and would include any information that VA determined as “necessary to ascertain and monitor the health effects” of individuals who served in the Armed Forces and reported exposure to toxic airborne chemicals and fumes caused by open burn pits. The law directs that registry participants are to be notified of significant developments in the study and in the treatment of

¹⁸ See Title II – Health Care, Sec 201. ESTABLISHMENT OF OPEN BURN PIT REGISTRY: <https://www.gpo.gov/fdsys/pkg/PLAW-112publ260/pdf/PLAW-112publ260.pdf>

conditions associated with exposure to toxic airborne chemicals and fumes caused by open burn pits.¹⁹

At the direction of Congress, the VA undertook the task of gathering information and creating a database so that the government could study the complaints of soldiers to determine whether there was a causal link between their symptoms and their exposure to burn pits.

The VA has, in various forums, articulated multiple goals and intents for the Airborne Hazards and Open Burn Pit (“AH&OBP”) Registry. The registry website states that the data collected will be used to help monitor health conditions affecting eligible veterans and service members, to help veterans and service members who report deployment-related exposure concerns, and to improve VA programs. It then states the following benefits of participation: creating a point to identify changes in health over time, using the completed questionnaire to discuss concerns with a health care provider, and learning about follow-up care and VA benefits.²⁰ VA also stated that it intends to use the registry to generate potential hypotheses about exposure response relationships but acknowledges that subsequent studies would be needed to test these hypotheses.²¹ In a presentation to the committee, VA said that data from the registry will also be used more generally to improve programs in the Veterans Health Administration (VHA) and to provide outreach to veterans who may have experienced adverse health outcomes as a result of their exposures.²²

¹⁹ National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice; Board on the Health of Select Populations; Committee on the Assessment of the Department of Veterans Affairs Airborne Hazards and Open Burn Pit Registry; Butler DA, Styka AN, Savitz DA, editors. Washington (DC): [National Academies Press \(US\)](#); 2017 Feb 28.

²⁰ VA. Airborne Hazards and Open Burn Pit Registry: About the registry. 2016a. [January 28, 2016]. <https://veteran.mobilehealth.va.gov/AHBurnPitRegistry/index.html#page/about>.

²¹ VA. Justification template: Airborne hazards and Open Burn Pit Registry self-assessment questionnaire. 2014a. [September 29, 2016]. www.reginfo.gov/public/do/DownloadDocument?objectID=44258503.

²² Ciminera P. Charge to the Committee on the Assessment of the Department of Veterans Affairs Airborne Hazards and Open Burn Pit Registry. Washington, DC: Mar 13, 2015a. PowerPoint Presentation Presented at the Meeting

By November 30, 2015, about 28,800 individuals had completed the questionnaire and indicated that they were interested in having a health exam, but only 750 participants (2.5% of those interested) had received the health exam. As of 2015:

An analysis of the chief complaints (participants may have indicated more than one) for the 543 participants who underwent a clinical evaluation showed that the three most common complaints were shortness of breath (57.5%), decreased exercise ability (47.8%), and chronic sinus infections (47.3%).²³

As of fall 2016, the VA was in the process of developing new patient appointment scheduling software that would allow the registry to interface with that system, allowing registry participants who are enrolled with VA to request the clinical examination directly through the registry.

By August 20, 2018, **154,071** veterans and service members completed and submitted the registry questionnaire.²⁴ There is no closing or “end” date for new participants to input their information onto the AH&OBP Registry.

B. The AH&OBP Registry

The AH&OBP Registry consists of responses to an online questionnaire [140 questions] that takes approximately 40 minutes to complete on a laptop or desktop, and approximately 61 minutes to complete using the mobile app version. In addition to the online accessibility of the AH&OBP Registry, the VA sought to improve access and participation in the registry by offering an optional in-person exam.

1. Pros and Cons.

²³ *Id.*

²⁴ See <https://www.publichealth.va.gov/exposures/burnpits/registry.asp>

As mandated by the law, an independent scientific organization was to prepare a report addressing issues related to the establishment and conduct of the registry and use of its data. In late 2014, the VA asked the National Academies to take on this responsibility and conduct an autopsy of Registry. Some of the highlights are as follows:

PROS:

One strength of the AH&OBP Registry is that the completed questionnaire generates a record of potential exposures and health concerns that is recorded in the participant's VA electronic health record that can be accessed by military and veteran health care system providers. This record of potential exposures can be downloaded and printed by the participant for his or her reference and the use of other health care providers.

CONS:

(1) The AH&OBP's message is not clear. The lack of a consistent message makes it difficult to evaluate the degree to which the registry is meeting its stated intents and suggests a lack of focus that is reflected in information gathering that does not appear to serve a sound research purpose.

(2) The time to complete the survey is too long and cumbersome. The VA states that the questionnaire takes about 40 minutes to complete. However, the veterans who had participated in the registry and attended the committee's workshop stated that in practice the questionnaire took closer to an hour to complete. Along with longer times needed, several reported that the website would freeze and they would have to start again, sometimes requiring multiple attempts before the questionnaire could be completed and submitted. Participants are able to save sections of the questionnaire as they complete them, and they are able to come back to a section to continue or

submit it.²⁵ A questionnaire should be designed and laid out in a manner that lessens the chance that respondents will be fatigued or unengaged before they get to the questions of greatest importance. Furthermore, a substantial amount of veterans may be suffering from PTSD which frequently co-exists with ADD/ADHD which would make it difficult to concentrate for the entire 140 question examination.²⁶

(3) The questions and directions are not clear. Directions and clarifying instructions are rarely provided throughout the questionnaire; there is little to none transitional language or instructions provided to make respondents aware of the change in topic; and compound questions are used, making it difficult to understand what must be answered. For example, the following are compound questions contained within the AH&OBP Registry:

Did you do anything differently during your deployment(s), when you thought or were informed air quality was bad (for example during dust storms or heavy pollution days)? 1. Yes, 2. No, 3. Never thought of this, 4. I was not informed or aware of bad air quality, 5. I do not wish to answer, 6. Don't know.

During your deployment(s), did you seek medical care for wheezing, difficulty breathing, itchy or irritated nose, eyes or throat that you thought was the result of poor air quality? 1. Yes, 2. No, 3. I do not wish to answer, 4. Don't know.

(4) No opportunity to update answers. The registry's design and architecture do not allow for information, once submitted, to be updated. Thus, making it impossible for veteran's to change their answer if a new condition arises, worsens or resolves.

²⁵ Montopoli M. VA responses to committee's questions following August 24-25, 2015, meeting. 2016b. Received September 15

²⁶ A list of questions contained in the AH&OBP Registry is located here: <https://www.ncbi.nlm.nih.gov/books/NBK436101/>

2. The VA's Inconclusive Conclusive Findings.

On the very first page of the U.S. Department of Veterans Affairs Burn Pit Page, it states, “Burn pits were a common way to get rid of waste at military sites in Iraq and Afghanistan. **At this time, research does not show evidence of long-term health problems from exposure to burn pits.** VA continues to study the health of deployed Veterans.” When you click on “research” you are brought to a hyperlink for “Assessment of the Department of Veterans Affairs Airborne Hazards and Open Burn Pit Registry.” The Conclusion states:

Attributes inherent to registries that rely on voluntary participation and self-reported information make them fundamentally unsuitable for addressing the question of whether burn pit exposures have caused health problems. Addressing the issues identified by the committee would, though, improve the AH&OBP Registry's utility as a means of generating a roster of concerned individuals and creating a record of self-reported exposures and health concerns. All parties—service members, veterans, and their families; VA; Congress; and other concerned people—would benefit from having a realistic understanding of the strengths and limitations of registry data so that they can make best use of them and, if desired, conduct the kind of investigations that might yield salient health information and improve health care for those affected.

This logic of “self-reported information makes them fundamentally unsuitable for addressing the question of whether burn pit exposures have caused health problems” is absurd, and frankly a waste of time and resources. Because the information is self-reported, it gives the VA the platform to therefore say “research does not show evidence of evidence of long-term health problems from exposure to burn pits,” is preposterous.

As of now, medical evidence is still “inconclusive.”

3. Organizations Outside of VA.

A study titled, “*Does deployment to Iraq and Afghanistan affect respiratory health of US military personnel*” examined ... well, exactly what the title states. In this study, scientists linked

deployment history of US military personnel with postdeployment medical records. The conclusion was as follows:

In a population of active duty US military personnel, we observed an increase in postdeployment respiratory symptoms and medical encounters for obstructive pulmonary diseases, relative to predeployment rates, in the absence of an association with cumulative deployment duration or total number of deployments.²⁷

Furthermore, in a study titled, “*Bronchodilator Responsiveness and Airflow Limitation Are Associated With Deployment Length in Iraq and Afghanistan Veterans*,” determined the relationship between deployment length and indices of airflow obstruction in Iraq and Afghanistan veterans with airborne hazards exposure. That study found: “In our sample of post-9/11 veterans, longer deployment lengths were associated with significant bronchodilator responsiveness and a trend toward airflow limitation independent of tobacco use.”²⁸

According to Burnpits360.com, a 501c3 non-profit Veterans organization, there’s a whole host of medical issues that have been linked to burn pit exposure.

The following have been cited as illnesses by Burnpits360:

Cancers

AML-ACUTE MYELOID
LEUKEMIA
LEUKEMIA
LUNG CANCER
THROAT CANCER
BRAIN TUMOR-
GLIOBLASTOMA
HODGKINS LYMPHOMA
MENINGIOMA
COLON CANCER
LIVER CANCER
CML-CHRONIC MYELOGENOUS
LEUKEMIA

T-CELL LYMPHOMA
RENAL CELL CARCINOMA
APPENDICEAL CANCER
SPINDLE CELL CARCINOMA
PAPILLARY THYROID
CARCINOMA
MARGINAL ZONE B-CELL
LYMPHOMA
THROAT CANCER

Cardiology

ASSYMETRIC LEFT
VENTRICULAR HYPERTROPHY
PULMONARY REGURGITATION
PULMONARY HYPERTENSION

²⁷ <https://www.ncbi.nlm.nih.gov/pubmed/22588475>

²⁸ <https://www.ncbi.nlm.nih.gov/pubmed/27058470>

CONGESTIVE HEART FAILURE

BRAIN LESIONS
MEMORY LOSS

Hematology

VITAMIN D DEFICIENCY
VIII BLOOD DISORDER

GI-Gastro Intestinal

IRRITABLE BOWEL SYNDROME
H-PYLORI
PARASITES
GALL BLADDER REMOVAL
CALCIFIED CYST ON SPLEEN
CHEMICAL GASTRITIS
CHROHN'S DISEASE
IBD FACTOR VII

Infectious Disease

HEPATITIS C

Neurology

PARKINSONS

Pulmonary

CONSTRUCTIVE
BRONCHIOLITIS
CHRONIC BRONCHITIS
OBSTRUCTIVE SLEEP APNEA
HYPERSENSITIVITY
PNEUMONIA
COPD

**Reproductive
Infertility**

Rheumatology

FIBROMYALGIA
DEGENERATIVE JOINT
DISEASE
LUPUS
UNKNOWN IMMUNE DISEASE

4. Benzene Exposure Causally Related to Cancer

Not only now do we have veterans claiming respiratory illnesses, but now, we have veteran's claiming that their cancer is stemming from burn pits as well. The reasoning behind this? Jet fuel [aka benzene] used to ignite burn pits.

Benzene is a pale yellowish liquid with molecular formula C_6H_6 , molecular weight of 78.11 and a flammable substance with aromatic odor. Benzene reacts violently with oxidizing agent, easy to vaporize. Benzene is absorbed into the body through inhalation, skin exposure, and ingestion. In animal experiments, about 50% of aspirated benzene is absorbed into the body.²⁹ In the case of skin exposure, the absorption rate is low because a significant amount is vaporized

²⁹ EPA. Toxicological review of benzene (CAS no. 71-43-2). US Environmental Protection Agency; 1998. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/toxreviews/0276tr.pdf.

before absorption, and a high uptake rate when ingested orally. Benzene is rapidly metabolized mainly in the liver and becomes water-soluble and is released into the urine within 48 h. Some of the metabolites of benzene migrate to the bone marrow. Benzene itself appears to be non-toxic, and the metabolites from the liver, especially benzoquinone and mucoaldehyde, have bone marrow toxicity.³⁰ These metabolites can damage DNA and produce DNA adducts. Benzene is metabolized in different concentrations. At low concentrations, much of benzene is metabolized to hydroquinone and other toxic substances than to high concentrations.

The International Agency for Research on Cancer (IARC) concluded in 1987 that benzene exposure has sufficient carcinogenic evidence in both humans and animals.³¹ That report shows strong evidences that benzene exposure causes acute myeloid leukemia (AML) and acute non-lymphocytic leukemia (ANLL). There are also positive association between benzene exposure and acute/chronic lymphocytic leukemia, non-Hodgkin lymphoma, and myeloma.³²

Rates of leukemia, particularly acute myeloid leukemia (AML), have been found to be higher in studies of workers exposed to high levels of benzene, such as those in the chemical, shoemaking, and oil refining industries.³³

According to a recent study on petroleum workers systematic review and meta-analysis of selected cancers in petroleum refinery workers. The author (Dr. A. Robert Schnatter, JOEM, Volume 60, Number 7, July 2018) conducted a meta-analysis studying the risk of 11 cancers in petroleum refinery workers. The article is significant, as Benzene is a known carcinogen, and

³⁰ Ross D. The role of metabolism and specific metabolites in benzene-induced toxicity: evidence and issues. *J Toxicol Environ Health A*. 2000;61(5–6):357–72.

³¹ McMichael AJ. Carcinogenicity of benzene, toluene and xylene: epidemiological and experimental evidence. *IARC Sci Publ*. 1988;85:3–18.

³² IARC. International Agency for Research on Cancer: IARC Monographs 100F - Chemical Agents and Related Occupations. IARC. 2012;100F:p249–94. <http://monographs.iarc.fr/ENG/Monographs/vol100F/index.php>.

³³ <https://www.cancer.org/cancer/cancer-causes/benzene.html>

besides being associated with Leukemia, Acute Non-Lymphocytic Leukemia (ANLL), Chronic Lymphoid Leukemia (CLL), Acute Lymphoid Leukemia (ALL), and Multiple Myeloma (MMY), showed statistically significant association for these diseases.

IV. BURN PIT LITIGATION

A. Overview of litigation

In order to invoke the Section 20(a) presumption of causation, claimant must make a prima facie case by showing: (1) that he suffered harm; and (2) that an accident occurred or working conditions existed that could have caused, aggravated, or accelerated the harm. *See Port Cooper/T. Smith Stevedoring Co. v. Hunter*, 227 F.3d 285, 287, 34 BRBS 96, 97(CRT) (5th Cir. 2000).

Once the Section 20(a) presumption is invoked, the burden shifts to the employer to rebut it with substantial evidence that claimant's condition was not caused or aggravated by his employment exposures.³⁴ Substantial evidence is ““that relevant evidence--more than a scintilla but less than a preponderance-- that would cause a reasonable person to accept the fact-finding.” *See Ceres Gulf, Inc. v. Director, OWCP [Plaisance]*, 683 F.3d 225, 228, 46 BRBS 25, 27(CRT) (5th Cir. 2012).

1. What Not to Do:

In *Wadah Bazzi v. Applied Insurance Technologies*, BRB No. 16-0381, 2017 WL 1279637, at *2 (DOL BRB Mar. 6, 2017), the Claimant filed a claim for medical and disability benefits under the Act, asserting that his kidney cancer was caused by his exposure to the burn pit smoke. Claimant was first deployed to Kuwait in late 2002, remaining there at different camps until August 2003, when he was deployed to Iraq by a different contractor from October 2003 until April 2004,

³⁴ *Id.* at 288

living at various camps in Iraq. Finally, he was deployed by employer to Balad Air Base in Iraq from February 2005 to September 2005. At each of these camps, garbage on the base was disposed of by burning.

Claimant testified that he usually lived in tents located not far from the burn pits, and that he could smell the smoke from the burn pits while in his tents and while working around the bases, although **he could not remember specifically how frequently he could smell the smoke from the burn pits**. He described the smell of the smoke as being “[t]o the best of my recollection as, **it's like close to plastic, wires, stuff like that, and sometimes it's weird too.**”

Administrative Law Judge, Paul R. Almanza denied benefits for the Claimant, and Claimant appealed.³⁵ While the Claimant presented evidence that the exposure to the burn pit smoke “could have caused kidney cancer,” the administrative law judge found that the Employer/Carrier submitted substantial evidence to rebut the presumption. Judge Almanza believed the Employer/Carrier’s physician, Dr. Grodan’s testimony that,

In order for chemical exposure to lead to kidney cancer, there must be long-term exposure than the Claimant was subjected to and there was not enough time between claimant's work exposure and the kidney cancer diagnosis in 2011 for the tumor to have grown as large as it was at the time of the diagnosis.³⁶

The Claimant failed to mention (1) how close he lived to the burn pits; or (2) what extent his exposures were. The administrative law judge recognized that claimant's testimony and recollections concerning his exposure to burn pit smoke were vague and unspecific, and thus did not establish the intensity, frequency, or duration of claimant's exposure.³⁷ Therefore, Claimant

³⁵ (2013-LDA-00464)

³⁶ *Wadah Bazzi* at *3 (DOL BRB Mar. 6, 2017)

³⁷ *Id.* at 4.

failed to establish a causal link between his kidney cancer and his exposure to chemicals from burn pits.

2. Gettin' Better, Still Not There:

In a recent case that made a *splash* in the news, *Veronica M. Landry v. Service Employees Intl. Inc. and Ins. Co. of the State of Penn.*,³⁸ Administrative Law Judge, Christopher Larsen found “sufficient evidence to establish Ms. Landry suffers from deployment-related lung disease.” Ms. Landry testified the following about her exposure:

The burn pit was a huge area that was dug out of the ground that they just burned everything, everything from tires – you know when tires are being burned, because the smoke was black, just really black – vehicle parts, air conditioner parts, hazardous materials, until we had a new HSE, Health Safety Environmental Officer who came in and started separating the hazmat out the best he could. They were just throwing all the hazmat stuff in there – we’re talking paint thinner, whatever, it could be any kind of, you know, hazardous materials – even ammunition. We spent hours in the bunker at a time, because there was ammunition just going off everywhere.

On August 25, 2016, Silpa Krefft, M.D. of the National Jewish Health Center in Denver diagnosed the Claimant with “**mild**” “deployment-related lung disease.”³⁹ While Judge Larsen did find that the disease was causally related to the burn pits, he concluded that the Claimant could return to her usual employment and was, therefore, not disabled. Judge Larsen reasoned:

To be sure, Dr. Krefft “recommends” Ms. Landry “refrain” from working in “austere” (apparently, dusty or poor-air-quality) environments, such as southwest Asia. But the breadth of this limitation is surprising. Dr. Krefft not only describes Ms. Landry’s lung disease as “mild,” reporting normal resting lung function and “excellent” exercise tolerance, but she acknowledges the prognosis is “uncertain,” and notes there are no established or evidence-based treatments for the condition. She opines Ms. Landry’s three respiratory “events” since returning home from Iraq are “not related” to her deployment-related lung disease. And Dr. Krefft does not

³⁸ OWCP: 02-140409; Case No: 2017-LDA-00210; 2017-LDA-00211
[https://www.oalj.dol.gov/DECISIONS/ALJ/LDA/2017/LANDRY_VERONICA_v_SERVICE_EMPLOYEES_IN_2017LDA00210_\(JAN_11_2018\)_152555_CADEC_PD.PDF](https://www.oalj.dol.gov/DECISIONS/ALJ/LDA/2017/LANDRY_VERONICA_v_SERVICE_EMPLOYEES_IN_2017LDA00210_(JAN_11_2018)_152555_CADEC_PD.PDF)

³⁹ Ms. Landry did have a biopsy of her lung conducted which indicated disease related to exposure to burn pits.

specifically aver that dust in the air, or poor air quality, is likely to worsen or accelerate Ms. Landry's condition. Like Dr. Rhodes-Marsh, Dr. Kreffft seems to suggest Ms. Landry play it safe and minimize her risk. There appears to be no reason, other than an abundance of caution, to restrict Ms. Landry from working wherever air quality may be low, since Ms. Landry's own graphic testimony suggests her lung disease resulted from exposure in Iraq to such nasty pollutants as smoke from burning tires, burning paint thinner, burning plastic, and other hazardous materials.⁴⁰

Although, in *Landry*, the evidence did not show that the Claimant was disabled by her deployment-related lung disease, it was a step in the right direction for obtaining justice for men and women who have been exposed to burn pits by causally relating the burn pit smoke to her injuries.

3. What's Up with the Class Action?

The Spark Note Background of the Case:

In September of 2010 burn pit lawsuits across the country were consolidated into *In re KBR Inc. Burn Pit Litigation MDL*.⁴¹ *KBR* filed a motion to dismiss for lack of subject matter jurisdiction.⁴² The U.S. District Court for the District of Maryland denied the motion. The Court concluded then that while it would be without jurisdiction to decide a claim arising out of an alleged breach of a LOGCAP III contract if such review would involve second-guessing a military decision, there was insufficient information at that early stage of the litigation to determine whether Defendants operated burn pits and treated water in ways prohibited or unauthorized by the military.

In February of 2013, following a "stay on all proceedings," the U.S. District Court for the District of Maryland heard *KBR's* renewed "Motion to Dismiss for Lack of Subject Matter Jurisdiction."⁴³ In its Memorandum Opinion, this Court concluded that there was "more than sufficient information" in the record such that full discovery or an evidentiary hearing was not

⁴⁰ *Id.*

⁴¹ One of the firms to take on the class action was *Motley Rice, LLC*.

⁴² *In re KBR, Inc., Burn Pit Litig.*, [736 F.Supp.2d 954](#) (D. Md. 2010) ("*Burn Pit I*")

⁴³ *In re KBR, Inc., Burn Pit Litig.*, [925 F.Supp.2d 752](#)(D. Md. 2013) ("*Burn Pit II*").

necessary.⁴⁴ The Court concluded that the extensive discovery sought by the Plaintiffs would "result in precisely the kind of unnecessary intrusion and entanglement with the military that the political question doctrine was designed to avoid."⁴⁵

In deciding that the cases were nonjusticiable under the political question doctrine, this Court noted that the Fourth Circuit in *Taylor v. Kellogg Brown & Root Services, Inc.*, 658 F.3d 402 (4th Cir. 2011), had adopted a two-part test for use in the government contractor context.⁴⁶ The two-part inquiry considered "(1) the extent to which a contractor was under the military's control; and (2) whether national defense interests were closely intertwined with the military's decisions governing the contractor's conduct."

This Court considered the "military control" factor and concluded that KBR's evidence "establishe[d] direct and fundamental military management and control of KBR employees in both theatres of war." The Court concluded that dismissal was appropriate due to federal preemption.

In March of 2014, the U.S. Court of appeals for the Fourth Circuit vacated the district court's decision and remands the case back to the district court. Then, in January of 2015, The U.S. Supreme Court turned down an interlocutory request by KBR to review the continuation of plaintiffs' claims.

In July of 2017, the U.S District Court for the District of Maryland dismissed the claim, again, citing that the "military control" factor requires that the claim be dismissed because "KBR was

⁴⁴ *Id.* at 759

⁴⁵ *Id.* at 760

⁴⁶ *Id.* at 761

acting at all times under the direct and actual control of the operational and contracting arms of the military.”⁴⁷

In June of 2018, the United States Court of Appeals for the Fourth Circuit denied the Plaintiff’s request to allow claims to proceed.⁴⁸

In July of 2018, the Plaintiff’s petition for rehearing en banc was denied.⁴⁹ A Petition for Review, filed by Motley Rice with the Supreme Court was filed on September 7, 2018.⁵⁰

4. What now?

As for the class action litigation, we wait. As for our own Claimants’ cases, we fight hard and we put on the best case we can with the best experts that are available. We give the judge as much detail as possible as to how much smoke our client was exposed to, how long our client was exposed to the burn pit, the symptoms our client exhibits [both before and after], etc. – all the while, making sure our experts are producing legitimate work that covers all the bases.

⁴⁷ https://www.motleyrice.com/sites/default/files/documents/Toxic_Exposure/09318721818.pdf

⁴⁸ https://www.motleyrice.com/sites/default/files/documents/Toxic_Exposure/Case%20809-md-02083-RWT.pdf

⁴⁹ https://www.motleyrice.com/sites/default/files/documents/Toxic_Exposure/Denial%20of%20En%20Banc%207.26.18.pdf

⁵⁰ https://www.supremecourt.gov/DocketPDF/18/18-317/63129/20180910110457019_18-%20Petition%20and%20Appendix.pdf