

Vandenberg in the early Days



Some Vandenberg Dates

1 September 1956 - Camp Cooke selected as IRBM/ICBM base

7 June 1957 - Camp Cooke redesignated Cooke AFB

16 July 1956 - 1st Missile Division moved to Cooke AFB

1 January 1958 - Cooke AFB moves from ARDC to SAC

8 May 1958 - First Atlas ICBM delivered

4 October 1958 - Cooke AFB becomes Vandenberg AFB

16 December 1958 - First missile launched - a Thor IRBM

My First Day at Cooke AFB, California - a look at the early days at Vandenberg by Jerry

Strong, member number A0466

Oct 4, 1957, Dallas, Texas - Radar Bomb Scoring Detachment 1 of the 10th Radar Bomb Scoring Squadron at Love Field - we hear the news that Russian has launched "Sputnik One" into orbit. That's all the talk, anyone you see and talk with, all the radio and TV stations. Sputnik, Sputnik; beep, beep, beep - everyone trying to sound like the signal sent by Sputnik. The whole world is changed by this launch of the first artificial satellite. Education policy changes, loans and grants are made to science and math teachers, student loans are started; engineering, science and math are the majors. Americans' response - to hear that Russia beat us into space, this is unthinkable. Everyone's interest turns to missiles, rockets and space.

Back at Love Field, we are supporting Convair with the testing of the ECM pod for the new B-58 bomber. I was full time maintenance on the radar and plotting board equipment, but operated the radar on special missions. Next came Chance Vought's request for support on flying the guidance system for the Regulus II missile. This was a cruise type missile to be carried and launched from a submarine. It was the backup/stopgap in case the tube launched Polaris missile was a failure. The Chance Vought engineer was a Japanese fellow who had worked on the Mitsubishi "Zero" fighter plane during World War II. We asked some questions about the "Zero"; however, most were about the Regulus guidance system. The test was a success with the system mounted in a Douglas B-26 aircraft. The Chance Vought engineer took the radio microphone and gave them the results, "bullseye, bullseye."

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A Word from the Association -

Newsletter Production - This issue features articles totally provided by members and other authors. You're sending in more and more interesting articles on a wide variety of topics. We feature nuclear submarines and a resort hotel in this issue. I was in New Zealand and Fiji for part of November, so the issue is a little later than planned, but I think you will find it's worth the wait.

AAFM Travels - We've hosted two meetings in recent weeks. In October, BGen Tim McMahon helped us set up an informal gathering at the Offutt Officers' Club - about sixty members and missileers attended. In early December, we had our second meeting this year at Peterson. LGen Lance Lord, board member and AFSPC Vice Commander, joined about 70 others there. I hope to get to Warren early in 1998 - watch for news.

321st Missile Group - A lot of you have asked about the closing ceremony for the Grand Forks missile unit - see page 7 for details. AAFM will be there with our display. Like many of you, I have close ties with the 321st - I spent five years on the crew force there in the late 1960s.

New Four Star - Member John Gordon, who commanded the 90th Strategic Missile Wing at Warren and served at Ellsworth in the 44th, has recently been selected for promotion to General, and is the Deputy Director of the CIA.

AAFM History Book - You should have gotten two mailings from Turner Publishing about our upcoming book, timed to come out for the 1998 National Meeting. If we missed you, let me know - there is still time to get your bio or your missile story in the book.

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Taps for Missileers - CMSgt (Ret) Bob Eagle, Spokane, Washington, a Lifetime AAFM member, served in Atlas and Titan II. He served at Altus, Sheppard and McConnell in maintenance.

General (Ret) Leon Johnson, who commanded the 44th Bomb Group in WWII and won the Medal of Honor for leadership during the Ploesti raid. He visited Ellsworth in the early 1980s, and made a video on "Officership" while there. He was highly respected by the enlisted troops and officers in the old 44th - he used to give rides to the maintenance troops in his Packard staff car - they always called him "Colonel Johnson" until his recent death - and all popped to attention when he entered the room at recent reunions.

Letters to the Association

Address your letters to AAFM, Box 5693, Breckenridge, CO 80424, or e-mail to AFMISSILEERS@compuserve.com. Letters may be edited to fit - content/meaning will not be changed.

Dear AAFM Editor,

I'm a fulltime author on Air Force subjects as well as a columnist for Air Force Times, and I feel privileged to be receiving AAFM's publication. I enjoyed the article by Lee Higley, but I wonder how he could have found a thousand AIM-4A and -4C missiles in storage at Truax in February 1960. The designation AIM-4 did not exist until October 1, 1962. I believe Higley found GAR-1D and GAR-2A missiles at Truax in 1960

Best wishes.
 Bob Dorr

A response from Lee Higley -

How right you are, I stand corrected. I was so used to using the term AIM for so many years, that I forgot that at that time, we still used the GAR term. We had the GAR-1D, and CAR 2A at Truax. The missiles in storage at Baraboo Ordnance Depot in Wisconsin were the original GAR-2. As we got the new 1959 model GAR-2As, the older ones went to Baraboo into storage. The GAR'S in storage were brought back, to Truax, checked out, and sent to Tyndall AFB for firing. I do enjoy your articles in the Air Force Times. Keep up the good work, Bob.

The Old Tomcat Lee Higley, Mbr No A0531

I Just got the latest newsletter, the one that covers "Transportation and Missileers." I especially liked the article on Moving Missileers in Montana since I spent nearly 13 years at Malmstrom. There is one mistake in the article! One of the towns he refers to, Lewiston, should be
(Continued on page 3)

Letters (cont) Lewistown. Its a really great community and I know if someone there saw the article they would notice the mistake right out! I enjoyed his comments about ops crew travel during those years. One day I hope to share some maintenance travel tales during those same years in Montana. Keep up the excellent work!

Clyde Owen, Mbr No A1284

Dear AAFM Editor

I read, with interest, the article in the August issue, titled "Watch Out- Falling BOMARC", by Richard Rice. I remember that mission very well. I was the Drone Coordinator in Mission Control that day. A good friend and at that time my boss, Maj Jack Dixon, was Mission Commander. That accident resulted in several meetings and rule changes regarding visitor and observer safety. Maybe Rice remembers the shortest BOMARC-A flight on record. I was the Mission Commander. Reviewing telemetry after the mission, showed that the missile had had forward motion then rotated in the shelter and burned. This resulted in a large cloud of Fuming Red Nitric Acid, which started drifting westward along the beach toward Pensacola Beach. We frantically alerted all police agencies from Ft. Walton Beach to Pensacola to evacuate the beaches. This cloud drifted westward to near the boundary of government property, when a sudden wind change turned it northward, and drifted directly over our tracking radar station. The cloud then slowly dissipated as it drifted over the Eglin Reservation. During this time my body pumped about 3 gallons of adrenalin.

Lewis E. Feuerstein, Mbr No A1209

I was a Missile Maintenance Technician (MMT) with the 548SMS (Atlas E) at Forbes AFB from mid '62 until deactivation in 1965. I was first assigned to operations, but before I could be sent to Vandenberg for launch train-

ing, I was reassigned to the Mobile Maintenance and Check Out (MOCAM) section. As soon as I had my 5 level, I became the MMT on MOCAM Team 1. The team (usually consisting of 5 or 6 specialists) traveled in old worn out 48 passenger busses. These busses worked ok as there was plenty of room for our tools, check-out equipment, etc. We took some of the seats out in the back to make them even more convenient. One could get a relatively good nap on them as well! Every member of the MOCAM team got a bus license, so we took turns driving. Once, our bus started giving us trouble on the highway west of Topeka. It was clear that we would not make it to the site, so we pulled over in a rest area. We had no radio, so all we could do was wait for someone on the way to or from the site to stop and take word back that we were stranded, or for someone to notice that we had not checked in at the site. We scrounged some firewood and built a fire in a BBQ pit in the rest area to stay warm. It was several hours before we were "rescued". We built a makeshift oven, warmed up our foilpak lunches, and had dinner. As I recall, the wrecker and another bus got there just in time for us to go back to the base! Our CO, Colonel Clugston, was at one of the sites one day to observe something we were doing. One of the other specialists on the site was needed at another nearby site, so the Colonel told him to take his staff car and go. The Colonel told him that if he did not get back in time, that he, the Colonel, would ride back to the base with the MOCAM crew. Colonel Clugston was like that! By the time the MOCAM team was ready to go, it was dark, the wind was howling, and it had begun to snow. Of course, the bus would not start. This was not uncommon, so we always parked it so that we could push it if necessary. Picture this! We all got off to push the bus, and the Colonel was right there beside me helping push! Within a week of the bus incident, the busses disappeared. In their place were brand new crew cab four wheel drive Dodge pickups; two for each MOCAM crew! The G2000 engine service carts used on the Atlas engines were about the size of a golf cart but I estimate they weighed 1500 pounds or more. Even though the carts were on wheels, they were not made to be pulled on the highway so the base transportation squadron had to haul them to the site on a low-boy trailer, unload them, the haul them back when we were finished with them.

Someone got the idea to mount the carts on a truck so they could be more easily moved around to the sites. It was decided that the MOCAM teams would get checked out in the trucks and do our own transportation of the G2000 carts. Good idea! However, the only truck chas

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Cooke AFB (cont) A request comes in for our radar AFSC to go the 704th Instrumentation Squadron at Cooke AFB, California. I put my name in - nobody else from Det 1 volunteers - orders arrive to report on or about 20 April 1958 with delay en route approved. Next: what is the 704th Instrumentation Squadron? Where is Cooke AFB? How do I get there?

Carswell AFB is our headquarters and support base - the transportation office can't tell me where Cooke AFB is. I don't have an automobile, so the best suggestion - take the train to Monterey and find out "where to go." A two day train trip from Dallas to Monterey - part of my baggage didn't arrive at Monterey and I still don't know where Cooke AFB is. After a couple of days, I go back to the train station to check on my duffel bag - still not in. The freight agent says he will forward it when it comes in - where do I want it sent? "Cooke AFB, but nobody knows where that is." Then I said, "That was Camp Cooke - US Army." That solved all my problems - he knew that the railroad station was at Surf and the base between Santa Maria and Lompoc.

I went to the bus station, bought a ticket based on that information and left for Cooke AFB. The bus left after dark and we rode all night and into the early morning. We leave Santa Maria and ride a long way in the country, the bus pulls over to the side of the road and stops - we are at Cooke AFB. Two of us get off - the driver gives us our baggage from the bus compartment and drives away. What do we see? A small wood building just off the road for the main gate guard shack. About three quarters of a mile from the road is the first building. That building is the 704th Strategic Missile Wing headquarters where we sign in. The sign-in book is numbered - we are between 450 and 475 to sign in to Cooke AFB. The other fellow is also going to the 704th Instrumentation Squadron - he is a supply person. We get our base processing papers, an information pamphlet and a map. We find our squadron in the old hospital area - three officers and four enlisted men - now six.

The squadron commander is LtCol Perry - former range safety officer at both White Sands and Cape Canaveral missile ranges. He was selected because of his ability and reputation for this job. One of his several degrees was in civil engineering - he was spending most of his time checking the work of the contractors on base. So the first day, we find out something about what the 704th Instrumentation Squadron is going to do. Only the two of us that reported in today are single - we are assigned to the barracks and shown the mess hall. The

one barracks has people from five or six squadrons, with each squadron having only a few people assigned. The mess hall is an old Army company type - everyone shares the mess hall. The aide to General Wade stood in line with the rest of us. The old mess sergeant greeted everyone, "What else would you like to have served? What do you like or dislike about the food or service?" This would stay the same until the new, large consolidated mess hall opened.

Later in the afternoon we hear that a C-47 has crashed short of the runway. Several of us go to look - the plane landed short of the runway, went between two trees and knocked both wings off outside the engines. The runway was closed until further notice and air operations moved to the Santa Maria airport. I would learn more about Santa Maria airport in a few weeks.

Many things happened that first day at Cooke AFB, and much, much more in the fourteen months that I was at Cooke/Vandenberg. I don't remember now, but I am sure that on that first day I must have said "Why, why did I ever leave Dallas?"

Eight months later the first Thor was launched from Vandenberg. In the 704th Instrumentation Squadron, we were 100% Air Force - no civilians were in control of any operations. In eight months, we went from no people, no buildings, no equipment, no training or experience to the first launch. Each year, as we get older, the feats get larger, but I think maybe we won't live long enough to make this accomplishment too large. The crack was in the curtain - the missile gap was already over.

The First Sergeant

We had been at the base for three to four weeks - the squadron is starting to fill up with people. Still only three officers, but we now have a first sergeant. He is from the "Old Army" with 26 to 28 years of service - the "First Soldier" type. He is six feet four - a big, rawboned man, who is in charge, and everybody knows it.

General Power, CINCSAC, is coming to the base and the base must be cleaned up. Squadron commanders and first sergeants are exempt from the detail - everybody else, from lieutenant colonel on down, will be on the cleanup detail. One of the officers is a first lieutenant, an Annapolis graduate waiting to get out to go to dental school. The first sergeant has the lieutenant be his jeep driver to keep him out of the work detail. So he and the first sergeant bring us coffee, ice water and make sure that we have regular breaks. Only the 704th Instrumentation Squadron had a first sergeant that looked after his

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Cooke AFB (cont) men on the cleanup detail - the "Old First Soldier."

Cooke AFB had been Camp Cooke, a US Army training base. Part of our cleanup area was around the old tank garages. Some of these held three tanks and the others had spaces for five tanks. Each garage also had an office and a maintenance area which were like miniature time capsules. The maintenance NCOs had laid out their shops and each was different. Some had tool boards with painted outlines or shadows, others just the boards and hooks. Names and dates were written or carved in the boards on the wall. It made us wonder what happened to them after leaving their tank units.

After three days or so all the areas that General Power is going to visit are cleaned up - not bad or a hard detail, and working together, we get to know each member of the squadron better. As to the lieutenant, everyone thought that the first sergeant had pulled a neat trick by making him his driver - and nobody resented the assignment.

The "Old First Soldier" only stayed with us a few more months. When the first ever Senior Master Sergeant promotions were announced, he wasn't selected - so he decided that it was time to retire from the Air Force. Sadly, I don't remember his name -but I will never forget our "First Soldier" in the 704th.

GLCM GUIDANCE SYSTEM

Submitted by Colonel (Ret) George Grill, who was with General Dynamics at Greenham Common AB, England - it may not be the first time you have seen this - it seems to apply to all guidance systems.

The missile knows where it is at all times. It knows this because it knows where it isn't. By subtracting where it is from it isn't, or where it isn't from where it is (whichever is greater), it attains a difference or deviation. The guidance system uses deviations to generate corrective commands to drive the missile from a position where it is to a position where it isn't, arriving at a position where it wasn't, but is now. Consequently, the position where it is, is the position where it wasn't. So it follows that the position where it was, is the position where it isn't. In the event that the position where it is now is not the position where it wasn't, the system has acquired a variation. The variation being the difference between where the missile is and where the missile wasn't. If the variation is considered to be a significant factor, the missile guidance logic system will allow for the variation, provided that the missile knows where it was or is not now. Due to the variation modifying some of the information

obtained by the missile, it is not sure where it is. However, the thought process of the missile is that it is sure where it isn't, and it knows where it was. It now subtracts where it should be from where it wasn't and adds the variable obtained by subtracting where it isn't from where it was. In guidance system "language" this is called error, or the difference between deviation and variation found in the algebraic difference between where the missile shouldn't be and where it is. Simple.



Letters (cont)

sis available were two old worn-out International dump trucks. The dump beds were removed and the G2000 carts were mounted on the truck frames. This was OK, except that these trucks had electric clutches! That's right, electric clutches! They had a standard 5-speed floor shift, but no clutch pedal. Instead, there was a button on the gear shift lever that you depressed when you wanted to change gears. The transmission had a torque converter on it, so that you just held the brake, depressed the shift button, shifted into low, released the button, released the brake and went on your way. There was a sort of "clunk" when you released the button to get started, but otherwise it worked OK. I still have my AF drivers license which lists "5 ton truck with electric clutch" as well as pick-up, staff car, and 48 passenger bus.

The launch crews used station wagons almost exclusively Chevys, as I recall. Helicopters were used as base-site transportation. but rarely. Near the end of the life span of the 548th, small STOL aircraft were used more frequently as base-site transportation. Short runways were prepared near the sites, just outside the outer security fence. I recall that these planes (I think they were called Otters) had a big radial engine and swivel landing gear so that crosswind landings could be made more successfully. The pilots had a reputation similar to the "bush" pilots in Alaska. The security guards used these planes - frequently.

Jack Roberts, Mbr No A0513



It's Still Alert - *By Burt Bright, member number*

A0072 After 27 years of active duty and four years working at the Kings Bay submarine base in Georgia, I finally got a trip aboard a Trident Submarine. Now this ranks a distant third behind a ride in an F-16 and of course, since we are card carrying Missileers, there was that memorable trip to Vandenberg in 1970 when Lewis Brewer and I launched a Skybird and one regular - but that is another story.

The Trident submarine is big, expensive, and complicated. It is 560 feet long, 42 feet tall, 36 feet wide, over 18,000 tons submerged, with 24 missile tubes and 4 torpedo tubes, which they have for Anti-Submarine Warfare (ASW). It costs about \$2.3 billion and the on board complement is 15 officers and 150 enlisted men.

The boat on which I went was the USS Wyoming (SSBN 742) commanded by Commander Seth Paradise. The Wyoming is the 17th Trident built and the 9th of the class to fitted with the Trident II D-5 missile. I remember when many of us were on the Joint Strategic Target and Planning Staff (JSTPS) in the 70s; it was impossible for us to get on board a submarine. Now that the Cold War has ended and even the Interservice Budget War has subsided; it is easier to 'get on board.'

The trip included a complete tour of the boat which included many of the dynamics with which we were concerned during our halcyon days of alert. Except these guys drive to their capsule and then proceed to spend 70 or so days on Alert. My trip was 14 hours.

The boat is amazing in that it is completely self-sufficient. The limiting factor is the amount of food they can carry. The highlights included: The 35 foot climb to the bridge and seeing the vast ocean and the hull of the boat with the 24 tubes. It was a clear day which made the view that much more spectacular. I was able to use the periscope and listen to fish on SONAR. Of course the tour included the support equipment which would remind some of us of the LCEB gone high tech A special highlight as the simulated missile launch at the Missile Command Console. It was very similar to what Boeing gave

us and even similar to the Sylvania version.

When I went to the Torpedo Room and fired an Ocean Water Slug, I was reminded of the time in 1975 when I briefed a Navy Captain on some aspect of the SLOP and I was concluding with ..." and after the boat launches the missiles it is now Miller Time." The Captain then explained that it was at that point that the fun and challenges began as they prepared for their ASW mission.

Yes, the food was good and no we did not have foil packs. It was freshly prepared. I did have a previous dry dock dinner aboard the USS Tennessee on which my wife and I were hosted in the officer's Wardroom for dinner. That experience was much different than the facility manager bringing a foil pack to the LCC at Hotel 1 while on alert a Whiteman.

Many of us have been to the Museum Of Science and Industry in Chicago where there is a WWII submarine with the hatches and the unbelievably small and cramped quarters. These Trident Class boats are quite roomy when you consider that they have a study room which is equipped with computer where the crew can take college courses while underway, a small exercise area which has 2 treadmills, exercise bikes, and weight machine. In addition, there was a library and videos for all. In fact the size and support functions reminded me of one of remote tours which was in Alaska; however, we got mail!

The crew was outstanding in their hospitality and their willingness to thoroughly explain what they do. The morale appeared high and the excellent leadership was evident throughout my visit My visit was in conjunction with a family outing for all the dependents of the crew. There were extra 100 individuals on board during this cruise. The crew did everything to make everyone comfortable. This Included the chow hall opened all the time and movies available throughout the 14 hour day.

After 14 hours of climbing through hatchways, climbing stairs, watching my head, and finding all the items on our tour checklist; I was ready to depart. I departed knowing that I no longer have to go on alert and that there are individuals who are taking our places who are continually doing the job for freedom.

Are all of your missileer friends members???
Send us their addresses and we will
send a newsletter and brochure
Help AAFM continue to grow



321st Missile Group Inactivation

GRAND FORKS AIR FORCE BASE, North Dakota

The 321st Missile Group here is scheduled to be inactivated July 1998 as part of a 1995 base realignment and closure decision.

The realignment process, which began in October 1995, involves transferring 120 Minuteman III missiles to Malmstrom AFB, Montana, and the remaining 30 missiles to the Ogden Air Logistics Center Utah.

Two of the three missile squadrons assigned to Grand Forks AFB, the 446th and 448th Missile Squadrons, have been inactivated. The last squadron, the 447th Missile Squadron, 9 schedule to have its last missile removed in June 1998. The 321st Missile Group is hosting a formal inactivation dinner July 1, 1998, to commemorate the efforts of all the men and women who have served in the 321st over its history. The inactivation ceremony for the group will be July 2.

For more information on the group's inactivation or reservations for the commemoration events, contact the 321st Missile Group's Mission Realignment Office by phone at (701)747-4336 DSN 362-4336; by fax at (701)747-3666, DSN 362-3666; or by e-mail to mg.ccr@mg.grandforks.af.mil.

Coming Events -

1998 AAFM National Meeting - October 21-25, 1998, Cocoa Beach, Florida Holiday Inn. See the enclosed registration form.

321st Missile Group Inactivation - July 1-2, 1998, Grand Forks AFB, ND. Phone 701-747-4336 for information.

First Alert - *the first in a series of members' recollections of their first time guarding our country. By Captain David Arnold, member number A0332, who was assigned to the 90th Missile Wing, 1990-1994*

My first alert was exciting to say the least. At that time in the 90th, we sat by squadrons with one site behind another. It was a pretty typical March in the Rocky mountains, with the threat of snow always there. As we went into pre-d, the snow had started to fall and the forecast was for more. Well, after the briefing, my squadron commander walked up the rows of crews saying to each Deputy "Drive safe" but when he gets to us, he says to my crew commander "Drive safe." Now, I'm from snow country, and have driven on it plenty, but I had never driven a Suburban before, let alone on snow. But my commander wants me to drive feeling that now was as good a time to learn as any.

Well, no problems getting out to Lima-01, getting on site, or doing changeover. We take our time getting through inspections and by the time it comes for the commander's nap, he's ready for sleep. So he hits the rack and I settle in for some TV-watching. About an hour later, the topcop calls and says there's an unidentified car at the gate to the LCF (we called them LCFs in those days) and he was going to send an ART member out to meet them. I knew there was a driving snowstorm out there. We had a couple of security situations we tabled because the roads were bad. I didn't want to wake my commander from his nap because I had heard all the stories about new deputies being "pimped" to do that, so I exercised my professional judgment and said "OK," not really seeing any harm in sending a cop out into the cold. The FSC calls me back a few minutes later saying the people in the car had noticed a calf stuck up against the fence as they were driving by the LCF, and drove up thinking that L-01 was the FARMHOUSE! I would have liked to have seen the expression on their faces when an 18-year-old with an M-16 walked out to greet them! But, in their zeal to help the local farmer on who's land our temporary home rested, the Facility Manager and the ART went out into the snow, rescued the calf and returned him to a grateful cattle rancher.

Greg Ogletree's book of missile patches, with more than 500 pages documenting patches from 1954 to date, is available from Greg, 1007 Ebony, Vandenberg AFB, CA 93437, for \$75 per copy



Blast Door for the Bunker

Under The Greenbrier Hotel - The Bunker that Protected Our Congress

- By Paul "Fritz" Bugas, Director of Community Relations and Special Projects. Fritz was responsible for operating the bunker during the entire time it was in service.

"A Resort for All Seasons, America's Resort, Ladies and Gentlemen Serving Ladies and Gentlemen, America's Informal Business Capital, Life As It Should Be," and "Live The Legend of Luxury"- all of these phrases have been used to describe The Greenbrier, a name that brings to mind beautifully rolling mountains, green woodlands and an ambiance attainable few other places in the world. It's a place of elegance, serenity, recreation and entertainment, clean air and caring people. For nearly two hundred and twenty years, The Greenbrier has been known for its traditional high levels of service and facilities, winner of the Mobil 5-Star Award for 36 years and AAA's prestigious 5-Diamond Award for as long as it has been in existence. One could go on and on and never use all the descriptions that encompass this 6,500-acre resort in southern West Virginia. Designated a National Historic Landmark in 1990, The Greenbrier's history has been aligned with that of the United States since 1778, when settlers discovered the medicinal value of the White Sulphur Springs water from friendly Indians. The first visitors to the springs simply camped in tents or built primitive log cabins around the perimeter of the spring. However, the owners of the land in the early-1800s built a Tavern and transformed a collection of tents and log cabins into a small village with rows of cottages named after the states from which the visitors came. By 1850, this was the premier resort in the south, and 26 Presidents of the United States have visited The Greenbrier.

Over the next 60 years, the resort, then commonly

called the Old White, underwent many changes. During the Civil War it changed hands several times, serving as a hospital for both the North and the South, and when it reopened after that time of strife, its old-time guests flocked back to "see and be seen" - the men to talk politics and the ladies to make marriages for their eligible daughters. There was little money in the south to maintain the resort in the fashion of the past, and by 1910, the property had been purchased by the Chesapeake & Ohio Railway (now the CSX Corporation). The C&O built the new Greenbrier and continued to build it through the next 30 years. Guest bedrooms numbered 685 by the beginning of WWII. Beginning December 1941, German and Japanese diplomats were interned at The Greenbrier until they could be repatriated; this was meant to influence those countries to treat our diplomats in the same manner. With the departure of these foreign visitors, the hotel reopened its doors to the public, only to have the U. S. Army purchase The Greenbrier in September, 1942, and convert it into the Ashford General Hospital. More than 20,000 soldiers were nursed back to health at The Greenbrier. (It was a cardio-vascular center.) Also, The Greenbrier served as a German POW camp; they performed duties as ward boys and tasks on the grounds. Their barracks were located on the site of the old White Sulphur Springs airport.

In 1948, the C&O repurchased the property and spent eleven million dollars refurbishing it. The Greenbrier reopened to welcome the creme of society and Wall Street. The popularity of the resort not only for social guests, but conference groups as well, led to the decision to add another wing; guest rooms and the Greenbrier Clinic occupied the new West Virginia. Construction of the West Virginia Wing (1959-1962) was used as a cover for the construction of the underground bunker.

Thousands of guests at The Greenbrier have walked

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The Exhibit Hall



Greenbrier (cont) through the West Virginia Wing during the past 35 years, never realizing that below them was a top secret bunker designed to keep American democracy functioning during a nuclear war. "It was a classic case of hiding something in plain view, said Paul E. "Fritz" Bugas, the self-described Cold Warrior who managed the clandestine facility from April 1971 to July 1995.

For decades, groups as diverse as General Motors executives and West Virginia dentists visited trade shows in the Wing's Exhibit Hall and viewed presentations in the adjacent Governor's Hall and Mountaineer Room. Nobody realized that, if war came, the U. S. House of Representatives would meet in the former and the Senate in the latter. The Exhibit Hall would have provided work space for congress and a small support staff.

"A reason for the longevity of the secrecy of the facility was that it was truly a secret out in the open," said Ted J. Kleisner, president and managing director of The Greenbrier. "It blended so well with the hotel's architecture, and was so integrated into its day-by-day operation that the hundreds of thousands of guests who have visited The Greenbrier over the years virtually had no idea of the existence of this substructure."

The facility, code-named "Greek Island," had enough space to house more than 1,000 people. Accommodations were austere and barracks-like, featuring bunk beds, communal bathrooms, and a mess hall. The bunker also had a broadcasting studio, dental equipment, decontamination areas, a small medical lab and clinic, huge generators, a records storage room, and an air purification system.

The bunker's existence became public knowledge on May 31, 1992, when The Washington Post ran a lengthy article revealing its existence and purpose. With its secret exposed, the facility no longer offered a safe haven. The government chose to discontinue its use. It formally ended the "Greek Island" project in July, 1995, giving control of the site to The Greenbrier.

Today, the Cold War seems like a distant memory and the bunker a relic from a confusing and sometimes frightening period. But, given the realities of those years, the bunker amounted to an important insurance policy.

The Cold War between the United States and the Soviet Union began in 1945 after World War II ended and lasted until communism collapsed in Eastern Europe in the late-1980s and early-1990s. This rivalry was played out around the globe. A nuclear war between the superpowers was a possibility. The resulting destruction would have been horrific and wide-spread.

If such an event occurred, President Dwight D.

Eisenhower wanted to ensure that democracy survived and Congress continued to play its vital role in government. So he put forward the idea of developing a secret site to which Congress should relocate if Washington was attacked. The Greenbrier, one of Eisenhower's favorite vacation spots, seemed like a good site. Not only was it near Washington, but the resort had a long relationship with the government. During the Civil War, the resort was the site of a hospital. During World War II, Axis diplomats were held there until exchanged for Allied counterparts. The government later converted The Greenbrier into a military hospital.

"These factors perhaps played a role in the selection of the resort for this purpose," Kleisner said, "as well as the fact that we were planning to build a new wing at the same time as the relocation facility proposal was put forward."

Eisenhower approached top congressional leaders from both parties with his idea and received their approval and support. The 112,000-square foot bunker was simply incorporated into the wing. Work began in 1959 and was completed in 1982. The installation of equipment came next, with the shelter ready for its new role in 1963. Construction costs totaled \$15 million.

The facility is buried about 720 feet into a hillside. Its ceiling and floor walls range from 36 to 60 inches thick. There can be anywhere from 25 to 75 feet of dirt covering between the bunker and the West Virginia Wing. There are four entrances to the site, each protected by large steel and concrete doors. The facility was designed to protect against radio active fallout.

Once built, the bunker had to be maintained in a state of constant readiness. So a small cadre of a dozen federal workers were permanently assigned to the site. They operated under the cover of being the hotel's television repairmen working for a dummy corporation known as Forsythe Associates. About 15 percent of their time was spent on TV repair and maintaining The Greenbrier's TV Systems. The rest of the time they were maintaining communications equipment, checking on freeze-dried food supplies, testing generators, medical equipment, and other custodial duties. This was updated every two years.

"If you lived during the Cold War, you knew that Washington was a target for intercontinental ballistic missiles. The threat was real," said Bugas, a former army intelligence officer who managed the site from April 1971 to July 1995. "This facility was a viable idea. I always believed in the concept and thought it made sense.

The relocation site never was used, although it
(continued on page 10)

Greenbrier (cont) reportedly was put on standby status during the Cuban Missile Crisis. Bugas and his men received policy direction from the congressional leadership through the Architect of the Capitol. They underwent periodic and informal inspections by top elected officials and short and infrequent drills. The bunker could have been activated in four to eight hours. If the worst happened, the generators could operate for 40+ days. Food supplies were good for 60 days. The government paid \$25,000 yearly rent until 1979 and \$50,000 after.

The Greenbrier began offering public tours in December, 1995. Interest has been strong, both from resort guests and the public at large, and has been of great media interest. While the federal government has removed its equipment, the resort has refurbished some areas to recapture the bunker's Cold War look and feel.

"Current plans are to continue the tour," said Townley Aide, a member of Greenbrier's Public Relations Department. "The Cold War is a part of our nation's history, and the fallout shelter reflects what was done to protect our system of government. The Greenbrier is proud to have been part of that effort. The Greenbrier will continue to show their guests and the public what was done there during this time period."

From Astronautics News, the biweekly newspaper published by Lockheed Martin in Denver for its employees. **June 16, 1997 - Atlas Program celebrates 40th Anniversary.** One of America's space workhorses, the Atlas launch vehicle, celebrated its 40th anniversary on June 11. First launched on this date in 1957, the vehicle has evolved from its initial status as an intercontinental ballistic missile for the U. S. Air Force to its current standing as one of the world's leading commercial launch vehicles... The first commercial launch of Atlas, an Atlas I designated AC-69, took place on July 25, 1990. This vehicle carried the Combined Release and Radiation Effects Satellite (CRRES) for NASA. (The article also discusses the other Atlas variants, the Atlas II, the IIA, the IIAS, and the latest configuration, the Atlas IIAR, which uses a single Russian-made RD-180 main engine.)

August 11, 1997 - Mace Missile Display Dedicated. Five Astronautics retirees and one current employee attended the Mace missile display dedication at Belleview Park in Englewood. The retirees were involved in the design and testing of Matador and Mace missiles, products of the immediate post-World War II era. The dedication highlighted the renovation efforts to the missile, now mounted on a pedestal plaques explaining the missile's history and listing the people responsible for making the missile a treasured feature at the park.

Missileers and Space - a report by Colonel

Tim Roberts, AFSPC Inspector General and member number A0043

I had the chance to attend parts of the last AAFM Convention at Vandenberg AFB and Santa Maria. While there, I had several questions and concerns directed my way, mostly from retired members, about the integration of our space and missile career fields and mission areas. The most asked question usually revolved around a concern that our bright young missile officers and NCOs may not have the same career opportunities that missileers of the past had

To address that issue we must first look at where we are today in our ICBM business. As you probably know, we are down to three missile wings and a missile group. To remain both politically correct, I'll clarify that the missile wings have been redesignated space wings (SW), thus all of our wings in Air Force Space Command (AFSPC) are space wings. Three of our AFSPC wings, the 90SW at Warren, the 91SW at Minot and the 341SW at Malmstrom operate and maintain ICBMs. We will have the 321st Missile Group at Grand Forks AFB until its inactivation next year. Those units comprise the 20th Air Force, headquartered at Warren.

That gives you some flavor for where and how many units there are available for assignments within missiles. Given that update you can calculate how many missile squadrons remain and the approximate manning numbers. Of course there remains requirements for missile expertise at 20th AF, AFSPC, STRATCOM (located at Offutt AFB, but not nearly the size of the SAC you remember), and the Air Staff.

14AF is the space side of AFSPC, with headquarters at Vandenberg. 14AF has two space lift wings, the 30SW at Vandenberg and the 45SW at Patrick. The 21SW at Peterson AFB is responsible for space warning and space surveillance, and the 50 SW at Falcon AFB is responsible for satellite command and control. 14AF has three major geographically separated units (GSUs) the 821st Space Group (SG) at Buckley ANGB, the 750SG at Onizuka AS, and the 721st Support Group at Cheyenne Mountain.

AFSPC operates and maintains its seven wings and GSUs around the world. Many GSUs are small units/functions that are primarily manned with contractor personnel. However, the unit leadership, to include typically a commander and operations officer and their primary support personnel are blue suit. In all AFSPC has approximately 200 units in over 60 locations around the world. What does that mean for the youngsters coming up in our command? It means (continued on page 12)

The Airlaunched Missile Page

Have some good air-to-air and air-to-ground missile stories? - send them in (with photos, if possible) for our special history of airlaunch missiles issue.

The Beginning - A review of the early efforts in the development of airlaunched missiles.

At the end of World War II, the USAAF was working on a number of projects for air-to-air and air-to-surface "missiles" - many in conjunction with the new ground-launched systems and others based on WWII projects from both the allies and the enemy.

In April, 1946, the airlaunched portion of the USAAF guided missile program consisted of the following projects:

Air-to-Surface

MX-601, a Douglas Aircraft vertical bomb controlled in range and azimuth, called the Roc.

MX-674, a Bell Aircraft vertical bomb called the Tarzon.

MX-776, a Bell 100 mile range subsonic missile called the Rascal.

MX-777, a McDonnell Aircraft 100 mile range super-

sonic missile.

MX-778, a Goodyear Aircraft 100 mile range subsonic missile.

MX-779, a Goodyear 100 mile range supersonic missile.

Mastiff, a 300 mile supersonic missile with an atomic warhead.

Air-to-Air

MX-570, a Hughes Aircraft 9 mile range, subsonic, 50,000 foot altitude JB-3, called Tiamat.

MX-798, a Hughes 5 mile range version of MX-570.

MX-799, a Ryan Aeronautical fighter-launched subsonic missile, called Firebird.

MX-800, a M. W. Kellogg fighter-launched supersonic missile.

MX-801, a Bendix Aviation fighter-launched supersonic missile.

MX-802, a General Electric bomber-launched supersonic missile, called Dragonfly.

Over the months following the April 1946 decision to pursue these projects, budget cuts, the emergence of a separate Air Force and interservice rivalry would all impact this list. Ground-launched systems were also being developed, and policy makers had to make some hard decisions as to the best use of limited resources.

To be continued in future issues. (Source, Jacob Neufeld's Ballistic Missiles in the USAF, 1945-1960, Office of Air Force History)

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Donate to the fund we use for our annual grants to museums and receive the items below:

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\$20___ 44 Missile Wing Commemorative Book

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Missileers and Space (Cont) they can compete, as younger officers, for command positions. Many smaller GSUs have Majors as commanders and Captains as operations officers. It means they have a chance to be stationed worldwide, and can move between four mission areas; missiles, space lift, space warning and surveillance, and satellite command and control. It means they get exposure to the evolving technologies that will shape the future. In addition, enlisted members in 14AF are used in a number of operational crew positions.

Is it better now than it was when our ICBMs were a key part of SAC? Did we have a better process because our officers and NCOs could move from the wings to SAC and/or Vandenberg in ICBM jobs and then back to the Wings? Thus, we built up the corporate knowledge and expertise that assured our strategic posture deterred the USSR. There is no clear cut answer, I certainly served with and observed outstanding missileers as they progressed up through their respective specialities and achieved success while providing outstanding service to our Air Force and nation. I have also been a part of and

have been able to observe missileers as they move into upwardly mobile "space" positions in exciting new mission areas at locations all over the globe.

I see a larger selection of career opportunities available to our people. It gets them to many locations that many of us never had the opportunity to go to, and because they are all over the globe and their missions are so integral to the warfighter, they have a lot more exposure the rest of our Air Force and our sister services. As I see it, change is not the question nor the problem. Change usually happens because we have evolving mission, political, manning, equipment, and/or technology dynamics. Sometimes we do get "directed" to change. However, in my opinion the key to change is how we manage it. My experience tells me a lot of thought and consideration is applied to the process as our leadership in AFSPC moves our up and coming leaders within our command. The result will be well rounded and grounded leaders with the appropriate backgrounds in space and missiles to lead our Air and Space Force as it evolves into a Space and Air Force.

Membership Application for the Association of Air Force Missileers

Name

Address

City

St

Zip Code

Phone

e-mail address

Active duty ___ Retired ___
 Discharged/Separated ___
 Guard/Reserve ___
 Civilian ___ Other ___
 Rank/title ___
 Missile Badge? Yes ___ No ___

My name and address may be released to units, other members, reunion groups, etc.

Signature

*A detailed application that documents your total missile experience will be sent upon receipt of your membership.
 Suggested donation for membership -*

One Year - \$20 ___ (\$5 for active duty enlisted)
 3 Years - \$50 ___ (\$14 for active duty enlisted)
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