NAAV

National Association of Atomic Veterans, Inc.

"Assisting America's Atomic Veterans Since 1979"

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R. J. RITTER - Editor **July, 2012**

United States Atmospheric & Underwater Atomic Weapon Activities

1945 "TRINITY"
ALAMOGORDO, N. M.

1945 "LITTLE BOY"
HIROSHIMA, JAPAN

1945 "FAT MAN"
NAGASAKI, JAPAN

1946 "CROSSROADS"
BIKINI ISLAND

1948 "SANDSTONE"
ENEWETAK ATOLL

1951 "RANGER"
NEVADA TEST SITE

1951 "GREENHOUSE"
ENEWETAK ATOLL

1951 "BUSTER – JANGLE"
NEVADA TEST SITE

1952 "TUMBLER - SNAPPER"
NEVADA TEST SITE

1952 "IVY"
ENEWETAK ATOLL

1953 "UPSHOT - KNOTHOLE"
NEVADA TEST SITE

1954 "CASTLE"
BIKINI ISLAND

1955 "TEAPOT"
NEVADA TEST SITE

1955 "WIGWAM"
OFFSHORE SAN DIEGO

1955 "PROJECT 56"
NEVADA TEST SITE

1956 "REDWING"
ENEWETAK & BIKINI

1957 "PLUMBOB"
NEVADA TEST SITE

1958 "HARDTACK-I"
ENEWETAK & BIKINI

1958 "NEWSREEL"
JOHNSTON ISLAND

1958 "ARGUS"
SOUTH ATLANTIC

1958 "HARDTACK-II"
NEVADA TEST SITE

1961 "NOUGAT"
NEVADA TEST SITE

1962 "DOMINIC-I"
CHRISTMAS ISLAND
JOHNSTON ISLAND

1965 "FLINTLOCK"
AMCHITKA, ALASKA

1969 "MANDREL"
AMCHITKA, ALASKA

1971 "GROMMET"
AMCHITKA, ALASKA

1974 "POST TEST EVENTS"
ENEWETAK CLEANUP

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" IF YOU WERE THERE, YOU ARE AN ATOMIC VETERAN "

The Newsletter for America's Atomic Veterans

COMMANDER'S COMMENTS

The *Veterans Advisory Board on (radiation) Dose Reconstruction* (***VBDR***) held their 12th. Plenary Meetings, in San Antonio, Tx., on March 23rd & 24th, 2012. Several members of ***NAAV*** were also present. In addition to the primary assignments, associated with Atomic-Vet radiation health issues, the ***DOD*** has saddled ***DTRA*** and the ***VBDR*** with two new oversight projects . . . . .

The first is ***"Tomodachi,"*** related to the potential radiation exposure of (approx.) ***61,000*** military personnel associated with the (March 11, 2011) ***Fukushima – Daiichi*** power plant explosion in Japan. The second is *Operation* ***"McMurdo,"*** addressing the radiation leaks from the ***PM-3A*** mini-nuclear power plant, operated by the U.S. Navy, at the (Antarctica) **McMurdo Station,** from ***1964*** to ***1972***, and the resulting health effects on all military personnel assigned to Operation ***"Deep-Freeze"*** during that time period. In addition to the new assignments, as mentioned above, ***DTRA*** is also developing an assessment of radiation exposure effects from *Long Range Aid to Navigation* (***LORAN***) power generation equipment, operated by the U.S. Coast Guard from ***1942*** to ***2010***. We will include in-depth articles of these new assignments in upcoming issues of this newsletter. The entire substance of information presented at the (San Antonio) meetings is available at the (***www.vbdr.org***) website. . . . . .

The (***NAAV***) Board of Directors has voted to keep the current slate of Officers intact until the end of ***2013***. We will also be holding our (***2013***) national re-union in ***Dallas, Tx.***, the details of which will be posted on our website and in our (***Nov. 2012***) newsletter. The current slate of (***NAAV***) Officers are: (Nat. Cdr.) ***R.J. Ritter,*** (Nat. V-Cdr.), ***Dr. F. Lincoln Grahlfs,*** (Sec. / Tres.) ***Bernie Clark,*** (Director-at-Large) ***Gilley Jenkins*** & ***Rodney Lee Guidry***. Given the average age of a (surviving) Atomic-Vet is now ***84***, it is almost impossible to find anyone who is healthy & mobile enough to actively participate in ***NAAV*** affairs, and over the last few years, and after several requests, we have not received any interest in these areas. . . . .

I am also working with ***AARP*** to develop a follow-up to their ***Nov. 2011*** (Atomic-Vet-Benefits) article. Since this article was published, the ***DOJ*** received approx. ***15,000*** phone calls, from surviving A-Vets, or from a family member of a deceased A-Vet, and mailed out more than ***6,000*** radiogenic health issue claim forms. As of the end of ***March, 2012***, they received ***970*** claims for processing. In this short period of time, ***164*** were approved (for ***$13*** *million*), while ***53*** were denied, due to low ***PC*** ratings, or for other reasons. The remaining ***753*** are still under review. Additionally, I am also working with a reporter from the ***"New-Yorker"*** magazine, who visited with us in San Antonio, for the purposes of developing a feature story about America's forgotten ***"Atomic-Veteran-Hero's***," and will keep you posted on all new developments in these areas . . . . . .

- - - FACT CHECK UPDATE - - -

In the previous newsletter, I incorrectly stated that a ***B-36-H*** bomber dropped the first (true) Hydrogen bomb during the (1956) "***Redwing"*** series, out in the Marshall Islands. This test was code named ***"Cherokee,"*** and the bomb was a ***TX-15-X-1*** (***Mk15/39***) thermo-nuclear device designed by ***LASL***. We received several e-mails, from ***"Redwing"*** participants who questioned the article's accuracy. We re-visited the event, and discovered that the (***Cherokee***) H-bomb, was air-dropped, 4 miles northeast of ***Namu*** Island (at Bikini Atoll) from a ***B-52*** bomber, while the ***B-36-H*** delivered the (parachute-retarded) instrumentation pods that were used to measure heat, shock and radiation activity at various altitudes from surface-zero. We want to thank those vigilant Atomic-Veterans for keeping the record straight, narrow and accurate . . . . . .

ARE YOUR DUES UP TO DATE ? ? ? ?

To insure that you receive your periodic newsletters, we must remind you to keep your dues current. You can do this my looking at the mailing label on your newsletter. The numbers following your name, is your **dues expiration date**. Be sure to send your (**$25.00**) annual dues before the expiration date, if at all possible. Our operating income is diminishing rapidly, as no one over the age of **82** really wants to pay dues to any organization. So, we are absolutely dependent upon your continued support . . . . .

We will, therefore; with your kind blessings, continue to be as active as possible in our dedicated promotion of the history, honor-able service and contributions of ***America's Atomic Veterans***, to the national defense of our country, in accordance with our capabilities. I have also agreed to continue on as editor of the ***NAAV*** newsletter, for the next few years . . . . .

FINAL MUSTER

Members of the Atomic-Veteran community are dying off at the rate of 1,600 per month. We are not privy to all of their names, or place of residence. To properly bestow our respects and to share the grief experienced by their respective families, we ask our members to observe a special moment of silence so as to properly recognize & give thanks for their dedication and honorable service, to their God, their families and their Country.

"Rest in peace, our Atomic-Veteran friends."

RAD-COUNT APPS FOR I-PHONES ! ! !

Tokyo, Japan: The Japanese-based computer firm ***Sanwa*** has announced the release of the ***Geiger-Fukushima***, an i-Phone application that detects Beta and Gamma rays in the environment. All you need to do is connect the 14cm long prove to your i-Phone, fire up the app and view the handset's display. The device was developed on the initiative of a young researcher who wanted to make a cheap and easy-to-use Geiger counter following the (March 11, 2011) Fukushima-Daiichi nuclear power plant disaster. Immediately after the disaster was triggered by the earthquake and tsunami, the least expensive (available) Geiger counter's were selling for a minimum of ***$200*** each, and were extremely hard to find. The first radiation measuring apps, for i-Phones were priced at ***$127*** dollars.

Asia Tech News - Nov. 16, 2011

RADIATION WASTE SHIPMENTS IN GERMANY

Dannenberg, Germany: It took more than ***20,000*** police officers and two days to secure the shipment of ***11*** heavy containers carrying ***150*** tons of highly radioactive waste from France to a (north central) dump site in Gorleben, Germany. As with 10 previous shipments, a coalition of activists, farmers, nurses, students and others turned out to protest and interrupt the controversial shipment headed for the Gorleben site. . . . .

The transport was impeded by several protesters who damaged train tracks and hundreds more who put their bodies in the way. Similar incidents, reoccurring along the entire route, caused tempers to flare and presented real opportunities for harmful results, given the anger and frustrations experienced by law officers charged with keeping the transport "interference" free. . . . . .

Near the city of Dannenberg, the train was held up by four activists who attached themselves to the tracks in a cement pyramid-like lock down. Meanwhile, the city streets were clogged with activists using radiation signs and public forums to alert others to the risks of exposure and transport accidents. . . . .

As the shipment neared Gorleben, several citizens reportedly came out of the nearby woods to throw Molotov cocktails and smoke bombs at the police escort. Officers then cleared various blockades using water cannons, tear gas and batons. More that ***1,300*** activists were arrested. Police estimated that ***3.500*** protesters participated, while organizers put the number closer to ***5,000***. . . . . .

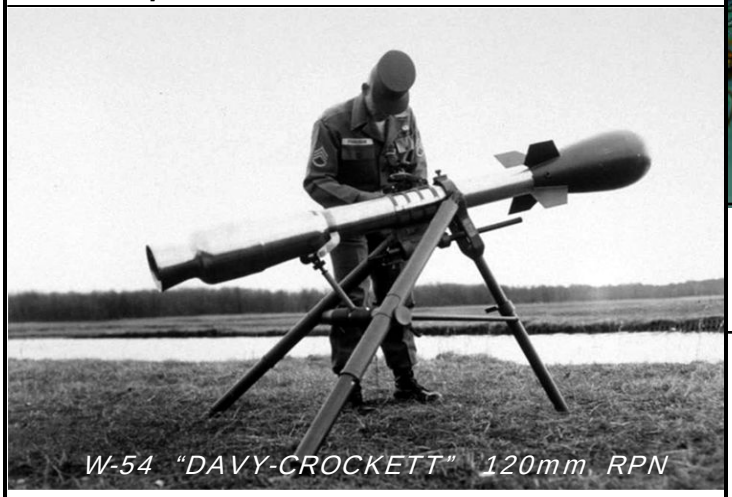
Germans are largely fed up with nuclear power. Responding to the broad and increasing anti-nuclear opinion resulting from the contamination of Germany by the (1986) ***Chernobyl*** incident, as well as the more recent ***Fukushima*** disaster in Japan, *Chancellor Angela Merkel* agreed to shutdown all ***17*** of Germany's nuclear power reactors by ***2022***. The organized protests against Castor shipments are saying they want those plants shut down immediately. . . . . .

Associated Press - Nov. 27, 2011

U.S. NUCLEAR WEAPON PROGRAM OVERVIEW PART - 2

The ***April, 2012*** issue of the ***NAAV*** newsletter explained the purpose, basics and methods utilized in the development of the United States nuclear weapons stockpile. Before we get into the substance of ***Part-II***, we offer the following applicable statistics. The cost of the ***"Manhattan-Project"*** was ***$20*** *billion* (measured in 1996 dollars). The total number of U.S. nuclear missiles manufactured (from 1951 to present) was ***67,500***. It is estimated that the U.S. built approx. ***1,000*** (***ICBM***) missile silo's (or launch facilities) between 1957 and 1964, at cost of ***$14*** *billion*. . . . . .

The total number of nuclear (aerial) bombs built, since 1945 was ***4,680***. Additionally, the total number of nuclear warheads (inventoried in 1966) peaked at ***32,193***. The total number of nuclear warheads manufactured (from 1945 to 1990) was ***70,000*** for a total of ***65*** (individual) warhead types. The largest tactical nuclear weapon stockpiled by the U.S. was the ***Mk-41*** (***5*** to ***25*** megatons), with a weight of ***42,000*** lbs., while the smallest nuke was the ***W-54*** (Davy-Crockett) rifle-propelled-nuke (***RPN***) weighting only ***51 lbs***. and producing a maximum yield of ***1 kiloton*** . . . . . .

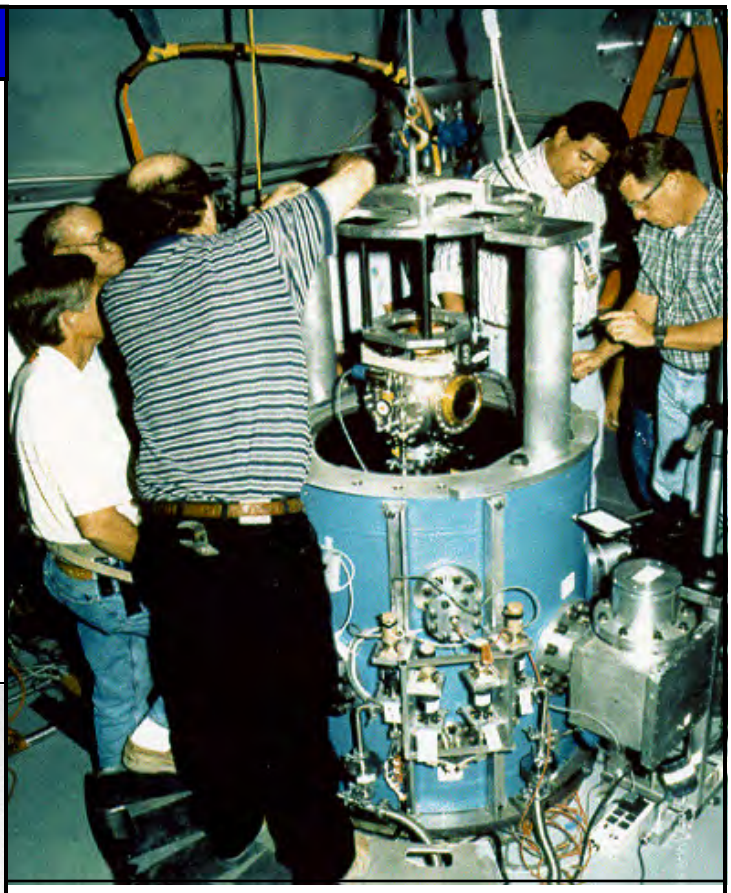


W-54 "DAVY-CROCKETT" 120mm RPN

There were ***44,000*** (***W-54***) "mini-nuke" warheads manufactured, with more than ***20,000*** deployed to the Korean demilitarized zone (***DMZ***) from 1964 to 1992. It was widely believed, at that time, that the North Koreans would not want to attack their southern neighbors while facing a wall of *Special Atomic Demolition Munition* (***SADM***) *"mini-nuke"* weapons. The U.S. Army requested more than ***151,000*** tactical ***SADM's*** between 1956 & 1957 . . . . . .

The total amount of fissile material produced (to support the U.S. nuclear weapon production requirements) included ***104*** metric tons of *Plutonium*, and ***994*** metric tons of highly enriched *Uranium*. It is estimated that there is currently ***43*** metric tons of *Plutonium* available in weapons of various types. The number of *Plutonium* (***Pu-239***) "pits" stored at the ***Pantex Plant***, in Amarillo, Tx. (as of May 6, 1999) was ***12,067***. The total (known) area of land occupied by U.S. nuclear weapon bases and facilities is approx. ***15,357*** sq. miles. . . . . .

Legal fees paid by the ***DOE*** (from Oct. 1990 to Mar. 1995) to fight lawsuits from workers and private citizens effected by nuclear weapons manufacturing & testing activities is approx. ***$90*** *million*. The U.S. State Dept. paid the Japanese ***$15.3*** *million* following the fallout from the (1954) ***"Castle"*** tests. They also paid the Marshallese more than ***$759*** *million* (for the same purposes), and are currently considering additional payouts accordingly . . . . .



Scientists from the Lawrence Livermore Nat. Labs. (LLNL) prepare a "sub-critical" nuke warhead component test at the Nevada Test Site, prior to the implementation of the U.S. (Nuke) Stockpile Stewardship Program (SSP). . . . . .

And, let us not forget, that the total volume of nuclear waste resulting from weapon activities amounts to ***104*** *million* cubic meters . . . . . .

Ending Underground Nuke Tests: In anticipation of a (potential) Comprehensive-Test-Ban-Treaty, the U.S. voluntarily suspended it's program of Underground Nuclear Testing (***UNT***). The (1992) legislation that ended the U.S. nuke test activities contained several key elements, including a provision for ***15*** additional tests to be conducted (by the end of Sept. 1996) for the primary purpose of applying three modern safety features to those warheads planned for retention in the (adjusted) stockpile under the proposed *Strategic Arms Reduction Treaty* (***START-II***) . . . . .

With a limit of ***15*** tests (within less than four years), there was no technically credible way to certify design modifications that would incorporate any of the desired safety features into any of the existing warhead types. Therefore, the new legislation was deemed too restrictive to achieve the objective of improving the safety of those warhead types lacking all of the available, or required, safety enhancement elements. . . . . .

The moratorium on ***UGT*** also resulted in suspending production of weapons with new, untested designs including those with newer safety enhancement elements, that would insure that if a warhead were to be accidentally damaged, for whatever reason, the fissile material would not reach ***"critical-mass."*** This also included those warheads with newer safety improvements beyond those specified in the newly accepted legislation. This created a shift toward a second paradigm, away from modernization and production (a cycle of newer-design warheads replacing older warheads) to a new

strategy of retaining previously produced warheads indefinitely, without a need for actual nuclear "proof" tests, but with 'no workable plans' to replace those aging weapons. . . . .

Single-Point-Safety tests (performed prior to the 1992 U.S. self-imposed nuclear test ban) insured that this "B-28" (MOD-1) thermo-nuclear bomb, designed to attach to the external (wing) hard points of an S.A.C. fighter-bomber aircraft, would not produce a "critical-mass-event," if it were to be accidentally dropped, or otherwise damaged. . .

In response to those new (restrictive) circumstances, the *FY-1994 National Defense Authorization Act* (***P.L. 103-160***) called on the *Secretary of Energy* to "establish a stewardship program to ensure the preservation of the core intellectual and technical competencies of the United States in the area of nuclear weapons." In the absence of nuclear testing, the primary purpose of the Stockpile Stewardship Program (***SSP***) was to support a (fully focused) multifaceted program that would increase the understanding of the enduring stockpile, to predict, detect and evaluate potential problems (due to aging of the weapon components), to refurbish and remanufacture those components, as may be required, and to maintain the science and engineering institutions needed to support the nation's nuclear deterrent, both now and into the foreseeable future. . . . .

This "science-based" approach, which has, since 1992, served as a substitute for nuclear tests has developed and matured to include computer simulations, experiments, and previous nuclear test data, combined with the judgment of experienced scientists and engineers. The 1992 legislation also stated that if, after Sept., 1996, any other nation were to conduct a nuclear test, the restrictions would be automatically lifted. . . . . .

Since 1992, several nations have performed "live" nuclear weapons tests, and the continuation of the U.S. (test) restrictions have been a matter of "policy," rather than a matter of law. Since 1993 the U.S. Nuclear Weapons Program has been essentially "stuck" in a continuous loop that represents only a small segment of what was previously a full cycle of perpetual production and replacement practices . . . . . .

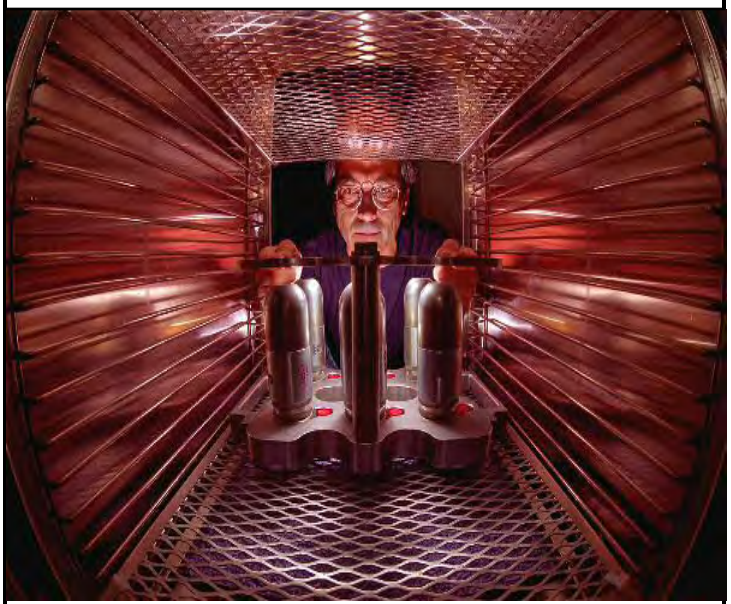
During this time, the truncated process consisted primarily of activities that were associated with the continuous assessment, maintenance, repair, and refurbishment of those weapons. As a "technological" hedge against the catastrophic failure of a warhead-type for which there would no longer be a planned replacement weapon, the stockpile plan was modified to include a new category of inactive warheads for reliability replacement. Prior to the ***UGT*** moratorium, and the suspension of new production, these weapons would have been retired from the stockpile, dismantled, and properly disposed of . . .

Under the new plan, if one warhead type developed a catastrophic problem that affected all warheads, of that same type, and could not be corrected because of the inability to conduct a (required) underground test, another warhead type could be reactivated as a suitable replacement. Because the U.S. suspended both production of new weapons, as well as underground nuclear tests, by 1992 confidence in the effectiveness of all U.S. nuclear weapons could no longer be founded on the perpetual modernization and upgrade of the (stockpiled) warhead types. . . . . .

Instead, the U.S. nuclear program relied upon a non-nuclear *Quality Assurance & Reliability Testing* (***QART***) program to validate safety, estimate reliability, and detect component problems for each inventoried warhead type. Most of the warheads in the current U.S. stockpile were designed and fielded to meet (Cold-War) requirements and, have since, been retained well beyond their original programmed life span. U.S. leaders are reassessing the size and structure of the stockpile as a part of a transition to the potential development and production of a new warhead design. However, unlike previous development programs, this would be accomplished without the use of "live" nuke tests . . . . . .

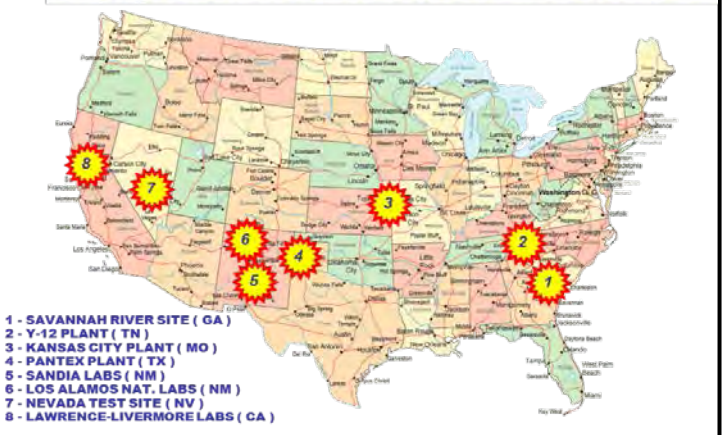
It is the current policy of the United States to achieve an effective strategic deterrent, at the lowest level of nuclear weapons, consistent with National Security requirements and the commitments & obligations to all U.S. allies. In 2001, *President George W. Bush* directed that the U.S. reduce the number of operationally deployed strategic nuclear weapons, from approx. ***6,000*** to approx. ***2,000,*** by the year ***2012***.

This would amount to a **2/3** reduction, resulting in the lowest warhead stockpile quantities since the *Eisenhower* administration. Several factors have contributed to those dramatic reductions from the Cold-War nuclear arsenal (built and maintained from the ***1950's*** to the early ***1990's***). For several decades, the Russian's were perceived to be the largest, intractable, ideologically motivated U.S. adversary; and it's fall has since allowed the U.S. to reassess it's nuclear "ready force" requirements. . . .



Neutron Generator pulse tubes (for the W-76 Trident-II missile) are undergoing testing & certification as part of the stockpile life extension program (LEP). The Trident-II was carrying up to 14 (W-76) warheads, but due to arms limitations agreements, it currently carries 8 or fewer. The W76 is the warhead used with the Mk-4 re-entry vehicle which arms the Trident-II (D-5) submarine launched ballistic missile (SLBM), and is designed for use on the MIRV bus upper stage. . . . . .

U.S. NUCLEAR WEAPONS COMPLEX



1 - SAVANNAH RIVER SITE (GA)
2 - Y-12 PLANT (TN)
3 - KANSAS CITY PLANT (MO)
4 - PANTEX PLANT (TX)
5 - SANDIA LABS (NM)
6 - LOS ALAMOS NAT. LABS (NM)
7 - NEVADA TEST SITE (NV)
8 - LAWRENCE-LIVERMORE LABS (CA)

In 2001, *President Bush* also directed the transition to a new set of military capabilities, more appropriate for credible deterrence in the ***21st.*** Century. This new "Triad" of strategic capabilities composed of nuclear (and non-nuclear) offensive strike forces, missile defenses, and a responsive national security infrastructure, thus reducing U.S. reliance on nuclear weapons, while mitigating the risks associated with drawing down U.S. nuclear forces. . . . . .

Nuclear weapons, however, continues to be the lynchpin of U.S. national security for the foreseeable future. All of the activities associated with U.S. nuclear weapons contribute to the continued safety, security, and reliability of the U.S. nuclear deterrent. Perhaps, most importantly, the U.S. Nuclear Weapons Program enhances the perceived credibility of U.S. nuclear forces. These tasks have always been most challenging, and currently, there are a number of challenges to the sustainability of this approach. . . .

Senior government leaders, and many of the managers of the *National Weapons* (design & development) *Laboratories*, have serious concerns about the state of the nation's nuclear stockpile. Several of these concerns have overlapping considerations. Some of the more significant concerns include the problem with aging warhead-types (in the "no-testing" era), lack of modern safety – security – control features in some warheads, loss of technical expertise, deteriorating nuclear complex infrastructure, and quantity of (deployable) warheads in the current stockpile. Current U.S. (nuclear weapons) laboratories include: *Los Alamos National Laboratory* (***LANL***), *Lawrence Livermore National Laboratory* (***LLNL***) and *Sandia National Laboratories* (***SNL***). . . . . .

Another challenge is the competition for "talent" which is characterized by the increasing difficulty in attracting, training, and retaining the best and the brightest Americans to work in both civilian and military positions associated with world of nuclear weapons. This is critical to the ongoing need to use computers for the purposes of designing & producing workable replacement upgrades for aging nuclear weapon components without the need for "live" proof tests. . .

Nuke Program Infrastructure: The *Department of Energy* (***DOE***) through the *National Nuclear Security Administration* (***NNSA***) and in partnership with the *Department of Defense* (***DOD***) is responsible for ensuring that the United States maintains a safe, secure, and reliable nuclear deterrent. The characteristics of this deterrent are continuously evolving as global (threats to U.S. security) are also changing. The need to adjust to potential threats from "rogue" nations is paramount . . . . . .

In 2002, the U.S. policy on strategic deterrence was revamped, so as to recognize that the premise for the strategy had progressed from one of deterring a peer adversary to one of being able to adequately respond to emerging (nuclear) threats. The 2001 *Nuclear Posture Review* (***NPR***) directed modifications within the structure of the deterrent to adjust to changes in the nature of such threats. . . . . .

Specifically, the ***NPR*** called for changing the size, composition and character of the U.S. stockpile in a way that reflects the reality of the end of the Cold-War, while achieving a credible deterrent with the lowest possible number of nuclear warheads consistent with national security needs, including obligations to the (potential) needs of our allies. This approach then shifted the structure of the U.S. nuclear deterrent from one that relies on nuclear weapon stockpile quantities to one that relies on the results of total nuclear capabilities. . . . .

Given these events, in the mid 1990's, the science-based *Stockpile Stewardship Program* (***SSP***), was established in recognition of the fact that the nation needed new tools to sustain the nuclear warhead stockpile without the use of "live" underground "proof" tests. . . . . .

A visiting (SAC) General inspects a training version of a B-61 (Hydrogen) tactical nuke, in an underground Weapons Storage and Security System (WS-3) vault at Volkel Air Base, The Netherlands. An access panel on the warhead is open, showing the interface for pre-flight set-up actions, including the PAL safety & arming station and the Dial-A-Yield (DAY) regulator device. . . . .

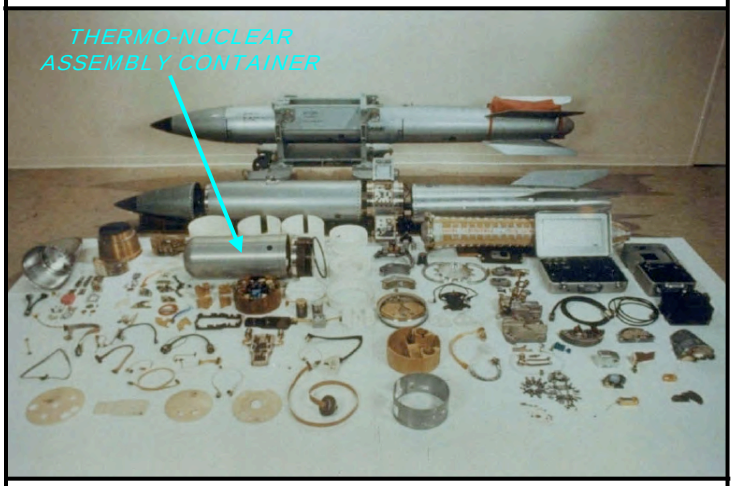
More than a decade later, these tools are still being used to support the current needs of sustaining a credible U.S. "nuclear-deterrent" capability. The next step was to transition interface, so as to leverage the investments in the ***SSP*** to enhance the responsiveness of upgrade designs, and to adequately certify and produce all of the components identified by the new program. . . . . .

Transformation Complexity: The ***NNSA*** had a vision, for the nuclear complex, outward to the year ***2030***. This scenario consisted of long term, over-reaching strategies (in partnership with the ***DOD***) that included transforming the nuclear stockpile, refurbishing limited numbers of "legacy" designs, and the accelerated dismantlement of aging (Cold-War) warheads . . . . .

Additionally, the transformation would modernize, and render the nuclear weapons complex so as to be "cost-effective," and to drive the science and technology base that is absolutely essential to long-term U.S. national security. These strategies were then implemented, with near-term actions, so as to build confidence in the total transformation process. . . . .

The U.S. must continue to remain committed to achieving a credible deterrent, while maintaining the lowest possible number of capable (tactical) nuclear weapons. Hence, establishing a responsive infrastructure that could facilitate reductions (dismantling or retiring of older weapons), while not sacrificing the capability, are any of the essential elements of the necessary path forward. . . . . .

The U.S. Nuke Complex includes the ***Pantex Plant*** (TX), The ***Kansas City Plant*** (MO), the ***Y-12 Facility*** (TN), the ***Savannah River Site*** (GA), ***Los Alamos National Laboratory*** (NM), ***Lawrence-Livermore Laboratory*** (CA), ***Sandia National Laboratories*** (NM), and the ***Nevada Test Site*** (NV), as indicated on the map on page 5 . . . . . .



TYPICAL TACTICAL "NUKE" REPAIR KIT

The ***Pantex Plant*** (17 miles northeast of Amarillo, Tx), is charged with maintaining the safety, security and reliability of the nation's (stockpiled) nuclear weapons. This facility is managed and operated by ***BWXT (*** Pantex), who is a designated contractor for the ***DOE*** and ***NNSA*** . . . . . .

Additionally, they are also charged with evaluating, retrofitting and repairing weapons in support of both life extension programs, including the certification of the safety and reliability of the standing weapons stockpile. This includes the dismantlement of weapons that are considered surplus to the strategic stockpile, and the storage and surveillance of the Plutonium (***Pu-239***) fissile core "pits." They also upgrade & refurbish solid-fuel missile tubes, and recharge jet-assisted-take-off (***JATO***) bottles . . . . .

Solid-fuel, as used in (short-range) air-to-air and surface-to-air missiles has a fixed shelf-life, and from time to time, must be replaced with fresh (solid) combustible materials. The old combustibles are carefully removed, with the use of high pressure water blasting, and after careful inspection, the new solid fuel material is then "spun" into the missile tube, after which the war-head & control devices are then refitted, and the finished weapon is then forwarded to it's assigned inventory storage facility for "ready-deployment" purposes. . . . . .

All work at the ***Pantex*** facility is performed in the context of several independent and equally important priorities, including the security of weapons and information, the safety and health of workers (& the public), and the protection of the environment. There are approx. ***3,500*** people employed at the ***Pantex*** *facility*. Of these, approx. ***3,200*** work for ***BWXT***, and the remaining ***300*** work for one of the on-site (weapon's component) associated Sub-Contractor's represented at the ***Pantex*** site . . . . .

The ***Kansas City Plant*** is a principal ***NNSA*** (non-nuclear) site within the weapons complex. The ***KCP*** is managed and operated by *Honeywell Federal Manufacturing & Technologies* (***HFMT***). The (nuke associated) products developed at the ***KCP*** include electrical, electronic, electromechanical, plastic, and non-fissionable metal components for various types of weapons. The ***KCP*** also provides critical support for *Directed Stockpile* (***DI***) activities, as well as the (stockpile) maintenance and evaluation programs . . . . . .

The ***Y-12*** *Facility* (*National Security Complex*) is responsible for carrying out the national security mission of the *Oak Ridge Operations Office*. This was formally known as the ***Oak Ridge Y-12*** *Plant* (*TN*), and was originally built to produce enriched *Uranium*, as a part of the *"Manhattan-Project."* Some portions of every weapon in the current U.S. nuclear arsenal was manufactured at the ***Y-12*** *Facility* . . . . . .

Current (***Y-12***) programs include the manufacturing and refurbushing of nuclear weapon components, the dismantling of weapon components returned from the national stockpile, serving as the nation's storehouse of special nuclear materials, and providing special production support to other associated programs. The ***Y-12*** Facility is also responsible for *Uranium* ("salted" & "second-stage") device assembly. Additionally, ***Y-12*** maintains the capability to produce *Uranium* and *Lithium* (*hydrogen*) isotope components, recover materials from the fabrication processes and from retired weapons, and to produce various replacement components for non-nuclear weapon types. The ***Y-12*** *Facility* is also operated by ***BWXT*** under contract with the ***DOE*** . . . . . .

The Savannah River Site (***SRS***) is primarily charged with secular nuclear weapon missions, including limited-life component exchanges, reservoir surveillance, and *Tritium* extraction. These missions currently involve the filling and shipping of new and reclaimed reservoirs containing *Tritium* & *Deuterium*, as well as non-*Tritium* gases. This also includes the surveillance of all (weapon related) "boost–gas" transfer components & systems . . . . . .

In 2006, a new *Tritium Extraction Facility* (***TEF***) became operational at ***SRS*** to process targets irradiated in one of the *Tennessee Valley Authority* (***TVA***) nuclear reactors for the purposes of producing new supplies of *Tritium*. This facility is now producing *Tritium* for the first time in the U.S. since 1988. The ***SRS*** (*Tritium*) operations include processes for the purification and enrichment of *Tritium*, the (azeotropic) blending, mixing and compression of *Tritium & Deuterium* (***DT***) and non-*Tritium* gases, the pinch-melding of gas filled reservoirs, the reclamation of returned reservoirs and performing high-pressure function tests for reservoir surveillance . . . . . .

A "B-61" tactical thermo-nuke undergoes a routine inspection process at the Pantex Plant . . .

Michele Caldwell is shown here preparing a W-80 (Sub-marine-Launched) Cruise-Missile-3 for a variety of electro-magnetic anomaly (interference) tests. She says the new computer generated testing capabilities have allowed her group to take a comprehensive set of critical data which would not otherwise be possible. . . . . .

The ***Los Alamos National Laboratory*** (***LANL***) is the first line (nuke weapon) design laboratory, and shares those unique responsibilities with the design group at ***Lawrence Livermore National Laboratory*** (***LLNL***). Their prime responsibility is to insure the safety and reliability of the weapon (initiator) explosives contained within all U.S. nuclear devices. From the ***1950's*** to the ***1990's***, both of these laboratories designed & developed second and third generation nuclear weapons, and those design capabilities are currently available, as may be required . . . . . .

However; the ***LANL*** facility possesses unique capabilities in the enhancement surveillance of *"neutron"* scattering, the manufacturing, production & diagnostics of (*Plutonium*) fissile *"pit's,"* and other science & engineering capabilities. Additionally, ***LANL*** oversees the refurbishment and surveillance of both nuclear and conventional weapon components for current U. S. stockpile inventories, and handles the required diagnostics for all other associated "fissile characteristic" physics modeling for the ***B-61*** (H-bomb), the ***W-76*** (Trident-II-D-5), the ***W-78*** (Minute-man-III), the ***W-80*** (Aircraft & Submarine Launched Cruise Missiles), and the ***W-88*** (Trident-II-D-5) warheads . . . .

The ***Lawrence Livermore National Laboratory*** (***LLNL***) is the prime design laboratory that, together with ***LANL***, supports the integrated ***NNSA*** programs. This includes ample surveillance efforts, so as to better predict warhead type 'aging-phenomena' (validated by simulation and experimentation), as well as the (required) refurbishment of various stockpile components. These principle activities also include stockpile surveillance, competence assessments, warhead refurbishments and all integrated program management practices . . .

LLNL is also responsible for all weapon designs, and component redesigns, and provides high explosive research and laser facilities, such as the *National Ignition Facility* (***NIF***) for weapon physics experiments. The ***LLNL*** facility is also tasked with performing the required diagnostics for nuclear secondary (second-stage) components, and is the associated physics research lab for the ***W-62*** (Minuteman-III), the ***B-83*** (Strategic H-bomb), the ***W-84*** (Ground launched Cruise Missile), and the ***W-87*** (Minuteman-III) warheads. In the future, ***LLNL*** may also be the associated lab for the ***W-80*** (Aircraft & Sub-marine Launched) Cruise Missile . . . . . .

The ***Sandia National Laboratories*** (***SNL***), with locations in both New Mexico and California, is the third entity of the U.S. national nuclear weapons research and development trilogy, and works in close concert with ***LANL*** and ***LLNL***. The activities that ***SNL*** are charged with include nuclear weapon systems (engineering, design, & development), and manufacturing of non-nuclear components for use in all currently inventoried nuclear weapon devices. They are also charged with field and laboratory testing of all of those items. The ***SNL*** operations provide mechanical, electrical, structural & chemical engineering for any new nuclear weapon programs that may be developed by the ***LLNL*** facility . . . . . .

The ***Nevada Test Site*** (***NTS***), northwest of Las Vegas, performed both above ground and underground nuclear weapon tests from ***1951*** to the end of ***1992***. During this period there were a total of ***911*** nuclear weapon devices detonated (above and below ground) at the ***NTS***. Although the U.S. is currently observing a self-imposed moratorium on underground nuclear testing (***UGT***), the ***NTS*** maintains the capability to resume ***UGT*** (or any other standard munitions weapon test) if so directed, and within a short period of time. .

Sub-critical nuclear component tests are still performed at the ***NTS***. Additionally, the site is also used to train Homeland Security and First Responders in the detection and reaction to fissile material (radiation exposure) threats. . . . .

W-87 (MIRV) Warheads are assembled on top of a Minuteman-III Intercontinental Ballistic Missile (ICBM) . . . .

Stockpile Stewardship: The ***National Defense Authorization Act*** (***NDAA***), included in *FY-1998 Public Law 105-85*, required the ***DOE*** to develop an annual *Stockpile Stewardship Plan* (***SSP***) for the sustainment of U.S. nuclear stockpiles in the absence of ***UGT***. The ***SSP*** is the implementing strategy of the ***NNSA*** to ensure a (credible) U.S. nuclear weapon deterrent without the need for ***UGT*** activities. Stockpile stewardship is an all-encompassing program that includes operations associated with surveying, assessing, maintaining, refurbishing, manufacturing, and dismantling the nuclear weapons stockpile, as may be required. It also included those activities associated with research, design, development, modeling and the non-nuclear testing of nuclear weapons components, as well as, assessment of safety, security, reliability and certification of the entire stockpile inventory . . . . .

Science-Based Transition: The ***1992*** legislation, that ended the U.S. nuclear testing program, caused an immediate

concern that when certain unique nuclear component problems arose they might not be possible to repair. Until that time, "live" nuclear tests were required to confirm and define the problem, and to validate any modifications that would adequately fix the problem. . . . . .

It was generally accepted that, without (live) nuclear testing, no new replacement warheads could be fielded with any degree of reliability. These concerns soon led to the establishment of the (***1993***) *Science-Based Stockpile Stewardship* (***SBSS***) program that required the development of an adequate (science-driven) substitute for "live" nuclear testing. .

The Nevada Test Site is still used for Homeland-Security & First Responder training purposes, but many of the relics of the ('50's & '60's) atmospheric testing activities still remain radio-active, including this Tank that was used in one of the "Tumbler-Snapper" (weapons-effects) tests. . .

The ***SBSS*** program evolved into the (current) ***DOE / NNSA*** campaign formats, that support this substitute arrangement, and would also include the (ongoing and developing) *Advanced Simulation and Computing* (***ASC***) campaign format. While there was considerable controversy concerning the technical feasibility of a ***SBSS*** substitute for nuclear testing, it is the current policy of the U.S. to work toward this goal. . . . . .

It was originally estimated that it would take decades to accomplish this objective. To provide assurances that the lack of nuclear testing would not put the U.S. on a path of unintended unilateral disarmament, due to the forced retirement of one warhead type after another, as they aged and developed unique catastrophic nuclear component problems, three additional programmatic steps were incorporated, in ***1993***, to address these concerns . . . . . .

First, the stockpile plan was restructured. As *Active-Stockpile* (***AS***) warheads were reduced (from Cold-War quantities to a ***START-I*** level), the U.S. decided to retain some of those warheads as (reclassified) *Inactive-Stockpile* (***IS***) reliability replacement warheads. If one warhead-type developed a unique nuclear component problem, another type from the (***IS)*** reliability replacement category could serve as a suitable substitute for the problem component series. This offered a "ready" programmatic and technical hedge against a possible unique nuclear component problem that could not be resolved without the use of (live) nuclear testing. And, so it is, that the current U.S. nuclear weapon stockpile is governed, maintained and "made-ready" as described in this article . . . . . .

- - - - end of Part II - - - -

"DIAL-A-YIELD" - HOW DO THEY DO IT ? ?

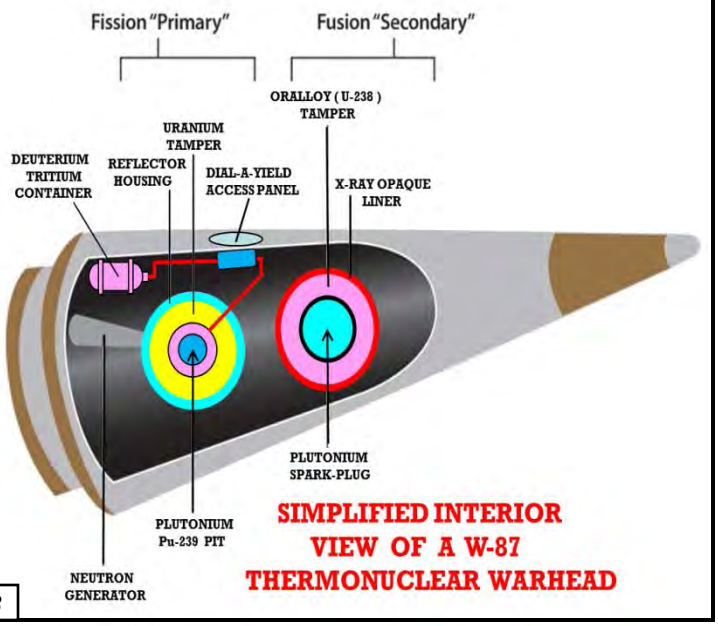
In the early years of the U.S. nuclear weapons development & testing program, scientists and engineers experimented with methods in which to increase the destructive power (yield), of a given weapon design, while reducing the mass weight of that given design. The weight factor was critical to the ability to deliver more than one weapon to more than one target over long distances. Select weapon components were chosen for testing, both at the ***Nevada Test Site*** and in the ***Pacific Proving Grounds***. . . . .

Within a few years, and given the success of the ***"Ivy," "Castle"*** and ***"Redwing"*** series that proof tested "force-doubling" & "boosting" agents, "neutron-generators," and more efficient fission / fusion processes, these features have been perfected to the point of producing lighter weapons that pack larger yields, well into the multi-megaton range . . . . .

In the course of these developments, it was also realized that there was a potential for "regulating" the maximum destructive yield of a multi-stage weapon device, in either kiloton or megaton increments. This approach culminated with the successful demonstration of the ***"Dial-A-Yield"*** (***DAY***) control system. The ***DAY*** system allowed the nuke weapon technician to select a required yield setting prior to actual weapon deployment. . . . .

For instance, if the (maximum) yield of the tactical weapon was **5** megatons, then the ***DAY*** could be set to produce from **1** to **5** megatons of destructive yield. The manner in which the ***DAY*** functions is in keeping with the laws of pressure vs. volume vs. (molecular) density . . . . . .

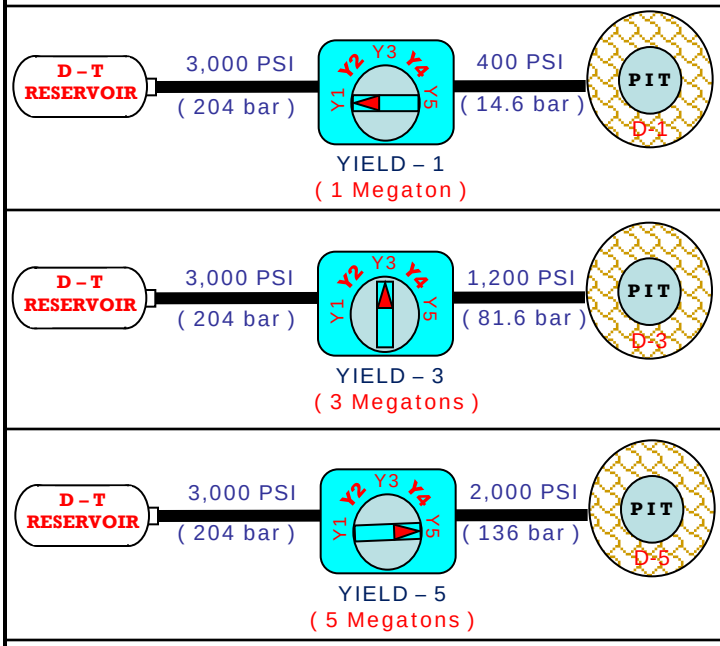
In this case, an (azeotrophic) blend of *Deuterium-Tritium* (***DT***) gas is stored in the high-pressure bottle (as shown in the weapon cutaway diagram below) in the same manner as air is stored within a "high-pressure" tank. As an example, a ***1*** cu. ft. (firefighter's) *"Scott"* bottle, at ***0*** psig (***1*** atmosphere), will only hold ***1*** cu. ft. of air at ***14.696*** psi (absolute) pressure (at sea level). If, however; the pressure, within the tank, is increased to ***3,000*** psig, (***204*** atmospheres), there would be ***204*** cu. ft. of air stored within the ***1*** cu. ft. bottle, and the molecules of (the compressed) air would be squeezed tightly together, thus increasing the molecular density within the (***1*** cu. ft.) fixed volume. . . . . .



If the firefighter required ***10*** cu. ft. per min. (of breathing air), the 1 cu. ft. bottle would provide ***20.4*** minutes of breathable air before the pressure within the bottle would be reduced to ***0*** psig, or ***14.696*** psi (absolute), or ***1*** atmosphere. This is an easily identified example of the relationship between pressure, volume and molecular density . . . . . .

The pressure within the bottle is much higher than the required pressure at the "point-of-use," and is therefore regulated (down-ward) to the pressure required for breathing purposes. In this case, only ***1*** atmosphere is required for breathing purposes, in a surrounding pressure of only ***1*** atmosphere. . . . . .

In the case of a ***SCUBA*** diver, the pressure would be regulated so as to keep the pressure within the diver's lungs balanced with the external pressure acting upon his body at any given (water) depth. The water pressure, beneath the surface, increases at a rate of ***1*** atmosphere (***1*** bar) for every ***33.3*** ft. of depth. Therefore, if the diver is at a depth of ***200*** ft., the pressure on his body would be approx. ***102*** lbs. / sq. in. Given this, the pressure of his breathing air must also be ***102*** psi, so as to keep his lungs at the same pressure as his surrounding water pressure. Accordingly, the Dial-A-Yield (***DAY***) control depends upon the same laws governing pressure / density / volume to provide varying molecular density, so as to produce varying boosting results. The ***DAY*** regulator allows for a fixed amount of ***DT*** gas to enter the (primary stage) chamber surrounding the *Plutonium* "pit." By adjusting the pressure, within the fixed volume of the chamber surrounding the "pit." the (***DT***) molecular density is also adjusted accordingly. . . . .



As exhibited in the above diagrams, the ***Y-1*** position allows ***400*** psi of ***DT*** gas into the (fixed volume) chamber, which produces the molecular density to provide for a ***1*** megaton yield event. When the ***DAY*** regulator is set to the ***Y-3*** position, the corresponding pressure (within the fixed volume) will then increase the molecular density of the ***DT*** gas so as to produce a ***3*** megaton yield event. And, likewise, if the ***DAY*** regulator is set to ***Y-5***, the pressure / density of the **DT** gas will then increase to that required to produce a ***5*** megaton yield event. Accordingly, each ***DAY*** position represents an yield increase of ***1*** megaton. In the case of nuclear weapons that provide yield selections in ***Kiloton***, the ***DAY*** control option will provide destructive yield selections in Kilotons . . . . . .

This holds true for weapons compatible with any type of delivery system, including aircraft, submarines, missiles, etc. Today's preferred (nuke) delivery systems are "missile" driven, with warheads that incorporate both *"fixed"* and *"variable"* yield capabilities. Yield selections are included in "authentication-codes" which must be verified & confirmed prior to setting warhead target coordinates and assigned target contact yield settings . . . . .

OPERATION "SANDSTONE" - FLASHBACK

A "Sandstone" pre-test briefing currently underway on the *U.S.S. Mount McKinley (AGC-7).* Pictured here, at that briefing, are Col. T. J. Sands, Capt. James S. Russell, Dr. D. K. Froman, Brig. Gen. David A. Ogden, Maj. Gen. J. D. Barker, Maj. Gen. W. E. Kepner, Lt. Gen. John E. Hull, Rear Admi. William S. Parsons, Rear Adm. Francis C. Denebrink, and Brig. Gen. Claude B. Ferenbaugh. . .

My name is ***Robert Oakes***, and I was a Sergeant in the *Officers Pay & Records Section* (*Personnel Unit*) of the *2nd Engineer Special Brigade*, stationed at *Fort Worden* (WA). During my entire tenure in the U.S. Army, I served with this same Brigade. It was just before Christmas (1947), as I recall, that we learned of our upcoming assignment to the force that was going to go out to Eniwetok, Atoll, in the Marshall Islands, to participate in the ***"Sandstone"*** atomic-bomb tests. I had asked what a "Sandstone" test was, and was told that it was all "top-secret," and my "need-to-know" was "don't-ask-again" . . . . .

Once our security clearances were finished, we boarded a train for Port Heuneme, CA., where we were then loaded aboard the *U.S.S. Pickaway* (***APA-222***) and then we sailed off across the Pacific to our assigned destination. I learned sometime later that there was a (news-reel) motion picture taken of us going up the ramp, but I have never been able to get confirmation that this actually happened. Over the years, I have asked the U.S. Army if I could purchase a copy of the film, but they don't even acknowledge my requests . . . . . .

The ***Pickaway*** was part of a three ship "fleet" including an ***AKA*** (cargo ship) and an Auxiliary Fleet Water Tender. I do not remember the names of the other two ships. On the way over, we made an (overnight) stop at Pearl Harbor, for refueling and provisioning purposes . . . . . .

It was reported to us that a young G.I. was taken off the ship because they found a camera in his possession. We were given strict instructions, before leaving for the trip across the Pacific, not to take any camera's with us, as they were strictly prohibited. We never found out what happened to him. . . .

We "celebrated" the crossing of the International date line; and I still have a certificate saying so, but can't find it right now, to determine the exact date of that nautical event. As a part of the traditional ceremonies, the ship's Officers and Non-Coms were all privileged to serve the other enlisted men as well as doing the necessary ***"K-P"*** duties, which we thought was kind of neat, and I remember that we all had a whole lot of fun on that, long ago, date . . . . . .

Two things stand out regarding the trip to Enewetak. The first thing was the crowded quarters and the stifling atmosphere below decks. We were below decks, as the Navy refused to let us above deck at night, unless we were pulling guard duty. It was amazing how many of us volunteered for guard duty, during our trip out to the Marshall Islands . . . . . .

After our "guard-duty" tour, we took life jackets and made a bed in the ship's upper-deck anti-aircraft gun-tubs. Naturally, at that time there were no guns mounted in those tubs. But, it was very cool, and conducive to a good nights sleep, as long as some "Swab" didn't find us sleeping in their "gun-tub". . .

The second thing was the Master-at-Arms who supervised the ship's (kitchen) which the Swab's called a "Galley." He kept an old greasy pork chop under the serving counter. When one of the troops came through the line, that looked a little green under the gills, he would whip-out that pork-chop to see if he could cause the G.I. to "leave," so he could go up on deck – to "heave." It worked like Hell sometimes, but for the most part, pissed off lots of the G.I.'s aboard that ship. It is a wonder that MAA didn't "go-missing" before we got to Enewetak. . .

When we first arrived, we toured the main Island and found a large number of spent cartridges and shell casings left over from the battle (with the Japanese) to take the Atoll; even at that late date. We found the Island was also loaded with construction equipment of every kind, including bulldozers, cranes, road scrappers, etc. Shortly after we arrived, they were all gone. The Navy "Sea-Bees" had dumped them all into the Ocean. They told us that it was too expensive to ship the stuff back to Hawaii or State-side. . . . . .

Duty on the islands was somewhat routine, except when I was taken to one of the smaller islands to take care of personnel duties. Most of the time I rode over in an ***LCVP***, but occasionally I went by helicopter. When I took the chopper rides, I could see schools of sharks "playing" in the lagoon, and reminded myself to not go swimming in that, or any other lagoon, for any reason . . . .

One night our standard routine was shattered. Several of us were in the first floor office of Brigade Headquarters (in the center of the island) playing cards. Abruptly, there was a sudden and loud banging on the door. I went to see what the noise was all about, and when I opened the door, I was looking straight into a single silver star, belonging to *Brig. Gen. David A. D. Ogden*, (who was our Brigade Commander).

He informed us that one of our "screening" Destroyers had spotted an unidentified submarine inside the fleet protection zone. Believing it to be a snooping Russian intruder, the General ordered a complete alert, and all lights were to be turned to "status-dark" ASAP. He then ordered the "on-duty" MP's (which included yours truly) to go upstairs and report to the Officer of the Deck (*OD*) for further instructions. . . . .

I was ordered to get a jeep and go around the island and see that all lights were rendered "status-dark." For the most part there was no problem until I came to one of the Port Company's barracks. When I went inside and ordered the lights out, I was told that they were all shooting craps and no *&#$%#@ military type was going to interrupt them. . . . . .

I was thinking, OK that's good with me, as I made my way to the Platoon Sergeant's door and knocked. As the door opened, there before me appeared the biggest man I had ever seen at that time. He was at least 6' 4" and weighed in the neighborhood of 300+ pounds. When I relayed to him the problem (and General's sentiments) he casually went to the bottom of the stairs and roared like a lion with his nuts in a vice ! !

Needless to say the lights went "status-dark" immediately and there was no more trouble, of any kind, that night. We were never to learn what the submarine was doing, or even if there was one. But it reminded us that protecting the nuke tests from prying eyes was not a "casual" task, by any means . . . .

I only stayed on the islands for a few months prior to the actual Sandstone tests, and was witness to only the first blast, which was **"X-ray."** Eight hours before the test, we were loaded onto the good ole' "Pickaway" and taken back out to sea. We were given darkened glasses and told to face away from the atoll until instructed to turn around. . . . .

With the Cold War rapidly developing, there was an urgent need to develop "New-Generation" nuclear weapons. The purpose of the "Sandstone" tests was to "proof" second generation designs, including a "levitated-pit" suspended in a hollow space within the tamper so as to create more efficient "core" compression. These designs abandoned the use of a pure Plutonium core since Oralloy production (highly enriched Uranium-235) exceeded Plutonium production by a factor of more than *3* to *1*. The first test, *"X-Ray"* (shown above) incorporated an *Oralloy-Plutonium* (composite) core, while *"Yoke"* and *"Zebra"* used super-pure *Oralloy* (only) cores. The data collected from the Sandstone tests soon led to the immediate stockpiling of the improved fission-core designs. . . . . .

After the initial blast we were given permission to turn and view the famed mushroom cloud and the pyrotechnics that went with it. Even today, I can still see the rising fireball, full of differing colors, and feel the blast shock wave as it passed over our ship. This was then followed by a roar the likes of which I have never before heard, and will never forget. . . . . .

Later, after the islands were tested for radioactivity, we were returned to our normal duties. Soon thereafter, and before the ***"Yoke"*** test, I was flown out of Enewetak, over to Kwajalein, then over to Honolulu, and back to Fort Worden. I remember seeing a ***B-29***, (1999) with the name ***"OVER-EXPOSED"*** on the nose, that was parked on the tarmac at Kwajalein airfield, as I was getting on my flight to Hawaii. I was thinking to myself, now that is Hell-of-a-name for an airplane. I found out later, that these were the first Air-Force crews assigned to "radiation-cloud-sampling" missions. . . .

The crewmembers of the *B-29 "OVEREXPOSED"* are being checked for radiation-contamination after returning from a "Cloud-Sampling" mission after a *"Sandstone"* test. After each such mission, the aircraft was washed down ("de-conned') by the ground-crew. . . . . .

Until my discharge, I was assigned to the *Brigade Intelligence Section,* which was really boring, as there was absolutely nothing to do. Over the years, I have only experienced minor health problems, but I have since learned that many of my Bud's have contracted lots of medical problems that could have been caused by radiation from those ***Sandstone*** tests. .

I am now in my 80's, and from time to time, out of the fog of the past, I can briefly remember other experiences that impacted my life back then, but the most vivid memories are those associated with my Atomic-Test (TDY). It would be nice to find a few "old geezers" like me to talk about those events, one more time. I salute all of America's past & present Atomic-Vet's. And so, that's my recollection of what took place, back in them days, out at ***Enewetak Atoll*** . . . . . .

Robert Oakes (Kansas) Current status – Unknown

I am ***Frank Potts***, and in early 1948, I was asked if I would like to volunteer for a very important assignment. At that time, I was a *Navy Weather Observer* (*Aerographer's Mate*) stationed in San Diego with ***FASRON-110***, and of course, my response to the question was "affirmative." The next day, I received transfer orders to the *U.S.S. Mt. McKinley* (***AGC-7***) for transport to the *Marshall Islands*. . . . . .

After leaving port, and while out at sea, we were mustered on the ship's **0-1** deck and told that we would be participating in the testing of atomic-bombs at Enewetak, Atoll. This, they said, was Operation ***"Sandstone"***. . . . . .

We were also told that there would be three test shots, and the duration of this assignment would be six months, or so. They also impressed upon us that our assignment was top-secret and we could not say anything about what we saw or did, after we returned to the States. I had previously been assigned to the (1946) ***"Crossroads"*** tests, and was told the same story about what not to say, and what might happen to me if I did say anything about those events . . . . . .

The *Mt, McKinley* was the flagship for *Joint Task Force Seven* (***JTF-7***). I have to say that those Navy "mess-cook" types can make three-day-old road kill taste like "file-mignon." I have to also acknowledge the wonderful cakes that *Adm. Denebrink* used to have in his refrigerator, but I best not reveal why I know how good those cakes were ! ! Thank you, Admiral - you were a wonderful leader . . . . .

My job, during the actual test detonations, was to stand on an open deck, and hold steady a high-speed pressure recorder, that was suspended from the upper-deck. I had to keep the recorder as steady as possible, before and after each blast. After viewing the chart, following the first test, it was apparent that I wasn't steady enough, although I was certain that I had remained as steady as possible. For the second blast the recording was much better, and after the third test, I was near perfect. It is very difficult not to move during such blasts and if not for the tell-tale evidence of the charts, I would swear that I hadn't moved at all - even on that first test.

Since weather played such a critical role in those tests, we worked very hard in the days immediately preceding each blast. We had several radio-teletype machines and we entered weather maps almost continuously. Our weather office was often crowded with high ranking officers almost to the point where we had no room to do our work. The ship's Captain (***W.L. Ware***), told me that he felt like he had totally lost control of his ship because of the number of higher ranking officers on-aboard . . . . . .

Witnessing those tests is an experience that is impossible to forget. The muffled "boom" followed by the resultant pressure wave and hydraulic shock, against the ship's hull, is an indescribable event . . . But, the most significant element was the beauty of that rising mushrooming cloud. Looking through those dark glasses, one could see nothing until the blast and then the light seemed brighter than the sun. Ear protection was not necessary to the best of my knowledge, but the use of glasses was stressed for those viewing the blast . . . . . .

Over the years, I have had a few health issues that may have been caused by radiation exposure, but I have not complained much. Don't know how others, who were there, have faired health-wise – over the years . . . . .

Frank E. Potts (Wisconsin) Current status - Unknown

Oops. . . I think I pushed the wrong switch ! ! !

VBDR NOW HAS "TOMODACHI" OVERSIGHT

A Memo (dated July 06, 2011) was drafted by the *Health Affairs Office* of the *Dept. of Defense* (***DOD***) and directed to the Asst. Sec. of the Army, Navy & Air Force, the Defense Threat reduction Agency (***DTRA***) and the President of the Uniformed Services University of Health Sciences. The subject of this memo was to set up a (radiation) dose assessment for the development of the *Operation* ***"Tomodachi"*** *Registry*, given that significant radiation was released from the ***Fukushima-Daiichi*** nuclear power plant following the earthquake and tsunami on March 11, 2011 . . . . . .

Although it is assumed that no individuals, within the ***61,000+*** person Department of Defense (***DOD***) population of interest, who were on or near the mainland of Japan, are known to have experienced medically significant radiation exposures. The purpose of the *Tomodachi Registry* will be to document radiation doses for medical surveillance, as well as other unspecified purposes. . . . . .

Included in this group are all military personnel who were stationed on, or near the Japanese islands. There are approximately ***61*** U.S. military facilities, including major military bases, located on the four main islands of *Japan* (*Hokkaido*, *Honshu*, *Shikoku*, and *Kyushu*) . . . . . .

The Okinawa Prefecture, where approximately ***50%*** of the U.S. military is stationed in Japan, is not considered a main Island, since it consists of the *Ryuku Island* chain that stretches over ***620*** miles southwest from *Kyushu* to **Taiwan**. A dose assessment for the *Okinawa Prefecture* and other adjacent land forms, e.g. *Korea*, will not be performed, since ***DOD*** radiation sampling data documented minimal radiation exposures to these areas & populations. The potentially affected U.S. military facilities are concentrated in a few prefectures, ***15*** in *Kanagawa*, ***10*** in *Nagasaki*, and ***6*** in *Tokyo*. About ***53,000*** (***DOD***) military, civilian, and dependent personnel are located in these facilities . . . . . .

To properly assess the radiation doses, for inclusion in the Registry, the Director of *Armed Forces Radiobiology Research Institute* (***AFRRI***) was requested to formally establish a *Dose Assessment and Recording Work Group* (***DARWG***) with technical and acquisition support provided by the *Defense Threat Reduction Agency* (***DTRA***) and the *Nuclear Test Personnel Review* (***NTPR***) *Program*. . . . . .

The ***DARWG*** held meetings at ***AFRR***I, on the Bethesda Campus, for approximately 3 months, commencing on July 18, 2011. It was also requested that the Army, Navy, and Air Force provide one knowledgeable, trained health physicist to ***AFRRI*** to support ***DARWG*** during that 3-month period, and that the Army provide health risk communication support to ***DARWG*** on an as-needed basis. Additional meetings will be scheduled on an "as needed basis" depending upon the brevity of information gained from radiation dose assessments. The *Veteran's Advisory Board on (radiation) Dose Reconstruction* (***VBDR***) is also tasked with oversight duties similar to those related to their current assignments related to military personnel exposed to radiation from nuclear weapons. More info is available at the www.vbdr.org . . . .

"BUSTER-JANGLE" FLASHBACK

Hello ***NAAV***. My name is ***Marvin "Pat" Campbell***, and I was a member of ***U.S. (6th.) Army's 3623rd Medium Maintenance Company***, and was out there in the desert for the purposes of keeping all them rigs & things running, for the ***"Buster-Jangle"*** atomic bomb tests. We worked on everything from small arms to tanks, and also helped set up a lot of those tests, with field equipment scattered from ground zero out to 500, or so, yards. We also had airplanes, includeing ***B-29's*** and ***B-17's***, and set those up for the tests too. . . . .

Then, after the blast we would take VIP's back in there to look at all those things and take pictures of what had happened to them during the blast. I remember one tank we set up at right angles to ground zero, there wasn't a whole lot of that left after it got hit by the shock wave. During those tests, we were at different places. For the first (1951) shot ***"Baker"*** we were five miles from the drop zone, on the side of a hill, when this bomber appeared over the distant mountains. My buddy, *Bill Bires* said he saw the bomb as it dropped from the ***B-29 "Butter-Cup,"*** and we quickly turned away from the blast area, crouched down and folded our arms over our eyes . . . . .

I have to say, that after each one of those tests, we surely had a mess of "blown-to-Hell" iron scattered all over the desert. At first, we thought this was kind of interesting and who else in this man's Army was repairing equipment that had just been blown apart by real live nukes ? Since we were the only group of Army maintenance specialists available, we got the job ! ! !

Buster "Charlie" **(10-30-51) was a** *14* **Kt, test of a modified (** *MK-4* **) bomb assembly with an experimental composite** ***Uranium-Plutonium*** **fission core assembly . . .**

A simple "tune-up" just ain't going to fix this stuff that was blown-to-Hell by another "Buster" nuke test . . . . .

We also supplied the trucks and transportation for the "nuke-tech" lab-coats – who were setting up all kinds of instruments. We would go in there well ahead of the test dates, and were generally the last ones out of there, after taking those nuke-techs back to collect instruments and animal cages. I find it difficult to describe some of those animals after the tests tore-em all to Hell and gone ! ! ! . . . . . .

The ***"Buster-Jangle"*** test shots were mostly airdrops mixed in with two ground det's. After some of the tests, we were involved in bringing the infantry in and walking right through all that (smoking) dust and scattered truck and tank parts. .

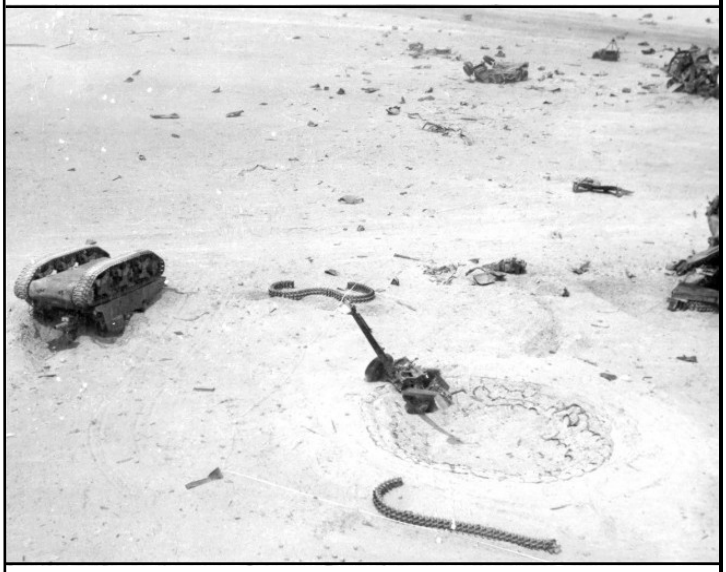
I remember that, after one of the tests, two Captains (from Washington, D.C.) wanted to go out and see a certain area. My Staff Sgt. told me to round up a Jeep and take those two officers around the site, as directed. So we went out to the areas they wanted to have a look at it, and pretty soon my Geiger counter went off scale. We also had radiation badges pinned on our caps, and, by now, they were turning black . . . .

One of the officers wanted to get closer to a certain spot, and I refused to take him there, because my Rad-meter was going nuts. By now, he was giving Corporal, yours truly, a real bad time. And, by now I was thinking to myself, *"Pattie ole boy – you've stepped in a big-one this time – but you ain't going to get your ass nuked, after the fact, for no one."* When we came out on top of the hill, at the de-con station, we had to be checked out before moving on. Sometimes we got scrubbed down, sometimes we got brushed down with a house broom, and sometimes we even lost your boots, or shoes. When we got back to *Camp Desert Rock*, we turned in our rad-badges. . . . .

The next day I got called in by my Captain, but he was not as hard on me as I thought he would be. He admitted that the area in question was too hot to handle, and said I was free to go back to my assignment, but they would not let me go out to any of the *"hot-zones"* after that incident . . . . . .

About a week later I was ordered to go see (***Col. Keen***) our *Commander*. When I got in there, these same two officers were in his office, and he proceeded to read them the riot act. He said *"this Corporal was out there to protect you while you were sashaying to and fro around the "hot-zone", and I am told that you gave him a hard time."* I just stood there - taking it all in, and wondering if I was in the "Twilight-Zone". . . . . .

I guess the one test that I remember, most of all, was the *Buster* ***"Baker"*** shot. We had several (Sherman) tanks and aircraft set out at several locations to so we could find out what a "nuke" would do to them. When we examined the wreckage, we found the tank's gun turret fused to the bottom frame of the tank, just like someone welded them together. It was absolutely unbelievable ! ! ! !



I am now in my 80's and I can still see those blown-to-bits trucks, tanks, field artillery pieces and destroyed aircraft. I can still smell the smoldering fumes of all those wrecks, the stench of dying animals, and I can also still feel the heat of the blast, and the shaking of the earth from the monstrous shock waves produced by those nuke tests. Do I want to do this again ? Not no, but Hell no, never, ever again . . . . . .

When I was discharged from the Army, I was told not to have any kids for at least ***10*** years. Well, I can tell you, that most veterans, in their 20's, ain't going to listen to that load of malarkey. So, I got married and I had kids. Over the years, I have experienced many difficult days fighting off lots of health problems, most of which I have overcome, to a certain degree. I have also found out that many of those veterans who were in those tests have since died off, plagued with many types of cancers and other problems I guess that the radiation from them nukes is what caused all those problems.

An so, that is my story of my experience with nuke testing, back in 1951. I am sure there are many Atomic-Veterans, like me, who would also like to tell their story, before they die off.

M. "Pat" Campbell - Oregon (current status – unknown)

After a routine exposure to radiation dust particles, a simple "brush-off" with a tent broom was the total de-con practice at Camp Desert Rock. . . .

TENNESSEE'S "NUKED" DEER

Oak Ridge, Tn: News of radioactive deer that were killed around Tennessee's *Oak Ridge* nuclear weapons factory, during the 2011 hunting season shouldn't come as any great surprise. Of the *321* deer that were tested, three were contaminated with enough *Strontium-90* in their bones, or *Cesium-137* in their muscle cells to prompt lab officials to confiscate the venison. . . .

The contaminated deer meat was forwarded to the proper radioactive waste disposal facility. Approximately two percent of the ***Oak Ridge*** herd is "too-hot-to-eat." Since the mid-1980's, ***200*** (radiated) deer have been confiscated from hunters. Radioactive animals have been registered at numerous nuclear weapons production sites in the U.S., including the Hanford (Washington) site, New York's Brook-haven National Lab., and Georgia's Savannah River Site. The *Dept. of Energy* (***DOE***) says it regularly tests animals *"to provide assurance that harvested animals do not contain levels of radionuclides which would result in significant internal exposure to humans who may consume the meat."* Although the home range of a white tailed deer is less than one square mile from available food and water, some contaminated deer have been harvested far beyond the site facility areas, and this has the potential to pose a very real hazard . . .

Knoxville News Sentinel - Nov. 27, 2011

OPERATION "RANGER" RE-VISITED

Dear ***NAAV;*** My name is *Tim Schultz*, and my father, ***Gerald "Jerry" Schultz*** passed away on March 17, 1999. After my father passed away, I began to delve into this mess our Government has bestowed upon all of those wonderful *Atomic-Veterans*, including my father. In the course of going through his personal belongings, I found a diary of his involvement in *Operation* ***"Ranger,"*** that included the detonation of ***5*** (air-dropped) atomic bombs, at the *Nevada Test Site* (***NTS***), in the spring of 1951. Before his death, my Father was diagnosed with leukemia, and also had skin grafts from the removal of several cancers. I am in total awe of hazardous duty that was assigned to honorable men, like my father, for the sake of our country. All of these men, living and deceased, are truly ***AMERICAN HEROES***, and deserve, at the minimum, a medal from the ***DOD***, for death threatening assignments. I would like to thank you for all your efforts to tell their stories, including the story of my Father's experience, written by his own hand, as follows:

Upon my release from active military service, I was instructed to keep silent about my participation in nuclear weapons testing activities in the 1950's. Over the years I have managed to maintain my silence about these matters, that is, until now. Given that I am experiencing severe health problems, it is my conviction that I should leave a written record of those activities, for my survivors. . . . .

I am ***Gerald Schultz***, and in January of 1951, I was assigned temporary duty to work on an atomic-bomb test project that was code named *Operation* ***"Ranger."*** This his would be the first time that an *Army Air Force* bomber would drop a live atomic-bomb on U.S. soil. Myself, and two other enlisted men, were trained the field of *Meteorology & Weather Mapping*. Our job was to obtain (daily) data of wind speed, direction, temperatures and vapor jet stream movement. Our equipment & housing shelter, was located on the *Nevada Test Site*, ***65*** miles northwest of *Las Vegas*, and approximately ***6-1/2*** miles from *Yucca Flats*, which was also a part of the Test Site. There was a bivouac area, west of ***Camp Mercury*** that was called ***Camp Desert Rock***, where military personnel assigned to Atomic Warfare games were housed & fed . . . . .

Military & Civilian personnel are receiving a "pre-test" orientation at *Camp Desert Rock* before a 1951 nuke event. . . . .

We were told that the effects of the first four tests, ***"Able," "Baker," "Easy"*** and ***"Baker-2"*** were more than satisfactory. As observers, our weather group thought they were quite spectacular. We could feel the blast effects at our location, but we survived with only a few loose boards on the side of our equipment shack. The bombs were released over the target sites from a ***B-29*** named ***"Butter-Cup."*** *I can tell you, those bombs were nowhere near being "butter-cups" . . . . .*

On February 5, 1951, at 2230, our red phone rang. It was a direct line to the *Atomic Energy Commission* (***AEC***), office in *Las Vegas*. The voice on the other end was a two-star who advised us to immediately take a balloon run followed by a second run at 0200 the following morning. I questioned the request because the next drop was not scheduled for another two days, and was quickly told that a change was made and we were also told that this bomb was going to be the biggest ever to be dropped and exploded from a ***B-29*** bomber. . . . .

After following instructions, and at 0245 I picked up the red phone and called in our data. The information we supplied would determine if wind conditions were favorable to minimize the chance of radiation fallout over populated areas. Later the phone rang again informing us that ***"Butter-Cup"*** had taken off from Alamogordo, NM, with the **"Fox"** bomb, and would arrive over the drop zone at 0647 . . . . . .

Ranger *"Fox"* was a *22* Kiloton "proof" test of a new *Mk-6* composite fission core design. . .

At 0600, after a brief discussion, the three of us mutually decided to take our chances of being outside rather than remaining in an old wooden building. The temperature outside was 20 degrees, the sky was crystal clear with a million stars lighting up the azure landscape surrounding us. A lone coyote howled to its mate over a far ridge. Other than that, there was the complete silence of a pre-dawn winter morning. . . . . .

At approximately 0640, we spotted a blinking light coming in from the east at about *35,000* feet. All other commercial airlines within a 100 mile radius were banned from flying through the test site. We were certain that this was our bomber. We watched with anticipation as it got closer and closer. At exactly 0647, the plane started to bank to the right. I uttered a comment to my buddies, *"it looks like the bomber may be making a dry run."* We immediately realized that the whining pitch of the plane's engines, and the immediate sharp right climb told us that the ***"Fox"*** bomb was on it's way down to the drop zone. . . . . .

From that moment on, time stood still. The three of us were fully aware that the largest atom bomb ever to be detonated was falling very close to where we were huddled, and shivering in the morning cold. We also realized that a one-degree error in the navigator's calculations would mean that the bomb would land directly on, or near our location. We were suddenly stricken with pure panic & fright . . . . .

I wondered if the those lab-types at *Atomic Energy Commission* had any idea if it were possible that the splitting of the atoms from this size bomb could start an atmospheric chain reaction and obliterate the entire world. I also wondered if what *God* created in this beautiful world would soon be destroyed by the hand of man . . . . .

The sound of the plane gradually decreased and again silence returned. No one spoke. Subconsciously I made an act of contrition and realized a rapid increase in my heartbeat. Then, suddenly it happened. The morning light was completely washed out with a blinding flash ***1000*** times brighter than the sun. We were all wearing protective eye gear but instinctively I raised my arm to shield my eyes. In doing so, I looked up and could see the plane trying to escape the inevitable shock wave that was moving rapidly towards it's tail section . . . . . .

The epicenter of the blast was the color of white incandescent heat rapidly changing to a bright orange, then to a fiery crimson that slowly faded to a lingering purple glow. The entire landscape around us was lit up in an eerie unrealistic brilliance, from horizon to horizon, as far as the eye could see. The light was so intense that ***THERE WERE NO SHADOWS***. . .

As the mushroom cloud began to rise - still glowing brightly - I dropped to one knee. As I did so, the first positive shock wave struck. The concussion was equal to a 100-pound bag of sand hitting me in the chest. I was knocked backward quite some distance but was able to stay on my feet. My furlined flight cap was blown off my head. The tremendous explosive sound was deafening, unlike any other man-made sound ever created, and the earth shook for several minutes . . . . .

I turned quickly away from ground-zero and watched the shock wave traveling across the land like a giant tsunami. The ground literally rolled outward, like giant waves in a lake disturbed by a thrown rock. The desert *Joshua* trees shook and swayed, and dust flew everywhere. As I turned back to look at the blast zone, I saw two large bolts of lightening that must have been created by the heat and electrons generated by the splitting of billions of atoms . . . . . .

By this time, *Jack Richards* became so shaken, that he ran back toward our building. He got about six feet from the door when the negative shock wave hit him in the back slamming him into the door, and severely cutting his wrist on the broken window. The rumble continued for another 3 to 4 minutes, gradually diminishing as it roared across the desert. The following day, local newspapers reported that the light and shock waves were seen and felt as far as *San Francisco* (*425* miles away) and also in *Los Angeles* and *Boise* (*ID*). Plate glass windows in stores in *Las Vegas* were blown out (*100* miles from ground zero). Upon inspection of our building, doors and windows were blown out as well as the entire wall facing the blast site. . . .

We thanked *God* that we survived and hoped that we would never again have to experience something as devastating as what we had just gone through. At the time we were chosen for this project, we were not given a choice nor were we warned of the hazardous (radiation) dangers we would be exposed to. We were not issued dosimeters, X-ray badges or Geiger counters that would have indicated the amount of radioactivity that we might have been exposed to. Nor could we assess the amount of radiation we took into our bodies as we inhaled the radioactive dust, blowing over us, from the Hell that was referred to as "*ground-zero*". . . . .

Over the years I have experienced many health problems that could have been caused by the radiation that I was exposed to at ***"Ranger"*** tests. I have experienced great difficulty in attempting to get the ***VA*** to accept the fact that I was one of many thousands of military ***"guinea-pigs"*** used by the *Dept. of Defense*, in the interest of our *National Security*. All of my attempts towards these ends were shot down by red-tape and "secrecy" smoke screens . . . . .

I also have worked with the *National Association of Atomic Veterans* in trying to locate *Jack Richards* and *Lewis Woods*, the men I worked with. To this day, I have been unsuccessful in determining if either of them are still alive. I would hope that someday, my story is told, for the sake of those ***Atomic-Veterans*** who have not been able to tell their stories . . . .

Gerald "Jerry" Schultz - Atomic-Veteran – now deceased

Military techs. are examining the remains of a "dummy" soldier destroyed by the "over-pressure" shock wave. . . .

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WOW - WHAT A GLOWING BEACH ! ! !

Caithness, Scotland: On Feb. 14, 2012 an (officially) significant *"hot"* particle was retrieved from *Sandside-Beach*, two miles from Scotland's *Dounreay* Nuclear Plant. According to a fact sheet generated by *Dounreay's* (clean-up) contractor ***DSRL***, the significant particle has radioactivity greater than ***1*** million becquerels (Bq) of ***Cesium-137*** which creates visible effects within a few hours, if kept in stationary contact with skin, and serious skin ulceration after ***1*** to ***2*** weeks. . . . . .

Although ***DSRL*** has retrieved ***208*** "hot" particles from the beach so far, it remains open to the public. ***DSRL*** considers the beach safe for public use, citing that *"the probability of the most frequent beach-users at Sandside coming into contact with a relevant particle is one in 80 million."* During initial testing, is was found that the "hot" particle contained ***Cesium-137***, ***Niobium-94***, and ***Stronium-90***. It was thought that the high *Beta* dose rate was probably radiating from the ***Strontium-90***, which exhibited readings of ***1*** to ***2*** million Bq's.

The *Scottish Environmental Protection Agency* (***SEPA***) was informed of the find and a spokesman declared, *"This latest find does not alter **SEPA's** view that public access to the beach should continue, given the current level of monitoring carried out and the number of finds to date."* The search for *"hot"* particles is part of an on-going cleanup linked to reprocessing of nuclear fuel rods at *Dounreay* in the 1960's and 1970's. During this period of time, nuclear waste was pumped into the sea through a series of liquid discharge pipes. . . . . .

I must be noted, that the articles about these discoveries have not hampered the migration of locals wishing to use the public beach, however; it was suggested that Scottish beachgoers;

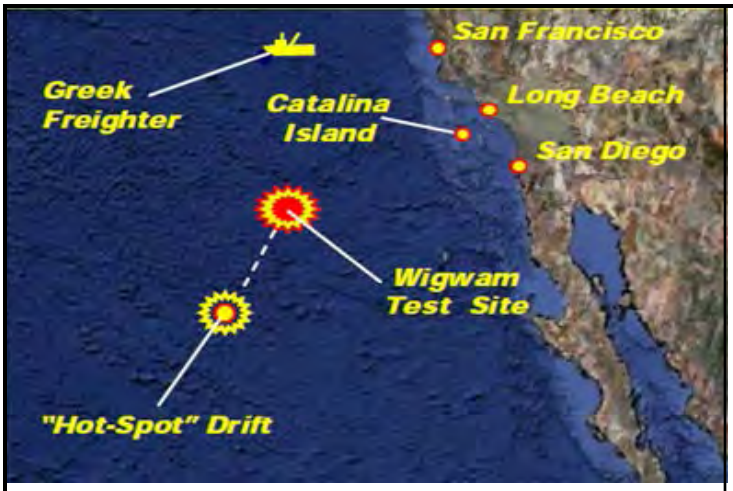
"Don't forget to pack a Geiger counter into your beach bag."

The Scotsman – Feb. 21, 2012

HOW WE'LL KNOW WHEN IRAN BUILDS A NUKE ! ! !

WIGWAM'S AIN'T ALWAYS SAFE ! ! !

I am ***Billy L. Rose***, and I was aboard the *General William Mitchell* (***TAP-114***), a troop transport for three years. We made monthly trips to *Yokohoma, Japan*; *Pusan* and *Inchon*, *Korea*, dropping off and picking up troops. Our homeport was in *San Francisco, CA.* and later *Seattle, WA.* I was in Seattle, when our Skipper received a (special assignment) request from ***NAVPAC*** that there was billet opening on a ***YAG*** for a Signalman with less than one year remaining on his enlistment, and I quickly volunteered, not sure of what the assignment was all about, or what a ***YAG*** was. It really didn't make a difference, as I was ready for a change of scenery at that time. I found out quickly, as I went aboard the ***USS Granville S. Hall***, (***YAG-40***) in March of 1955. Over the following few weeks and many hours were spent updating *"Notice-to-Mariners"* charts for the entire Pacific region . . .



Then, on the *May 2, 1055* and assigned to ***Task Force 7.3.3***, we steamed out of Long Beach Harbor (*CA.*) and my watch section had no idea exactly where we were headed, or for what purpose. As I remember, there were only thirty seven Navy personnel aboard the ***Hall***, plus a half dozen civilian scientist types from the *Scripps Oceanographic Institute, out of San Diego, CA.* . . . .

The following day, the ships Captain let us know, over the loud-speaker, that we were going to participate in an *Operation* code named ***"Wigwam,"*** that would be an anti-submarine nuke test, a few hundred miles southwest of *San Diego Harbor*. We were then left with our imaginations to develop a creative minds-eye vision of that upcoming event . . . . .

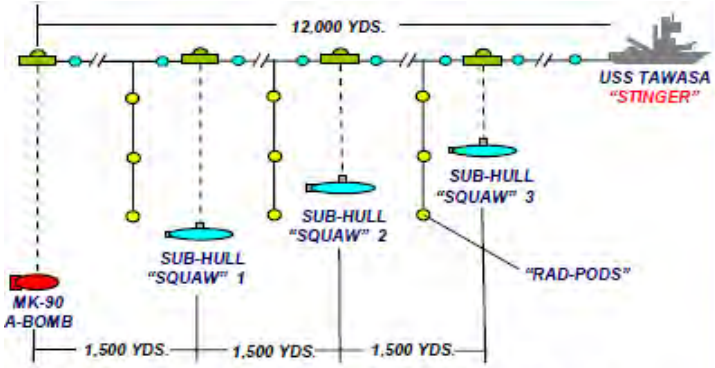
The next day, we arrived on location and discovered there were ***33*** Navy ships, ***3*** Scripps research vessels and ***6,100*** sailors & civilians involved in a multitude of activities. Teams of Navy divers were coupling ***8*** ft. dia. floatation 'balls" to a ***2"*** tow cable, as they were dumped out of ***LST's***, forming a ***5*** mile line of floating barges containing instrumentation and other test equipment. Somewhere below that were three test submarine hulls (called Squaws) and ***2000*** ft. below the last barge, hung a ***31*** *kiloton* (***Mk-90***) "***B-7"*** (deep-water) atomic bomb. Now that was nice to know ! ! !

Navy Divers return to their ship after setting up the string of *"Wigwam"* towed array test hulls and instruments. . .

On the front end of this (arrayed) string of barges was the ***U.S.S. Tawasa*** (***ATF-92***) what was charged with towing all that stuff at ***3*** knots. This was not an easy task, as the weather was raising Hell as the countdown started. As the test Zero-hour approached, the crew of the ***Hall*** was transferred to the ***U.S.S. Morgan County*** (***LST-1048***) via ***LCVP's***. This was an exciting event, as the seas were now getting to be quite choppy, and our "Coxwain" referred to the conditions as approaching the status of "a real nut-smasher". . . . . .

The drop from the debarking nets into the ***LCVP***'s had to be timed just right, as the boats were rising and falling ***6*** to ***8*** feet in the rolling swells. We were told to lay face down on the deck for our only protection, wearing only standard dungarees and shirts. *Lt. Len Glaser* (Section Officer) and a few of his men stayed aboard the ***Hall*** to set a (newly devised) set of remote controls, so as to guide the ship into the center of the ***"hot-zone"*** . . . . .

After the blast, the shock wave was so severe, that the ship's boilers went out, and *Lt. Glaser* had to return to the ***Hall***, re-light the boilers, reset the controls, and get the Hell off the ship as quickly as possible. While this was happening, we put a motor whaleboat over the side. The crew included a Boatswain Mate (coxswain), an Engineman, two Scientists, myself, and a Quartermaster / Signalman (3rd. Class). We proceeded down-wind towards the drifting *"Hot-Spot"* to allow the Scientists to take water samples from the surface and down to several hundred fathoms; and to collect some of the (still floating) debris from the blast. . . . . .



Operation "WIGWAM" test array setup

My job, while collecting water samples, was to maintain constant communications with the ***Hall***. This I did with a portable battery powered flashing light. My communicator (receiver) aboard the ***Hall*** was ***Lt. Glaser,*** who was also my Division Officer . . . . . .

Although there were two (1st Class) Quartermasters aboard the ***Hall***, they didn't know Morse-Code or semaphore, while ***Lt. Glaser*** was quite proficient in flashing light signal messaging. After going several miles toward the "hot-zone", we were told to return to the ***Hall*** to pick up *Glazer* & his crew . . . .

We were all wearing dosimeters, but I was never informed as to what the readings were, or how "hot" our op-area was. I do recall the Scientists commenting on their sample readings, and they did not look happy about the situation. . . . . .

Several of the Navy ships involved in the test experienced heavy damage to their above deck rigging and equipment racks. The hydraulic shock damaged the shaft alley's in some of those ships, as well . . . . .

The bow doors of one ***LST*** were blown open by the impact of the tidal wave, and the Capt. of that ship had to steam all the way back to Long Beach Harbor, in reverse. Now that was one heck-of-a-feat of seamanship by the wheel-house gang . . . . .

After the "hot-zone" tests, the ***Hall*** was maneuvered back to relatively safe water, and ***Adm. John Sylvester*** came aboard, via helicopter, landing on the ship's forward hold. He thanked us for our part in the exercise, discussed some issues with ***Lt. Glazer***, then flew back to his flag ship. . . . .

Shortly thereafter, we received orders to steam back to Hunter's Point. When we finally arrived, there was a considerable delay in arriving at our assigned berthing space. The harbor tugs didn't want to come near our ship because they claimed it was *"to hot to handle"* . . . . .

When we finally did tie-up dockside, every member of the crew had to be carefully screened before going ashore. I must have been the last one to be cleared, as I was sent back to the shower for scrub-down numerous times. Finally, after approx. ***5*** hours, I was released and allowed to "hit-the-beach". . . . .

Years later, I forwarded several requests to the *Defense Special Weapons Agency* with concerns of possible radiation exposure. When I finally received a response, I was told that the radiation levels of the ***U.S.S. Granville Hall*** was average, or less . . . . .

There was no record of the "whale-boat" trek in and around that drifting "hot-spot," nor the pick-up of Lt. Glazer & his crew from the ***Hall***, while it was still in the "hot-zone." The ship's Deck log could have verified the launch and retrieval of water samples & radiation contaminated debris. They told me that my ship's deck-logs were lost. A coincidence, perhaps, but then, who knows ? I often wondered how many of ship's logs, participating in the ***"WIGWAM"*** anti-submarine nuke test were also lost . . . . . .

Capt. Ginther was a fine officer. He insisted on my getting a ***GED,*** from ***USAFI,*** upon discovering that I was a high school dropout. He had the test set up and also set up transportation to Treasure Island, in the upper portion of San Francisco Bay. He later wrote a letter of introduction for me, to East Carolina State College in Greenville, N.C., recommending that I be accepted. When the Engineering Warrant Officer (I can't remember his name) realized that I was driving back to Texas; he built me a two wheel trailer, using parts from a local junk yard. For this, he would accept no money, and I was truly grateful for all their help . . . . .

The months spent aboard the ***Hall*** were great. Life aboard that rust-bucket was just like none I had previously experienced in the Navy. We three ***QM's*** (Quartermasters) had a separate berthing space. At breakfast we would walk by a caged area of the galley and just pick & choose what we wanted. Then we would go to the ward room, for a cup of mud (coffee), and head back to our breakfast snacks . . . . .

All of the ship's crew; enlisted men, officers and civilians ate at the same galley tables. There was a large reefer, located in a passage way, that was always well stocked with cold-cuts, milk, etc; and always available, for quick meal pickins. I was told, by other sailors, that this was in keeping with standard routine on all of the Navy's auxiliary fleet ships. That "laid-back" total brotherhood format promoted a real "family-type" atmosphere, and that I can surely verify . . . . . .

U.S.S. Granville S. Hall

In 1974, I retired from the Navy as a *Master Chief Petty Officer,* and in 1994 I retired from the *Internal Revenue Service*. Somewhere along the way, I read a story about ***"Wigwam"*** that said all who participated in that test were sworn to secrecy. I can remember the ship's Captain saying that we were going to be involved in a "secret" nuke test. Over the years, I have been treated for colon cancer, lymphoma of the stomach, thyroid problems and have had many skin lesions removed. I can't say that my participation in the ***"Wigwam"*** nuke test was the cause; however, it's a fact that neither my parents nor my seven siblings had any of these problems. It kind of makes you wonder, don't it ??

P.S. - Hi, I'm Bill's wife. I can remember the day that his ship returned to *Hunter's Point*. It was a scary day for me. I was at the Base Housing area waiting for Bill to return. It seemed like all of our neighbors, who were aboard the ***Hall*** came home to their families, except my Bill. He was a no show. So I put our (4 month old) son in stroller and walked down to the gate. There was no sign of Bill, or anyone else. We went back home thinking that someone had given him a ride home. He was still not at home when we got back to the house, so off we went again. Our son was tired and so we returned to the house to wait. . . . . .

It was hours before Bill finally got home and he did not explain for years after why he was the last one off the ship. He told me that he had to take multiple showers, and get rid of all the clothing he was wearing, until he could pass the radiation meter test. I was so grateful to see him walking thru the door. He later made many attempts to contact *Lt. Glaser,* his Division Officer, but received no reply. It was as though they fell off the earth. We often wondered if the sailors on the other ships involved in the ***"Wigwam"*** test were as isolated as we were, after the fact . . . . . .

Billy & Jennie Rose - Round Rock, TX

VETERANS SEEK END TO REPEAT REMANDS

"They want the appeals court to rule more quickly when reviewing denials of disability benefits."

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Lady Louise Byron

Washington, D.C. – ***Lady Louise Byron*** is now ***80*** years of age, has terminal cancer and is stuck on what many Veterans call *"the hamster wheel of justice"* in their pursuit of disability benefits. By February of this year, her claim for benefits due to the death of her Army Veteran husband had been considered ***10*** times – ***3*** times at the Veterans Administration's regional level, and ***7*** times at the system's appellate levels, during her ***15*** years of active litigation. . . . . .

Backed by several major Veterans organizations, Byron and other Veterans, in separate actions, are asking the U.S. Court of Appeals for the Federal Circuit to help them and similarly situated Veterans to end the repeated remands of their claims. Congress, they argue, gave the U.S. Court of Appeals (for Veterans Claims) express authority, in 2002, to reverse denials of claims by the Board of Veterans Appeals when those denials were clearly erroneous. The court's narrow interpretation of it's authority, they contend, is thwarting Congress' goal of expediting the painfully long claims process. They do not seek reversals in every appeal to the court, but only when a Veteran's record is complete, when the weight of the evidence supports the Veteran, and when a remand would be futile. . .

William Fox

Every remand adds at least a year to the review process. And the Veteran's Court remands, a whopping ***70%*** of the appeals it receives, back to the Vet's Board. The Board, in turn, remands a huge number of those cases back to the (***VA***) regional level, where the cycle begins again. Veterans only win outright reversals in less than ***5%*** of their appeals, on an annual basis. . . . . .

"I believe the court is simply way to reticent to reverse any award benefits, and I firmly believe they have the power to do so," said William Fox, former dean of Catholic University of America Columbus School of Law, and a leading authority of Veterans' law. *"This is a very significant problem. It's particularly tragic, where you have these poor people dying before the system can even give them a firm decision on their benefits". . .*

Established by Congress almost ***24*** years ago, as an Article-I court, the Court of Veterans Appeals was designed specifically to become expert in Veteran's law, Fox said. *"They actually have broader powers as a kind of super-administrative agency, than they have ever been willing to admit,"* he said. *"But they view themselves as an Article-III court."* However, Chief Judge Bruce Kasold, of the Veterans Court, while sensitive to delays in the whole claims process, said, *"I think if we went down the road of truly looking for reversals, I believe an overwhelming number of those [denials] would be affirmed". . . . . .*

Time and Numbers: The court reviews decisions by the Board of Veterans Appeals. *"The Board's most common error is failure to provide an adequate 'reason and basis' for it's denials of benefits,"* Kasold said. He went on to explain that this requirement is imposed by law, and is supposed to be a safeguard in favor of the Veteran. *"We really have to understand how the Board arrived at it's decision, and that means we don't have to go to the level of having a firm conviction that it's wrong. You can remand the claim for further development,"* Kasold also said. . . . . .

But the Veterans Court's own statistics appear to support the Veteran's organizations arguments that something is out of wack with the disposition of Veteran's appeals. Experts inside and outside of the court generally agree that it sends ***70%*** of the decisions back to the Board. . . . .

In fiscal year 2011, the court made decisions on merits of ***3,892*** cases. Roughly ***2,724*** cases went back to the Board; Veterans won ***195*** reversals; and the Board has affirmed in ***973*** decisions. The ***5%*** reversal rate has been fairly consistent, over the last many years. . . . .

"There is no doubt that appellants would like to see that higher," said the Chief Judge of the reversal rate. But he also said that *"remands can often result in subsequent awards of benefits by the Board, awards based on the proper development of the facts."* The Veterans Administration (***VA***) never responded to phone or e-mail requests for statistics on benefits awarded by the Board, after remands from the Court . . . . . .

Kasold and his predecessor have repeatedly urged Congress to create a Commission to examine the Judicial Appellate process for Veterans filing claims for "Service-Connected" health issues. *"While the high remand rate reflects the 'terrible track record' of the Board of Veterans Appeals, in deciding Veterans' issues,"* said Bart Stichman, Executive Director of the National Veterans Legal Services Program, *"the rate also shows the court itself isn't doing what the Federal Judicial review statue requires. They seem to constantly require the Agency to set a perfect record before they'll exercise the judgment they're supposed to exercise – that is the legal problem,"* Stichman also said. . . . .

Legal Purgatory: Congress, in 2002, amended the Veterans Benefits Act to address delays caused by those continuing remands. The amendments expressly said the Court shall *"hold unlawful and set aside or reverse"* any material finding of fact adverse to the Veteran if the finding is *"clearly erroneous."* The Court also was directed to examine whether the Agency had, as required by law, given the Veteran the benefit of the doubt when positive and negative evidence concerning any part of his claim was approximately in balance. . . . . .

Many Veterans organizations believe those amendments, and their legislative history, make clear that Congress intended the Court to take a more aggressive and less deferential role in reviewing facts found by the Board of Veterans Appeals. The law does prohibit the Court from engaging in *de-novo* fact finding. . . . .

The Federal Circuit appeals by Byron, and two other Veterans, are a concerted effort by National Veterans organizations to persuade the Federal Circuit that it should make clear to the Veterans Court what those 2002 amendments require. In Byron's case, her lawyer, Edward Reines (of Weil, Gotshal & Manges) is seeking *en-banc* review in hopes of overturning a panel ruling that he contends misapplied the amendments and another statue allowing the Veterans Court to reverse in cases of *"unreasonable delay."* Briefs supporting this position were also filed by the Paralyzed Veterans of America and the Disabled American Veterans. . . . . .

Throughout her ***15*** years of litigation, Byron produced medical affidavits from five of her (physicist) husband's treating Doctors stating that his non-Hodgkins lymphoma, which killed him at age ***45***, resulted from repeated radiation exposure. And she also produced affidavits from witnesses who now of his assignment in 1953 to the highly classified (*Upshot-Knothole*) project for atmospheric nuclear weapons testing in Nevada. . .

Despite her evidence, the Board of Veterans Appeals approved only an in-direct service connection to her husband's cancer. Because a direct service connection entitled her to an earlier effective date for benefits, she appealed and sought reversal from the Veterans Court. The ***VA***, according to Reines, never contested her factual evidence and only said it had no dosimeter record for her husband. . . .

UPSHOT-KNOTHOLE - SHOT "BADGER" – 23 KILOTONS
APRIL 18, 1953 - NEVADA TEST SITE

THESE "TRENCH-GRUNTS" ARE ADVANCING TOWARDS "GROUND-ZERO" WHILE THOSE IN THE BACKGROUND WAIT FOR THEIR ORDERS TO DO THE SAME, AS A PART OF THE "CAMP-DESERT-ROCK" ATOMIC WARFARE EXERCISES AT THE NEVADA TEST SITE. . . . .

Because the Board erred by not writing a decision specifically on the direct service-connection aspect of the claim, the Court said it had no choice but to remand the case. *"All of the evidence supports us, and all [the Agency] relies on is the absence of their own records proving it,"* said Reines. *"They don't say that their records show he wasn't there. I say they have no evidence and we have lots of evidence, and therefore they must lose."* Most Veterans accept the remands of their claims, however; Lady Byron balked, and stood firm in her position. With only about two years left to live, she chose to pursue the legal principle, and continue the fight . . . . . .

Futile Remands: A three-judge Federal Circuit panel ruled, *"It is not enough for Ms. Byron to claim that all of the evidence of record supports her position. The Board must still make an initial determination of whether Ms. Byron has sufficiently supported a claim for an earlier effective date."* The Veterans Court could not make that determination, the panel said. *"because it cannot make de-novo fact-finding"*. . . . . .

Futile and wrong on the law, professor Fox contends. *"There is no more factual evidence to develop."* He also said. *"Lady Byron's case cries out for reversal. There is language in the act that prohibits the Court from conducting a trial de-novo, but I don't think that's what we're talking abut when we discuss reversals versus remands. I know the judges disagree with me on these views"*. . . . . .

Former Chief Judge William Greene said, *"The Board has to find the facts. Sometimes [Veterans] may think their argument merits [reversal] but if we conclude there is another permissible view of the evidence, then the Board has to weigh that evidence. We look at the complete record, but is must consist of facts found."* On May 03, the Federal Court re-quested a response from the **VA** to Byron's *en-banc* request. . . . . .

In the case of Ronald Deloach, his lawyers, Igor Timofeyev and Stephen Kinnaird (of Paul Hastings) assisted by Stichman, argue that the Veterans Court misinterpreted the prohibition on judicial fact-finding, thus preventing it from examining the medical evidence and reversing the Boards decision. Three years after leaving the Army, where he was a neuropsychiatric specialist, Deloach was hospitalized for schizophrenia and recurrent breaks with reality, which, his treating physician believed, had begun during his service. He was in and out of hospitals in subsequent years, and in 2001 filed a disability claim. . . . .

His claim was before the Board for 5 full years, was reviewed 3 times and was remanded on 2 occasions. Then, in 2008, the board said the preponderance of evidence weighed against finding a direct service connection to his condition. Subsequently, the Veterans Court, in 2011, said that to reverse the Board would require weighing the opinions of Deloach's first two doctors against other evidence in the record, and that would be (prohibited) fact finding. The Court then ruled that the Board had provided an inadequate explanation for it's decision, and remanded the case for an additional medical exam – Deloach's fourth by a VA doctor. . .

UPSHOT-KNOTHOLE - SHOT "ANNIE" - 16 KILOTONS

The American Legion, the Military Order of the Purple Heart, and Vietnam Veterans of America also have urged the Federal Circuit to clarify the standards the Veterans Court should apply in reviewing facts found by the Board and in reversing when clear errors are found. Even though Congress could address the remand-reverse problems, it seems to have little interest at this time, said Fox, who has been studying the system and representing Veterans for two decades. *"I've been so frustrated by this whole system, that I am almost to the point that I'd like to see the whole thing burn down flat, and then develop a proper system for Veterans' benefits,"* he said, and went on to also say, *"There are a lot of people starting to feel the very same way that I do about the current system."*

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