

OUR TRIP TO THE NUCLEAR TEST SITE

JUNE, 2013



**BROWNLEE TRIBE AND GUESTS
A NOTEWORTHY CREW!**

OUR TRIP TO THE NEVADA NUCLEAR TEST SITE

In June, 2013, a bus load of visitors (mostly the Brownlee family) visited the NTS for a day, and found it vastly more interesting than its emptiness might suggest. There were many scenes strongly suggestive of an amazing past, and stories and detailed information from those present. Personal cameras were not allowed, so many of the pictures contained herein are from the files. However a few pictures were taken where permissions were possible, and some of them are also included. Woven into our account are the essays from most of the visitors.



When traveling to Mercury, our testing “home town”, here is what one first sees—the main gate. The guards just want to see your badge, and if you don’t happen to have one, you should have Travis Pullen who has your name and the necessary paper work to permit you to proceed. If you don’t have this either, any explanation for your presence has been heard by the guards before, and they will be unimpressed.

Here is a look at Mercury—on a good day for the mountains—as it once was.



Perhaps it is best to first offer a poem containing the thoughts of Donice Lee Brownlee Buller, one of the oldest visitors in our tour group.

Bob Brownlee arranged a trip
For relatives from here to there
He had a plan where they should go.
And it wasn't just anywhere.

He arranged to take us to that place,
The one he knows so well.
It was the Nevada Test Site,
And we'd stay there for a spell

A hotel in Las Vegas,
Was the place where we would stay.
Thirty four relatives climbed on the bus,
And we soon were on our way.

At the Nuclear Test Site
There was very much to see.
All the bomb craters and pictures
Were amazing to me.

Bob took us though the area
Where tourists seldom go
He is known as "Dr. Brownlee" there,
And is certainly in the know.

One of the travelers in our group
Had just returned from Space.
Don Pettit cheerfully answered questions
That we asked about that place.

It was an educational trip
Interesting to one and all.
But one of the best parts of the trip
Each traveler will recall.

Spending time with relatives again,
There is no better fun
Than visiting with that kin.
And now my poem's done.



Each visitor was asked to submit an essay on the trip. The Meade's essay contains quite a bit of history. So, here it is.

Bob Brownlee and the Nevada Test Site
By Roger and Linda Meade



On September 23, 1992, the Nevada Test Site fell silent. Scientists from Los Alamos had fired what may be the very last nuclear device tested by the United States – codenamed Divider. In the years since Divider, despite the ravages of time, evidence of the 904 United States and 24 United Kingdom tests conducted at the NTS remains, continuing to bear silent witness to a unique and important era in American history. For one day in June 2013, these silent witnesses were given voice by a pioneer in nuclear testing – Bob Brownlee.

The need for a continental test site came about because of the Korean War. Before Korea, all nuclear tests were conducted in the far reaches of the Pacific Ocean at Bikini and Enewetak Atolls in the Marshall Islands. The outbreak of fighting in Korea created two very significant problems. The first problem was that of security – could the United States guarantee the security of its nuclear operations in the Pacific. Using submarines, for example, the Soviet Union could spy on the most secret and sensitive of nuclear secrets of the United States. The second problem was one of logistics. The Korean War required the manpower and material that had been reserved for United States nuclear test operations. Each test series in the Pacific involved hundreds of ship and airplanes as well as thousands of troops. Competition for these scarce resources was of great concern both at Los Alamos and the highest levels of government.

There also was a technical reason for creating a continental test site. The ever quickening pace of nuclear weapon development required an increase in the number of proof tests. Again, logistics became important. The effort required to mount a test operation in the Pacific required months and sometimes years of planning – a time frame much too long to be effective in developing new nuclear weapons. A site much closer to Los Alamos was needed.

Our day with Bob began with a bus ride from Las Vegas to the test site, a distance of some sixty-five miles. This ride gave us a chance to learn from Bob about how the site was selected and surveyed by Los Alamos personnel, particularly Al Graves. While the area for the site was easily selected – its geography and geology have no equal in the United States – we also learned that getting to the site in the early days was not easy. The only road to the site was unsafe and, at the insistence of Los Alamos was straightened and paved. However, important and significant nuclear testing was the safety and security of the nation, safety for the people who worked at the site was equally important.

Our bus ride to the site also gave us an unparalleled opportunity to learn about the man who is Bob Brownlee – how he came to live and work Los Alamos. In the early post World

War II years, Los Alamos was a frontier community. Housing was substandard and beginning a family in the mountains of New Mexico was difficult. Working at the Laboratory was also difficult, but rewarding. As a newly minted staff member, Bob worked with some of the most notable people in the world of science – Hans Bethe, Carson Mark, and Stan Ulam – a rare experience few young scientists ever enjoy.

The Nevada Test Site is huge, covering over 1300 square miles of desert, mountains, and high mesas. It is impossible, except by airplane, to cover the entire site in one day. Fortunately, it is possible to see some of the most significant sites in a day-long tour. Our first stop was Frenchman Flat, a dry lakebed used in the early and mid-1950s for atmospheric tests. Many of these tests were so-called “effects tests”, specialized tests conducted to evaluate how structures of various materials withstand an atomic blast. Among the structures at Frenchman are a railroad bridge span, an underground bunker, metal and concrete domes, and a bank vault. Although one can easily see the damage to these structures, it was Bob’s narrative that gave meaning to what we saw. Bob’s description of how the bank vault was used to test the effects of a nuclear blast on both the vault itself as well as the contents inside, gave us an insider’s account of how a nuclear test was carried out. The vault, because of its heavy steel construction, held up well – somewhat surprising given that two-inch steel cable surrounding the vault were bent and broken like matchsticks.

After leaving Frenchman, we travelled north passing the command post, CP, where testing was coordinated and executed, Yucca Dry Lake, and into the desert by way of dirt roads. Almost without realizing it, we were driving between and around the most iconic of the test site’s features – the subsidence craters from underground nuclear tests. These craters, varying in size, were created when the earth above the cavities created by underground tests collapsed. Our trip through these back roads took us by the Huron King Vehicle – a massive house mounted on tractor - abandoned after its use. From a distance, Huron King resembles a sailing schooner on the high seas. We stopped for lunch at the Icecap tower. Icecap was a planned United Kingdom test that was cancelled in September 1993 in anticipation of a test moratorium. Icecap is one of only three towers still standing at the site. Another tower, named Gabs, can be seen in the distance.

The Icecap site is unique, even for the test site. It remains relatively unchanged despite the passage of twenty- one years. Around the tower are the dozen trailers that were to house the diagnostic equipment for the test, thousands of feet of thick signal cables, and inside the tower, the test rack on which the Icecap device was to be housed. All of these features gave Bob the opportunity to explain the process of testing and, more importantly, what his role in the process was.

Icecap was followed by a visit to the Sedan Crater. The Sedan shot was part of Project Plowshare, a program that explored the use of nuclear devices to excavate earth in massive amounts. Over three hundred feet deep and thirteen hundred feet in diameter, the crater is the largest ever made by man. The crater provided the backdrop for a one-of-a-kind Brownlee family photograph.

Our trip concluded with a drive through Area 12, the site of many tunnel tests, by the troop trenches used in the 1950s to train troops in nuclear warfare, the drill yard where the massive drill bits used to mine the deep shafts of the test are stored if needed, and the bone yard, a collection of trains, planes, and automobiles used to simulate a nuclear attack on an American city.

And so our day with Bob reached an end. It was an unparalleled opportunity to see the Nevada Test Site through the eyes of an eyewitness to an era of American history that will not be repeated.

One of the roads at the test site looks like this, and the picture tells its own story.



A picture of Yucca Valley shows clearly where many underground tests were made.

Cratering from underground nuclear tests looking south along Yucca Flat.

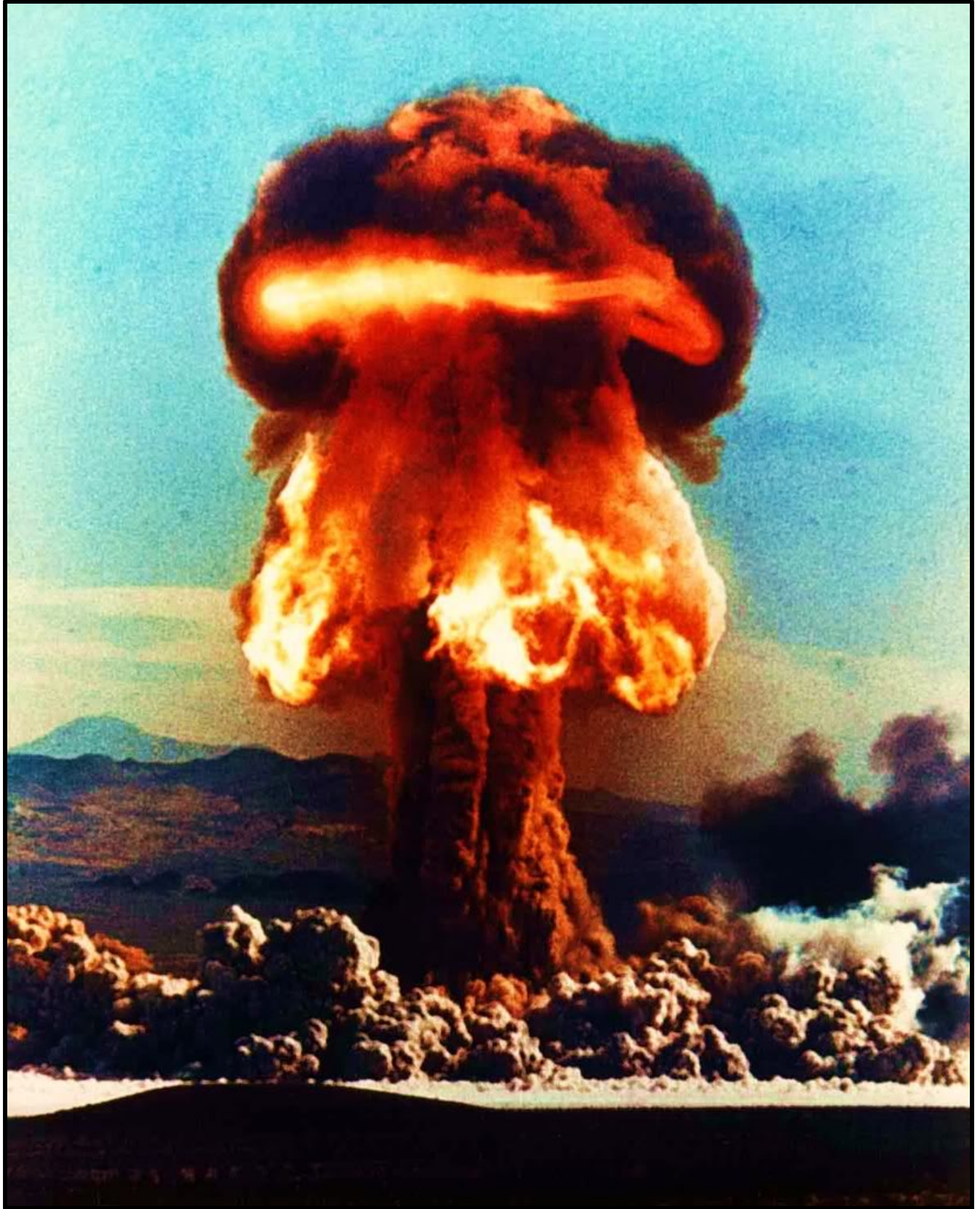


The large crater at the bottom of the photograph is the Sedan Crater. Our first visit was to Frenchman Flat, where many of the early atmospheric tests were conducted.

It takes snow to make the many craters most visible.



One of the famous tests was named PRISCILLA, and is pictured below.



PRISCILLA, fired June 24, 1957, had yield of 37 kilotons

In those days there were bleachers for observers.



Because of the many tests accomplished at this location, the dry lake looks enormously complicated nowadays—which indeed it is.



Frenchman Flat was the location of a number of airdrops, hence all of those complications.

And look what PRISCILLA did to the railroad bridge



Another look



Everyone truly enjoyed seeing the surviving vault that contained money



A Bus load of family requires many gigabytes for pictures



Let's have a close up look



That

money, one

million US Treasury bills, each one a \$3 bill, proved awesome for some of us. For example,
Mallory Koschany writes:



“During the Nevada test site trip I learned and saw a lot, but the part of the trip stood out the most to me was the 1 million 3 dollar bills that were locked in a safe and then tested. It is incredible to think about how much the safe had to withstand from the bomb, and on top of the safe holding up, not a single 3-dollar bill was affected in any way. After the testing was over, to think all but 3 of the 3-dollar bills were then destroyed. I feel this was the government making the bomb testing fun and more amusing. Lastly, it is a bit strange to me that 3 bills were donated to different places, and now not one of the three can be accounted for. When something of importance like that just disappears--seems weird and unusual to me.”

The vault also inspired a limerick submitted by Nancy Bonnema, as follows:

Test site limerick

At the test site near Vegas we found
Huge money was put in the ground
They had a great time
On the taxpayers dime
Making our bank vaults more sound.

They minted some three dollar bills,
Proceeded a bank vault to fill.
The device was set off,
The vault hardly coughed
The 3 dollar notes were there still.

The notes were then trucked far away
One given to put on display
The rest, save for two
Were bidden ado
Destroyed, at least so they say.

The three that were saved, it is feared
Have somewhere in space disappeared!
Who knows where they be.
This historic three?
Per chance one fine day they'll appear.

The bank vault had done its job well!
The design was now easy to sell
Since it weathered the blast
And the bills had stood fast.

That vault could survive even Hell!
The crafty and sly Nar-do-well
Who thinks he has 3 notes to sell
Will acknowledge his fault



As he sits in the vault
(With no 3 dollar notes) down in Hell.

From Frenchman Flat we went north, past the Control Point, past area 3 to the BILBY crater. There Bob B. gave an account of his personal experience of being the first guy to work in his data trailer just outside the crater. His job was to determine the yield of Bilby, which he did a few hours after the event. When finished, he discovered that his car had sunk into the ground that had been tossed into the air with the ground shock. It was lifted out by the huge crane just being moved into place for the drill back.

We were able to see the huge shallow crater caused by the initial ground shock, and then the collapse crater. We drove into the Bilby crater seeing the emplacement pipe and the satellite pipes wherein were Bob's data cables.

The emplacement pipe, now sticking out from the crater bottom, looks like this:



The three satellite holes are visible to the left.

From Bilby we visited Ice Cap.

Ice Cap is the most famous underground test that was never done. In 1992, the UK paid around 44 million dollars for use of the NTS for a test they really needed. A tower was designed and built, instrumented, and was nearly ready to be tested when the US Government decided to have a test moratorium. Despite promises by the US congress that were almost immediately taken back, the moratoria were extended until the decision was made to end testing permanently. Thanks to the dedication of Ron Cosmi, money that remained was returned to the Brits, and despite various kinds of decisions made in Washington to restore everything to pristine desert, the tower and drilled hole have been kept as a memorial to an age that was truly unique in world history. Again, thanks, Ron!



Travis and Bob at the Ice Cap tower

Sure enough, the tribe is standing just beside the tower





Near this spot several data trailers remain. They still have beneath them the supports that were expected to crush at the moment of detonation, when the earth rises many feet.



From Ice Cap we proceeded to the Sedan Crater.

Here is an aerial view: One stands at the left.



As always, the Sedan Crater attracts cameras



Here is the Brownlee family with the traditional family flag



And the old-timers are shown as much more relaxed than in the old days.



Some of the younger observers are a bit more relaxed than others.





Cousins all, but four of the five are double cousins!

Four of the Five Brownlee youngins



And some younger ones

On our second day, having returned to Las Vegas, we visited the Atomic Museum and once again suffered for some group pictures.





Outside the museum there are many bricks, each one given in memory of a particular person, or perhaps of a particular event. Our visitors spent some time studying them.



Here are some samples.



Alvin Graves and Bob Campbell were two of the NTS brains that shaped everything there.



Later that night (we are in Las Vegas; remember?) we see Kansans at play.



AND
One
Floridian

Don Pettit

Research in Style



Bob Brownlee always had a flare for advancing scientific knowledge. He had a way, like Huckleberry Finn painting the fence, to make his scientists not only *want* to work for him but *want* to work really hard (for him). In fact, it would not be until sometime afterwards that we scientists even figured this detail out. He had a way of making it think it was your idea in the first place. Part of the deal was that Bob would take really good care of his scientific cadre. I had the good fortune to be part of Brownlee's painting crew for a project called "Zest". We ended up in Hawaii for several months launching rockets and other such mischief. At the end of this grand adventure we had a final

meeting. I took a picture of the sign.



Now shift about 22 years into the future. Bob is retired and so is most of his cadre. I find myself working for NASA as one of the lucky ones that get to fly in space. Many of the lessons I learned from Brownlee on how to conduct yourself while maintaining the utmost scientific integrity followed me into orbit and served me well in three flights and over a year of living off the planet. His lessons on how to do research in style concurrent with an inner joy now has expanded into the cosmos which is fitting for my mentor who majored in astronomy. It was a must that I attend his visit to the Nevada Test Site last June. It was almost like old times except the old was not the time but the people now attending the tour. At least on the surface we were older; inside we were all young men excited to get back to work on whatever project Brownlee had in mind for us. In normal style, Brownlee took care of us complete with a government issued box lunch (which we all paid fair market value for). In Brownlee style, he proceeded to lecture us about keeping our creative processes growing. He summed up the subject by saying we have to “eat out of the box”. This was just like past times. The day was both long and short; surrounded by good friends and colleagues made for a delightful reunion and once again affirmed the process of living your research in style. This of course will find its way back into the cosmos along with whatever becomes of us.

Sylvia Dooling



How can I, in one short paragraph, express adequately my thoughts about my trip to the atomic testing site and museum? First of all, it was an honor to be invited to see it with the Brownlee family and Bob's long time colleagues. It was also an experience that brought me face to face with something that, as a child, had filled me with dread. I grew up as part of a generation of children that was taught that it was entirely possible that an atomic bomb would be dropped on our heads. The “drop drills” that we practiced unendingly in school, and the black and white pictures of “the bomb's” unimaginable destructive power that

were shown over-and-over again on local television caused me many nightmares. However, the highlight of this adventure to the site was to be there with Bob as our guide and friend. One statement that he made took my focus off my past fears, and helped bring more clarity to a book in Scripture that also brought fear and anxiety to me as a small child. It is the Revelation that was given to John as he was exiled on the island of Patmos. Believe it or not, the two came together for me. Bob stated that one must come up with entirely different ways of interpreting the sights and sounds of a nuclear explosion because it is beyond the brain's capacity to express what it has never experienced before. It's an event so huge, so brilliant, and so powerful that words are not adequate to describe what they saw. Immediately, I

thought of John and God's revelation to him of heaven. It was one of those "aha" moments, John was struggling, through the inspiration of the Holy Spirit, to describe a sight that humankind has never before "seen," and that, hence, required a "language" never before heard. At that moment I concluded that God sometimes uses unusual human experiences to teach us more about himself and his Kingdom. Thank you Bob! And, thanks be to God!

Robert Dooling



To begin with, my wife and I were honored to be invited, along with his family, friends and colleagues, to tour the nuclear weapons testing site in Nevada with Bob Brownlee as our host. I have long considered Bob to be one of the most fascinating people it has ever been my privilege to know, and the adventure north of Las Vegas only added to that estimate. As I suspect were all of us on the bus, I was awed by the terrible destructive power of the "devices" that Bob and others detonated under the desert floor. I was even more fascinated, however, by the experiments and mechanisms that were devised to gather data from the explosions during their first milliseconds of their short "life." But ever so much more fascinating to this non-scientist pastor was to see the esteem, affection and respect with which Bob's friends and colleagues hold him, the eager enthusiasm that leaks out of his every pore as he regales any and every audience that will listen with story after story, and his consistent willingness to bear simple witness to the faith that is at the center of his life. I have been privileged over my lifetime to meet many intriguing people – most who will remain unknown to history, some who are famous, and a handful who are infamous – but Dr. Robert Brownlee surely sits near the very top of that list, and it is profoundly humbling to be able to call him my friend.

Paul Mutschlecner



Going to NTS brought a lot of emotions and thoughts. First of all, nostalgia. While I was not there as much as some--it was plenty of times both for nuclear tests and then later for verification work as part of the infrasound program. Seeing the CP, the Mercury complex, Sudan crater, and the flats brought back a lot of memories. But it was great to see the newer work such as U1 and the homeland security area. Second, it brought reflections on different days during the "cold war" and later; the imperatives for this kind of work--and the later-days "judgments" of it

all. The other aspect of it was being with so many friends during the bus trips and renewing friendships. Of course Bob's running commentary was a major feature--I heard many stories that I had not heard before and, no doubt, Bob has even more! Finally, thanks to all who helped put the trip together, especially Bob but all of the others including Nancy and the DOE. I found myself wishing that my grandchildren could see this--as a part of our history...well, maybe someday. Thanks so much.

Nancy L. Brownlee Bonnema



It was on a bright, hot July morning that a rag tag group of 38 friends and family stepped onto a bus to tour the 1360 square miles at the Nevada Test Site. Well, we didn't tour ALL of the 1360 square miles, but we covered a lot of ground! There was much to absorb, much laughter, many sites and many stories. I didn't even think to bring paper and pen to take notes!

With reasonable ease (I mean, what, no DNA test or anything?) we were allowed entrance to what was once highly classified and secure terrain. "Mum" was the word when it came to this area when we kids were growing up.

I am sure that we 5 kids never doubted that what our community was doing was of great national importance, or that our Dad was playing a major role in some of the "doings" at the test site, but I am sure we really had no clue of the scope of it all. We were just dumb kids. Still are.

Being able to visit the test site, seeing Frenchman Flat, Ice Cap, as well as the Sedan and Bilby craters was a great treat, as well as humbling. The sites and stories shared were an affirmation of the brilliant minds, dedication and passion shared by the Los Alamos Laboratory and test site employees. But it also had a counterpoint of how quickly a nation can change course, become complacent and ignorant.

I made one previous visit to the test site some years ago and we actually were able to spend the night at Mercury! This particular trip was enhanced by the presence of, and comments by colleagues and friends of Dad's; Paul Mutschlecner, Paul Dotson, Roger Meade, Brook Sanford and Don Pettit. Thanks guys, for the input, as well as the barbs and taunts thrown Dad's way. We wouldn't want him to get a swelled head from all the "Dr. Brownlee" salutations he received from the test site folks. They did show an immense respect for him and the work he has done. But, he is just "Dad", after all.

Thanks Dad, and thanks Travis, for making it possible.

Linda McComb Rathbun



Our tour of the Nevada Test Site gives us cause to think back across the great sweep of human events, and consider those cataclysmic episodes which have affected a sea change in the march of history.

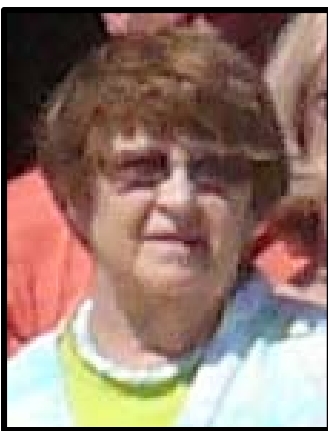
The written and geologic records inform us that on very rare occasions there have been violent upheavals or other events with massively stunning repercussions that have left their marks of change--often violent--across the planet, yielding variable influences for all that came after. Inevitably, the arrival of the nuclear age of fission and fusion rears its astonishing head in this context.

If it were possible to ask Noah to consider the anticipated effects of the Great Flood, as it is described in Genesis, and also the nuclear and thermonuclear events as quantified first by kilotons, and subsequently by megatons, we might surmise that Noah would gratefully choose to face the cataclysm that could be coped with via his Arc.

What a rarity among humankind for an individual, living or dead, to have had the opportunity/responsibility to participate in a fundamental way with the capture and manipulation of elements so stunningly powerful as to alter the course of history. Through most of my lifetime, our family has felt the pride and awe of knowing that our kinsman—my double cousin Robert Brownlee—is one of these rare few.

Now we all may pray that our nation will ever continue to use this unimaginable force to deter evil.

Vangie Wendelburg



I was privileged to tour the Nevada Test Site. Nothing prepared me for the powerful aura of the area. It brought to mind how Moses must have felt when the Lord told him to take off his shoes for he was standing on holy ground. I know, only our Creator God can cause a burning bush not to burn. But, the things that were accomplished there at the NTS changed the entire world history. What the combination of genius, superegos, tempers, perseverance, sweat, luck, and prayer accomplished there is mind boggling. Creating a device more powerful than the sun, then learning how to control and harness that power, were tremendous

accomplishments. I realized that having created such fantastic world-changing inventions, then having to keep them secret from family and friends, took incredible discipline. The whole experience had special meaning to me as we were hosted by someone who had to have similar

DNA. Thank you, Bob, for the things you did for the protection and freedom of our country. Thank you, Addie Leah and kids for your sacrifice to make these accomplishments possible. I am proud of you all!! The package is complete and held together with an indomitable and delightful sense of humor.

Alec Westerman



The trip to the Nevada Test Site and the Atomic Testing Museum, more than anything, illustrates how far we have come with nuclear technology and how far we have yet to go. The bent I-beams, the broken bunkers, and the un-buried basin of Sedan all made blatantly clear how far we have come from the days when the only motive force was that of humans and horses. The exhibits and artifacts of radical experiments ranging from the fission rocket to the concept of Nuclear excavation that have since been left to collect dust cause one to wonder what could have been and what might still be if treaties were different and it there weren't such a stigma attached to the industry. It gave me hope to see that, in spite of present constraints, that progress is still being made and that it will be made for some time to come underground and in other creative ways. It was interesting to look back at what all we accomplished in-spite of all the setbacks and to dream of what we can still accomplish in years to come.

Billie Jo Downing



Growing up I am not sure that I knew what my Grandfather did for a living. I did hear talk about the Test Site as well as about tests in the Pacific. After having visited the Test Site for the very first time, I have a much better understanding of his life and the others involved. I expected the Test Site to be very orderly and clean. I was very surprised to find it looked like random locations and finding aging debris and equipment left out in the open. I marveled at the bridge beams and the bank safe and the craters. Even though I was shocked that the government would leave the equipment like the tower and trailers from the test that never was, I am glad that they did. It helped me to understand a lot more and I cannot imagine what it must have been like to gather the data in those trailers after an explosion. One thing I also noticed and enjoyed was watching the men that Grandfather worked with while on the tour. After all this

time they still go off from the crowd to discuss some theory or concern with one another. I would say their minds are completely wired differently than the rest of us and I am glad for it.

Brook Sandford



In years before, new J-Division people had to climb 600'-tall towers. (See tower look down on the right.) That all changed about the time I started with the Test Division. People had to go into mine tunnels and work under drill rigs. Today they are back to going deep into the mines. So not too much has changed. Smart people figured out how to work at ground level. We call ourselves theoreticians.



Travis Krause

Thoughts from the tour of the Nevada Test Site



It has long been my belief that one of America's golden ages occurred between the mid-1930s and the late 1960s. This era brought to this country many great achievements, some of which being the completion of the Hoover Dam, harnessing the atom, the many victories of World War II, supersonic flight, and the exploration of regions outside our own atmosphere. Our country's role in atomic research has always been a fascinating subject for me. I suppose the three facets of the Atomic Age that interest me the most would be: The scientific research to prove fission, the development of atomic weapons, and using atomic energy as a power source. Throughout my life, I have tried to gather as much information as I could to feed the hunger of those interests. Imagine my sheer excitement when I learned that I would be able to tour the Nevada Test Site. The pictures that I have seen in books, the footage that I have repeatedly watched on the Internet---the Nevada Test Site is where it happened.

Upon arriving at the Site, it appeared much as one would expect from preconditioned ideas of a secure military facility. Similar to various fictional portrayals, it was in the middle of the desert, there were armed guards, bureaucratic procedures, a government built "town," and so forth. But once we crested that first hill that overlooked Frenchman Flat, I was awestruck. All

of my expectations went out the window. Immediately, I began to recognize things that I had seen in books or in videos. I did not foresee that such a bombardment of visual images that would trigger connections and recognition in my mind. Nearly everywhere I looked, there seemed to be something that sparked a thought, a memory, or a question. There are certain places on this earth that are steeped in history. Places that humble you just by being there. This is one of those places.

For starters, the Site is deceptively large. Even though Frenchman Flat was visible after that first hill, it was quite the drive before we even got close. It was only after being at the Site for nearly a full day that I realized exactly how large the Site truly is. When we did get to Frenchman Flat and we were able to get off the bus and take a look around, I was somewhat surprised to find that I was completely at ease. I felt comfortable walking the hard packed earth and taking in the sights. I suppose some people may find the area hostile, or even frightening. I, however, had the sense that I was merely a miniscule human walking where unfathomable energy had once owned the landscape. Somehow, that feeling was calming to me. The experience was simultaneously comforting and humbling.

The power that is unleashed as the result of an atomic event is maddening. Of course, I knew this before I ever set foot in Nevada, but seeing some of the effects in person is astonishing. I think the thing that is most impressive is that the destruction happens so quickly, sometimes instantaneously. I can think of a lot of things that can bend and twist an I-beam like the one I saw, but I can only think of one thing that can do it so quickly.

As we continued on our tour, though Yucca Flat and the crater field, I continued to recognize the sights and the landscape. In a way, it was almost as if we had travelled back in time, not a whole lot has changed here since the 50s and 60s, and the landscape is the same, save for maybe a few more craters. I'm sure it is not much different to drive around on the site now than it was 60 years ago. I had no trouble at all envisioning a myriad of scientists, going from area to area, from experiment to experiment. What a fascinating time that would have been, a mixture of the known and the unknown, the predictable and the unpredictable. I found it extremely wonderful that the Ice Cap shot is still in place and that was a great learning tool for me. I had understood various pieces of the process of underground testing, but seeing them all together really helped me to gain a more thorough understanding.

I enjoyed my visit to the Site immensely and appreciate the opportunity to be a part of the tour. It will be an experience that I will remember and regard for the rest of my life.

Jerry Josh



On Thursday, June 13, I was given another chance to tour the Nevada Atomic Test Site with my father-in-law Robert Brownlee. I had been out to that test site many years ago. But this time was different. I guess that the last time I had not fully grasped the idea of nuclear power and all that it could be used for. If people could truly know all of the research and knowledge involved in atomic power—not just for nuclear war—they would also be truly amazed as I have come to be.

I saw test sites, history, experiments, real people who were involved in research and development of nuclear power which could and did change the world. I feel truly blessed to have been able to go where very few Americans have ever or will ever be able to visit.

Autumn Bonnema



When I first heard that Granddad was gathering folks for a trip to the Test Site, I was so excited. I had been there before with him, Jamie, Angela and Bobby for Los Alamos Family Day in 2001, but I knew this time would be so much more.

Travelling anywhere with Grandpa is a unique experience and I have been lucky to be on several continents with him. He is always full of knowledge that most people don't know, or haven't put the significance together. Being with him at the Test Site and hearing his history is remarkable, and an experience I wouldn't trade for anything.

This trip was particularly fascinating because some of the participants were associated with Los Alamos National Labs and knew to ask questions the rest of us did not. Consequently, the information we gleaned from Grandpa and the others was richer than we may have gotten otherwise. Also, Granddad remembered things being at the site that he would not normally have, and I heard stories that I've never heard before! A marvelous occurrence in a family of storytellers! One of the itinerary items that particularly sticks out to me was visiting Ice Cap. This is where I really started to understand what was involved with designing and constructing a test shot. It also brought home to me the magnitude of Granddad's accomplishment in launching the "manhole cover". This was no ordinary cover!

Overall, I think the trip was a huge success and we all learned at least one thing we didn't know before. Thanks, Grandpa, for sharing your wonderful experiences with us not only on this trip but every time we gather all over the world!

Robert W. Brownlee



Recently I had the honor of accompanying my grandfather, who is among the only people left who have seen a thermonuclear explosion, on a private tour of the nuclear testing area in Nevada. My grandfather played a major role in this area during our nation's nuclear arms race with Russia. This period is also known as the "Cold War". This test facility is the only link we have between modern nuclear age and the men and women who propelled us here.

I say this as only to bring into perspective the history that is laid out in the dessert floor just a short drive from Las Vegas.

However, my experience was quite different there. I proudly served in the Army for some time and deployed twice in support of our war on terror. My father, who was also there on the trip, served in Army Intelligence with my mother in the 70's and 80's. My grandfather was a B29 navigator in the pacific theater during World War 2 so my blood is thick with patriotism. Dedication to one's nation is not reserved for the military. Many serve our nation in ways that do not require a uniform. The Nevada Test Site, or NTS, served as a prime example of people not in uniform making strides to secure our freedoms during the Cold War.

I went on this trip, not for the history lesson, as I have been once before and have always heard stories from my grandfather, but rather as a grandson, son and veteran to connect to sacrifices made during a war where soldiers and scientist worked together to prevent soldiers from fighting in foreign lands. I have a great relationship with my father, we share so many things, my sister says I'm just like him. My grandfather and I share a bond I can't explain. We went to war, we flew our missions, we sacrificed and managed to make it home. I watched as my father and grandfather toured these important grounds, looked at the historical sites, and talked about lessons learned and all I could think was how lucky I am to share this lineage, but more importantly, to share these moments. It is not often you can recognize how special a moment is as it is happening. I was fully aware the whole time.

Yes, we learned about different test, how test are conducted and how the site has been rededicated to other causes in recent years but one thing I will never forget will be sitting among the nation's brightest and most dedicated individuals and still seeing a sign that read "Never forget, 9-11-2001". No matter the politics, this sight once used for a nuclear arms race will always remember why they do the research, why they travel from home and why they work such long hours. Our freedom isn't given, it's earned in the blood of patriots and secured in the minds of the men and women of NTS.

Ian Josh



My trip to Las Vegas was an amazing experience, unfortunately what happens in Vegas stays in Vegas. But if I were to describe some highlights of the tour I would say that everything I saw was incredible. I would pick out the sedan crater and the remains of the many tests that occurred at the test site to be the standout points. The amount of damage that the bombs can do is overwhelming and I think it is really neat that my Grandfather played a role in the atom bomb. Although most people came back with memories of the site I was able to bring a little piece of history back with me...



Wenda Brownlee Josh



I was born in Los Alamos soon after Dad started working at “The Lab” in 1955. My childhood experience growing up there was like most all my friends. We knew what division and site our fathers worked in, but nothing more. Dad was seldom home. He left for work long before I woke up to begin my day, but was usually at home for dinner. The news

was on, and there was always discussion regarding current events, what we kids did today, but no discussion as to what Dad did at work today.

This was accepted as we did know the work done at “The Lab” was classified.

Dad traveled A LOT! Pacific, Washington D.C, trips to countries on other continents, and many trips to the Nevada Test Site. My NTS trip opened up within me a desire to learn more.

I remember sitting in class in elementary school when the teacher asked as a part of her lesson plan, “What does your father do?” Really? Every student had the same answer, “He works for The Lab.” We were then asked to draw a picture of our father. I thought about it for a long time. (My mom saved the picture.) Dad curiously looked like the Man in the Yellow Hat. My dad was on another one of his long trips. Chip and I used to ask Mom, “When is our Daddy coming back, we forgot what he looked like!”

I never imagined there would be a day when we could go to the test site. I love the expansive space, and unexpected beauty of the desert. My first visit to the test site, Dad was able to take Mom, Wayne and me down the tunnels. This trip we went to Frenchman Flat, and saw the Sudan Crater. It was great to visit amongst family and friends. I especially loved to hear the stories, and comments from my esteemed companions. I felt blessed to hear my father, and see his excitement and passion for the work he loved.

I will never be able to go back to tell my teacher what my father did, but I have been learning more about my father!

Ciera McQuaid



I didn't know what to expect when I was told we were going on a trip to Las Vegas. I never really understood what my great grandfather did, but when we arrived I got vast knowledge of his nuclear research and experiments along with many stories. This trip help me gain a better perspective of what goes on at these test sites and my great grandfather's contribution to it.

Erin McQuaid



On the family trip to the Nevada test site not only was it a blast to spend time with my family and family friends, but I also discovered a lot about our country's national security program and atomic testing. I am extremely privileged to have a great grandfather who played a pivotal role in atomic testing both in New Mexico and Nevada. I was astonished to see the raw power of some of the small yield above ground test at the testing site. The most amazing was the force it took to bend the steel I beams of the railroad bridge. At the museum I was proud to see my grandpa Brownlee credited most of the way through the exhibit.

Sharon Brownlee



I want to thank dad for the opportunity to see where he worked for so many years and come to a better understanding of just what kind of work he did in Los Alamos. I was able to see things I had only read or heard about and was able to have these things explained from an eye witness to these events. It was so much fun to share it with the family and to make new friends. But the real thrill is to realize that I was seeing a part of history so special, and only a handful of people in the world have got to see what I was able to see that day. Thanks Dad. Love you.

Wayne Brownlee



About 60 years ago I came with my family to live in Los Alamos, New Mexico. Dad had received a job working at the Los Alamos Scientific Laboratory. Over the next many years the family lived there ... however....Dad spent much of the time away from our home. He spent some time in the Pacific, some time in the Alaskan North, some time traveling the world, and a whole lot of time at the Nevada Test Site.

This trip was not the first trip I had visiting the Test Site. However it is easily the best time I had visiting the Test Site. I was lucky this time to be also in the company of many family members who were experiencing their first view at much of what Dad

did for a living. I was fortunate to also be in the company of several of his friends and colleagues who also had spent time working at the Test Site. This group was filled with people I respected and loved. Knowing that this would be the last time I would probably ever have the opportunity to visit but also have my father guiding the entourage, it was even more special. Did I learn more than I had before? Yes. Did I hear stories I had never heard before? Yes. Did I leave with a better understanding of History? Yes. Did I have a better Idea of what may lay ahead for this Country? Yes. Did I thank my father for his service, his great skills and accomplishments? Yes. Have I written that down on paper? I have now. Thanks.

Cale Groseclose



I, Cale Groseclose, may or may not be able to explain what I learned at the Nevada Test Site. Although my head feels just crammed full of information, I am not at liberty to say “Bird Dog”, over and out!



And now, for the real sign.

Mercifully, we did not take any pictures.



Rachelle Groseclose



This was a most impressive experience' from the blown vault to the breath-taking Sedan crater, I have to say. I enjoyed Grandpa's Boom-Boom stories the most. We had the unique privilege of the personal real-life experience threaded into our travels. Priceless and very cool! When you take in these massive powers men have created, I stand in awe of the Awesome God I serve! I am blessed to be a part of this family. It was an honor to be part of this adventure. I anticipate more to follow!

Gail Lamborn



What an amazing once in a lifetime opportunity I experienced. I am thankful to have been invited to join this special group and learn so much in so many areas. I had no idea the history of Mercury and what was accomplished for the good of the United States, the testing that took place, why that location was chosen and to see the results of the power of the testing. It was interesting and concerning to learn how the politics in our country affected a huge part of our countries present and future security.

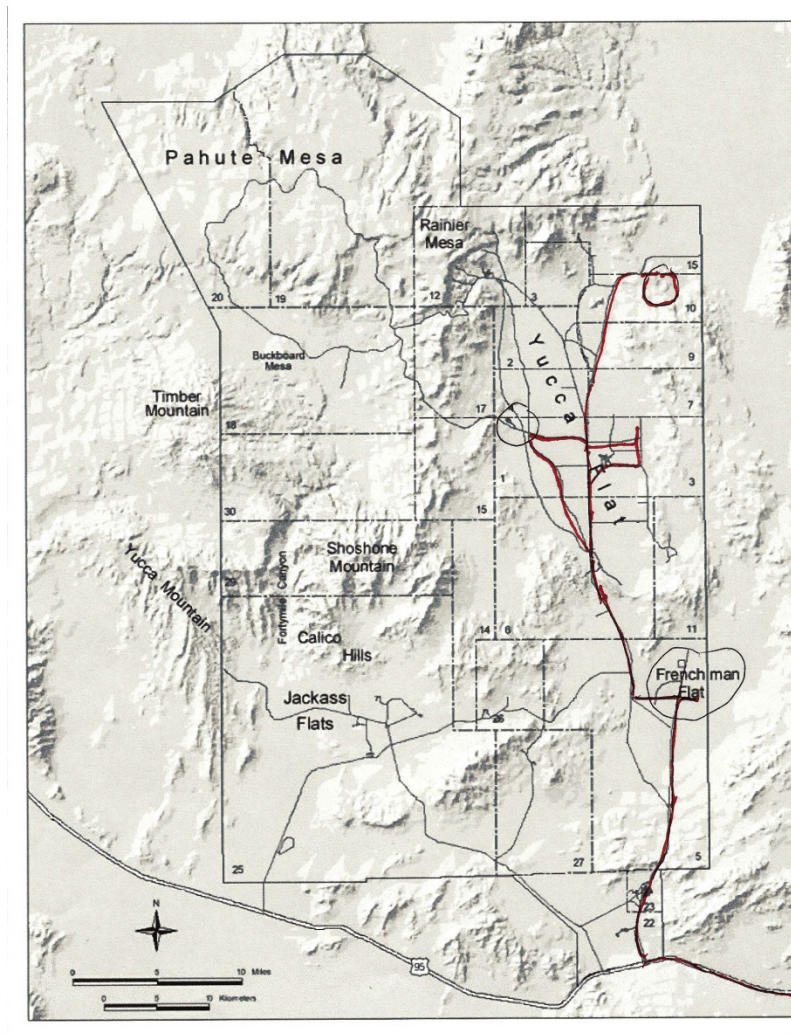
Visiting the museum and going in each room to hear the details and knowledge from one of the few people in the world who had actually been there was so interesting for me. Thank you for all the arrangements made and the invitation to attend. It was a great time with family and enjoyable to meet new friends. Thank you Dr. Brownlee for many years of service to our country. Go Navy !!!!

Travis Pullen



The Brownlee clan came out to the Test Site in June, 2013. The horde of family and close friends filed onto the bus, in good spirits and ready for the day. I have been on many tours over the years, but this group had an easygoing nature. You could feel the common sense of adventure and easy camaraderie among them. They were attentive to the tours at the various sites, and seemed to enjoy every minute. At ICECAP, a couple people stayed on board the bus and regaled me with tales of their childhood, and stories of relatives going to college with former presidents, further demonstrating what a small world it is.

I invited a couple of local friends to come along on this trip, and they were appropriately impressed by what they saw and heard throughout the day. We ended up back at the hotel and offloading from the bus, amid hugs, goodbyes and ongoing conversations, and plotting for what to do later that evening. It was a genuine pleasure to make the acquaintance of several people, and a great joy to see so many friendly faces. It always seems to be a bonus to have so many family members in one place, to take part in a shared experience. It left me in a comfortable mood, basking in the reflective calm of the day's activity. As I made my goodbyes to people I rarely see, but appreciate all the more when I do, they started on their respective paths home. I held onto that sense of home they bring with them, wherever they gather together.



NTS—Our trip plotted on the map

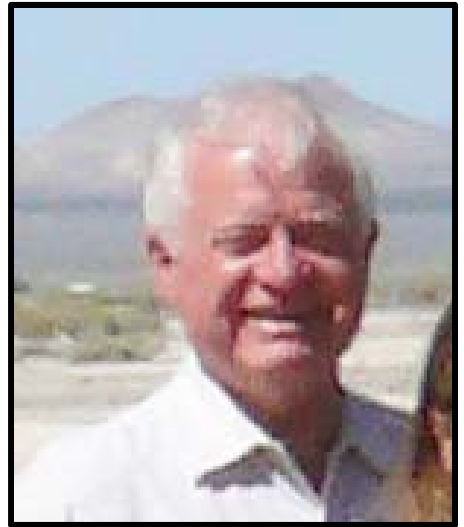
For a variety of reasons, a number of those on the tour chose not to reply to the request for an essay documenting their experiences. Nevertheless a decision has been made to honor these xxxxxxxx travelers by documenting their presence.



Virginia Elliott



Mary Jo Brownlee



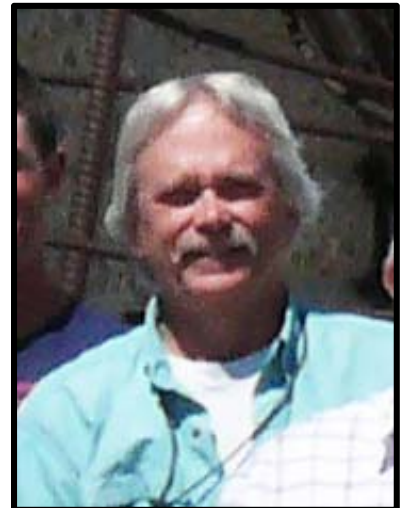
William Schneider



George Rathbun



Matt Sanford



Paul Dotson



Chip Brownlee



John Bonnema



(This guy got his essay in to us in July).