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#### WHO WAS: DR. CHARLES C. LAURITSEN

by Jack Latimer

#### Special points of interest:

- Who was Dr. Lauritsen
- President Kennedy
- Public Relations Corner

Newsletter Editor - Bettye Moody

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Dr. Charles Christian Lauritsen was, more than anyone else, the inspiration behind the establishment of the Naval Ordnance Test Station at Inyokern, California, which today goes by the name of the Naval Air



Warfare Center Weapons Division (NAWCWD) China Lake. The China Lake community has a technical laboratory and a street named for Lauritsen.

Early Years. Born in 1892 in Holstebro, Denmark, Lauritsen graduated from Odense Technical School in 1911, and immigrated to America in 1917 with his wife Sigrid and young son, Thomas. He worked around the country at engineering and design jobs. In 1926 he attended a public lecture on physics given by Dr. Robert A. Millikan, head of a small college in Pasadena, California, that soon became the California Institute of Technology

(CalTech). Inspired by Millikan, Lauritsen moved to Southern California to study physics under Millikan. In 1929 Lauritsen received his Ph.D. and joined the physics department faculty in 1930. The remainder of his academic career as a Professor of Physics was spent at CalTech until he retired in 1962.

Work on X-rays. In 1928, while still a student at CalTech, he and Dr. Ralph D. Bennett developed X-ray tubes operating up to 750 kilovolts. These tubes were then used for radiation therapy of cancer patients in the Kellogg Radiation Laboratory, which was built as a treatment clinic in 1931. In 1932 Lauritsen converted one of his X-ray tubes into an accelerator of protons and helium ions and began to study nuclear reactions. One of Lauritsen's most significant discoveries showed that protons could be captured by a carbon nucleus, releasing gamma rays. This process called radiative capture— was applied to the study of nuclear (Con't page 2)

# President's Message



We pray you experienced a wonderful holiday with the love of family and friends all around. We certainly did here in the Indian Wells Valley!

Amongst the eight Christmas parties in eight days that Bob and I attended (our culture here hasn't changed that much!), we had fun with friends of the China

Lake Museum—volunteers, Board, and Founders Club Members at the CLMF Annual Christmas Party at the Museum. A special thank you to our hard working Board and staff this year 2015, especially our unpaid volunteers and docents, who make the Museum come alive each day to our visitors, and keep our community far and wide engaged and educated about the China Lake history and (Con't page 6)

## WHO WAS: Dr. Charles C. Lauritsen

(con't from page 1)

processes at the heart of a star. Throughout the 1930s Lauritsen worked with some of the eminent pioneers in nuclear physics: Ernest Rutherford, John Crockcroft, Ernest Lawrence (Nobel prize winners), Merl Tuve, Richard Tolman, and J. Robert Oppenheimer.

World War II Interferes. In 1940 Lauritsen began work on weapons and weapon design. His initial work was on the artillery proximity fuze under design and development by Tuve, but for most of the war he ran a large program at CalTech that developed, tested, and manufactured a variety of rocket weapons, mostly for the Navy.

Rockets. In the summer of 1941 the National Defense Research Committee (NDRC), headed by Dr. Vannevar Bush, sent Lauritsen to England. Lauritsen's assignment was to investigate Britain's rocket programs. He returned to the U. S., bringing with him about 40 British rockets, and urged the NDRC to begin an American rocket program. In September 1941 work began, under Lauritsen's direction, on the design and development of rockets at CalTech. The effort, initially financed by a \$200,000 contract with the Navy, eventually grew to an \$80 million war industry, and resulted in rockets becoming a major instrument of warfighting.

In late 1943 Lauritsen and other leaders of the rocket program recommended establishment of a large research, development, test, and evaluation facility in the northern Mojave Desert that could gradually take over the rocket program under Navy management; CalTech would phase out of the program after the war and return to its academic endeavors. This facility was the Naval Ordnance Test Station (NOTS) Inyokern. The peak of CalTech's rocket program was reached in the fall of 1944, as preparations began for the transfer of NOTS management from CalTech to the Navy.

The Atomic Bomb and Project Camel. At the same time the Manhattan Project, which was developing the atomic bombs, had reached a feverish pitch and needed help. Bush recommended to Oppenheimer that he invite Lauritsen to discuss the project's problems, and Lauritsen visited Los Alamos in November 1944. As a result of the discussions between Oppenheimer and Lauritsen, on 8 January 1945 "Project Camel" was formally established. The work would be carried out at CalTech and NOTS Inyokern under Navy jurisdiction. Lauritsen would lead the project.

Lauritsen used his existing rocket program organizational structure to manage Project Camel. CalTech operated a

procurement capability for rocket components for the Navy's rocket program and was able to apply this capability for bomb-part procurement for the atomic bombs. Within nine months of Project Camel's start, \$7.5M had been expended and over 1,000 people were working on contracting alone. Most of this work was accomplished at CalTech's Foothill Plant in Pasadena, California.

"Fat Man," an implosion-type atomic bomb, was under development; its successful operation was in doubt as to the theory of operation and whether or not the bomb components could be manufactured to very exacting requirements. CalTech was engaged to help develop and test the various components of the Fat Man bomb. For this effort, CalTech's rocket project facilities at China Lake were heavily engaged. Thousands of bomb parts—including explosive lenses, detonators, explosive component molds, contact and electronic fuzes, bomb tails, bomb bodies, and firing circuits—were procured, tested, modified, and retested until the final designs met the specifications needed. China Lake's airfield and remote ranges were used for over 120 drop-tests of Fat Man bombs allowing refinements of components and bomb configurations to be thoroughly tested and understood. Bomb handling equipment was designed and tested and airplane crews were trained in the assembly, loading, and delivery of the bombs. Without this testing and training Fat Man could not have been successfully developed in the short time available to meet the Manhattan Project's deadlines.

Perhaps the most important contribution of CalTech and China Lake team was the construction and operation of the Salt Wells Pilot Plant. The first high-explosive blocks—critical components of the bomb—were melted, poured, cast and machined at the new Pilot Plant on 25 July 1945, only five months after construction of the plant began. Fifteen days later, on 9 August 1945, a Fat Man bomb was successfully dropped on Nagasaki, Japan, and the war ended. Between 1945 and 1949, the Salt Wells Pilot Plant was the nation's only producer of the conventional high-explosive components of the Fat Man atomic bomb. The plant continued operation until it was closed in 1954. China Lake provided the scientific know-how, tools, and techniques for more efficient industrial production of atomic bombs in the future.

Lauritsen went on to participate in a variety of highlevel studies of strategic defense initiatives. He helped lay down the ground rules for the (Con't page 5)

## **PUBLIC RELATIONS CORNER**

by Dr. Anthony (Tony) Damiano



This November flew by without time to take a breath. The Museum was publicized in the SWAP Sheet and News Review. In January 2016, I plan trips into Los Angeles, San Jose, and Sunnyvale to contact some of the companies that have projects at China Lake for sponsorships and contributions for displays.

As I continue to work with Bob Peoples, I now have access to the Travel Agent Directory <a href="http://www.travelagentbuyersguide.com/">http://www.travelagentbuyersguide.com/</a>. This site has us listed on the front page under top companies, scroll half way down the page to see the link. The China Lake Museum is also listed in the Travel Agent Guide home page under Destination Activities, select Museums/ Exhibitions, and you will see the Museum as the second museum on the page. This places the China Lake Museum in an excellent position for advertising to travel agents and travelers around the world. I ask that all members look at the site and send me your suggestions for upgrading the site, sunnyd2@iwvisp.com.

#### 29 Palms Film Festival

Please think about joining me in May to celebrate this event and show off to an appreciative crowd the support China Lake provides to the Warfighter of every Department of Defense Component. I was contacted by the Basic Leads Company Representative for the first annual 29 Palms Film Festival, 13-15 May 2016. I went to Hollywood on Monday 30 November and talked about China Lake Museum advertising in the program and putting a display up to talk to attendees, mostly active duty and retired Marines. The area has a population of 155,000 people and expected attendance is unknown right now. I believe we could get 30,000 attendees. The web site is still under construction, but you can see it at <a href="http://29palmsfilmfestival.com/">http://29palmsfilmfestival.com/</a> where you can register for newsletters. If we can get some young engineers to join some retirees, we can have a great showing and potentially raise money for our Phase 2 construction. Please think about joining me in May to celebrate this event and show off to an appreciative crowd the support China Lake provides to the Warfighter of every Department of Defense Component. There will be more information as Hollywood's Variety Magazine is supporting the event.

# Join the China Lake Family! Build Yourself a Legacy

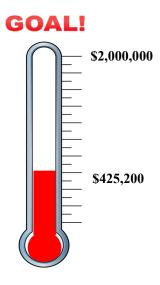


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## COMMANDER-IN-CHIEF SUPPORT

#### For

#### JOHN F. KENNEDY





	John F. Kennedy		1961-1963
Conflicts		Cold War	, Cuban Missile Crisis, Vietnam War

#### **Major Contributions of NOTS:**

**Problem:** In 1962 the Soviets positioned medium-range nuclear-armed missiles in Cuba, with an array of radar-directed Surface-to-Air (SAM) stations defending the sites. At the time the U.S. did not have any operational anti-radiation missiles to counter the SAMs.

**Solution: Shrike**, the world's first dedicated Anti-Radiation Missile (ARM) to be mass-produced, invented at China Lake, was under development. China Lake, working with industry, sped up development and, in 6 months, produced 600 Shrike missiles for possible use in Cuba; 200 of them were produced on site at China Lake. Shrike became the primary ARM for the Navy and Air Force. Shrike was used heavily in the Vietnam War, by the Israelis in the 1973 Yom Kipper War, and by the British in Grenada. They were last used in the 1991 Gulf War and were phased out in 1992 (some 30 years after introduction), to be replaced by the more capable High Speed Anti-radiation Missile (HARM).

**Problem:** The Sidewinder, a heat seeking air-to-air guided missile, had reduced effectiveness at night and in foul weather. A missile was needed that could be used in any weather or time of day.

**Solution:** An alternate semi-active radar seeker **(AIM-9C)** was designed and produced to give Sidewinder all-weather capability. Additionally the original Sidewinder seeker was improved giving the heat-seeking missile added capability. The AIM-9C was integrated with the F-8 Crusader, and when it was retired the 9C was stockpiled and the inventory was later converted to an antiradiation missile, Sidearm, for use by the Marines.

**Problem:** Delivering free-fall unguided bombs from low altitude was hazardous because the aircraft could be damaged by its own bomb fragments. Also low-altitude delivery allowed increased accuracy. A method of low-altitude delivery was needed to protect the delivery aircraft from its own bombs.

**Solution:** China Lake developed a mechanical tail assembly, called **Snakeye**, that would allow bomb delivery from both high and low altitudes, but when dropped at low altitude the tail-assembly would be opened, which increased drag enough to allow the aircraft—bomb separation to be sufficient for the aircraft to escape damage.

**Note:** President Kennedy was the only American President to visit China Lake. After a tour of China Lake in June of 1963, where he witnessed several live ordnance delivery events, he told a crowd of visitors who came to see their President, "I cannot think of a prouder statement when asked what our occupation may be than to say, 'I serve the United States of America."

## Who Was: Dr. Charles C. Lauritsen

(Con't from Page 2)

Office of Naval Research, helped bring it into being, and for many years served on its Advisory Committee. During the Korean War, he traveled to Korea for the Weapons Systems Evaluation Group, observed the Inchon landing, and helped evaluate the role of new weapons in combat. Lauritsen was the first recipient of the Conrad Award for Scientific Achievement in 1958. He received many other awards in his lifetime. He was an eminent research scientist and teacher. He authored or coauthored approximately one hundred papers. He passed away in 1968.

### SAVE THE DATE...



The upcoming
"16<sup>th</sup> Annual
Dinner Auction"
will be held on

Saturday, June 4, 2016

Please start bringing your "unique and favorite items" to the CLMF office in support of the various auctions and raffles ...

# Spotlight: Business Membership in CLMF

#### **BUSINESS \$1000**

Altaone Federal Credit Union The Boeing Company Coldwell Banker Best Realty Raytheon Company Jacobs Naval Systems Group

#### **BUSINESS SPONSOR \$500**

The Swap Sheet Warren's Automotive

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The newsletter is sent via USPS.

If you wish to receive the quarterly newsletter via email, please call (760)939-3530 or email us at <a href="mailto:chinalakemuseum@mediacombb.net">chinalakemuseum@mediacombb.net</a>. Place "Electronic Newsletter" in the subject line.

# ENDOWMENT FUND DONORS

Phil and Nancy Arnold
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Les and Nancy Saxton
Anonymous (1)

### NEW FOUNDERS CLUB MEMBERS

#### **BENEFACTORS**

Ed and Carol Jeter

#### **FOUNDERS**

Steve Benson
Arthur and Laura Hickle
Samuel Schoenhals
Anonymous (1)

## President's Message (Con't from page I)

continuing China Lake mission of maintaining peace through strength!

#### PHASE 1 MOVE

We now will focus on completing the plan for our Phase 1 move to Ridgecrest. Thank you to all who are helping make this part of our dream a reality with your financial and other gifts! We can be proud that we have over \$1 million in assets and can now confidently make this move forward, thanks to you all. We especially will appreciate any volunteer time you can provide as we make this move, including helping document many personal histories that we will be including in the new Museum.

#### FOUNDER'S CLUB

The Founders Club Wall update will be finished by the end of January to include all "paid up" Founders and Benefactors. If you'd like to be included with your early donation for 2016, let us know ASAP by calling 760-939-3530 and making your payment arrangements. Your credit card with that phone call works fine. Remember, Lifetime Membership comes as a bonus with your Founders Club Membership. If we do not receive the \$250K grant, these Founders funds will enable us to complete the Phase 1 move to Ridgecrest and will fund the infrastructure.

#### **ENDOWMENT FUND**

Some of you Lifetime Members received a special letter in December announcing the opening of our Endowment Fund as another giving option. This is convenient for those who want to transfer stocks or make other financial arrangements through our broker Vincent Avalos

of Edward Jones Investments (ph. 760-371-1271), or if you have tax questions, our Tax Advisor Howard Manning has offered to help (ph. 661-267-2005) from his Burkey & Cox CPA office in Lancaster. This Endowment Fund account will assure we have continuing maintenance funds for our new building. Thank you to those who have already made a financial gift! If you did not receive the Endowment Letter and would like one, please call the office at 760-939-3530, or email Nancy at

chinalakemuseum@mediacombb.net.

#### **AMAZON SMILE**



For your Amazon purchases, please use Amazon Smile by going to smile.amazon and choosing the China Lake

Museum Foundation as your favorite charity, and we will get a percentage donation from them for all your purchases. Don't forget to make your unique China Lake purchases at our Gift Shop, already doing very well with Mary Lattig in charge.

God's Blessings for the New Year! Alice Campbell



## **MUSEUM GIFT SHOP:**

Our "After Christmas Sale" continues...all "Navy themed" ornaments are 50% off. Get your ornaments for next year early.

#### **BOARD OF DIRECTORS**

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Don McLean
VADM David Nichols, USN (Ret.)
VADM Mark Skinner, USN (Ret.)
CAPT Glenn Tierney, USN (Ret.)
CDR Stu Witt, Test Pilot USN (Ret.)

#### Photographs from Christmas Luncheon

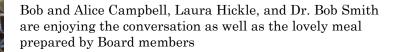


Courtesy of Philip Kelly

A delicious meal had by all...

Join us for our next luncheon in the Museum.

The food and the conversation are one you do not want to miss!



#### IRA CHARITABLE ROLLOVER

The IRA charitable rollover is back, once again, and this time for good and applies to your 2015 and now future rollovers. You should seek advice of a tax attorney to verify applicability to your own situations. It provides an excellent way to benefit the CLMF, or a qualified charity of your choice, and avoid an increase in income taxes because of the resultant increase in your Adjusted Gross Income because of the required payout from your IRA once you have reached the age of 70 1/2. If you made a contribution from your IRA to the CLMF in 2015, you should seek further advice from your tax attorney to determine how you can ensure it meets the rules approved in the budget authorization in December 2015 and can be factored into your 2015 tax submittal (even if the donation was made before Congress approved the budget in December).

#### In summary, for your gift to qualify for benefits under the extension:

- You must be 70 1/2 or older at the time of your gift.
- The transfer must go directly from your IRA to the CLMF.
- Your total IRA gift(s) cannot exceed \$100,000.
- Your gift must be outright.

#### Direct gifts from your IRA to the CLMF can:

- Be an easy and convenient way to make a gift from one of your major assets.
- Be excluded from your gross income: a tax-free rollover. Count toward your required minimum distribution.

# RDML Mike Moran's Change of Command Address

Good Morning! And, what a great Navy morning it is. Welcome! VADM Grosklags, Flag Officers, fellow SES'ers, current and past commanders of NAWCWD, NAWS, Test Wing Pacific, Squadrons, VX-9 and the MAD. Welcome local dignitaries, friends and fellow citizens of NAWCWD.

RDML Moran, I am truly honored. It is a privilege to be your guest on this podium and to speak on your behalf. You all need to know I have been given very strict orders on what I can and cannot say. I am NOT to talk about RDML Moran or his contributions to NAWCWD, or his achievements, or his extraordinary leadership, or his value -set...I could talk about these for hours. Rather, for once I'll be a good teammate and follow his orders. He wants me to talk about <u>YOU</u>... and the importance of our military-civilian team. This is something he holds very dear.

For me, too, this is an extremely important topic...I think it's appropriate to starting with a little history. So, I have taken liberally from Al Christman's two books, "The Grand Experiment at Inyokern" and "Target Hiroshima, Deak Parsons and the Creation of the Atomic Bomb."

Prior to WWII, Dr. LTE Thompson, a nationally recognized government scientist, and LT George Hussey (later RADM Hussey) developed a strong relationship working together at Dahlgren on artillery ordnance. During this time they evolved a philosophy regarding the role of science within the military framework. They recognized the importance science, AND their teamwork, in solving the problems facing naval artillery. Their philosophy acknowledged that both the military officer and the government civilian scientist were working for a COMMON PURPOSE: the betterment of weapons for the Navy. This was the beginning of the military-civilian team.

In 1941, still at Dahlgren, but now working on the proximity fuze, Dr. Thompson and another cohort, LCDR Deak Parsons, extended the idea of sailors and scientists working hand-in-hand. If you are unfamiliar, Deak Parsons, later RADM Parsons, was the naval officer/engineer who was instrumental in transforming the science of nuclear physics into a usable weapon. Al Christman writes: "they [Thompson and Parsons] dreamed one day of a naval laboratory where scientists would work closely with officers familiar with fleet ordnance requirements yet would have the freedom to conduct effective research. The laboratory's broad

# By Scott O'Neil

technological base would allow it not only to respond to the immediate needs of the fleet but also to explore new technologies that had long range military potential. They talked of the close couplings needed between civilians and military;" military officers and civilian scientists working hand-in-hand towards common goals, as equals.

When RADM Blandy, Commander Bureau of Ordnance, (and later Commander Atlantic Fleet) stood up NOTS Invokern in November 1943, he wrote "a large test station that could do research, development, and testing of weapons with militaryscientific cooperation." ADM Blandy, a strong supporter of science and technology, understood the importance of the experiment at Invokern as a test of the military-civilian partnership idea. He personally chose NOTS first Commander...CAPT Sherman E. Burroughs. Unsurprisingly, the first NOTS Technical Director was Dr. LTE Thompson. CAPT Burroughs, RADM Deak Parsons, RADM Ashworth, and ADM Blandy were a tight knit group of brilliant, savvy officers who embraced science and technology and saw its power during and immediately following the War. The proof of this power was the development of the proximity fuze, rockets, and the atomic bomb...these technological achievements secured the outcome of the War. NOTS Invokern was established on the premise that science and technology would be the foundation of the future Navy and that civilian scientists and engineers must explore new technology and its application to warfare in partnership and close collaboration with military fleet officers.

This relationship, based on respect, was the prime objective of the Navy's ordnance postgraduate program just prior to WWII. Its achievement was the success of many ordnance developments during the War and is personified in the lasting associations made by Dr. Thompson and his young naval officer students. These officers-students became the leaders in ordnance at the end of WWII. Guys like Parsons, Burroughs, Schoeffel, Entwistle, Stroop, Switzer, and Vieweg; all significantly contributed to the Thompson-Hussey civilian-military philosophy and approach. It was their continuing leadership after the War that secured establishment of the Navy Laboratory system. Many of their names are still memorialized

on our local infrastructure. So, this is our roots.

When I came here in 1972 I started in the Fleet Support Branch of the Fleet Support Division in the Engineering Department. This was during Vietnam. We had a whole division working direct fleet support. This was just one of many connections the Center had with the fleet. Our Branch was made of engineers and a bunch of active duty military, mostly crusty Marine Sergeants, usually gunnies, and Navy Chiefs, usually ordies. Branch members, especially the military, made frequent trips to Vietnam working with the Fleet to understand how our weapons were functioning. They would bring the issues home to be actively worked. When a new weapon was to be introduced, like the '-eye' and FAE weapons, they were actively engaged in training the fleet. It was our Branch who led the Center's involvement in understanding the causes of the fires on USS Forrestal, Oriskany, and Enterprise. This was the culture I started in and it had profound impact. In 1972 I was a brand new engineer, Master Gunnery Sergeant Jesse Green, a Marine tough as nails, took me under his wing. He wasn't told to do this. It was just his way. He took me in and I'm sure treated me just like he did many junior officers. I was part of 'his' team and he was going to help me be effective. Jesse Green humbly showed me the ropes. He was a coach, mentor, teammate, leader, and careful ass-chewer when I needed that. He was my introduction to the military-civilian team. Master Sergeant Green had a huge influence on me and my attitude towards the military, NAWCWD, and the Navy. It may sound trite but he truly inspired me. The sole reason NAWCWD exists is to support our warfighters. For me Master Gunnery Sergeant Green personifies that warfighter. Jesse Green, my teammate, personifies the military-civilian team I endear. I can confidently say in the 1970s the military-civilian team at China Lake was strong and well.

Today the Navy's military-civilian team needs a tune-up. Many of the Navy's top leaders do not understand technology let alone their in-house technical capabilities or how to use this asset. This needs to change. As warfighting moves in to the digital age it is an imperative that this relationship be strong and imbues the Navy much as it did in the years shortly after WWII. For our mission to be successful we need to be able to hire the best and the brightest scientists and engineers, get them trained and keep them on the government team. We need naval officers who are capable warfighters that understand the naval laboratory environment and can envision

how technology can be used in fleet operations. In WWII, we had officers with that vision and savvy scientists; working together they changed the War.

Nobody will argue that today our weapons systems are getting more complex. Just take Sidewinder. In just one generation, AIM-9M to AIM-9X ... the complexity of that weapon jumped a couple of orders of magnitude. F-35 is significantly more complex than F/A-18 E/F. The Es and Fs are way more complex than the old As and Bs. There are a lot of reasons for this increase, but that discussion is for another day...the fact is the complexity of our weapons systems is growing unchecked. The fact is application of new technology is fundamental to maintaining a superior fighting force. At WD, where our mission is at the pointy end of the spear...we see and understand the ramifications of this complexity. With it goes increased development risk and schedule pressure... test complexity ...more complex killchains...fleet training implications...all this demands tighter teaming between our civilians and our military. As we prepare to face a near-peer threat the imperative of a strong military-civilian partnership is compounded. We cannot afford any internal disharmony, petty turf wars, or superficial distractions. We need to actively work together to assure success. The forefathers of the Navy's laboratory system, military and civilian, had it right and they saw the future very clearly...it was dangerous and technology was a key equalizer. Today is no different. Today, we need smart, able scientists and engineers who understand the art of the possible though the application of technology. And we need smart, able military officers who understand what is required to win in the fight, but what we need most of all is a strong team made up of both.

At NAWCWD we understand the wisdom of our forefathers, the implications of increasing complexity, and the current state of affairs in the world. We have all the essentials. Our civilian team is extremely skillful and getting stronger. Our military are very capable and ready to go. Thanks to RDML Moran, we have taken the first steps to tune-up our military—civilian team. We have the support. Senior Navy leadership sees NAWCWD as a critical naval asset and innovator in the application of technology to warfighting. We are positioned well. Now it is time we lock arms, military and civilian together, and show the way.

Thank you.



Dr. John Burrow, Assistant Secretary of the Navy for Research, Development, Test and Evaluation (RDT&E)

A special evening event was held Jan 5 at the Museum for visiting leaders of the Navy Labs. They were also attending the retirement party of Mr. Scott O'Neil, Executive Director (formerly called Technical Director) of Naval Air Warfare Center-Weapons Division. The CLMF Historian Paul Homer presented a short history of China Lake after being introduced by Mr. Scott O'Neil's replacement Mrs. Joan Johnson. Pictured is **Dr. Burrow** speaking very favorably of China Lake's history, Museum, and culture after Mr. Homer's presentation.



Burrell Hays, former Technical Director of Naval Air Warfare Center - Weapons Division and Trustee, Dr. Jim Colvard had a discussion during a visit to the China Lake Museum.

# **Future Museum Building Plans**

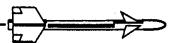
The CLMF is excited to be moving ahead with the relocation to our leased land in Ridgecrest. The concept for the initial 2,880 sq. ft. gift shop/ informational center, infrastructure and utility connections is becoming more than a concept (see below picture). Construction diagrams are almost complete, funds have been identified and we will soon be starting the required planning process review with the county.

Relocation of the Museum will provide an important public information venue that shares the history of China Lake's role in helping to shape national defense. Location of the Museum in Kern Regional Park will establish a "museum complex" next to the existing Maturango museum (natural science, petroglyph and area early history). This central location has high visibility along the major thoroughfare through Ridgecrest. It will be easily accessible by the general public, and therefore will significantly enhance tourism and branding for the Indian Wells Valley and Kern County. It will also increase educational outreach opportunities in Science, Technology, Engineering and Math (STEM) within the community. We appreciate your support for the Foundation and hope you are enthusiastic about the progress made this last year. Keep posted for more information about our progress with this and the next 10,000 sq. ft. building phase!

#### Laura Hickle



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