



# Hands Across History



A joint newsletter for the White Sands Historical Foundation and the White Sands Pioneer Group.

Volume XVII, Letter III

August 2021

## New Memorial Sign Pays Tribute To Joy And Paul Arthur - Patrons Of The WSMR Museum

By far, the single largest contribution to the White Sands Missile Range Historical Foundation in support of the Range's Museum was made by the estate of Joy and Paul Arthur. These icons for the civilian workforce spent their entire careers at White Sands making a difference in many fields. They are the only husband and wife team in the WSMR Hall of Fame. Joy's hall of fame title reads, "Research Electronic Engineer." Paul's reads, "Tester-Director-Mentor."

The Historical Foundation explored many ways to honor the Arthur's donation. The board of directors looked at the possibility of naming a building or a street after them but the bureaucratic bog proved a true quagmire. The sign was finally decided on because it explains Joy and Paul's gift and provides some background on who they were. In addition, it sits right beside the walkway from the parking lot into the Museum so most visitors will see it. It is much better than a street name where, in 10 years, people would be scratching their heads wondering, "who was that?"



*New WSMR Commander, Brig. Gen. Eric Little, left, and Cmd. Sgt. Maj. Christopher Prosser stand by the new Joy and Paul Arthur memorial sign in front of the Museum after their visit to the facility. Photo by Gerry Veara*

# New WSMR Commander Visits With Our Foundation

By Frances Williams, President

The flight of the rocket ship Unity 22 launched from New Mexico's Spaceport America ushered in another new era to change the world as it did when the first atomic bomb was assembled and exploded on White Sands Missile Range. The world has never been the same since.

What benefit or impact will it have for WSMR is not known at this time. But the Las Cruces community has seen an increase in jobs and is experiencing many changes and the impact can be seen by the increase in the traffic, shortages of houses to sell and apartments to rent. Hopefully this will result in an increase in membership and donations so that we can continue to provide the support the museum needs to meet its goals and objectives of enhancing and adding exhibits as well as providing support to educational institutions in this area with an active outreach program

The new WSMR commander Brig. Gen. Eric Little visited the museum and met with the Foundation recently. Darren Court, Director of the Museum, provided a walk through of the museum complex to include the building we donated. He

explained what the museum will look like after the exhibits and new technology are put in place.

After Little's visit with Darren, he was introduced to the members of your Board of Directors and was given a briefing on the history of the Foundation and its various donations totaling over one million dollars given to update and expand the Museum. He was very interested in the Bataan Death March event, and indicated that he might participate the next time. The meeting was very successful. He stated that he and Cmd. Sgt. Maj. Christopher Prosser would become members of the Foundation. We think we are off to a good start.

The Foundation has taken on the financial responsibilities associated with the missile range Hall of Fame. The White Sands JAG office indicates the government cannot spend money on retirees for this program. Also, we now have a larger impact on the actual vote when it comes time to select inductees. We are happy to announce that BG Little has followed the selection committee's recommendation and approved Bob Lipinski for induction this year. See page 3 for more info.

See New Board Members Needed, page 3

## Recent Honor Donations To The WSMR Foundation

**William Mimmack** - from Ron Hayslett

**Bill Agee** - from Jon Gibson

**David Soules** - from Jon Gibson & Mary Beth Reinhart

**Dan Duggan** - from Lawrence McFall, who worked for Capt. Duggan in 1963 on Shillelagh

## Statement of Purpose and Membership

The "Hands Across History" newsletter is published by the White Sands Missile Range Historical Foundation and the White Sands Pioneer Group (WSPG). Both nonprofit organizations aim to preserve the accomplishments of White Sands Missile Range.

The newsletter is intended to keep

White Sands Pioneer Group  
P.O. Box 171  
White Sands, N.M. 88002

members of both groups informed about current events and share information of common interest. The editor is Jim Eckles. He can be contacted by email at [nebraska1950@comcast.net](mailto:nebraska1950@comcast.net) or at either address below.

Membership to either organization is open to anyone who shares their goals.

White Sands Historical Foundation  
P.O. Box 171  
White Sands, N.M. 88002

# Bob Lipinski Next WSMR Hall Of Fame Inductee

Retired Army Col. Robert Lipinski will be the next inductee into the White Sands Missile Range Hall of Fame. As the 56th member of the hall of fame, Lipinski is noted for his 35-year association with the missile range community as a senior Army officer, a contract manager and as a volunteer in many community organizations.

The native of Pittsburgh, PA came to White Sands as the Director of the National Range in Dec. 1985. According to his nomination, "Lipinski's strength was his ability to call upon his Army project management experiences from YPG, the Abrams Tank Project, and his Pentagon time to develop system management practices and personnel management techniques that enabled his directorate to address the conflicting DoD Service demands for test services and conduct the maximum number of tests under the usual resource constraints to produce quality results for WSMR." His approach was to practice "common



*Colonel Robert Lipinski's official portrait while director of the National Range at WSMR.*

sense and good timing."

After his tenure as NR director, Lipinski served as WSMR's deputy commander from 1989 until his retirement in Sept. 1990.

Lipinski then went to work for a succession of range support contractors using his experience to tailor support to meet White Sands test requirements. Also, he took on roles as adjunct professor for the Florida Institute of Technology on the WSMR campus, served as president of AUSA and the White Sands Pioneer Group. Most recently he spent

16 years on the board of directors for the White Sands Historical Foundation. One of his duties was laying honor bricks on the Museum's plaza.

The induction is *tentatively* scheduled for **Oct. 27 as a luncheon at the White Sands Frontier Club. The Protocol Office will be taking reservations later. If you'd like to attend, send an email to [nebraska1950@comcast.net](mailto:nebraska1950@comcast.net) and we'll send you a note when you can reserve your ticket.**

## New Board Members Needed

We need three new members for the Foundation Board. We lost our Vice President, David Soules, who was such an important part of our organization. He made many suggestions for the improvement and expanding our horizons on where we need to go. He will be sorely missed.

To continue to support the museum and provide the support and funding it needs, we need to increase our membership and improve our donation receipts. We are still in the brick sale business and have expanded the area for bricks in our memory/honor garden. We are at a time with our expanded mission, to provide outreach and support to our local educational institutions, to bring kids in from surrounding schools and to give them workspace to explore what can be done with computers and other technology, and peak their interest in going into STEM programs for the jobs which are now being established and will grow as they grow to new horizons not known today. I am

— CONTINUED FROM PAGE 2

asking all of you to help in this endeavor. We are a tax deductible 501(c)(3) organization.

The Board is composed of volunteers who give generously of their time and their invaluable work experiences. But we cannot do it alone. The Museum is part of the heart and soul of this community. When it is finished it will be one of the best in the Army and will attract many visitors from out of state, expanding our economy and working with local community organizations affiliated with education, learning and development.

Please give us the help and support we need to continue in this mission of preserving the historical events that took place on White Sands and passing that gift of history onto the generations to come. If you are interested in becoming a member of the WSMR Foundation's Board of Directors, please contact me at e-mail [ffw@newmexico.com](mailto:ffw@newmexico.com) or call 575-526-9769. This is your museum and we need your help.

# Yes, There Was Once A Proposal To Launch NASA Moon Rockets From Outside Las Cruces

By Jim Eckles

*Editor's Note: A shorter version of this story appeared in the Las Cruces Sun-News in July.*

When I first arrived at White Sands in 1977 I heard stories of how locals had once lobbied to have NASA's Apollo rockets launched from the missile range. The stories were vague with no real details. They usually hinged on the supposed advantage of being able to launch from an elevation of four thousand feet instead of sea level. To my skeptical nature, that never seemed like a good enough reason to relocate everything to New Mexico and start from scratch.

Then, a few weeks ago, Clyde Treat, a WSMR veteran with decades in the Plans Office, dropped off two boxes of stuff he collected during his long career. He asked me to deliver them to the missile range's Museum Archive and to let him know if I found anything interesting.

Boy, did I ever. Buried in one box were two 1961 documents that were proposals for launching Apollo Saturn rockets and landing space vehicles at White Sands. It turns out, the old space vehicle stories were kind of true.

So, imagine that on Wednesday, July 16, 1969, instead of getting up to watch the launch on TV of Apollo 11 with Neil Armstrong, Buss Aldrin and Michael Collins onboard, you simply took your cup of coffee to your front porch or patio in Las Cruces and watched the launch live from there. The proposed Saturn launch pads would have been just 18 miles northeast of town, on the western edge of White Sands Missile Range.

Each rocket would have stood over 360 feet tall, higher than any building in Las Cruces (the old bank tower downtown is only 120 feet tall). Each weighed 6.2 million pounds and, at liftoff, they generated 7.6 million pounds of thrust. The roar would have easily rumbled through the city. Out on the mesa and in Organ, windows would have rattled, maybe shattered, and buildings would have shook. It would have been a great display of pure power.

That is exactly what was proposed in a White Sands Missile Range report called "Proposal For NASA-DOD Launch Site On National Lunar Program." Dated July 14, 1961, the internal government document was prepared by White Sands staff members in response to a request in June 1961 from NASA to evaluate the possibility of launching Apollo Program spacecraft from the missile range. According to a NASA history, other sites considered were Brownsville, Texas, Cape Canaveral (on-shore and off-shore), Mayagurana Island in the Bahamas, Cumberland Island, Georgia, and the Hawaiian Islands.

By the end of August, NASA reviewed the input from all and decided on expanding its facilities at Cape Canaveral as opposed to building new launch capabilities elsewhere. New Mexican politicians were publicly upset by the decision but the White Sands proposal had some serious problems, issues that would have been almost impossible to overcome.



*The two documents found in Clyde Treat's boxes for donation that led to this article.*

The site proposed by White Sands was the area now occupied by the NASA White Sands Test Facility, a few miles north of Organ. At the time, it was open desert with a few dirt roads and barbed wire fences for pastures. The Jornada Experimental Range and the missile range share a boundary there. The eight proposed launch pads were to be placed on military property with the administrative, maintenance, and support facilities on the Jornada.

**See Would Have Cost \$700 Million, page 5**

## Would Have Cost \$700 Million Then — CONTINUED FROM PAGE 4

The document also proposed a second possible launch area in the northwest corner of the missile range, west of Trinity Site and on the Jornada del Muerto. There is some discussion of the site and its advantages and disadvantages but when it got to the cost estimates and details, the second site was not included. Everything focused on the Las Cruces site.

Since there was nothing out on the plain north of Organ, the hurriedly prepared plan had to estimate the cost of putting in EVERYTHING: paved roads, a railroad spur from near Dona Ana to the site, power and gas lines to power the facility, the launch pads running south to north just below the San Andres Mountains, a landing strip, plants to manufacture liquid oxygen and other propellants, a telephone exchange with 2,000 lines, 10-each 40,000-square foot warehouses, control buildings and on and on. The report had an extensive to-do list, all of it requiring new construction with a cost approaching \$700 million. That is just over six billion in today's dollars. The construction camp alone, to house personnel, equipment and materials, was estimated to need 200 acres of real estate.

Given the short time to prepare the report, it was sorely lacking in real details. For instance, a medical services building to house 120 people at a cost about \$200,000 was listed. However, the cost was for the building only, an empty box. There was no cost estimate for the medical equipment to go inside it or for anything in the many other facilities.

The report glossed over any possible issue about the amount of water available and what its

quality might be. It simply stated water would come from five new wells and the system, along with sanitation, would cost close to \$15 million.

Who would operate it? All totaled, White Sands estimated it would take an additional 2,000 workers to man the place once it came on line. To feed everyone there were going to be four cafeterias. To move people, they imagined a fleet of 2,000 vehicles. The operations building was going to cover 30,000-square feet. There were to be seven fire stations – no estimate on the equipment for them either. And, of course, there was to be a security complex with guard stations all over the property.

It was an ambitious proposal with the Army guesstimating every cost they could think of. The construction schedule for this massive undertaking was probably a bit optimistic – maybe even a bit farfetched. The report's milestone for the start

of the project was October 1961 with a completion date of January 1965.

When NASA announced its choice, Rep. Thomas Morris of N.M. was quoted by the *Associated Press* as saying the White Sands alternative would have been cheaper and better for the country. Senator Clinton Anderson of N.M. said he regretted the decision. The *Associated Press* quoted him saying, "The proving ground, with

its great open expanses and elaborate instrumentation would have proved the logical site for the moon program. I am sorry about the decision, but I will continue to advocate an important role for White Sands and Holloman in space activities."

**See Boosters Couldn't Be Moved, page 6**



*This photo of a Saturn V Apollo rocket is included to show just how big they were. The rocket is being transported out to the launch pad from the assembly building. The parking lot with all those cars in the foreground gives you some idea of the rocket's size. NASA photo.*

## Boosters Couldn't Be Moved — CONTINUED FROM PAGE 5

It is uncertain if the two politicians ever saw the huge costs associated with the White Sands proposal or simply chose to ignore them. If NASA had decided to accept the missile range idea, it would have been a gigantic economic windfall for Las Cruces, a city of only about 35,000 people at the time. Also, it would have created incredible headaches for the city as the sudden influx probably would have overwhelmed the housing available and the school system.

To defend its decision NASA did release some reasons for not picking White Sands. Right up front was the problem with the trajectory of the rocket launches. Based on the desired orbits, the vehicles were to be fired to the east, which is no problem from Cape Canaveral with the mostly empty Atlantic Ocean out there. NASA pointed out firing to the east from White Sands would require dropping boosters near populated areas across the southern U.S. In the event of a failure, large cities would have been at risk from falling debris. Dropping a booster on a state's capital city would not have been a good move for the new agency.



*This is one of the leftover Saturn V boosters being moved in 2016 to the Mississippi INFINITY Science Center by barge for display. Imagine trying to move it cross country on regular highways. NASA photo.*

Another reason was the impossibility of moving the rocket boosters to southern New Mexico. Saturn V first-stage boosters were 33 feet in diameter and 130 feet long. The Nova rocket that was

still under consideration had a diameter of 40 feet. The boosters were simply too wide to go down a standard railroad track or highway with the mix of bridges, tunnels, and other obstacles that required a much smaller clearance. The only alternative would have been to assemble the rocket stages on site which was not considered in the proposal.

For the Cape launches, the boosters were simply moved using barges via canals and ocean routes. It was easy.

Senator Anderson was Chairman of the Senate Aeronautics and Space Committee and was very aware of other possible NASA action for White Sands. Associated with the very visible launch and landing operations, laboratories and test facilities were needed – places that didn't have the sex appeal of manned vehicles being hurled into space. A reasonable person would assume he had some influence with NASA's decision to put the NASA White Sands Test Facility on the west boundary of the missile range – about the area that the launch proposal had targeted. Established in 1963, it was built to provide laboratory facilities for the testing of Apollo program propulsion systems and the materials used in spacecraft.

It has evolved over the years supporting each new generation of NASA projects.

It turns out that NASA had divided up its plans for the lunar program into many bite-sized pieces. In addition to looking at launch sites in 1961, they were also looking for possible landing sites for space vehicles. Holloman Air Force Base, with the missile range's endorsement, responded at the end of the year with "Proposal – National Aerospace Landing Site." This proposal was for the landing of manned and unmanned space vehicles as well as military related testing on White Sands Missile Range. Locals quickly saw another chance at getting a piece of the Apollo program with recovery of the astronauts on their return to earth.

Holloman and White Sands proposed using a "100-square mile area commonly referred to

**See Landing Site Is Still In Use, page 7**

## Landing Site Is Still In Use — CONTINUED FROM PAGE 6

as the Alkali Flats” out in the middle of the missile range. It is part of the old Lake Otero lakebed from when there was a sizeable body of water in the Tularosa Basin at the end of the last ice age. The area is north of Lake Lucero and west of the gypsum sand dunes.

The document pointed out advantages of the site included the fact that it was almost dead flat, varying only about 25 feet from one end to another, and that it was almost devoid of vegetation. It was going to be a very simple process to drive out, find the vehicle in a few minutes and recover it.

The authors pointed out that this was a huge advantage over the water recoveries especially in light of Gus Grissom’s landing on July 21, 1961. Grissom’s Mercury capsule’s emergency explosive bolts unexpectedly blew the hatch off when he hit the water. He was forced to exit the sinking capsule and almost drowned as helicopters raced to help him. The crews could not save the capsule and the data stored onboard as it sank.

This proposal was fairly modest compared to the earlier launch facility pitch. Since very little infrastructure would have been needed, the only major costs were for additional instrumentation. The Holloman/White Sands complex was already richly populated with radar, telemetry and optical equipment used in missile testing.

Although NASA opted to continue with water landings for the Apollo program, in the 1970s they moved on to reusable winged spacecraft – the Space Shuttle. It could re-enter the earth’s atmosphere and then glide in for a controlled landing on a runway just like a jetliner. NASA remembered

that 1961 proposal and moved to take advantage of the Alkali Flats at White Sands.

Initially, NASA performed drop tests of shuttle scale models over the flats. On the gypsum lakebed was an old graded runway once used by the Northrop Corporation to launch and land drones for military testing. Eventually, NASA designated the runway, known locally at “Northrup” Strip, as a shuttle pilot training site. Yes, the name was misspelled but once it was reproduced on maps and reports, it was too late to correct.

By 1979, Northrup Strip was improved with longer and wider runways and designated as an alternate shuttle-landing site. On just the third shuttle mission, Northrup Strip was called up and Space Shuttle Columbia landed there on March 30, 1982. It was the same area proposed by Holloman and White Sands back in 1961.

The 1961 idea was obviously a good one because the area is now being used by NASA/Boeing as one of the landing sites for its Starliner spacecraft. Boeing is using a parachute system to land their vehicle much like the old Apollo program, just not water dependent. During an unmanned test of the Boeing system, the Starliner was safely parachuted into White Sands on Dec. 22, 2019.

Printing this newsletter has been on hold because the Starliner was scheduled to launch for a repeat mission on July 30. I thought it would be nice to include the results. That was postponed until Aug. 3 which has now been delayed as well. When it does launch, it will deliver 750 pounds of food and other materials to the Space Station. Alkali Flats is the primary landing site.

### White Sands Federal Credit Union Donates \$500 To The Historical Foundation

Stephanie Martinez, Marketing Director for the credit union, said “Donations such as this are made possible by the Do a Good Deed Program, an employee run community support group. Employees make donations to the Do A Good Deed Program through payroll deductions, and an employee committee selects the quarterly recipients.”

***Thank You WSFCU!!!***

White Sands Missile Range Historial Foundation  
Hands Across History  
P.O. Box 171  
White Sands, NM 88002

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## The Back Page - *Wind & Sand*, Oct. 8, 1953

Selected because it seemed appropriate given our feature article.



—U. S. Army Photo

Members of the New Mexico-West Texas Section of the American Rocket Society who conducted a panel discussion on rocketry, jet propulsion and space travel at a recent meeting in Las Cruces are shown above during the forum. Left to right are G. Harry Stine of the WSPG Electro-Mechanical Laboratories Division; Gilbert L. Moore of the Physical Science Laboratory, New Mexico A&M College; Edward E. Francisco Jr., EML, WSPG; Dr. R. K. Sherburne, New Mexico A&M; Herbert L. Karsch, Special Assistant to the Commanding General of WSPG for Facilities Planning; and Maj. D. G. Simons, USAF, of the Space Biology Laboratory at Holloman Air Development Center.