



PERSONNEL AND
READINESS

OFFICE OF THE UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

The Honorable James M. Inhofe
Chairman
Committee on Armed Services
United States Senate
Washington, DC 20510

NOV 13 2018

Dear Mr. Chairman:

The enclosed report is in response to section 502 of the Harry W. Colmery Veterans Educational Assistance Act of 2017 (Public Law 115-48), which requires the Department of Defense (DoD) to investigate and assess World War II sites where the U.S. Army Corps of Engineers has uncovered evidence of testing to assess the effects of full-body exposure to a covered substance on humans, or with regards to which more than two veterans have been denied claims for compensation under chapter 11 of Title 38, United States Code.

The DoD worked closely with the Department of Veterans Affairs (VA) to identify sites from previously denied claims to implement the law. With assistance from the VA, the DoD has identified more than 90 potential sites, and subsequently conducted a site review and assessment, which culminated in this report that includes input from the Military Departments. Specifically, the Department of the Army included input from the U.S. Army Corps of Engineers concerning review of records related to nitrogen mustard gas, sulfur mustard gas, or Lewisite testing over a period from 1937 to 1946 for evidence of testing to assess the effects of full-body exposure.

Similar letters have been sent to other appropriate congressional committees and the Secretary of Veterans Affairs. Thank you for your interest in the health and well-being of our Service members, veterans, and their families.

Sincerely,

A handwritten signature in black ink that reads "James N. Stewart". The signature is stylized with a large, sweeping initial "J" and "S".

James N. Stewart
Assistant Secretary of Defense for Manpower
and Reserve Affairs, Performing the Duties
of the Under Secretary of Defense for
Personnel and Readiness

Enclosure:
As stated

cc:
The Honorable Jack Reed
Ranking Member



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OFFICE OF THE UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

The Honorable William M. "Mac" Thornberry
Chairman
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

NOV 13 2018

Dear Mr. Chairman:

The enclosed report is in response to section 502 of the Harry W. Colmery Veterans Educational Assistance Act of 2017 (Public Law 115-48), which requires the Department of Defense (DoD) to investigate and assess World War II sites where the U.S. Army Corps of Engineers has uncovered evidence of testing to assess the effects of full-body exposure to a covered substance on humans, or with regards to which more than two veterans have been denied claims for compensation under chapter 11 of Title 38, United States Code.

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Sincerely,

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James N. Stewart
Assistant Secretary of Defense for Manpower
and Reserve Affairs, Performing the Duties
of the Under Secretary of Defense for
Personnel and Readiness

Enclosure:
As stated

cc:
The Honorable Adam Smith
Ranking Member



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OFFICE OF THE UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

The Honorable David P. Roe
Chairman
Committee on Veterans' Affairs
U.S. House of Representatives
Washington, DC 20515

NOV 13 2016

Dear Mr. Chairman:

The enclosed report is in response to section 502 of the Harry W. Colmery Veterans Educational Assistance Act of 2017 (Public Law 115-48), which requires the Department of Defense (DoD) to investigate and assess World War II sites where the U.S. Army Corps of Engineers has uncovered evidence of testing to assess the effects of full-body exposure to a covered substance on humans, or with regards to which more than two veterans have been denied claims for compensation under chapter 11 of Title 38, United States Code.

The DoD worked closely with the Department of Veterans Affairs (VA) to identify sites from previously denied claims to implement the law. With assistance from the VA, the DoD has identified more than 90 potential sites, and subsequently conducted a site review and assessment, which culminated in this report that includes input from the Military Departments. Specifically, the Department of the Army included input from the U.S. Army Corps of Engineers concerning review of records related to nitrogen mustard gas, sulfur mustard gas, or Lewisite testing over a period from 1937 to 1946 for evidence of testing to assess the effects of full-body exposure.

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Sincerely,

James N. Stewart
Assistant Secretary of Defense for Manpower
and Reserve Affairs, Performing the Duties
of the Under Secretary of Defense for
Personnel and Readiness

Enclosure:
As stated

cc:
The Honorable Timothy J. Walz
Ranking Member



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OFFICE OF THE UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

NOV 13 2018

The Honorable Robert L. Wilkie
Secretary of Veterans Affairs
Washington, DC 20420

Dear Mr. Secretary:

The enclosed report is in response to section 502 of the Harry W. Colmery Veterans Educational Assistance Act of 2017 (Public Law 115-48), which requires the Department of Defense (DoD) to investigate and assess World War II sites where the U.S. Army Corps of Engineers has uncovered evidence of testing to assess the effects of full-body exposure to a covered substance on humans, or with regards to which more than two veterans have been denied claims for compensation under chapter 11 of Title 38, United States Code.

The DoD worked closely with your Department to identify sites from previously denied claims to implement the law. With assistance from your Department, the DoD has identified more than 90 potential sites, and subsequently conducted a site review and assessment, which culminated in this report that includes input from the Military Departments. Specifically, the Department of the Army included input from the U.S. Army Corps of Engineers concerning review of records related to nitrogen mustard gas, sulfur mustard gas, or Lewisite testing over a period from 1937 to 1946 for evidence of testing to assess the effects of full-body exposure.

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Sincerely,

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James N. Stewart
Assistant Secretary of Defense for Manpower
and Reserve Affairs, Performing the Duties
of the Under Secretary of Defense for
Personnel and Readiness

Enclosure:
As stated



PERSONNEL AND
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4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

NOV 13 2019

The Honorable Johnny Isakson
Chairman
Committee on Veterans' Affairs
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

The enclosed report is in response to section 502 of the Harry W. Colmery Veterans Educational Assistance Act of 2017 (Public Law 115-48), which requires the Department of Defense (DoD) to investigate and assess World War II sites where the U.S. Army Corps of Engineers has uncovered evidence of testing to assess the effects of full-body exposure to a covered substance on humans, or with regards to which more than two veterans have been denied claims for compensation under chapter 11 of Title 38, United States Code.

The DoD worked closely with the Department of Veterans Affairs (VA) to identify sites from previously denied claims to implement the law. With assistance from the VA, the DoD has identified more than 90 potential sites, and subsequently conducted a site review and assessment, which culminated in this report that includes input from the Military Departments. Specifically, the Department of the Army included input from the U.S. Army Corps of Engineers concerning review of records related to nitrogen mustard gas, sulfur mustard gas, or Lewisite testing over a period from 1937 to 1946 for evidence of testing to assess the effects of full-body exposure.

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Sincerely,

James N. Stewart
Assistant Secretary of Defense for Manpower
and Reserve Affairs, Performing the Duties
of the Under Secretary of Defense for
Personnel and Readiness

Enclosure:
As stated

cc:
The Honorable Jon Tester
Ranking Member

**Section 502 of the Harry W. Colmery Veterans Educational Assistance Act of 2017
(Public Law 115-48)**

**Reconsideration of Previously Denied Claims for Disability Compensation for Veterans
who Allege Full-Body Exposure to Nitrogen Mustard Gas, Sulfur Mustard Gas, or Lewisite
during World War II**

Final Report



The estimated cost of this report or study for the Department of Defense is approximately \$210,000 in Fiscal Years 2017 - 2018. This includes \$116,000 in expenses and \$94,000 in DoD labor.
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RefID: C-CD6A3EA

Background and Purpose:

Section 502 of the Harry W. Colmery Veterans Educational Assistance Act of 2017 (Public Law 115-48), requires the Secretary of Veterans Affairs to reconsider previously denied claims for disability compensation for veterans who allege full-body exposure to nitrogen mustard gas, sulfur mustard gas, or Lewisite during World War II (WWII). This report responds to the Department of Defense (DoD) requirement set forth in section 502(b).

Specifically, the law directs DoD to investigate and assess sites where the U.S. Army Corps of Engineers has uncovered evidence of testing conducted by DoD during WWII to assess the effects of full-body exposure to these substances or with regards to which more than two veterans have been denied claims for compensation in connection with exposure to these substances at such sites. The law directs DoD to submit a report to the Department of Veterans Affairs (VA) and the Committees on Armed Services and the Committees on Veterans Affairs that includes locations, dates, and numbers of Armed Forces members who experienced full-body exposure to these substances in each such testing.

The law requires the DoD to define “full-body exposure.” For the purpose of this report, DoD defines “full-body exposure” as “any nitrogen mustard gas, or sulfur mustard gas or Lewisite exposure that occurred in a (test) chamber, field, or battlefield environment beyond localized application to one specific area of a Service member’s body.” Pursuant to this law, this report defines the applicable timeframe of active military, naval, or air service (as defined in section 101 of title 38, United States Code) during WWII as December 7, 1941 to December 31, 1946. Furthermore, the DoD considers occupational exposure beyond localized application that occurred during this timeframe while maintaining, transporting, or handling nitrogen mustard gas, sulfur mustard gas, or Lewisite as “full-body exposure.”

The law also directs the VA to reconsider all claims for disability compensation and make a new determination regarding each such claim with respect to alleged full-body exposure of mustard gas or Lewisite during active military, naval, or air service during WWII at one of 23 sites listed in the law (Table 1), and was denied compensation before the date of enactment. The 23rd site is noted as any site the VA determines is appropriate. In addition, the law includes the following factors for VA to consider in the analysis: 1) full-body exposure records may not be available; 2) many veterans were sworn to secrecy; 3) statements based on the personal knowledge of a veteran who served at one of the listed sites; 4) information from this DoD report; and 5) any evidence the VA considers relevant. Further, the law directs that the VA may not determine that testing of full-body exposure did not occur at a site solely based on information from the DoD and VA Chemical and Biological Warfare Exposure System (described in the law as the DoD and VA “Chemical and Biological Warfare Database”) and that the VA shall make a presumption of exposure during reconsideration deliberations.

TABLE 1. Sites to be considered in Public Law 115-48, section 502.(a)(3)

1	Camp Siebert, AL (Camp Sibert, AL)*
2	Fort McClellan, AL
3	Huntsville Arsenal, AL
4	Rocky Mountain Arsenal, CO
5	Naval Research Laboratory, DC **
6	Bushnell Field, FL
7	Great Lakes Naval Training Center, IL
8	Edgewood Arsenal, MD
9	Fort Detrick, MD
10	Naval Research Laboratory, MD **
11	Naval Training Center, Bainbridge, MD
12	Horn Island Installation, MS
13	Camp Crowder, MO
14	Hart's Island, NY
15	Camp Lejeune, NC
16	Charleston, SC
17	Dugway Proving Ground, UT
18	Toole Army Depot, UT (Tooele Army Depot, UT)*
19	Naval Research Laboratory, VA **
20	USS Eagle Boat No. 58
21	Ondal, India
22	Fort Clayton, San Jose Island, Panama
23	Any site the Secretary of VA determines is appropriate

*Corrected site title

**DoD considers these locations synonymous

DoD Efforts in Response to Section 502 (Public Law 115-48):

Phase I: VA Coordination

In September 2017, the DoD began working with the VA on this effort to begin assessment of the sites listed in section 502 (Public Law 115-48). DoD, in coordination with VA, identified information gaps and additional sites potentially applicable under the law.

DoD evaluated over 90 sites for evidence of testing methods, types of tests conducted, and numbers of personnel tested.

Phase II: Site Review and Assessment

During the time period in question (December 7, 1941, to December 31, 1946), DoD carried out three basic types of tests with human subjects in the context of full-body exposure:

1. "Patch" or "drop" tests which involved drop applications of liquid agent onto protective garments or a subject's skin to assess the efficacy of a multitude of protective or decontamination ointments, treatments for mustard agent and Lewisite

burns, effects of multiple exposures on sensitivity, and the effects of physical exercise on the severity of chemical burns.

2. “Chamber tests” where subjects were exposed to agent in various types of test chambers to evaluate protective clothing that were treated with chemicals to retard vapor penetration – these tests also included non-treated protective clothing as controls; and
3. “Field tests” which involved the contamination of large or small areas of land with sulfur or nitrogen mustard or Lewisite and exposure of subjects to evaluate protective clothing, to monitor the effects of agent on animals, and to take measurements of agent concentration in soil and water in the test area.

DoD considered sites where chamber tests, field tests, and patch/drop tests occurred that were part of a test and evaluation program as having the potential for full-body exposure to nitrogen mustard gas, sulfur mustard gas, or Lewisite.

DoD evaluated the sites listed in the law, any site that met the requirement of having more than two veterans being denied claims for compensation, and VA presumed locations and any site identified by VA or DoD as having evidence of testing, training, or storage of the covered substances of nitrogen mustard gas, sulfur mustard gas, or Lewisite. Logistics sites where these substances were either manufactured, produced, stored, or demilitarized were initially assessed for evidence of full-body exposure.

DoD reviewed and evaluated the documents in the responses for details to collate evidence of testing with respect to full-body exposure at the respective sites, dates of such testing, and numbers of Armed Forces Service members affected. DoD used previously published studies, test reports, unit commendation orders, unit history information, and other documents provided to determine the potential for full-body exposure, and estimated test dates and numbers of personnel involved.

There was no documentation of testing to assess the effects of full-body exposure to a covered substance on humans provided by the U.S. Army Corps of Engineers. Sites were identified as chemical storage or training sites, but with the exception of Fort Dix, NJ and Huntsville Arsenal, AL, investigation of documentation for these sites did not uncover any further evidence of such human testing. Some of these sites, in addition to other sites that DoD investigated, only provided volunteers for testing at other locations (e.g., Camp Howze, TX; Camp Lee, VA; Camp Maxey, TX; Camp Pickett, VA; Camp Wolters, TX; Fort Eustis, VA; Fort Sam Houston, TX). These sites did not have any evidence of full-body exposure testing. Some sites conducted tests involving protective clothing but no covered substance exposure, whereby the actual testing with the agent occurred at another site (e.g., Camp Blanding, FL; Camp Lee, VA; Camp Lejeune, NC). The actual testing locations are listed in Table 2. In addition, some sites included other events such as occupational mishaps or enemy interdiction where there was evidence of exposure.

Table 2 consists of the sites listed in the law, any site that met the requirement of having more than two veterans being denied claims for compensation or VA presumed locations, and any site that had documentation of testing to assess the effects of full-body exposure to a covered substance on humans. Where information was available, the estimated number of full-body exposures and associated years are listed. Only those sites with activities occurring during the timeframe specified in the law are included in Table 2.

Conclusion:

The DoD completed a detailed review of available records where covered substance testing may have occurred with respect to Public Law 115-48. Table 2 is the summary of this review. This information is available to the VA for further implementation and action in reconsideration of WWII claims. Because clear documentation of full-body exposure for every veteran is lacking, exposure determination must be made based on evidence of activities related to or providing the potential for full-body exposure, period of service and veteran's reported experiences. DoD will continue to work closely with the VA in the reconsideration of additional claims.

TABLE 2: DoD sites involved with nitrogen mustard gas, sulfur mustard gas and/or Lewisite with potential for full-body exposure to Service members

#	Location/Vessel	Years	Number of Full-Body Exposures
1	Bari, Italy ^b	1943	628
2	Bushnell Field, FL ^{a b}	1943-45	1,003
3	Camp Crowder, MO ^{a b}	d	d
4	Camp Lejeune, NC ^{a b c}	d	d
5	Camp Polk, LA ^c	1943	99
6	Camp Sibert (Gadsden), AL ^{a b}	1942-44	2,313
7	Camp Wolters/Walters, TX ^b	1944	1
8	Charleston, SC ^{a b}	1946	416
9	Dry Tortugas, FL ^c	1944	74
10	Dugway Proving Ground, UT ^{a b}	1942-46	799
11	Edgewood Arsenal, MD ^{a b}	1941-46	2,404
12	Eglin Field, FL ^c	1943	28
13	Fort Clayton, San Jose Island, Panama ^{a b c}	1943-46	1,740
14	Fort Detrick, MD ^{a b}	d	d
15	Fort Dix, NJ ^c	1942	2
16	Fort McClellan, AL ^{a b}	d	d
17	Fort Meade, MD ^c	1943	68
18	Fort Pierce, FL ^c	1944	18
19	Great Lakes Naval Training Center, IL ^{a b}	1942-45	37,019
20	Hart's Island, NY ^{a b}	1943-45	123
21	Hichinbrook Island, Queensland, Australia ^c	1944	41
22	Horn Island Installation, MS ^{a b}	1946	2
23	Huntsville (Redstone) Arsenal, AL ^{a b c}	1942-44	105
24	Isle M'BA, New Caledonia ^c	1943	3
25	Naval Research Laboratory, DC, VA, MD ^{a b}	1942-45	2,860
26	Naval Training Center, Bainbridge, MD ^{a b}	1942-45	399
27	Ondal, India ^{a b}	1944-45	67
28	Philippines ^b	d	d
29	Rocky Mountain Arsenal, CO ^{a b}	d	d
30	Tooele Army Depot, UT ^{a b}	d	d
31	USS Eagle Boat No. 58 ^{a b}	d	d

^a Sites listed in PL115-48, Sec 502.(a)(3)

^b Sites provided by VA

^c Sites identified by DoD

^d No covered substance testing documentation identified

^e Fort Clayton and San Jose Island are listed together in the law; however, documentation only referenced San Jose Island