

*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"
JOHNSON ISLAND
- 1958 "ARGUS"
SOUTH ATLANTIC
- 1958 "HARDTACK-II"
NEVADA TEST SITE
- 1961 "NOUGAT"
NEVADA TEST SITE
- 1962 "DOMINIC-I"
CHRISTMAS ISLAND
JOHNSON ISLAND
- 1965 "FLINTLOCK"
AMCHITKA, ALASKA
- 1969 "MANDREL"
AMCHITKA, ALASKA
- 1971 "GROMMET"
AMCHITKA, ALASKA
- 1974 "POST TEST EVENTS"
AMCHITKA, ALASKA

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



NAAV

National Association of Atomic Veterans, Inc.

"Assisting America's Atomic Veterans Since 1979"
Website: www.naav.com E-mail: naav.cmdr@naav.com



R. J. RITTER - Editor

July, 2011



THE 1957 LAS VEGAS "MISS-NUKE" CONTEST WINNER

The Newsletter for America's Atomic Veterans

COMMANDER'S COMMENTS



We will gather in Richmond, Va., on October 01, 2011 to celebrate **31** years of service to honor the service and sacrifices of more than **500,000** Atomic-Veterans, the majority of whom are now deceased, having carried their "oath-of-secrecy" with them to their graves....Those of us who have survived the effects of those radiation exposure events, without health issues, continue to assist those who are experiencing a host of radiation induced health issues.....

When signing the (2003) Atomic Veteran's Relief Act, President George W. Bush said: "Being wounded by atomic radiation from nuclear weapon tests is no different than being wounded by the bullet of an enemy on the field of battle"Over the years, we have continuously pressed our Congressional leaders to authorize a special **Atomic-Vet-Medal** that would properly honor all Veterans exposed to ionizing radiation particles while proudly serving in our Armed Forces.....

I have been asked many times, "if the Brit's can get one, why can't we get one ?"..... To date, we have had "zero" success in this area... That is not to say that we have not had a host of Legislators, from all 50 States, promising faithfully to "get something done in that area, so as to 'officially' honor America's Atomic-Vet's".....Unfortunately, this has not happened, and equally as unfortunate, the current "official" position of the Dept. of Defense does not agree with President Bush's statement.....

Sadly, given that there are approx. 190,000+ surviving Atomic-Veterans, who's average age is now 84..... their ability to physically accept, display & appreciate, to any degree, a medal of any type, is diminishing at a rapid rate.....As one of our members from Tennessee once said: "Well now, I recon we can all say that we are all charter members of the D.O.D. Loser's-Club"

Given the sadness of his comment, and the seriousness of our situation, I think we should all bow our heads and pray for Congress to wake up and smell the charred remains of ground ground-zero, and smoldering animals, in and around all of those test sites.....

If you cannot visit with us in Richmond, Va., (on October 01, 2011) please take a few moments to send in your votes for Director positions..... Two of our Directors (R. J. Ritter & Dr. F. L. Grahfs) will continue to hold office until the fall of 2013..... This Newsletter includes a (mail-in) ballot with the names of the three (3) Directors who are now up for election We ask that you check those you wish to vote for, and you may also write in the name of someone else, if you wish..... Please print and sign your name and mail back to the (Houston, Tx.) address.....

For those who will be attending our Re-union, we have also included a pre-registration form that you can send us with your attendance, and / or dinner fees. Please check your newsletter mailing label to insure that your dues are current, so your vote will be counted. Your dues expiration date are the numbers following your name, as shown below.....

Example: John Q. Munster **07-1-11**
2727 Old Rock St.
Johnston City, MN. 55777

(Note: John's dues expiration date is July 1, 2011)

WE NEED YOUR SUPPORT - IN MANY WAYS

As noted in previous issues, we continue to find ways to "outreach" to Atomic-Vet's and widows of deceased A-Vet's, who may not be aware of current benefits available from the **V.A.** or from the **D.O.J.** We welcome all "Good Samaritan" donations that allow us to continue these most worthy activities, as the luxury of time is not in our favor.....

Final Muster

- | | |
|-------------------------------------|------------------------|
| A. H. Bolin (MN) | G. M. Everett (MS) |
| Don McFarland (WA) | W. J. Mitchell (WA) |
| J. C. Phillips (AL) | M. A. Morriss (VA) |
| G. D. Sherman (ND) | R. P. Zingale (CO) |
| R. D. Early (CA) | R. H. Davis (FL) |
| W. D. Barnes (NM) | C. A. Aaronian (MD) |
| F. J. Allen (OR) | G. K. Evenson (ND) |
| T. N. Holcomb (IL) | W. D. Lancaster (MS) |
| W. M. Martin (LA) | J. A. Pearle (IA) |
| R. J. Meyers (AZ) | H. T. Simpson (SD) |
| M. D. Snyder (TX) | G. F. Seiwert (CA) |
| R. A. McNitt (CA) | T. F. Keenan (DE) |
| W. R. Powell (GA) | F. A. Arsenault (FL) |
| J. E. Adams (AZ) | R. A. Stremple (OR) |
| M. C. Yost (CA) | R. C. Sattler (NM) |
| A. M. Alexander (LA) | R. A. Guerra (TX) |
| E. W. Yeager (MN) | C. W. Pacheco (NM) |
| H. W. Knoebel (OH) | D. L. Bates (TX) |
| K. J. Fitzsimmons (ME) | G. F. Skinner (MA) |
| B. J. Cunningham (TX) | R. J. Ager (KS) |
| L. M. Sargestano (NY) | R. A. Phelps (CA) |
| J. J. McLaughlin (NJ) | W. B. Miles (VA) |
| H. N. Livingston (KS) | W. F. Wood (WA) |
| L. R. Phillips (ID) | A. H. Walker (SD) |
| W. E. Shearbrook (FL) | J. T. Leger (LA) |
| C. W. Weisner (FL) Past Nat. Cdr. | L. G. Miller (GA) |

We ask our members to observe a special moment of silence so as to properly recognize & give thanks for their honorable service, and total commitment to their God, their families and their Country.



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



N.A.A.V WELCOMES NEW V.B.D.R. CHAIRMAN



N.A.A.V. Cdr. Ritter welcomes **Charles H. (Chip) Roadman II, M.D.** (Lt. Gen. U.S.A.F., Ret.) as newly appointed Chairman of the **Veteran's Advisory Board on (radiation) Dose Reconstruction**, at the March, 2011 meetings in Arlington, Va..... **Dr. Roadman** is a Distinguished Professor of Military Medicine, Uniformed Services, University of Health Sciences, Bethesda, MD., and also served as **Surgeon General of the United States Air Force**, and currently sits on the Board of Directors of **Assisted Living Concepts, Inc.**, and **Air Force Village**... He is also a member of various Scientific advisory boards and served as President (& C.E.O.) of **American Health Care Association**, Washington, D.C..... **Dr. Roadman's** complete BIO can be

THE "MISS-ATOM-BOMB" STORY

On December 18, 1950, *President Harry S. Truman* authorized the establishment of an on-shore (*Continental*) nuclear testing site, on a **680** square mile section of the *Nellis (Air Force) Gunnery & Bombing Range*, north & west of *Las Vegas, NV.....* First known as the *Nevada Proving Grounds (N.P.G.)*, in 1955 it officially became the *Nevada Test Site (N.T.S.)*, opening the door to an atomic age that not only affected our national security, but our national culture as well

Today it is now known as the *Nevada National Security Site (N.N.S.S.)*, and training grounds for *Homeland Security* and other (*W.M.D.) First-Response* groups..... Shortly after nuclear testing began, and back in *Las Vegas*, America's attention was captured by the spectacular detonations within easy viewing distance of all those "*mushroom-cloud*" activities.....



In 1951, the first (*N.T.S.)* nuclear weapon tests began, with the "*Ranger*" series..... This was then followed, later that same year, by the "*Buster-Jangle*" tests..... During the course of these events, public interest increased each time the early morning sky was lit up a the monstrous atomic detonation

The next series of tests was "*Tumbler-Snapper*" which were conducted in the spring of 1952..... This time, the entire nation witnessed an atomic weapon test blast from the comfort of their homes, as the media was allowed (by the *D.O.D.)* to provided (limited) live television coverage.....

As Americans witnessed their first televised atomic bomb test blast, atomic fever swept the country, reflected in a variety of curious cultural phenomena..... Designers of everything from clocks to lamps to corporate logos soon adopted what came to be known as "*Atomic-Style*" into their work..... It was a form of design that commonly included rays and spheres simulating the path of electrons around the nucleus of an atom..... This is evidenced in the "*Mushroom-Cloud*" cake created for a "*Pacific-Proving-Ground*" military party, in Hawaii, as shown above.....

The *Franciscan China Company* created the widely popular "*Starburst*" dinnerware pattern, and some High Schools across the country named their football teams the "*Atoms*"..... Soon, Hollywood movies, such as "*Godzilla*," and some popular music all began to reflect this atomic fever..... But perhaps none were as curious as the creation of the "*Atomic-pin-up-girl*".....

In keeping with this idea of reflecting the "*Nuke*" culture of the day, *Las Vegas*' casino's decided to combine two of it's largest attractions....show-girls and atomic bombs..... The first known photo of an "*Atomic-Pinup-Girl*" appeared in the May 09, 1952 edition of the (*Dixon, IL.) Evening-Telegraph* and the (*Statesville, NC.) Daily-Record*.....

Depicting the photo as that of "*Miss-Atomic-Blast*," otherwise known as *Las Vegas* dancer *Candyce King*, the caption stated that she has "*a radiating loveliness*" as opposed to the apparent deadliness of atomic radiation particles..... *Ms. King*, who was appearing at the *Last Frontier Hotel*, dazzled a group of U.S. Marines who participated in the recent Atomic test maneuvers at *Yucca Flats (N.T.S.)*..... They were most eager to bestow upon her the title of "*Miss-Atomic-Blast*," finding her just as awe-inspiring, in another way of course, as she adequately represented the "big-bunker-busting-bangs" they had most recently been associated with out in the north-west desert flats

By now, all of the strip hotels in *Las Vegas* had their own show-room "lines" of showgirls, who performed between the famous head-liner acts, such as *Dean Martin & Jerry Lewis*..... While visiting a friend at the *Sands Hotel*, photographer *Donald English* took the famous "*Miss-Atomic-Bomb*" photo of *Lee A. Merlin*, who was employed as a showgirl at the *Copa-Club*.... With a cotton mushroom cloud added to the front of her swim suit, the publicity photo of the last "*Miss-A-Bomb*" has appeared, and continues to appear, in hundreds of world-wide publications..

By now, the public was smitten with a case of "*Nuke-Fever*" as evidenced by the Post-Card (shown below) that was available at all of the Vegas Hotels & Casino's.....



During the "*Upshot-Knothole*" tests, in the spring of 1953, the city of *North Las Vegas* held it's first annual "*Miss-Nuke*" beauty contest..... Showgirl *Paula Harris* won the title, and rode atop the (*N.L.V. Chamber of Commerce*) "*Atomic-City*" parade float. There were signs on each side of the float proclaiming *North Las Vegas "as modern as the A-bomb itself,"* as evidenced by the presence of their (super-hot) "*Miss-Nuke*" queen.....

In early 1955, one of the "*Teapot*" tests, was designed to evaluate the potential impact of a nuclear attack on civilian communities..... This test, joint ventured by the *Atomic Energy Commission (A.E.C.)* and *Federal Civil Defense Administration (F.C.D.A.)*, was code named *Operation "Cue"*.....

It's purpose was to measure how well houses, household items, food, shelters, metal buildings, equipment, and mannequins wearing everyday clothing, would survive at various distances from the center of a nuclear weapon blast.....

After several delays, and due to high winds, test personnel began calling this event Operation **"Mis-Cue"**.....During one such delay, **"Cue"** personnel descended on the Las Vegas *Sands Hotel* (for R & R) where (six) U.S. Army nuclear test soldiers from *Camp Desert Rock* crowned an unidentified chorus-girl **"Miss-Cue"**..... Then, on May 01, 1955, the *Sands Hotel* released a photo of that show-girl (shown below) being crowned **"to illustrate another misfiring of the Operation Cue bomb test"**..... Her crown was, of course, a carefully designed mushroom cloud.....

Then, on May 05, 1955 the **"Cue"** test was finally successfully accomplished, and the resulting mass destructive effects of heat and blast over-pressure forces were clearly evidenced and duly recorded.....Then, on May 24, 1957, the *Las Vegas News Bureau* released the last, and arguably the most famous, **"Miss-Atomic-Bomb"** photo (as shown on the cover of this newsletter), to coincide with the upcoming **"Plumbbob"** test series to be conducted at the **N.T.S.**.....

By the time the (1958) **"Hardtack-II"** test schedule arrived, and given that this would be the last atmospheric weapons test series, these events were no longer the great tourist attraction that they once were..... Atmospheric testing displays had, by now, become routine and was soon to go completely underground and public attention & interest had been directed to the newly developing International space race & nuke missiles.....



Moscow Russia: Stooping to old lows, and in an ongoing campaign to sell nuclear power, **Nuclear Ru, Russia's** leading internet service covering nuclear topics, held it's sixth annual **"Miss-Atom"** Beauty Contest for women who worked within the *Russian* nuclear industry.....The contest is designated as an industry wide, web based project for *Russia's* **"Nuclear-Belles"**....

More than 160 contestants signed on for this year's competition in hopes of winning such prizes as an all-expense-paid vacation to *Cuba* or *Croatia*, as well as an assortment of various furs, diamonds, digital cameras, etc..... Whether beauty pageants are by nature "sexist" is still, in some quarters, open to debate, but the deadly consequences of glamorizing nuclear radiation exposure potentials cannot be papered over with photos of fashionable physically fit female physicists

FEEDBACK FROM "GREENHOUSE"

Hello **NAAV**... I am *Keith Cunday*, and I served on the **U.S.S. Curtiss (AV-4)** during Operation **"Greenhouse"** (April to June, 1950). Our primary duty was to guard the compartments on the ship that contained "top-secret" materials. Only those personnel with a **"Q"** clearance were allowed to enter any of those compartments. We checked all badges, as well as pictures of the individuals that was allowed into those compartments.....

We also escorted the bomb used for shot **"Easy"** to the island on which the test was to be performed. And, I also remember on another test, we escorted that bomb to **"Runit"** island. This was the **"Dog"** shot.....As I recall, just before the first shot that I saw (**"Dog"**) me and my section mates were told to turn our backs to the shot area, and to cover our eyes with our arms, and then, after the flash was over, we could then turn around to watch the mushroom cloud..... And, wow, what a sight that was.....

Being engrossed with those kaleidoscopic sights in front of me, I wasn't thinking of the sound that was to come a few second later, and when it hit me I jumped a few feet off the deck, not knowing what the hell was going on. It sure gave me on helluva scare, and we sure cooked a whole lot of ocean fish that day.....

For the next shot I was given dark glasses, by our section Chief, and was able to use them to watch the action. This is an adventure that will be remembered the rest of my life, and at my age, I still see those big "sky-busters" in my sleep. As far as health problems, I have had a few, over the years, but can't find out much about the health problems of any of my old shipmates.



And so it was, that hosting **"nuclear-bomb-watch"** parties soon became a thing of the past in the *United States* However; in *Russia*, to our surprise, they are still (at this date) actively engaged in (*Nuke*) bombshell **P.R.** contests, as described in the March 2007, issue of the *Spiegel* publication, and as follows....



Greenhouse "George"

My name is Roy V. Slavin, I was stationed on *Enewetak* from Jan 1951 to Feb. 1952, and I was a Radioman in the U.S. Army. Before, during and after the "Greenhouse" tests we lived in tents in our designated company area. After the tests, I was assigned to remain on the island till February, 1952. We lived in the Radio-Op's building at the end of the island nearest to the garbage pier where we spent our off-time fishing a lot

As I remember there were about six radiomen and one N.C.O. We handled all ship-to-shore traffic and were designated as Net-Control for traffic to & from *Los Alamos*. We also handled all of the teletype receivers. And we had a voice-phone patch to all the ships in the lagoon, maintained a C.W. Net between all other groups involved in the "Greenhouse" tests setup.....

I arrived at *Enewetak* from Camp Stoneman in Jan.,1951, aboard the M.S.T.S. Hugh J. Gaffey (T-AP-121). After anchoring in the lagoon we went ashore in one of the ship's landing craft at an spot that would later become "the designated swimming area".....

Me, and several of my bud's, were assigned to the 7127th. *Communication Detachment*, and shortly after that, we were re-assigned to the 726th. *A.U. Army Element. JTF-3 (TG-3.2)*.... I worked in the receiver building on what I believe was the west end of the Island. It was the wide end near the beginning of the airstrip runway.....

The N.C.O. in charge was Sgt. *Gerald Stemen*, and the Officer in charge was a Lt. *Gerald Fisher*. Other radio operators who arrived with me were *Henry Hardin* and *Warren E. Jones*, and *Bernard J. McVey* was our Section Cryptographer.....

Whenever there was a test shot, the people on our end of the island, who were not on duty, were taken to a pier where we received supplies and were told to kneel at the countdown with our backs to the lagoon..... We had very dark glasses (like welders use) and we were told not to look at the explosion until we were told it was safe. Then when the bombs went off, even with the glasses, it was a very bright event.....

I recall, during one shot, they lost control of a (T-33) radiation sampling drone. I think and it went directly over our heads and crashed in the lagoon, just off shore from our location.... And I also remember seeing several B-17 drones that were damaged by the heat when they were flew through those boiling & rumbling mushroom clouds.....I kept thinking, what a mess....

For entertainment, between test shots, we had outdoor "Nuke-Theater" movies, enjoyed music from "Radio-Enewetak," enjoyed adult beverages at the "Swimmers-Tavern" (N.C.O.) Club, and, of course, did a lot of swimming and fishing. We weren't allowed to eat the fish but they were fun to catch. After the four test shots, I remained on the Island as part of the site garrison.....

After six, or so, months on *Enewetak*, we were flown to Ft. De-Russey (Hawaii) for some much needed R. & R. Honolulu was much better than *Enewetak*..... One of my bud's, who was also a medic, was fond of saying, "If they had to give the planet an enema – *Enewetak* was where they would definitely put it in"

I finally left that piece of badly damaged & highly radiated-coral-reef in February, 1952 and finished my enlistment at the *Army Signal School* (Ft. Monmouth, N.J.). All in all, it was quite an experience and a whole lot better than the alternative – which would have been a cold trench somewhere in *South Korea*.....

Roy V. Slavin – Atomic Veteran (now deceased)

My name is *Al Truocchio* and I was at Operation "Greenhouse" aboard the U.S.S. *Sproston* (DDE-577) along with the U.S.S. *Walker* (DDE-517)... In 1951 we escorted the U.S.S. *Curtiss* (AV-4) to the *Marshall Islands* along with all of the (*L.A.S.L. & L.L.N.L.*) Scientists and the four nuclear weapon devices that would be used for the tests.....

The night before arriving at *Enewetak*, a patrol plane had spotted a group of submarines, dropped a flare and then radioed back to the *Destroyer* screen that was escorting, and protecting the *Curtiss*.... We were called to general quarters, armed our depth chargers and made a run towards the submarine location. As we left the formation, the *Walker* stayed with the *Curtiss*,... We made one or two passes but didn't drop any charges, then returned to the *Curtiss* and *Walker*, and re-formed our active & protective screen station duties.....

Our (test) assignment were to stay on station 15 miles from the detonation area until after the explosions, then we were to steam to a quadrant 4 miles from the (test) Island, then circle the Island looking for any ships or submarines within the area.... After each test, and upon arrival back at *Enewetak*, we had to decontaminate the ship by washing it, from the top of the radar antenna's down to the main deck, with our sea-water pumps.....

In March,1978 I received a letter from the *Defense Nuclear Agency* (*D.N.A.*) and another letter from the *Armed Forces Radiobiology Research Institute* (*A.F.R.R.I.*) asking for information about my health problems, so that detailed research could be conducted by some Scientific types. This continued for a few years till they finally stopped..... I guess they figured that I was no longer worth looking at.....

Since then, I have had many bouts with skin cancers and other health problems.... I have heard that a few of my buddies, that were at *Enewetak*, are now dead, but can't find out any other details related to those (top-secret) events.....

Al Truocchio – Atomic-Veteran (now deceased)

OPERATION "GREENHOUSE" RECAP

The "Greenhouse" series was conducted at *Enewetak Atoll*, in the *Marshall Islands*, during April & May (1951)... It consisted of four relatively high yield tests, as measured by the standards of the day.... "Dog" (04-18-51) produced a yield of 70 kilotons, & "Easy" (04-20-51) produced a yield of 47 kilotons, These were "proof" tests of two new strategic bomb designs, the *Mk-6* and the *Mk-5* respectively.....

While "George" (05-08-51) produced a yield of 225 kilotons, & "Item" (05-24-51) produced a yield of 45 kilotons. These were the first "true" tests of the thermo-nuclear-fusion process, or the release of "fusion" energy from "thermally excited" nuclei.....

"George" was a research experiment that studied *Deuterium*-fusion burning when heated by thermal radiation, while "Item" was the first test of the principle of the fusion-boosting of

fission devices. **“Dog”** was a proof test of the **Mk-6** strategic bomb. This was the highest yield test up to that time, that would then be upstaged, a month later, by the **“George”** test, which would evaluate the (stock-piled) **Mk-6** weapon utilizing an upgraded, and experimental **“How-Double-Prime”** composite **Uranium-Plutonium** core.....

The resulting (**George**) detonation lifted **250,000** tons of (radiated) soil & coral reef particles to an altitude of approximately **35,000** feet. The **Mk-6** was an improved large **“Fat-Man”** type weapon, with a **60”** diameter, a length of **128”** and a weight of **8,500 lbs.** (later reduced to **7,600 lbs.**) a **32%** reduction from the earlier **10,900 lb.** (**Mk-4a**) design.....

The **Mk-6** also had an improved 60-point implosion system (as opposed to the **Mk-4a’s** 32-point system) that provided greater compression and higher efficiency..... The **Mk-6** was the first nuclear weapon stockpiled in large numbers by the **United States** (with over **1,000** eventually produced). Stockpiling the **Mk-6**, on an emergency basis, was already underway at the time of the **“George”** test.....

The proof test of the **TX-5D** (the proto-type of the **Mk-5** bomb), was a major advance in weight reduction for spherical-implosion type bomb designs. The **“Easy”** test device only weighed **2,700 lbs.** with a diameter of only **40”**, as compared to **10,000 lb.** (**60”** diameter) for earlier designs..... It also used a 92-point (92 reflective lens) system with a refined composite (**Plutonium/Oralloy**) fission core..... **Oralloy** is “super-enriched” **Uranium**.... This design was used as the **“primary”** in the first (**Hydrogen**) bomb used for the (1952) Ivy **“Mike”** test.....The **“Easy”** shot was also used to test weapon effects on various military structures....These structures were erected on nearby **Enjebi** and **Mijakadrek** Islands.....The destructive effects of these tests were more than successful.....

The **“George”** test was a thermo-nuclear physics experiment, and used a (purely theoretical design) device considered, by some scientists, to be unsuitable for use as a nuclear weapon.... The test device, (code named **CYLINDER**), consisted of an enriched **Uranium** core which was imploded using a unique cylindrical (spark-plug-type) system.....This device may have been the first to use external initiation to begin the fission chain reaction processes.....

The **Cylinder** fission device may have been based on a design by physicist **George Gamow**... It included a disk about **8 ft.** across and **2 ft.** thick perforated by an axial hole....The hole, compressed to a narrow channel by the implosion, conducted thermal radiation to a small **Beryllium Oxide** chamber containing a mixture of cryogenic **Deuterium** with a few percent of **Tritium**, so as to lower its ignition temperature.....

The resulting thermal radiation rapidly heated the fuel chamber to fusion temperatures, as the pressure in the **BeO** wall caused it to implode and compress the fusion fuel, thus quickly accelerating its combustion processes.....The thermal radiation then arrived ahead of the fission explosion “**shock-front**”, thus allowing time for a reaction to occur before being engulfed by the expanding (fission material) fireball.....

The yield of the fusion reaction was negligible compared to the size of the fission device. The progress of the fusion burn was observed by measuring the thermal **“X-rays”** emitted by the resulting fusion plasma.... This required instruments that were shielded, from both the **X-rays** and **Gamma-rays** of the fission bomb, and were far enough away from the explosion to be able to measure and transmit tangible data while the fusion burn was still in progress.....

This part of the experiment was designed by **Hugh Bradner** and **Hebert York**... The measurements were made by recording the fluorescence of a set of **“K-Edge”** filters located at the base of the test shot tower...The **X-rays** generated within the fusion chamber reached the instruments through a series of vacuum filled pipes that were inside a **4 ft.** diameter (lead-lined) tube that blocked out all other extraneous **X-rays** and **Gamma-rays**... The test device itself, weighed **235** tons, while the total weight of all diagnostic equipment was **283** tons..... **“Now that was a bomb !!!”**

The other diagnostic instruments included shielded photographic plates used to detect the high energy (fusion) **Neutrons** by counting the **“streaks”** left by the **Protons** that were ejected from the emulsion created by the **Neutron** collision activities...The thermonuclear portion of the experiment was largely developed by **Edward Teller**, but based on a device patented in 1946 by **Johann Von Neumann** and **Klaus Fuchs**.....

The **Von Neumann-Fuchs** invention was intended to be the ignition mechanism for the **“Classical-Super,”** the first proposed design for a **Hydrogen-bomb** that would later be shown to be impractical...The test, however; fortuitously provided much useful data on the radiation implosion principle, an essential element of the **Teller-Ulam** design which had been devised just two months earlier.....

The **“George”** test left a shallow crater in the coral & sand atoll that was **10 ft.** deep, with a diameter of **1,140 ft.**... Such wide & shallow craters were typical of all **Enewetak** tower shots...This was also the first test of the principle of **“fusion-boosting,”** the use of a thermo-nuclear fusion reaction to inject **Neutrons** into a fission core so as to boost the weapon’s total efficiency.....

In the **Rapatronic** camera photo of the **“George”** shot (*pg. 5*) the development of the **“mach-stem”** can be seen as the fireball shock wave reflects off the ground..... The mach-stem is a belt of intensified shock pressure at the base of the shock front..... Since in this phase of growth the temperature (and hence brightness) of the fireball is determined by the strength of the shock wave, a bright band can be seen where the Mach stem appears to be attached to the rising fireball.....

The **“Item”** test device used a cryogenic **Deuterium-Tritium** (**D-T**) mixture inside an enriched **Uranium** core. **Carson Mark** later reported (in a 1993 interview) that the **“Item”** test did, in fact, use **D-T** gas for boosting purposes.....



This boosting process doubled the yield over its expected (non-boosted) design value, and would quickly lead to the further development of thermo-nuclear devices with "dial-a-yield" capabilities, thus allowing a **S.A.C.** weapons officer to "dial-set" a (**Mk-41**) **25** megaton "hydrogen" bomb, to deliver a total (destructive) yield of **5, 10, 15, 20** or **25** megatons, depending upon the strategic impact requirements of the target-of-intent, while en-route to said target "Now that is real nuke creativity".....

THE "RADIATED" CHILDREN OF INDIA

B.B.C. April 02, 2009 / Down to Earth April 14, 2009

Faridkot, India: Toxicology tests have found that **149** children at the *Baba Farid Centre for Special Children* are carrying deadly amounts of Uranium contamination. "Around 80 percent of the samples, including those from children with cerebral palsy, revealed the presence of Uranium in levels that the experts have described as pathological," said the head of the hospital, *Prithpal Singh*.....

The results have baffled Indian officials as there are no known sources of Uranium in the Punjab region, where *Faridkot* township is located.....They are searching for viable and reasonable answers to shed light on this situation.....

The *Baba Farid Centre* is home to more than 300 children suffering from various types of neurological disorders. The results of the tests, to date, have let experts to further explore the correlation between exposure to radiation and birth defects, renal failure and several forms of cancers..... All of the children affected with Uranium poisoning are under the age of 13.....

ATOMIC VET SEEKING IDENTITY OF SAILORS

In the July (2010) issues of our Newsletter, we placed a notice, at the request of a Naval Officer who attempted to rescue seven sailors from the *Bikini* lagoon, during *Operation "Castle"*. That request was made by (former U.S. Navy Lt.JG) *Gilbert Di Lucia*, who is now an attorney. At that time, he was watching a group of sailors swimming in the lagoon, when they started floundering and shouting.... *Di Lucia* quickly commandeered a life-boat, and proceeded to assist the sailors in distress. Six of those sailors were successfully rescued, however one of them drowned, before he could be reached. Over the years, *Gilbert* has haunted by not knowing the name of that unfortunate Sailor.....We recently received a letter from *Gilbert*, informing us that he was contacted by someone, who had read our article, telling him that the unfortunate Sailor was "*Pop*" *Cunningham* (from the State of Tennessee) who served aboard the *U.S.S. Curtiss (AV-4)*.....

After all these years, it was a great comfort to know the name of this unfortunate sailor, whom he could not reach in time to prevent his drowning..... *Gilbert* is now interested in knowing the names of the six sailors who were rescued, and asked that we print a follow-up request accordingly..... He can be reached at:

Gilbert Di Lucia – Attorney at Law
 265 E. 66th. St. Suite # 3-B
 New York, N.Y. 10065
 (917) 684-7473 or (212) 794-6414
 E-mail: gdilucia@hotmail.com

WW-II ATOMIC-VET LOOKING FOR BUD'S

"I am trying to contact anyone who may have been assigned to **Air Group 99, or VF-301 from 1943 to 1945** If you were attached to either of these groups, please contact me

James "Jay" Kemp (Pr-2c)
 704 E. Skyway Ct. Payson, AZ. 85541
 Ph: 928-474-2798 Cell: 928-225-6351
 E-mail: jaybird1924@q.com

N.A.A.V. SPECIAL RECOGNITIONS & HONORS



We offer our many thanks and best wishes to outgoing **V.B.D.R.** Chairman **James A. Zimble, M.D.** (*Vise-Adm. U.S.N. Ret. & Past Surgeon Gen. of the U.S. Navy*).... It was both an honor and pleasure to have served with Dr. Zimble during his Chairmanship....His focus & leadership related to the issues expressed by Atomic-Veterans, culminated in a host of improvements in the manner in which radiation health claims are processed and adjudicated within the **V.A.** system...This also includes several improvements in the methodology

incorporated by the Nuclear Test Personnel Review (**N.T.P.R.**) Div. of **D.T.R.A.**..... And so, on behalf of America's Atomic-Veteran community, "we thank you Admiral, for your kindness and dedicated assistance, and smooth sailing to you Sir".....

We also want to recognize *Mr. Stephen Polchek*, who now serves as the *Executive Director of the Veterans' Advisory Board on (radiation) Dose Reconstruction (V.B.D.R.)* and is also the *Alternate Designated Federal Officer (A.D.F.O.)*..... Steve provides regulatory oversight and administrative direction to this Federal Advisory Committee. He ensures that public meetings are held regularly and that the Atomic Veteran community's concerns and issues with radiation dose assessments and **V.A.** adjudication of claims are properly, addressed.....



Prior to joining the Defense Threat Reduction Agency, *Mr. Polchek* was with Northrop Grumman Corporation, providing Advisory and Assistance Services to the Defense Threat Reduction Agency Advanced Systems and Concepts Office, managing the (**A.S.C.O.**) research studies databases, the Enterprise Information System Share Point Team Site and the **A.S.C.O.** external website.... He also managed efforts with the Visiting Scientist Program, the tri-annual Senior Leader Off-site conferences, while also facilitating visits to **A.S.C.O.** by government and academic researchers.....

Previously, *Mr. Polchek* was the *Director of Government Operations* for the *Wexford Group International, Inc.*, supporting the *U.S. Army's Small Business Innovation Research (S.B.I.R.) Program* and the *Advanced Concepts & Technology-II Program*. Additionally, he directed the *Army's S.B.I.R. (Phase II) Quality Award Program* that recognized the most innovative research projects transitioning to successful commercial products.

Prior to his civilian career, he served in the *U.S. Army* with command and staff assignments in *Target Acquisition* batteries and *Cannon Artillery* battalions in the *1st Armored* and *101st Airborne Divisions*, holding staff positions in the *7th U.S. Army* in Europe and the *Fire Support Test Directorate* at Fort Sill, OK, where he served as *Operations and Security Officer*, coordinating and executing tests to validate future *Field Artillery* equipment and systems.....

As a member of the **V.B.D.R.**, I can say that it is a great pleasure to know and work with *Steve Polchek* and his associates. .

THE NEW START TREATY - - - REALLY???

The following article (by John La Forge) was forwarded to N.A.A.V. by an Atomic-Vet from Oregon.....

There is an arms race and a squandering of public money in the back-story of the **New Start Treaty**, lauded as a warhead reduction agreement between the **Unites States** and **Russia**... The recently ratified treaty obligates each side to reduce the number of it's "city-busting" or "strategic" nuclear warheads from **2,200** to **1,550**.....However; the *U.S. Senate* extorted some so-called "modernization" funding from *President Barak H. Obama*, in exchange for the treaty's ratification.....In May, 2010, the *White House* promised **\$80 billion** to the nuclear weapons establishment for replacing much of the (aging) U.S. weapons arsenal..... Three large H-bomb laboratories will share about **\$10 Billion** annually to "upgrade" U.S. warheads, and they are also set to receive equal sums for the next 10 years.....

These funds are for a new (**\$4.5 billion**) "Chemistry and Metallurgy Research Replacement" complex at Los Alamos, N.M., a new (**\$3.5 billion**) "Uranium Processing Facility" at the **Y-12** lab in Tennessee, and "a few billion" more for a replacement "Kansas City Plant" (in the State of Mississippi), that will make non-nuclear parts for the warheads.....With this buildup, the U.S. will be able to quadruple it's current warhead production capacity, from **20** to **80** per year..... *New Start* does pledge the elimination of **30** land-based missiles, **34** heavy bombers and **56** submarine-based missile tubes.....

On the U.S. Navy's **14** giant "Trident" submarines (each is two football fields long) there will only be **20** Intercontinental Ballistic Missiles (**I.C.B.M.'s**), down from the current **24**..... but each missile can still carry eight (**8**) warheads, that can be assigned to eight (**8**) different targets This amounts to **2,240** nuclear weapons, and well over the *New Start Treaty's* publicized limit...

Warheads hidden in the Fine Print: The numbers fudging is possible because the new treaty's counting system nullifies a lot of "supposed" reductions..... According to the *Wall St. Journal's Jonathan Weisman*, "Quirks in the treaty's counting rules mean that under one scenario, the U.S. could meet it's new obligations by mothballing just **100** warheads, while Russia need only remove **190** of their warheads."

The treaty will count the actual number of warheads on land-based rockets (**Minuteman-III** missiles) and on sea-based missiles, but "it will count each heavy bomber as a single warhead, even though they can carry far more than one nuke each." (**B-52's** can carry up to **16** nuclear weapons, according to the *New York Times*) This bizarre sleight-of-hand means that the new treaty counts **1,650** warheads, when there are actually **2,300** nuclear warheads in inventory.....

According to *Hans Kristensen* of the Federation of American Scientists, "A U.S. air base with **22** nuclear tasked **B-52** bombers will only count as **22** nuclear weapons, even though there may be hundreds of nuclear weapons on the air base. The counting rule will hide about **450** U.S. and **860** Russian warheads, or **1,310** altogether".....

This apparent **fraud** means that the U.S. and *Russia* can, and probably will, deploy more large-yield "city-busting" H-bomb nukes under **New Start** than would have been allowed by the **2002 Moscow Treaty**.... As if increased H-bomb production and hidden warheads aren't cynical enough, the U.S. currently has about **3,000** nukes in their "rapid-ready" storage inventory.....and **Russia** has approx. **1,000** in their inventory.... These can be, placed on the alert "firing-line" at any time in the near future....

"Don't you just love it ????"



HARDTACK-I "UMBRELLA" (1958) MARSHALL ISLANDS

" ANOTHER MAGNIFICANT ENEWETAK FISH-FRY "

JOIN US IN 2011 AT RICHMOND, VIRGINIA

We will be holding a **NAAV "Reunion"** at the **Holiday Inn** (1021 Kroger Center Blvd – Richmond, VA. 23235), on **Saturday, October 01, 2011**..... All members wishing to reserve hotel rooms must call **800-397-1034** prior to **August 30, 2011**.....Be sure to ask for the special **NAAV** group rate..... Registration will be Friday evening **1600** to **2000** and Saturday, **0800** to **0845** The registration fee is **\$20.00** / member Members & guests wishing to attend the Saturday evening **Fellowship Dinner** will be able to purchase dinner tickets upon check-in, or you can send us your dinner fee with your mail-in ballot, as shown below.....

Three (**3**) Director's are up for (4 yr. term) re-election. They are (Sec.& Treasurer) **Bernie Clark** (OK), Director-at-Large - **Gillie Jenkins** (VA), and Director-at-Large - **Rodney-Lee Guidry** (LA) who is filling in for recently deceased Director – **Darrell Robertson** (MO).....*Guidry* is also (LA) State Commander, and has been most active in assisting A-Vet's in his State

The terms of **R.J. Ritter** (Nat. Cdr.) and **Dr. F.L. Grahlf**s (Vice-Cdr.) will not expire until the fall of **2013**

Please make a copy of the (Director) voting ballot as shown below, select your choice for a Director's position, and mail to the **N.A.A.V.** address shown on the back of this newsletter.....

MAIL-IN BALLOT FOR DIRECTOR POSITIONS

- Bernard Clark (OK) Secretary - Treasurer**.....
- Rodney-Lee Guidry (LA) Director at Large**
- Gillie Jenkins (VA) Director at Large**
- Other (write-in)** _____

Member Name (print) _____

Member Signature: _____

Note: The (annual) dues of members submitting a mail-in ballot must be current (paid thru 2011)

Members wishing to submit (re-union) pre-registration fees can do as follows:

Member name (print) _____ @ \$20.00

Guest name (print) _____ included

Dinner ticket: Number of persons _____ @ \$25.00 ea.

Total amount submitted: \$ _____

CHERNOBYL - A FIRST HAND RE-VISIT

The current *Fukushima, Japan* nuclear power plant disaster and the subsequent atmospheric radiation dispersion and resulting health issue problems bring to mind the 1986 nuclear power plant disaster at the *Chernobyl N.P.P., in Russia.....* At that time, *Vladimir Bukhankov* was a Senior Flight Navigator with the *Russian Special Ops Combined Squadron*, that would be tasked with the responsibility of tracking and gathering airborne radiation samples within a 1,000 mile radius of the (now destroyed) Chernobyl (nuclear power) plant...

In 1978, *Vladimir* graduated from the *C.A. Academy* in *St. Petersburg, Russia*, with an degree in Flight Engineering & Navigation, while his wife *Marina* had also earned her B.A. & M.A. degrees in French, German & Literature from the *Russia State University*, also in *St. Petersburg.....* They were soon married and *Vladimir* concentrated on his career as a Flight Engineer & Navigator with the *Russian Air Force.....*



Then, on the morning of April 26, 1986 at the *Chernobyl Nuclear Power Plant (C.N.P.P.)*, a large scale excursion occurred, due to the effects of un-controlled positive coefficient of (critical-mass) reactivity, which then blew radioactive materials into the atmosphere, while totally destroying the reactor containment building.....According to on-site witnesses of the accident, "*there were two subsequent explosions, which looked something like fireworks in the night sky*".....

On April 25th. *C.N.P.P. Reactor #4* was shut down for routine maintenance, so that technicians could run a test that, in case of a power outage, the turbines could produce enough energy to keep the cooling system pumps running until such time that the backup generators could become fully operational.... However; in order to get accurate results, it was decided that the safety systems would also be shut down.....

Shortly after 1:00 am on the morning of April 26th., the reactor's power dropped suddenly and the situation became uncontrollable, due to the absence of the safety systems....and at 1:23 am, the reactor exploded.....The resulting repercussions would last for decades.....

On the morning of April 28, 1986, a radiation monitor sounded at the *Forsmark N.P.P.* in *Sweden*, which was 1,200 km from the *C.N.P.P.* Increased radiation levels were also observed at other nuclear facilities in *Sweden....* It was evident that a nuclear accident was presumed to have occurred somewhere within the *Russian territories.....*

Then, on the evening of April 28th, *Moscow Radio* broadcast that a nuclear accident had happened at *Chernobyl*, in *Ukraine.....* By the beginning of May, 1986 radioactivity from the *Chernobyl* event had rained down upon almost all *European countries.....*

In *Japan*, Scientists first observed the arrival of (*Chernobyl*) radioactive particles in rainwater on May 3rd.....More than twenty radio-nuclides were detected from the *Russian C.N.P.P.* accident. These radiation samples included: *Xenon-133, Iodine-131, Caesium-137, Strontium-90, and Plutonium-239.....* The *Japanese* began to analyze the scale of radioactive contamination using the data obtained from world-wide sample readings.....

Since this accident occurred during the *Cold-War* period (between *Russia* and the *U.S.*) the most important radiation fallout data, within *Russian territories*, was not made available...

This situation, however; was rectified in the spring of 1989, with the (*Russian*) publication of a (*Caesium-137*) contamination map

It was a real surprise to note that the heavily contaminated areas extended, something like isolated islands, outward to **600 km** from the center of the accident site.....The basic feature of nuclear accidents is determined by the amount of radioactivity released into the environment.....

This is where Senior Flight Navigator *Vladimir Bukhankov* and his *Special Operations – Combined – Nuclear Fallout Survey Team* became engaged, flying continuous radiation monitoring & sample gathering missions, from shortly after the 1986 accident, to the fall of 1988. To accomplish these missions, they used three types of aircraft.....

The *Anatov-AN-2 "Colt"* was used for aerial surveys and radiation sample gathering at low to extremely low altitudes, while the *Kazan MI-8 "Hip"* (multi-purpose) Helicopter was used for low altitude monitoring and ground level support tasks.....



And the *Tupolev TU-16 "Badger"* was used for long-range, high altitude radiation sampling so as to develop viable fallout pattern grids.. While this was happening, the list of radiation victims began to grow at a rapid pace

At the time of the accident, there were approx. **444** site personnel

and *Construction workers* performing various activities at all four *C.N.P.P.* reactors.... Additionally, there were approx. **200** fire-fighters engaged in post-accident emergency response activities.....During the emergency work, the fireman became sick, one by one, with symptoms of nausea and vomiting.....Such acute radiation symptoms appear when people receive large doses of radiation in a very short period of time.....

These radiation victims were transported to a hospital in *Pripyat City*. In the evening of the first day, a special medical team arrived from *Moscow*. Those patients in "serious" condition were transferred to a special treatment hospital in *Moscow*, for further studies....



Soviet authorities later announced that approx. **300** people were hospitalized because of acute radiation syndrome, among which **28** died during the next three months.... In addition, two personnel died on the day of the accident; one due to serious radiation burns and one missing under the debris.... Adding one death from unknown cause, it was officially reported that **31** people died in the *C.N.P.P.* nuclear reactor explosion accident....

Pripyat City (population 50,000) was constructed to house the *C.N.P.P.* workers and was located **3 km** from the nuclear power complex... It was lucky for the citizens of *Pripyat* that the first "hot" plume of radiation released by the explosion passed over a few miles south of the *City....* Due to extremely strong radiation exposure, pine trees, exposed to the fallout, died within a few days and the area was later called "*the red-dead-forest*".....

In the morning of the second day after the accident, radiation rates in *Pripyat* began to increase at a rapid rate... Around noon, that day, the local radio announced a total evacuation of the City... Residents were asked to bring their passports and three days of food rations.....Using **1,200** buses, the evacuation was quick and without panic....

People thought that they could come back to their homes in three days, but soon found that they would never return to this area of their country..... In contrast to the *Pripyat* evacuation, residents within a **30 km** radius of the accident were given no evacuation information, and were unaware of the extremely deadly health risks they now faced.....

They were eventually informed one week later, and the evacuation process was not easily obtained, as it involved tens of thousands of citizens...Those who remembered **WW-II** had that same horrible feeling that once again, they were being invaded by the Germans..... After the end of **WW-II**, they were able to return to their properties,....this time, however, returning to their homes would be completely out of the question

And so it was, that two weeks after the *Chernobyl N.P.P.* accident, more than **151,000** civilians were evacuated to prevent fatal exposure to radio-nuclides..... And according to the "official" reports by the U.S.S.R., "there was no radiation syndrome among the people evacuated from the **30 km** exclusion zone".....

Immediately after the accident, to cope with the emergency situation, a special working group was organized within the *Politbureau* of the *Central Committee of the Communist Party*.... But soon after the disappearance of the U.S.S.R., the secret protocols of the *Russian Communist Party*, from the period of the *Chernobyl N.P.P.* accident, were eventually disclosed..... A lot of descriptions of radiation patients among the inhabitants were found in these disclosed protocols, an example of which follows.....

Excerpt descriptions of the health of Chernobyl victims from the Secret Protocols of the Communist Party of the Soviet Union....

May 4, 1986 As of May 4th., **1,882** people are hospitalized. Total number of examined people reached **38,000**. Radiation disease of various degrees of seriousness in **204** people, including **64** infants....

May 5, 1986 Total number of hospitalized people reached **2,757** including **569** children. Among them, **914** people have symptoms of radiation disease... **18** people are in very serious state and **32** people are in a serious state....

May 6, 1986 As of 9:00 on May 6th., the total number of hospitalized people reached **3,454**. Among them, **2,609** people are in hospital for treatment, including **471** infants..... According to confirmed data, the number of radiation disease cases is now **367**, including **19** children. Among them, **34** people are in a serious state.... In the 6th Hospital in Moscow, **179** people are in hospital, including **2** infants.....

May 7, 1986 During the last day, an additional **1,821** people were hospitalized. At 10:00 May 7th., the number of people in hospital for treatment is **4,301**, including **1,351** infants. Among them, diagnosis of radiation disease was established in **520** people, including staff of the Ministry of Internal Affairs of the U.S.S.R.... **34** people are in serious state.....

May 8, 1986 During the last day, the number of hospitalized people increased by **2,245**, including **730** children. There are **1,131** people left in hospital.... As of 10:00 May 8th., **5,415** people are in hospital for treatment, including **1,928** children...Diagnosis of radiation disease was confirmed for **315** people....

May 10, 1986 During the last two days **4,019** people were hospitalized, including **2,630** children. **739** people left hospital. In total, **8,695** people are in hospital, including **238** cases with diagnosis of radiation disease, among which are **26** children....

May 11, 1986 During the last day, **495** people were hospitalized and **1,017** people left hospital. In total, **8,137** people are in hospital for treatment and examination, among which **264** people with diagnosis of radiation disease. **37** people are in serious state. During the last 2 days, **2** people died. Total number of deaths from radiation is now **7** people....

May 12, 1986 During last day, **2,703** people were hospitalized, most of which were in Belarus. **675** people left hospital. **10,198** people are in hospital for treatment and examination, among which **345** people have symptom of radiation disease, including **35** children.... Since the time of the accident, **8** people have died and **36** people are in most serious state.....

Editors note: These excerpts are a dramatic look at the health risk potentials that could be precipitated by a similar type nuclear accident (such as the one at *Fukushima, Japan*) or the detonation of a "dirty-bomb" within a major city.....

Detailed information about the *Chernobyl N.P.P.* accident was not fully made public until three years after the date of the accident... It is estimated that more than **500,000** people were relocated, either voluntarily, or otherwise, leaving their homes and most of their personal possessions behind.....

After the completion of his radiation monitoring & sample gathering assignments, *Vladimir & Marina* moved to the U.S., and they now reside in San Jose, CA., *Marina* is a teacher at a Nurse's School and *Vladimir* is enjoying the Pacific Coast climate... He is also a proud



(Life) member of **N.A.A.V.**.... The photo (above) was taken on their 25th. Wedding Anniversary..... We offer *Vladimir & Marina* our best wishes for continued health and many successes, and thank him for providing the riveting substance for this (timely) article.....

VOICES FROM NUCLEAR HELL

My name is *Charles S. Decker, Jr.* As an Ensign attached to *Joint Task Force 1.2.7*, and while serving *T.A.D.* on the U.S.S. *Achomawi* (*ATF-148*) I participated in *Operation "Crossroads."* I was on the flying bridge of the *Achomawi* when the (Japanese Light Cruiser) "*Sakawa*" sank on our tow wire, damn near taking us with it

An Ensign in the U.S. Navy is the lowest commissioned rank, equivalent to an (Army) 2nd. Lieutenant... I had received my commission the previous August (1945) and had spent the next six months at the *Navy Ship Salvage School* in New York and so was soon thereafter assigned duty as the *Assistant Salvage Officer* aboard the *Achomawi*....

Shortly thereafter, we were out at *Bikini Island*, as a part of the "*Crossroads*" support group.... I might have been assigned other collateral duties on the *Achomawi*, but if so, I can't remember what they were, as I am now on back side of my mid 80's, and my memory sometimes does tricks with my recollection, and my body does tricks in other areas of interest.....

Fortunately, or unfortunately whatever the case may be, the *Achomawi* did little or no actual salvage work at *Bikini*....



U.S.S. ACHAMAWI (ATF-148)

Instead, we spent our time moving various ships, of the target fleet array, into position prior to the two tests. Just before test "Able" we moved the landing craft, that was supposed to be the bomb carrier for test "Baker", into a floating dry-dock... It was rumored but never substantiated, to my knowledge, that the test "Baker" bomb was already in place on it when we moved it.....

Even so, the maneuver was carried out very carefully. On the day after the "Able" test we were ordered to move the "Sakawa" out of the target array, as it was severely damaged, and listing badly to port.... Due to its position in the array set-up, the Achamawi had gone along the high (starboard) side of the Sakawa, with our stern toward the Sakawa's bow.....

Then we were supposed to spin the Sakawa around to starboard and tow it out of the array field... It was when the spin move started that the Sakawa started rolling over to port, and starting sinking to the bottom of the lagoon, still lashed to our tow wire.... Needless to say, our Chief Boatswain-Mate was quick enough to cut the tow wire, allowing the Achamawi got the hell out of the way away of the rapidly sinking Japanese Cruiser....

On the day of "Baker" test, the Achamawi, and all other support ships, moved off some distance (outside of the Atoll lagoon) and away from the "target-fleet"..... We were near enough that we could see the target array and saw the big mushroom of water, exploding out of the lagoon surface....

Here my memory is a bit hazy, but I believe that the salvage task unit, including the Achamawi, was allowed back into Bikini lagoon, but were then sent to an anchorage in a remote part of the atoll due to the high degree of radioactivity of the water surrounding the target fleet area.....

The scientists who were dealing with all of the test animals were also real busy.... After the "Able" test, I had the opportunity to see some of those animals.... Some were still charred & smoking from the blast heat, and some of them were still alive and squealing like hell.... After the "Baker" test, the skipper of the Achamawi and I watched the U.S.S. Saratoga sink to the bottom of the lagoon. We all saluted as it sank out of sight, after which all the auxiliary ships, including us, spent quite a bit of time shuttling back and forth between Bikini and Kwajalein with one or another of the badly damaged target ships at the end of our tow wires.... I remember when we were towing one of the old Battlewagons the rudder was jammed hard-to-port, so instead of towing directly behind us, it rode on our port quarter the entire way.....Now any sailor worth his salt will tell you, that was a real funny looking way to steam across the Pacific Ocean....

I guess maybe I one of the lucky ones. I am now on the late side of my 80's and have had no illnesses that can be attributed to my participation in the "Crossroads" tests..... at least that's what the V.A tells me.....

Over the years though, I did hear about several Achamawi crew-members who developed radiation sickness, of one kind or another, including members of our rescue & diving team.... Having attended several reunions, over the years, rumors of radiation exposure health issues, experienced by sailors who participated in the Crossroads tests were the main topic of discussions..... The big issue was the difficulty dealing with the V.A. and getting "proof" of being there from the Dept. of Defense.....

In 1952, I did have an enlarged (overactive) thyroid which was determined to be benign after a subtotal thyroidectomy.... And in 1993 I was diagnosed with an enlarged prostate, that likewise was determined to be benign after surgery... I have always considered my "Crossroads" experiences, the memories of which are getting rather dim now, as one of the high points of my Naval career..... Thank you, for listening to my short story.....

C, S. Decker, Jr., (OR) Atomic-Veteran
(current status - unknown)

I am William K. Luebbert and I was stationed at the 5th Army base in Ft. Riley, KS., and was also assigned to G-2 as an assistant Instructor.... My M.O.S. was 1890 Photo Interpreter, and I was sent to the "Upshot-Knothole" tests after I had prepared a display of photographs and bomb damage estimates for an open house that was held in Patton Hall on base.... The subject of this presentation was Nagasaki and Hiroshima "before" and "after" the bombing at those locations.....

My boss, at the time, was Major Brown, and he thought I could gain more knowledge about Atomic-Warfare by participating in an actual A-Bomb test... And so, accordingly, orders were cut and I was on my way out to Camp Desert Rock, NV.....

My experiences are similar to other accounts I have read...In the early morning, before sunrise, the desert is extremely cold... One additional experience I can still recall is while waiting for the countdown to begin several soldiers had prepared small bonfires attempting to keep warm.....Shortly thereafter a voice came over the loud-speaker system that was operating in the staging area and announced "Please extinguish the fires in the staging area as we have delicate instruments in place to obtain information from the blast, and if you will be patient we will have our own centrally located heating system operating in a very near short time," meaning the "Simon" test bomb blast of course. Those instructions kind of took the "edge" off of the wait.....

A siren wailed shortly before the countdown began and in the silence of the desert that sound is penetrating... We then braced ourselves against the forward wall of the trench as the countdown began 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, "Oh-sh-t" With arms over my eyes the blast 'flash' was as if a photo flashbulb exploded in my face and as I peered out of the end of the trench the surrounding hills appeared as white as sheets.....

After the return rush of dust spilled into the trench I stood up and watched the unusual and 'beautiful' display of activity occurring within the atomic cloud as it slowly began to rise into the atmosphere.... It seemed as if the blast woke up the sun... From pitch dark before the blast, to dawns new light immediately following the blast, everything in the forward area was clearly visible, in many ways.....

We then dumped out of our trenches and walked toward "ground zero"... Looking behind our trench location I saw what appeared to be Joshua trees burning in the far distance... As I continued my forward march, toward ground zero, I saw lots of sheep, staked out in shallow pits, with their sides burned & smoking....

11 Most of the sheep appeared to still be alive.....

Many other items that were set up near the blast were severely damaged, as well.... Then, we were stopped shortly, from our walk forward, and told to get on our designated bus... As we entered each bus, we were checked for radiation, and were only told what the reading was, if we asked... and so.... I asked !!....

I have never been contacted by anyone regarding my atomic-bomb test experiences, nor have I been provided information about the test results or health after-effects.... The main record center here in St. Louis does not have a copy of my service orders... I was told they were "burned up" in a major fire that happened at the record center, in the 1970's.....

Over the years I have had many skin cancers removed from my face and arms, and have suffered from other health issues.. Every time I have filed a claim with the V.A., it was denied, until I finally quit filing claims with them.....

After all these years, I can still hear the sounds of the blast, and smell the flesh of burning sheep in my dreams, often waking in a cold sweat, with trembling hands..... I have been trying to get information about fellow Atomic-Vet's who were with me that day, but have been unsuccessful, so far... So, if there is anyone out there who remembers that event, and is still healthy, I extend my best wishes.....

*Bill Luebbert (Atomic-Veteran) U.S. Army
(current status – unknown)*

I.C.R.P. RAD-EXPOSURE UPDATE

The **International Commission on Radiological Protection (I.C.R.P.)** issues statement on Tissue Reactions to Radiation Exposure....(*I.C.R.P. ref. 4825-3093-1464, approved on April, 12, 2011*), as follows.....

(1) The Commission issued new recommendations on radiological protection in 2007 (*I.C.R.P., 2007*), which formally replaced the Commission's 1990 Recommendations (*I.C.R.P., 1991a*). The revised recommendations included consideration of the detriment arising from non-cancer effects of radiation on health... These effects, previously called deterministic effects, are now referred to as tissue reactions because it is increasingly recognized that some of these effects are not determined solely at the time of irradiation, but can be modified after radiation exposure.....

Previously, the Commission had reviewed various aspects of non-cancer health effects of low linear-energy-transfer (**L.E.T.**) ionizing radiation in *Publication 41 (I.C.R.P, 1984)*, high **L.E.T.** radiation in *Publication 58 (I.C.R.P., 1990)*, the skin in *Publication 59 (I.C.R.P., 1991b)*, and the skin and eye in *Publication 85 (I.C.R.P., 2000)*.....

(2) The Commission has now reviewed recent epidemiological evidence suggesting that there are some tissue reaction effects, particularly those with very late manifestation, where threshold doses are, or might be lower than, previously considered. For the lens of the eye, the threshold in absorbed dose is now considered to be 0.5 Gy. (50 rads).....

(3) For Occupational exposure, in planned exposure situations, the Commission now recommends an equivalent dose limit for the lens of the eye of 20 mSv in a year, averaged over defined periods of 5 years, with no single year exceeding 50 mSv.....

(4) Although uncertainty remains, medical practitioners should be made aware that the absorbed dose threshold for circulatory disease may be as low as 0.5 Gy (50 rads) to the heart, or brain.... Doses to patients of this magnitude could be reached during some complex interventional procedures, and therefore particular emphasis should be placed on optimization of these

circumstances.....

(5) The Commission continues to recommend that optimization of protection be applied in all exposure situations, and for all categories of exposure. With the recent evidence, the Commission further emphasizes that protection should be optimized not only for whole body exposures, but also for exposures to specific tissues, particularly the lens of the eye, and the heart and cerebrovascular systems.....

MY "TUMBLER-SNAPPER" FLASHBACK

By Charles V. (Chris) Christian

Upon returning to duty after being medically released due to wounds received in the *Korean War*, I was assigned to the 369th Engineer Amphibious Support Regiment at Fort Flagler, WA.... I was the first Korean War veteran assigned there and it provided me with several opportunities to attend various class "A" schools, such as operating heavy equipment, etc., however, I was holding out hopes of being transferred back to an Infantry unit, so, very foolishly I declined all the school offers.....

Well, as it turned out I never got the transfer and I blew my chances of learning how to operate heavy equipment. I think part of my decision was the fact that within the last several months I had been relocated five times and I was just tired of packing up and moving all over the place.... I wanted to settle down to garrison duty and maybe live a half-way normal life again.....

Fort Flagler is located on Puget Sound and if you didn't have a car or motorcycle the only means of transportation to the main land was via the "*M-Boats*" (short for *LCM*, or *Landing Craft Mechanized*). Consequently, I didn't go to Port Townsend that often, except maybe on pay day when a few of us got together and went in for a few beers and to check out the town & chicks, which really wasn't all that much....They had a few restaurants, bars, a couple theaters and a V.F.W. or American Legion club.... In a way though, it was sometimes an adventure just going to town in the one of those growling, smoke-belching "*M-Boats*".....

One time when we were returning to Fort Flagler the fog had set in and you could barely see your hand in front of your face. I don't recall exactly how far it was from the main land to the island, but, when you're out there in the water with a fog horn blowing constantly and hoping you don't ram into a freighter or a tanker, it seems that you're an Ocean apart..... Luckily we had a good Bosun's mate and navigator that got us home, a few hours late, but, at least we got there all in one piece.....safe and sound.....

Another disadvantage of being stationed on the island was whenever there was a regimental parade at Fort Worden we had to be taken there by the good old M-Boats and as you can imagine there weren't any docks to tie up to get out of the boats, so, the Bosun would get us as close to the shore as possible and then drop the ramp for us to wade a-shore..... It was very easy to determine the troops of the Boat Battalion as to the Shore Battalion...we were the ones with the water stains from the knees down..... Thankfully, there weren't too many regimental parades...

In April 1951 we received orders for the whole battalion to participate in the "*Tumbler-Snapper*" atomic bomb tests in the desert of Nevada known as Frenchman's Flat and Yucca Flats.... We were transported there via troop train which took two days. That was a very educational trip as I learned how to play chess...not very well, but, I could hold my own.... When we finally arrived in Las Vegas it was rather pleasant weather-wise. We were taken to what was to become known as *Camp Desert Rock* by truck convoy and we set about putting up squad tents and laying out routes of travel (I hesitate to call them streets or avenues.....just routes of travel).... In two days we were all set up and ready



"M-BOAT" WITH A LIBERTY PARTY

to go about our special duties..... During this time I was assigned to various jobs, one of which was to climb the telephone poles that were installed along the road to connect us with the Atomic Energy Commission (**A.E.C.**).... My job was to secure the cross beams that would be holding the conductors for the wires. Everything was going fine and I had completed about ten of the poles....

As I was climbing up the next pole I was about three quarters of the way up when one of the gaffs didn't dig in far enough into the pole and I lost my footing and balance..... When this happens you are trained to just lean back and depend on the safety belt to save you....well, that's all fine and good in theory, but, when you panic you forget a lot of what you're told you should do... and consequently, I wrapped my arms around that pole like I was in love with it and slid all the way down to the bottom, busting my butt..... I have no idea as to how many splinters I had in me, but, it seemed to take an eternity to get them all out.....

During this splinter removal and healing period, which lasted about two weeks, I was placed on light duty and every day I had to go to the Med-Aid Station for splinter removal. The old timers never did let me live that incident down, but, in some ways, they were sympathetic to my prickly predicament.....

After I got all the splinters out of me I was assigned to drive various types of trucks.... One such truck was an old "deuce and a half" with a stake body and a huge open rubberized container inside the back..... This was used to transport water to Camp Desert Rock from Indian Springs Air Force Base.....

One day I was dispatched to go to I.S.A.F.B. and get water for C.D.R..... Upon arrival at Indian Springs the Air-Police at the gate directed me to the location to get the water... It took about two hours to fill the rubber container and then I was back on my way to Desert Rock.....

When I approach the gate to C.D.R., the M-P posted there normally just flag me through, so, I usually maintain my speed and go right on through, however, for some reason an M-P came out of the security booth and signaled for me to stop....so....I immediately pushed on the brake pedal as I got to the gate and a cavalcade of water came rushing from the container, over the front of the truck, and soaked the hell out of that M-P all the way to the bone.....

This, of course, was not done on purpose and that M-P looked like he was ready to draw his "45" and put some lead in me, but, I got out and explained to him that I'm never stopped coming in the gate driving a GI truck before..... After a while he did settle down, but, had to go to his tent to get a change of clothing..... See, there were some humorous things that happened out there at the desert flats' "horned-toad" cookouts.....

After we were there about a month we got our first chance to witness an A-Bomb test... We were all transported to the test site via convoy and upon reaching our destination we dismounted and fell into Company formation..... We were then given a briefing as to what to expect and what safety procedures we were supposed to follow....After the briefing we marched to the hundred foot perimeter from ground zero and observed various types of equipment and live sheep, some of which were above the ground and some of which were in fox holes.....

Some of the equipment consisted of an M-4 Sherman tank, a couple of jeeps, a weapons carrier, some mannequins dressed in both civilian clothing and military uniforms (both fatigues and class "A" uniforms), a small two bedroom house with furniture, and dressed mannequins inside at various locations in the house, an airplane, a few machine guns and other types of field weapons..... From there we were taken to the next perimeter which was five hundred feet away from ground zero with the same type of equipment and animals..... I kept thinking "where in hell are they going to put me for this blow-out ??".

We were also taken to the one thousand foot perimeter and observed military equipment that was set up there, as well... After viewing all these different perimeters we were given a lunch break, and after we ate we were instructed to get in this real long and deep trench and wait for more instructions.....



At this time they allowed us to stand up in the trench so we could observe the detonation of one thousand pounds of high explosives, so that we would be able to make a comparison between that kind of explosion and the humongous one were about to witness.....

About thirty minutes later we were instructed to put on our gloves, and make sure our pant legs were bloused inside our boots, and insure that our field jacket sleeves were buttoned tightly and all the way up to the neck..... **Buster "Charlie"**, a **31** kiloton air-dropped Atomic-bomb test at Yucca Flats, was about to happen.

We were told that at the end of the countdown to make sure to cover our closed eyes with our hands and stay all the way down in the trench....Then the countdown started....And the noise was deafening.....and after about thirty seconds you could feel the wind from the blast blowing over the trench and the after another thirty seconds we were told that we could rise up and see the mushroom cloud (if we so desired).....

Well, I can say that the desires were mixed....but when I looked up, the sight was magnificent and then after a minute, or so, we were told to get back down in our trench.....A short while later, we were told that it was safe to get out of the trench and to get



BUSTER "CHARLIE"

With the pre-dawn shots, after we were given the countdown, we were then advised as to when we could raise up out of the trench momentarily to view the fireball.....Upon seeing this massive mushroom fire-ball, I was so awe struck by it that I forgot my counting and if it hadn't been for my trench mate yanking me back down into the trench I would have been blown away by the blast shock wave.....

That was one magnificent sight to behold, and it's amazing how something so beautiful could be so damn destructive..... The beauty of the fireball filling up the darkness is indescribable... You would have to have been there to really appreciate it.....On second thought, no one in their right mind would want to be there.....

All in all I think I participated in seven of those T-M tests (and I still don't glow in the night) and to be honest I found them to be very interesting and informative.....This was an experience that not very many people have had.....

As for my health, I have had skin cancers removed and other problems with various parts of my inners, but the V.A. has always said it was not associated with my A-bomb experiences..... I somehow think that, for the most part, was a bunch of donkey-dooo.....

Over the years I have tried to find out what happened to all of those other members of our "Guinea-Pig" brigade.....My inquires were always denied, for one reason or another.....

Charles Christian (US Army Ret,) Atomic-Veteran
(current status.....deceased)

in formation.... Once we were assembled we were taken again to the various perimeters to see what they looked like and what condition they were in.....

I was totally amazed at what we saw.....The Sherman tank that was at the one hundred yard perimeter was no where to be found... The tank that was at the five hundred perimeter was blown out to nine hundred yards, and torn apart..... And the houses were completely destroyed along with the mannequins and everything else inside them.....

The sheep, that were above ground, were gone and the sheep, that were in the fox holes, had their fur either badly singed or burnt off completely.....They were later put to sleep after being checked for radiation by the Med-types.....

The weapons that were still at their locations were melted down or twisted and deformed so as to make them totally inoperable.....There was total devastation at all of the different parameters....



THIS TANK WAS MOVED 400 YDS BY THE ATOMIC TEST BLAST

After viewing the mass destruction, we were then marched to a check point where our radiation badges, that we were issued, were checked for the amount of radiation (or roentgens) absorbed in our bodies..... We were told that it wasn't enough to be dangerous and we didn't have to worry about not making babies, lighting up at night, or glowing in the dark Later, I would learn that that was all a crock of donkey-dooo.....

This was a daylight shot and as impressive as it was the pre-dawn shot was even more spectacular.... We went through the same drill as before with the exception of visiting the various marked off perimeters, or looking into the unsuspecting eyes of those unsuspecting animals.....



The age of Nuclear "Weapons-of-Mass-Destruction" (*W.M.D.*) began on the morning of July 16, 1945, with the successful test of a 32 point, lens-type spherical nuclear implosion device surrounding a *Plutonium-239* fission core, that was activated by external explosive initiators...the test code name was "*Trinity*"... the site was in Alamagrado, N.M.....and the test device code name was "*Gadget*".....

This nuclear weapon test produced a total yield of **21** kilotons (or 21 thousand tons) of destructive shock & over-pressure forces with a corresponding amount of airborne ionizing radiation particle dispersion..... This weapon was also identical to the "*Fan-Man*" bomb that destroyed Nagasaki, Japan on August 09, 1945.....

After the successful "*Trinity*" test, *Robert Oppenheimer* (Scientific manager of the Manhattan Project) made the following statement: "*If the radiance of 1000 Suns were to burst at once into the sky, it would be like the splendor of the Mighty One I am become death, the shaterer of Worlds*".....

The Atomic bomb that destroyed Hiroshima, Japan.... three days earlier, was a linear "shot-gun" design that used an explosive force to ram a *Uranium-235* core into a *Uranium-235* plug, to produce the required "critical-mass" explosive forces. This type of atomic weapon did not require a pretest qualifier.....

While the "Trinity" test gave a good approximation of many of the explosion's immediate effects, it did not provide an appreciable understanding of the consequences of nuclear fallout, which was not well understood by the project scientists until well after the nuclear destruction of *Hiroshima* and *Nagasaki*..... At the beginning of the age of atomic weapons, the Scientific community had no base line data for predicting the long term (biological) effects of exposure to ionizing radiation particle fallout..... Since then, however; the debilitating health effects of long term exposure to nuclear radiation particles has filled volumes in a host of Scientific manuals & reference books.....



CASTLE "BRAVO" (1954) 15 MT BIKINI ISLAND

Since that historic day in July, 1945 those nations of the word who are (currently) members of the "1000-Sun" (nuclear weapon) Club have detonated **2,184** (known) weapon devices, with a total destructive yield of more than **429** megatons (or 429 million tons) of destructive force..... with a corresponding amount of (global) atmospheric ionizing radiation particle dispersion.....

While the (1954) U.S. sponsored "Castle" nuclear test series contaminated more than **570,000** square miles of Marshall Islands, in the western Pacific Ocean, with radiation fallout particles, the largest single weapon test was conducted by Russia, on October 30, 1961 when they detonated a **51** megaton hydrogen bomb, code name "**Czar-Bomba**" (or "**Big-Ivan**") over their *Novaya-Zemlya* test site on the North-East coast of Russia..... This single event (permanently) contaminated more than **200,000** square miles of the earth's surface

The United States conducted six nuclear weapon tests before the Soviet Union developed their first A-Bomb (**RDA-1**) and tested it on August 29, 1949.....It produced only **12** kilotons, and was identical to the "*Fat-Man*" design, as the Russians had acquired the blueprints and technical data from spies working within the (U.S.) *Manhattan Project* development community.....

Neither country had very many nuclear weapons to spare at first, and so testing was relatively infrequent.... When the U.S. used two of their stock weapons for Operation "**Crossroads**" in 1946..... they were (at that time) detonating over 20% of their current arsenal..... However, by the 1950's the United States had established a dedicated test site, on a large part of the Nellis Air Force Base bombing range, in central Nevada, and was also using a site in the Marshall Islands, designated as a part of the *Pacific Proving Grounds* for an extensive range of nuclear and thermo-nuclear development tests.....

The early tests were used primarily to discern the military effects of nuclear weapons.....



RUSSIA "CZAR-BOMBA" (1961) 51 MT NOVAYA-ZEMLYA

For instance, "*Crossroads*" had involved the effect of (atmospheric and sub-surface) nuclear weapon detonations on various types of surface ships, submarines and support vessels.....

During the 1950's these included new hydrogen bomb designs, which were tested in the Pacific, and also new (compact) fission weapon designs. The *Soviet Union* also began testing on a limited scale, primarily at a new site in *Kazakhstan*.....

In the later phases of the "Cold-War" though, both countries developed accelerated testing programs, detonating many hundreds of bombs over the last half of the twentieth century, resulting in inventories of several thousand weapons by each side of the heated "Cold-War" nuke race.....These activities were not without grave circumstances that would impact the lives and longevity of a host of biological organisms, including humans....Nuclear weapon tests can involve many hazards...

A number of these were illustrated in the (1954) *Castle "Bravo"* test.... For example, the "*Bravo*" fallout plume spread dangerous levels of radiation particles over a **10,000** sq. mi. area surrounding the *Marshall Island* test site.....

The weapon design was a radically new form of hydrogen bomb, and the scientists underestimated how vigorously some of the weapon materials would react.... As a result, the (**15** megaton) explosion exceeded the design limit by **250%**

This device was supposed to test the effects of *Lithium-7-Deuteride* (**L-7-D**) surrounded by a natural *Uranium* tamper encased in a scaled down version of a "*Runt*" device..... It was later discovered that the reason for the unexpected high yield was due to the "*Tritium-Bonus*" provided by the *Lithium* isotope which made up most of the force enhancement charge.....This isotope was initially expected to be "inert," but in fact, had an unexpected and substantial reaction cross-section with the high energy *Neutrons* produced by the *Deuterium-Tritium* fusion process, thus surprising the hell out of the on-site scientific team.....

Aside from this problem, the weapon also generated a large amount of radioactive particle fallout.... more than had been anticipated, and a change in the weather pattern caused the fallout to be spread in a direction which had not been cleared in advance..... The deadly airborne plume spread high levels of radiation for over a hundred miles, contaminating a number of populated islands in nearby atoll formations.... Although they were soon evacuated, many of the islands' inhabitants suffered from radiation burns and later from other effects such as increased cancer rates, including a large increase in (documented) birth defects

The Japanese fishing boat "**Daigo-Fukuryu-Maru**" (*Fifth Lucky Dragon*) was also caught in a large saturated radiation fallout plume..... One member of the boat's crew died from radiation sickness shortly after returning to port, and it was feared that a large amount of the (**250 metric tons**) of radioactive tuna they had been consumed by the unsuspecting Japanese population...



DAIGO FUKURYU MARU
1953

While the Castle "**Bravo**" test would be the source of the worst U.S. nuclear accident, in the history of testing events, many of its component problems, including unpredictably large yields, changing weather patterns, unexpected fallout con-tamination of populated areas, and food supplies, occurred during atmos- pheric nuclear weapon tests

by other countries as well.....

Incidents of thyroid cancers, within the continental United States, were increasing at an alarming rate, resulting from all atmospheric dispersion & fallout pattern routes from the nuclear tests conducted at the *Nevada Test Site* from 1951-1962.....

Because of growing International concerns about worldwide fallout rates a "*Partial-Test-Ban-Treaty*" was agreed to in 1963, which limited signatories to underground testing, only..... Not all atmospheric tests stopped, however, but because the *United States* and the *Soviet Union*, in particular, stopped testing above ground it cut the number of atmospheric tests down substantially, because, at that time, about **86%** of all nuclear weapon tests were conducted by those two countries..... But, by now, the **World Nuclear Club** had more than two members.....

The United States conducted **1,151** tests, by official count, involving at least **1,154** devices.... Of this number, **331** were atmospheric tests), at the Nevada Test Site, in various locations within the Pacific Proving Grounds, including Johnston Island, Christmas, Islan, the Marshall Islands and offshore San Diego, Ca., and in the Allantic Ocean..... with **10** other tests taking place at various locations within the United States, including Amchitka, AK., Colorado, Mississippi, and New Mexico.....

The (1962) "**Sedan**" test was a (U.S.) experiment to use a nuclear weapon to excavate large amounts of earth.....and it did just that The test device was in a shaft, 650 ft. beneath the north zone of the Nevada Test Site..... and was a **Mk-56 Submarine Launched Ballistic Missile (S.L.B.M.)** warhead that was detonated on July 06, 1962 developing **104** kilotons of destructive yield, and lifting more than 12 million tons of rock and aluvial soil to an altitude of several thousand feet

The resulting crater measured 1,280 ft. wide and was 320 ft. deep.... This test also dispersed more than **880,000** curies of *Radioiodine-131* particles into the atmosphere, causing extreme health issues to those who were "downwind" of the test.....

South Africa is the only (acknowledged) nuclear power which claims never to have conducted a nuclear weapon test, and according to the latest intellegance reports, does not currently own or possess any (known) nuclear weapons There was some strong suspicion that *South Africa* may have tested a nuclear weapon in 1979 somewhere in the South Atlantic Ocean.....

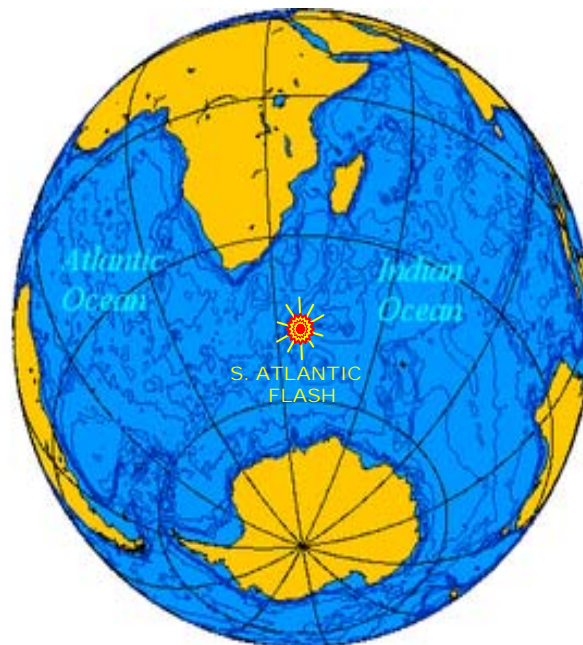
This was known as the "*Vela Incident*," sometimes also referred to as the *South Atlantic Flash*, and was an unidentified "double flash" of light that was detected by a U.S. "*Vela-Hotel*" satellite on September 22, 1979...Specialists who examined the data speculated that the double flash characteristic of a nuclear explosion, may have been the result of an actual nuclear weapons test.....



"SEDAN" 7-06-62 104 KT N.T.S.

One member of the examination team stated: "*The conclusions of the Presidential (Ad-Hoc) panel were reassuring, as they suggested that the most likely explanation of the Vela detection was a meteoroid hitting the satellite — in part because of the discrepancy in bhang-meter readings*"..... While others, who examined the data, including the U.S. *Defense Intelligence Agency (D.I.A.)*, the *National Laboratories*, and various defense contractors reached a very different conclusion, stating that: "*the data supported the conclusion that on 22 September 1979, the Vela 6911 satellite had detected a nuclear detonation*".....

However, it has never been ruled out that the "double-flash" signal might have been a spurious electronic signal that was generated by an aging detector in an old satellite....There has not been a corroboration of an explosion, such as the presence of nuclear by-products in the atmosphere, even though there were numerous passes, within the area, by U.S. Air Forcer planes



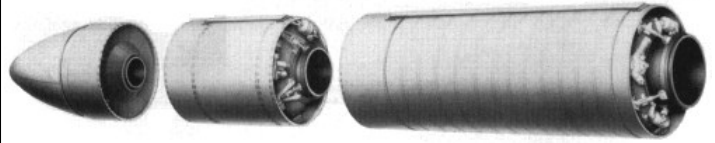
that were specifically designed to detect and gather airborne radioactive dust particles.....

It was also noted that some *Meteoroids* produce explosive bursts, that can measure from several kilotons to many megatons of explosive forces as they enter the atmosphere, such as the *Eastern Mediterranean* the *Tunguska* events..... In such cases the physical manifestations are normally distinct from those that were observed, since single meteors do not (normally) produce the double flash characteristic of a nuclear detonation.....

However, there was also speculation that the single satellite had recorded an exceptionally rare combination of natural phenomena, i.e., that "the detectors had, indeed, functioned as per design, but the event was definitely non-nuclear in nature".....

The Soviet Union conducted a total of **715** tests, by official count, involving **969** nuclear and thermo-nuclear devices, at their *Semipalatinsk* and *Novaya Zemlya* Test Sites, and a few more at various sites within *Russia*, including *Kazakhstan*, *Turkmenistan*, and in the *Ukraine*.....

The United Kingdom conducted **45** nuclear weapon tests, **24** of which were joint ventured with the *United States*..... There were **21** U.K. tests in *Australian* territory, including **9** at *Maralinga* and *Emu Field*, (*So. Australia*) and some at *Christmas Island* (in the *Pacific Ocean*), and several at the *Nevada Test Site*.....



The French M4B Missile (shown above) can accommodate the TN-70/71 thermo-nuclear warhead family, that has lower yield, lower weight, and higher survivability compared to its TN-60/61 predecessor..... The smaller warhead physical size allows the TN-70/71 to be used for arming missiles with Multiple Intercontinental Reentry Vehicle (M.I.R.V.) warheads..... Accordingly, six M.I.R.V. (TN) warheads are used to arm each M.S.B.S. (M4A and M4B) Submarine Launched Ballistic Missile (S.L.B.M.), and is similar in performance to the (U.S.) W-76 "Trident" S.L.B.M. missile warheads..... France began stockpiling the M4A & M4B weapons in 1985.....

All of the production and fabrication of special nuclear materials (*Plutonium*, *Lithium-6-Deuteride*, and enriched & un-enriched *Uranium*) occurred at *Dimona*, although the design and assembly of nuclear weapons would occur elsewhere..... *Israel* is widely thought to possess a sizeable nuclear weapon arsenal.....

Some experts disagree on whether Nations can have reliable nuclear arsenals – especially ones using advanced warhead designs, such as hydrogen bombs and miniaturized weapons – without testing, though all agree that it is very unlikely to develop significant nuclear innovations without actual testing..... One other approach is to use supercomputers to conduct "virtual" testing, but the value of these simulations, without actual test result data, is thought to be somewhere between slim and none.....

The People's Republic of China conducted **45** nuclear & thermo-nuclear tests, **23** of which were atmospheric and **22** of which were underground..... These tests were performed at their *Lop Nur Nuclear Test Base*, in *Malan, Xinjiang*..... *China* also refused to sign the *Test Ban Treaty*, and continued on with their atmospheric testing program until late 1980.....

India conducted **6** underground tests (including the first one in 1974), at *Pokhran*.....There is little, or no further information about these events.....

Pakistan conducted **6** underground nuclear weapon tests, at *Ras Koh Hills*, (*Chagai District*) and at *Kharan Desert* (*Kharan District*) in *Balochistan Province*.... No additional information is unavailable....

North Korea performed **2** sub-surface tests at *Hwadae*.... Additionally, there may have been at least **3** alleged, but unacknowledged, nuclear type explosions..... Of these, only one was taken seriously as a possible nuclear test, and given the apparent measured yield, it is believed that it was an instrument calibration, or a partial yield test only.....

From the first nuclear test in 1945 until the 1998 *Pakistan* tests, there was never a period of more than 22 months with no nuclear testing..... From June 1998 to October 2006, when *North Korea* reported a successful underground nuclear test, was the longest period since 1945 with no acknowledged nuclear test activity.....

There have been many attempts to limit the number and size of nuclear tests; and to also reduce the size of current nuclear weapon arsenals.....the most far-reaching of these efforts was the (1996) *Comprehensive Test Ban Treaty*..... followed by the *Strategic Arms Limitation Treaty* (*S.A.L.T.*), and the recent new *Strategic Arms Reduction Treaty* (*S.T.A.R.T.*) between the *United States* and *Russia*....



U.K. "GRAPPLE-X-RC" 11-08-57 1.5 MT
CHRISTMAS ISLAND, PACIFIC OCEAN

France tested a total of **210** nuclear weapon devices, **50** of which were tested atmospherically and **160** of which were tested underground These tests were conducted at various sites, including (*C.E.S.M.*) near *Reganne*, (*C.E.M.O.*) near *In-Ekker* (in the then *French-Algerian Sahara*) and at *Fangataufa*.....The undersea (submarine) tests were conducted at *Moruroa* (in *French Polynesia*.....

Additional atomic and chemical warfare tests were performed at their secret base (*B2-Namous*) near *Ben Wenif*..... while other tests, involving rockets and missiles, were performed at (*C.I.E.E.S.*) near *Hammaquir* (in the *Sahara*).... The current French nuclear weapon inventory is unknown.... Also, *France* did not sign on to the *Nuclear Test Ban Treaty*.....and continued to test atmospherically until the fall of 1974.....

Israel is believed to possess the largest and most sophisticated arsenal outside of the five declared nuclear powers. *Israel* has never admitted possessing nuclear weapons, but atomic weapons test specialists have indicated that they have performed **7** nuclear weapon device tests, all of which were underground.....

The center of *Israel's* weapons program is the *Negev Nuclear Research Center* near the desert town of *Dimona* (the center is usually identified simply as "*Dimona*").... A nuclear reactor and *Plutonium* production facility was built by *France* at this facility in the late 1950's and early 60's....

Nuclear testing has since become a controversial issue in the *United States*, with a number of politicians saying that future testing might be necessary to maintain the aging warheads



A "DEEP-SHAFT" TEST DEVICE IS BEING SET UP AT THE PHYUTE-MESA AREA OF THE NEVADA TEST SITE

It is for this reason that the "Devine-Strake" bunker-buster weapon test, that was scheduled at the Nevada Test Site, did not happen.... Although this test would have used conventional explosive materials, the argument was directed to the possibility that such a large detonation would re-introduce (still active) ground level radiation particles, from previous nuclear tests in the 1050's & 60's, back into the atmosphere, thus presenting a new round of radiation induced health issues and related concerns....

Some nuclear testing has been for ostensibly peaceful purposes, such as the "Sedan" test described earlier..... An example of the successful use was the design of small, compact nuclear power plants that are now used in Nuclear Aircraft Carriers and Submarines.....

While other (so-called) "peaceful-nuclear-tests" were used to evaluate whether such powerful detonations could be used for non-military purposes, such as digging canals, or creating artificial harbors, or to stimulate (fracture) oil and gas fields, or even to develop instruments that would detect man-made events from naturally occurring earthquakes.....In most cases the resulting radioactive dispersion and potential sub-surface contamination factors were not practical.....and therefore; the programs proved to be neither economically sound or politically favorable.....



At this time, however; there are a few developing (rogue) nations who are possessed with a passion for developing, or otherwise procuring nuclear weapons of mass destruction...This potential is of grave concern to the rest of the *International Community*, and it is the opinion of America's (surviving) *Atomic Veteran Community*, that these rouge nation *W.M.D.* aspirations be retarded at all costs, and absent of any political restraints..... The horrifying results and corresponding human misery would otherwise be totally un-controllable.....

"SUSPECT METAL CONFISCATED AT BORDER"

Detroit, Michigan: The U.S. Border Patrol seized **23,891** kilograms of the metal alloy "Inconel 738LC" – worth **\$662,188** – at the Canadian border in 2009, and the *Dubia* company *Al-Noor Alaili Trading* wants it back..... The alloy is a high-grade, heat-resistant, super-metal made of *nickel, chromium* and *boron*, and has been used in the production of steam generators for pressurized water reactors.....The cargo was manufactured in Muskegon, Michigan and the U.S. Government claims the shipment was bound for Iran – via Canada – to be used in nuclear weapons production..... A lawsuit is pending between the U.S. and the owners of the material....

According to court records, the trading company claims it paid for the material, and should be allowed to reclaim the two shipments it says were illegally seized last year.... The U.S. suspects that many goods that cross the border are headed to Iran via front companies....In one case, a shipment went from Toronto, to Vancouver, to Hong Kong, to China, and then to Tehran..... Microchips, centrifuges, pressure transducers and high-pressure pipes have all been confiscated at the border for fear that they were headed to Iran....

London Telegraph – Feb. 24, 2011

COL. CADDAFI'S NUCLEAR WASTE GAMBLE

Tajoura, Libya: *Colonel Qaddafi*, the much-maligned leader of Libya, apparently took out his frustration with the United Nations (for not allowing his delegation to pitch tents in New Jersey during his 2009 U.N. General Assembly visit) by leaving seven casks of (weapons-grade) *Uranium* nearly unguarded on a tramac at the Government's *Tajoura* nuclear facility, 30 miles southeast of *Tripoli*....

The *Uranium* was to be picked up by a Russian transport plane for disposal, but *Qaddafi* refused to let the plane land.... So the containers sat – not prepared for storage – but prepared only for transport – threatening to crack in the hot desert sun, and potentially causing a radioactive environmental disaster.... Upon learning about the accident liability, U.S. and Russian officials (while keeping the story secret) began strenuously lobbying Libyan officials, demanding that they have the casks removed....It took an entire month, several threats and a personal plea from U.S. Secretary of State *Hillary Clinton* before a Russian cargo plane was finally allowed to land, and on December 21, it successfully took off with the load of *Uranium*....

Libya's agreement to discard the *Uranium* and abandon weapons of mass destruction temporarily ended *Qaddafi's* international pariah status..... By Autumn 2009, he was to have gotten rid of all the weapons grade uranium and begun destroying his stock of *Scud* missiles....

By the end of 2010, he was supposed to have converted the *Rabta* chemical weapons factory to a pharmaceutical plant and completely destroy all nerve gas ingredients.... The agreement's final step would be the destruction of stocks of mustard gas by the end of 2011.....

Guardian – Dec. 03, 2010

National Association of Atomic Veterans, Inc.

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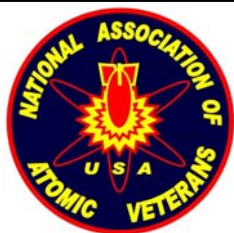
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R. J. Ritter - Nat. Cdr., Editor & Publisher

Website: www.naav.com

E-mail: naav.cmdr@naav.com

