



Hands Across History

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



Volume VII, Letter III

August 2011

After 40 Years The Space Shuttle Program Ends Its Presence At WSMR's Northrup Strip

By Jim Eckles, Editor

Lamentably, 30 years of space exploration using the first reusable spacecraft ended on July 21, 2011 when the shuttle Atlantis touched down in Florida. It also marked the end of four decades of shuttle support by White Sands Missile Range, the birthplace of America's space activity.

Most people are aware that the space shuttle Columbia landed at White Sands on March 30, 1982 on just the third flight for the program. However, the missile range's involvement in the shuttle program long preceded the first launch in 1981.

As early as 1976, WSMR agreed to allow NASA to use Northrup Strip, in the middle of the old Lake Otero lakebed, as a shuttle pilot training site. In preparation, the Northrup runway, originally used for launching and recovering drones, was lengthened to 15,000 feet. A second runway was added and training began in Oct. 1978.

Yes, it is misspelled. Apparently Northrop Corp. used the runway but somewhere along the line the company name was misspelled in a news release and on maps. Maps are really hard to change so the misspelling stuck.

In 1979, the two runways were designated an alternative landing site for actual shuttle missions. To accommodate this move, the runways were stretched to 35,000 feet. That's right, seven miles. They started life being 100 yards wide but later were widened to 300 yards.

Even earlier, in 1970, NASA conducted the first of a series of one-tenth size scale model drop tests of the shuttle over the Northrup area. The 13-foot long models were dropped from an Army CH-54 "Sky Crane" at an altitude of 12,000 feet above sea level. According to NASA, the aerodynamic tests were "designed to demonstrate the vehicle's transition from a steep re-entry angle of attack to a level cruise attitude and its stability in stalled conditions."

In 1989, a third runway was added to the landing site. This was a short, narrow runway to simulate an emergency landing in Morocco.

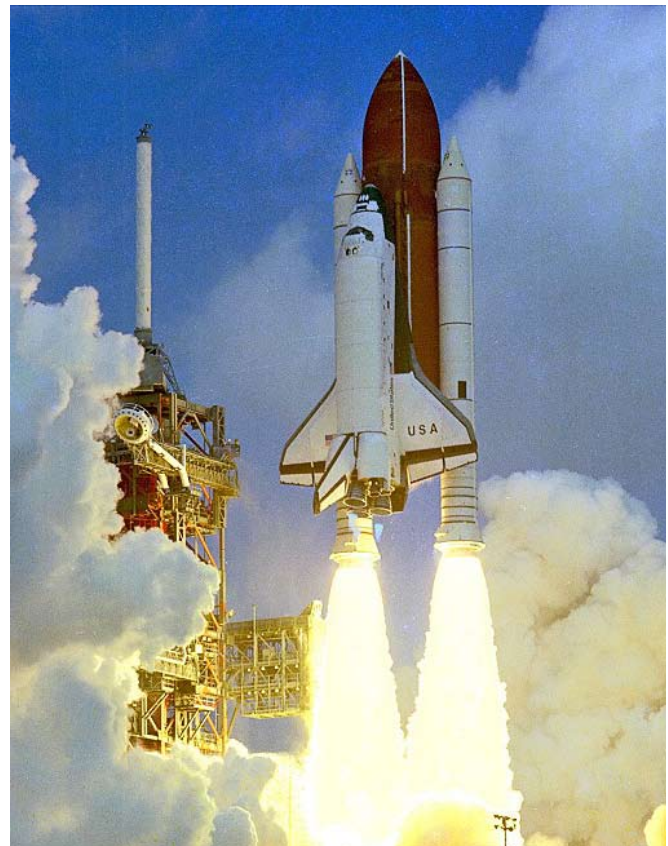
The scenario was called "Trans-Atlantic Abort Landing" and was based on the shuttle having engine failure during launch and not being able to reach orbit. There were a number of these launch failure possibilities and subsequent emergency procedures. If the shuttle wasn't very high and

was still intact, it was supposed to separate from the fuel tank and boosters and land back in Florida.

If the shuttle was high enough and had enough energy, it was to glide across the Atlantic to reach the Morocco site.

Finally, if the shuttle was just short of orbit, the protocol was for an "Abort Once Around" landing. For an AOA, the shuttle would have enough energy to circle the earth once and land back in the United States. Because of the launch angle and lack of maneuvering possible in such a situation, White Sands was frequently designated the prime AOA site. Both NASA and WSMR often had people on call or on site ready to respond if they were suddenly required.

see **Just Space Trunkin'**, page 3



Space Shuttle Columbia lifting off on March 22, 1982 for mission STS-3. It landed at WSMR eight day later.

Commentary

No One Elected To The White Sands Hall Of Fame Again

By Jim Eckles, Editor

This is the second year in a row no one has been elected to the WSMR Hall of Fame. The people who care are pointing fingers trying to find the cause for this unprecedented happening.

As someone who has been involved with the WSMR Hall of Fame in one way or another since it started in 1980, I thought I would comment on what I see. I wish it was as simple as more publicity or rewriting the hall of fame pamphlet. It's really the convergence of several factors and the outlook isn't rosy.

1. There is a lack of nominations. Back when I was running the Pioneer Group review committee we would have 10 or more nominations to review each year. I think this decline is happening for two reasons. One is the change in atmosphere at White Sands. Gone is the camaraderie or sense of community present in the earlier decades. Now there is a general malaise of indifference found commonly in places where people look at their work as just a job. The second part is the workers from the early couple of decades, when it was easier to stand out from the crowd, are long gone. We are now firmly in an era where everything is done by committee and individuals have few opportunities to stand tall.

2. Many of the nominations just are not well written. Many a worthy candidate has been rejected because the nomination merely lists awards or accomplishments without any context. I have seen dozens of nominations over the years and I think the successful ones explain the work behind the award and how it made a difference in accomplishing the WSMR mission. Of course, a problem here is that many nominations are written by loving relatives or coworkers who just don't have the necessary info or background for a good package. That is why the Pioneer Group review was inserted into the process. The Pioneer Group review was meant to provide the insight from contemporaries of the nominees to validate a nomination or supplement a threadbare one with a thumb's up or down based on institutional

knowledge. When I was doing this for the Pioneer Group one problem I noticed the first year was that the command's review committee didn't seem to care what we had to say. After that I tried to stack my review group with as many Hall of Fame members as possible. One year I had at least four hall of famers on board. Didn't seem to make much difference as the officers and others on the command group didn't know them from Adam and were leery of them. Typical management thinking there is, "Give it to someone else to get the info and rewrite it." Its not a "yes" or a "no."

3. The command review committee is a typical bureaucratic group of managers who are really cautious. When I've been there they are always asking for more guidance, more information, more help in making a decision. I think they are conscientious and fear making a mistake to a fault. I sat in one year as a voting member as the Acting Public Affairs Officer. The committee was trying to get a handle on the candidates when one of them hit on the baseball hall of fame analogy and suggested one nominee was just a "singles hitter." Using that pretext, they rejected everyone because there were no Babe Ruths or Einsteins in the bunch. Surprise, surprise! Of course, using such an inappropriate analogy was ridiculous. Luckily we were able to get Gen. Hite to look at the packages and he selected a worthy inductee.

4. Frequently folks want to rewrite the very short Hall of Fame pamphlet that spells out the requirements. Its been changed several times. They usually want more guidance. I imagine they'd like a checklist where a nominee has to meet 18 out of 20 criteria to get elected. They don't understand that when it is a bit vague they have the FREEDOOM to interpret and lead.

5. Finally, who should get in? Now it is a very elite honor with almost impossibly high expectations. Austin Vick once told me when Gen. Ball was putting the Hall of Fame together his vision was for lots of inductees - not just Ruths and Einsteins. Vick said if Ball's vision was followed there might be dozens more inductees by now.

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 members of both groups informed about current events and share information of common interest. The edi-

tor is Jim Eckles. He can be contacted by email at nebraska1950@comcast.net or at either address below.

Membership to either organization is open to anyone who shares their goals. However, details of membership (dues, etc.) differ between the two groups. For more information, please contact the appropriate organization and we will send it via the Post Office or email.

White Sands Pioneer Group
P.O. Box 318
White Sands, N.M. 88002

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

Just Space Truckin' ——— CONTINUED FROM PAGE 1

Early on in the program when shuttle flights still attracted the public's attention, my shop, Public Affairs, sometimes had news media camped at our door ready to go just in case there was an AOA situation.

The shuttle landing strip was managed by NASA's White Sands Test Facility located on the western edge of WSMR. The range's NASA tenant was responsible for much more shuttle work than just the landing strips.

For instance, each shuttle was equipped with small thrusters that were tested at WSTF. These little guys were part of the "Reaction Control System" and were scattered around the body of the shuttle to turn and move it just a bit when docking with other vehicles or retrieving something like a satellite.

Also, at the back of each shuttle were two "Orbital Maneuvering System" rockets that were tested at WSTF. When you look at the back of the shuttle you see the three large rocket engines that are used at launch. Just above them are the OMS rocket pods.

The OMS engines had enough juice to move the shuttle to a higher orbit. Also, on every mission they were used as big brakes to slow the shuttle down so it would fall out of orbit and begin its descent through the atmosphere.

To understand why the shuttle Columbia landed at White Sands, you need to go back to catch a little historical perspective. One of the main factors was the fact that NASA advertised the very expensive shuttle program as a "space truck." They said they would be hauling cargo into space for all kinds of organizations and nations and they would run it on schedule just like a trucking company.

You have to remember this was early on in Ronald Reagan's presidency and one of his major themes was to make government more efficient, more like private enterprise. NASA was trying to fit in by comparing itself to United Parcel Service. (I wonder how well those big brown trucks fly with rockets attached).

The other major factor was that the program was still testing these new vehicles and managers wanted to land on the dirt of dry lakebeds instead of unforgiving short, hard concrete runways. So, the first series of missions was scheduled to land on Lake Rogers at Edwards Air Force Base in California.

At the time, people were excited by the shuttle program. This was the next great thing after going to the moon. For instance, after the early missions, NASA announced when and where the Boeing 747 would be as it hauled the

shuttle back to Florida. People all along the route would step outside their homes and offices hoping to catch a glimpse of it as it went by. In the Las Cruces/El Paso area we were sometimes lucky to have the 747 actually land in El Paso to spend the night before flying on to Florida.

When it came time for the third mission, NASA ran into a problem. Seasonal rains soaked the lakebed at Edwards making it way to soft for a shuttle landing. They could have opted for a concrete runway landing but that was completely outside their safety directives.

At the same time, their "trucking" schedule was looming. The public needed to see they could keep to the schedule. So instead of delaying, they decided to launch on time and land at their backup dirt runway, Northrup Strip at WSMR.

The announcement about the new landing site was made by NASA on March 18, 1982 – four days before the launch on the 22nd.

Almost immediately phones started ringing in my office and elsewhere on range. Most of our calls were from news media asking where White Sands was and how they could get onto the facility to report the landing.

The public called as well wanting to know if they could come and watch. The Air Force and NASA had already set a precedent to allow public viewing with the first two landings at Edwards.

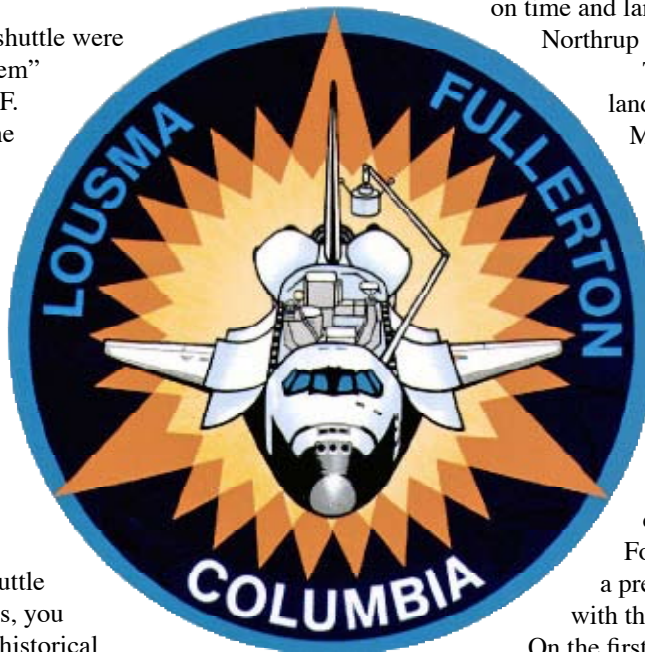
On the first mission, when John Young and Bob Crippin landed Columbia on Rogers Lake on April 14, 1981 over 200,000 people were on hand to watch. Some estimate the crowd was closer to 300,000.

The shuttle program was hugely popular. Witnesses raved about the double sonic boom that accompanied the shuttle as it fell out of the clear desert sky. The California landings were huge "geek" festivals. Eventually the effort to go and see a "truck" land lost its luster for most Americans.

Our office immediately went into overdrive working with NASA and just about every major WSMR organization figuring out how we were going to take care of the reporters. We had to get them registered, keep control of them, move them about and provide all kinds of support.

Of course Public Affairs was only one organization. Gary Lindsey, National Range, once estimated about 1,000 WSMR employees were busy at one time or another supporting the shuttle mission. The school kids even got involved. Their moms and dads baked cookies and brought boxes of them to our building for the news media.

see Reporters Everywhere, page 4



Reporters Everywhere ——— CONTINUED FROM PAGE 3

One of the major problems for us in Public Affairs was the early announcement. They announced Columbia was coming to WSMR on March 18 but the landing wasn't scheduled until the 29th after a launch on the 22nd. That meant just about every news agency and outlet in the U.S. and the free world had the opportunity to get themselves to New Mexico, if they had the money.

In the end, we had close to 900 people registered as "media" types. A lot of these were support personnel and not reporters. Why all the support? For instance, the three networks each brought in a huge house trailer and planted it at Northrup. They built wooden platforms on top to mount cameras and have a place for their reporters to report from.

We allowed Associated Press into our building (Bldg. 122) to construct a dark room in the back where the old Officer's Club kitchen was located. Running water was the key ingredient.

So we had all these people descending on WSMR from all over days, before the landing. They needed to file stories daily with their newspapers, news services and radio/television stations about what was going on. They needed to justify the expense of being in N.M.

It was perfect. NASA didn't seem to care what we did with all the local and regional reporters. They were only interested in the three broadcast networks. So it fell to us to keep all the other folks busy.

We were not NASA spokespeople so we arranged for the reporters to visit and interview missile range personnel on our preparations for the landing. We escorted groups of reporters to watch the commo guys setting up radios and landlines out at the site, to get a demonstration by the weather guys of weather balloons being launched, to record the explosives ordnance disposal teams recover and dispose of ammo, to talk to the engineers blading and smoothing the runways, and to visit the WSMR test nerve center, Range Control, Bldg. 300.

There was so much time to kill, we even took loads of people to Trinity Site and Launch Complex 33 to give them some background on WSMR's history.

Most of the reporters were thankful and loaded us up with souvenir pens, hats, t-shirts, etc. Afterwards, for awhile, I jogged in a t-shirt from a radio station in Portland.

My favorite story about a reporter was a woman from the Los Angeles Times who showed up at our office to register days before the landing. I happened to be around when she checked in with Debbie Bingham.

Debbie explained there were Army buses running from our office out to the site, about 40 miles, and they ran from early in the morning until well past sunset. The reporter asked when the next one would leave.

Taking a look at the woman's nice dress, stockings, high heels and expensive leather briefcase, Debbie suggested she might want to change her clothes and come back later in the day – after all, nothing was going to change.

The woman became a little agitated and said she needed to see the site immediately and would take the next bus. She left in a huff.

In the afternoon I was back out at Northrup and ran into Ms. LA Times. She was carrying her shoes because the heels sank into the sandy soft spots. Her stockings were all frayed and coming apart because of the gypsum abrasion. Also, the breeze was picking up the dust and her makeup seemed to be a magnet. Her cheeks looked like the cracked mud at the bottom of a dried puddle.

I didn't see her again until landing day. Someone said she had to return to Los Angeles to write an obituary for someone famous. Anyway, on landing morning I saw her and was surprised. She must have known a good Hollywood prop shop. She was wearing those jodhpur riding pants that balloon out above the knee and are tight below the knee so they can be tucked into tall riding boots. The boots were an improvement over the high heels.

She wore a matching shirt and topped it off with a real, honest-to-God pith helmet. It looked silly but I'm sure it was more comfortable than her previous outfit.

One of the neat historical artifacts from the event we displayed in the first version of the WSMR museum was a shuttle model created by local artist Bob Diven. Diven still lives in Las Cruces and is now known as a painter, writer, performer, editorial cartoonist, musician and street artist.

see Nord In The Spotlight, page 5



Columbia astronauts Jack Lousma, left, and Gordon Fullerton in the official STS-3 photo.

Nord In The Spotlight

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He was helping one of the TV stations at the site and during his down time, he built a model of the shuttle using manila folders, foam coffee cups and other debris he found.

While all this media baby-sitting was going on, the decision was made to allow the public in to watch the landing. Major General Alan Nord made the announcement at a news conference in our conference room on March 24.

I distinctly remember the news conference because our office prepared Nord for the event. It was my first close encounter with a general where we gathered rather informally and talked about formats and what to expect.

We hashed out details and told him we would prepare and list of 10 or 12 questions with appropriate answers for the conference. He came by our office the night before and we went through the Qs and As. He seemed a bit nervous as he had never done anything like it before. We reassured him and told him to study the answers.

At the news conference, when the general opened it up for questions, we all listened to see if we had calculated correctly on what reporters wanted to know. It was amazing. The first four or five questions were right off our list. As Nord fielded them you could see him visibly relax. He had the answers and it was easy. I think they asked eight out of ten on our list.

Adding the public to the landing created a whole new level of complication. The decision was made to allow folks to drive to the northwest corner of Lake Otero putting the visitors many miles northwest of the landing strips. An instrumentation site on the edge of the lakebed served as the focal point.

In preparation, the EOD personnel walked and cleared a square mile of lakebed to make sure it was safe for parking. One of my days escorting reporters involved taking a van full of them to record the soldiers doing their job.

As we drove across the lakebed to get to the EOD guys, we drove by a belt of 20mm cartridges sticking out of the dirt. I left the CBS television crew there so they could photograph while I got a couple of EOD techs to come look at it. Before I left, I hammered home the warning about the explosive dangers on the missile range and they were not to touch anything. We'd been hitting them with that day after day.

I came back to the site with a couple of soldiers who made a nice show of delicately lifting the belt a bit so they could make an identification. The CBS cameraman was all over it, right down with the tech.

The reporters were told what it was and how it probably got there. Finally, one of the techs gently pulled the belt out of the moist ground and carried it over to his pickup truck. In the mean-

time all the reporters were focused on one of the guys talking about EOD. I kept my eye on the soldier with the belt and about fell over laughing when he pivoted and made an over-the-head hook shot throwing the belt into the back of the truck. It crashed and rattled home but none of the reporters seemed to notice.

To get to this viewing site, the public was told they could enter through the Tularosa gate, drive west to Rhodes Canyon Range Camp and then south down Range Road 7 to the site. Security was a big, big deal and to make sure no one took off cross-country from the paved road, soldiers and vehicles from Ft. Bliss were positioned every few miles. They weren't just jeeps and trucks either. There were armored personnel carriers and other heavy vehicles mixed in the lot.

Reporters claimed that since the shuttle was a national asset, the security people had license to "shoot to kill" if anyone seemed a threat to it.

The news outlets were given a much closer vantage point. They were located just east of the point where the two runways intersected. It was thought this maximized the possibility of seeing the shuttle no matter which runway was used or which direction it landed.

In addition to the news media watching from this sweet spot, VIPs were thrown into the mix - hundreds of them. Bleachers, more portable toilets and shelter tents had to be erected. Workers soon found out why WSMR's lakebed is the perfect natural surface for a runway.

The lakebed is gypsum-based with some sand, clay and other materials. Over the centuries the wet gypsum compacts and hardens to a density close to concrete. To make a runway you just have to wet it and blade it smooth.

Teams needing to erect tents or drive stakes for poles or dig holes soon found it was just about impossible. Jackhammers and drills were used to punch holes in the ground so the stakes could be driven home.

Having said that, the runways could be a little temperamental. When the gypsum dried out it began to flake away. When the winds blew, the gypsum sand went with it creating a blow-out or pothole.

see Foul Runway, page 6



Shuttle Columbia landing on WSMR's gypsum notht/south runway, March 30, 1982.

Foul Runway ——— CONTINUED FROM PAGE 5

That is exactly what happened on the scheduled landing day, March 29. By mid-morning the wind was howling. It was more than a typical spring day. The gypsum sands were being picked up by the winds on the lakebed and lifting them to form a low-hanging fog bank.

I'm from Nebraska and experienced my share of blizzards. As I sat in a trailer at Northrup Strip I was reminded of January back home. The trailer rocked back and forth. The noise of the wind screaming around the windows was nonstop. Out the windows all you could see was white, not even the trailer next door.

The big difference, of course, was that when I went outside the wind was warm and gritty – no moisture, no biting cold. When I drove in it, I sometimes couldn't see the front end of my car. During big gusts I opened the door to check road markings to see if I was on track.

Personnel everywhere scrambled for goggles to protect their eyes and dust masks to protect their lungs.

Because of the sand blizzard, the landing was postponed a day. The wind blew potholes in the runways and sand was drifting like snow across them in other places. The engineers went to work after the wind died down to move sand and fix the holes. They were at it all night.

One requirement for blading the sand was to get it wet. Tankers hauled in water from a tiny well on Range Road 7 just north of Pony Site. The water had one remarkable trait. Because of its high sulfur content it smelled like rotten eggs.

Everyone was aware of the smelly water because we'd all been stuck, at one time or another, behind the tankers as the runways were initially prepared. It was pretty foul.

After the landing was postponed the news media immediately started a joke saying they didn't see any reason to postpone the landing. Certainly, the pilot would be able to smell the runway even if he couldn't see it.

At the public viewing area, visitors suffered through the winds. Camper tops were blown off and people lost chairs and other light items as they flew toward Tularosa.

Everyone reloaded then and we tried again the next day, March 30. Since the weather forecast was for high winds again, NASA brought Columbia in earlier in the morning to make sure they got it on the ground before the dust storms struck for round two. It worked with the shuttle touching down at 9:04 a.m.

The mission commander was Jack Lousma and the pilot was Gordon Fullerton. They completed 130 orbits and traveled 3.3 million miles while circling the earth.

The WSMR landing was a bit different than all the other landings in the program. We were told Columbia would come from the west, we would hear a double sonic boom, it would make a big swooping loop turn to bleed energy and then it would touch down on the north/south runway heading south.

We saw and heard most of that except for the big loop at the north end of the runway. Instead Columbia came from the west and made a big right turn and shot for the runway.

As a result, according to Al Paczynski, NASA's manager at Northrup Strip, the shuttle came in hotter than planned. When it touched down it was going close to 50 miles-per-hour faster than planned.

As Columbia rolled down the runway on its rear wheels, the nose started to drop. Suddenly we all saw the nose rise back up as if it was going to do a back flip. However it quickly stopped going up and dropped back down hard onto the runway.

You can always distinguish the WSMR landing from all the others because of that little hiccup. Fullerton later said he thought the nose was dropping too fast so he pulled back on the controls to slow it down but went too far.

We also learned the landing gear deployed at 150 feet off the ground and locked in place only five seconds before touch down. That was cutting it close.

Paczynski said the two shuttle tires left a great deal of burned rubber embedded in the runway where they initially touched down. He said he had workers cut out those blackened areas of the runways and gave them to employees as souvenirs.

Once on the ground the two astronauts were removed from the shuttle, given a quick health check and then whisked to a ceremony near the media/VIP viewing area. Soon after that concluded the winds started to blow again. By noon, we couldn't see the shuttle out on the runway from the press viewing area.

The winds continued for days. They plagued all our operations at the site.

Our involvement in this landing did not end there after the landing. Columbia was towed to a "de-service" area to prepare it for its piggy-back ride back to Florida. While this work was being done, NASA and WSMR allowed the public and WSMR personnel and their families the opportunity to ride a bus to Northrup Strip and look at it.

We devised a schedule to run long caravans of buses from the main post out to the strip and back. Then we made up color-coded tickets for the different days and times and distributed them.

So our labors in support of STS-3 didn't really end until Columbia flew away on the back of a 747 on April 6. I don't know about everyone else, but I was tired.

As a result of the flight, Maj. Gen. Nord proclaimed the spot where Lousma and Fullerton rejoined their wives out on the strip as "Columbia Site." Also, N.M. Senator Harrison Schmitt, a former astronaut who walked on the moon, introduced a bill that Congress passed renaming the old Northrup Strip as the "White Sands Space Harbor."

Lousma and Fullerton, along with their wives, flew into WSMR again on May 17, 1982 to thank White Sands for its support. They visited the school to talk to students, gave a slide presentation about their mission at the post theater and shared their experiences again at a luncheon attended by 450 people.

see It Almost Landed In 2006, page 7

It Almost Landed In 2006 ——— CONTINUED FROM PAGE 6

Locally, people were quite excited about the Columbia landing. They eagerly looked forward to future landings at WSMR. Unfortunately, that was it – a unique event.

Most people say NASA never wanted to land at WSMR again because of the blowing dust. Apparently when Columbia got back to Florida the engineers found gypsum in just about every nook and cranny on the shuttle.

That was certainly a factor but more important might have been the cost and time delay of landing at WSMR. The expense of moving a great deal of specialized equipment to N.M. was huge plus getting two cranes to lift the shuttle onto the 747 became a major issue. The scuttlebutt was that it might take weeks to get the necessary cranes and would really put a crimp in NASA's scheduling.

However, the Space Harbor did serve as a backup landing site throughout the program. Improvements were continually made to keep it up-to-date.

For instance, lights were added so a night landing could be accomplished. This was a simple system that used huge xenon spotlights with a total of more than 11 billion candlepower. The lights were mounted at one end of the runway and were tilted to shine parallel to the ground, down the runway. Along the edge of the runway were small stakes with reflective tape at the top. If a shuttle came into the runway at night, the pilot would see a long area at the beginning of the runway fairly well lit and then the edges lit by the reflectors, probably all the way to the end.

Also, the de-service area was moved west to the edge of the lakebed. By moving the preparation area to the edge of the runway there would be much less dust to contend with in the event of high winds.

The closest White Sands ever came again to hosting another landing was on Dec. 22, 2006. Bad weather at both Edwards and in Florida had already forced NASA to keep the shuttle in orbit for extra days. Finally, they couldn't delay any longer. The shuttle had to come down on the 22nd come hell or high water. It was necessary to activate the Space Harbor so all three possibilities were in play that day.

Our office notified the media and after lunch we took two buses of local and regional press out to our viewing area. When we left Public Affairs, it was looking pretty good for a landing at WSMR. The weather was still bad at the other two sites.

As I got off the bus, my cell phone rang. It was my boss Larry Furrow who was at the NASA Ops Center. He said Discovery had just completed a de-orbit burn for Florida. I said "damn" and went to tell the reporters to get back on the buses. Apparently NASA managers saw a small break in the clouds over Florida and were able to land in the gap.

The value of the Space Harbor to our space program certainly can't be measured in actual landings of space shuttles. In the end it was the training of the shuttle pilots that made WSSH important.

All the pilots trained to fly shuttles in a trainer aircraft that simulated the controls and actions of the shuttle. When

the trainee sat in the pilot's seat, the controls were exactly like those found on the shuttle. They went so far as to cover parts of the cockpit windows to simulate the limited visibility found up front in a shuttle. They also modified the plane, a Grumman executive jet, to behave like a shuttle falling pretty much like a rock out of the sky.

Over 90 percent of pilot training was done at WSMR. The pilots trained in all kinds of conditions – day, night, cloudy, head winds, tail winds, cross winds, calm, etc. – using the gypsum runways.

The pilots liked the Space Harbor. The runways were so long and wide, they were very forgiving. They said the old lakebed surrounding the Space Harbor was visible from an orbiting shuttle as a large white spot on the ground.

Even though the shuttle never landed at WSSH again, it became a handy emergency landing site for military aircraft. Probably the most memorable one occurred in 1994 when a KC-135 lost a landing gear assembly on takeoff at Holloman AFB. The whole thing fell off leaving just a strut sticking down.

The pilot and crew spent hours flying around WSMR's airspace burning fuel and then finally landed at the Space Harbor. The pilot was able to keep the plane off the strut for sometime before she lost enough speed and had to set the plane down all the way. The strut plowed into the gypsum and spun the plane around. Not only did the crew survive but there was no serious damage to the plane.

On June 13, 2011 NASA held a farewell ceremony out at WSSH. Brig. Gen. John Regan, WSMR commander at the time, was on hand to accept a commemorative plaque from NASA administrators for WSMR's support. I was one of only a couple of WSMRites who worked the landing in 1982 who attended. To say the least it was a bit sad.

So what is the future for the space harbor? Right now it is up in the air although my guess is it will return to being a lakebed with the runways disappearing very quickly. NASA offered the facility to the missile range but WSMR has no money and no hot projects needing such a capability.

It looks like it is lights out.

EDITOR'S NOTE: *If any of you readers have a shuttle story or experience to relate, please send it to me. We should have room in the next newsletter for some. You can email them to: nebraska1950@comcast.net or use the postal service and address them to: HAH Editor, PO Box 171, White Sands, NM 88002.*

Given that most evidence of the Space Harbor will probably soon blow away when NASA removes their buildings, let me be the first to suggest we look into getting a historical marker or sign erected on the side of Range Road 7. It could be placed near Brillo Site, which is straight west of the old runways, and could recount the days when WSMR and NASA supported the space shuttle on the old lakebed.

Putting the marker along a well-traveled road makes more sense than trying to erect something out at the site where no one would see it and it would soon be forgotten.

Hands Across History
P.O. Box 171
White Sands, NM 88002

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On June 13, 2011, Michael Coats, NASA Johnson Space Center director, right, and Frank Benz, NASA's White Sands Test Facility manager, left, present Brig. Gen. John Regan, WSMR commander, with a commemorative plaque during a farewell lunch for the closure of the White Sands Space Harbor. It also celebrated an association of more than 40 years concerning support of the space shuttle program. Photo by Adriana Salas.