

Ex-POW Visits Center...

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 their support on the home front. During the luncheon, Lt. Rehmann was the recipient of an NWC plaque that was presented to him as a memento of his visit to China Lake by H.G. Wilson, NWC Technical Director.

Lt. Rehmann's visit here was climaxed by a brief appearance at Burroughs High School, where he showed his adeptness at responding to students' questions with a touch of levity—despite the seriousness of the information he had to convey.

The ex-POW expressed his surprise at today's long hair trend among this nation's youth, came out solidly in favor of the pride he feels everyone should have in serving their country, and when queried responded firmly that he believed no funds should go for the reconstruction of North Vietnam until the North Vietnamese have provided the most complete information possible about servicemen on the missing-in-action

list and also have shown a willingness to cut off the sending of supplies to Laos and Cambodia. While sticking with the agreement made with other POWs not to discuss actual prison camp conditions during their confinement until the time when all prisoners have been released, Lt. Rehmann made it plain to his high school audience that the food he and other POWs received left much room for improvement.

Currently an out-patient at the Balboa Naval Hospital in San Diego, Lt. Rehmann will be granted 90 days convalescent leave following his discharge from the hospital. At the moment, however, he's undecided about his future plans.

Photos by
PHAA Shellie Reed



POW MEETS NAVAL OFFICERS — An hour-long rap session in the ready room at the Naval Air Facility provided an opportunity for many questions asked by officers assigned to the Naval Weapons Center to be answered by Lt. David G. Rehmann, who spent six years as a prisoner of war in North Vietnam.

WWII POWs To Hold Reunion In Sacramento

The Sacramento Inn at Sacramento, Calif., will be the setting April 5 through 8 for the second annual meeting of a group of ex-prisoners of war who were among the defenders of Bataan and Corregidor in the Philippine Islands at the outset of U.S. involvement in World War II.

A western states chapter of the American Defenders of Bataan and Corregidor was formed a year ago at a meeting held in Sparks, Nev., by some 40 eligible survivors.

Officers of this select group, including Ralph Levenberg, a former Air Force major (now retired), are attempting to reach others who shared their wartime experiences and invite them to attend next week's reunion in Sacramento.

Readers of The ROCKETEER can obtain additional information by contacting Levenberg, associate director of the NWC Security Department, at 452-B Essex Circle, China Lake, phone 446-6062.



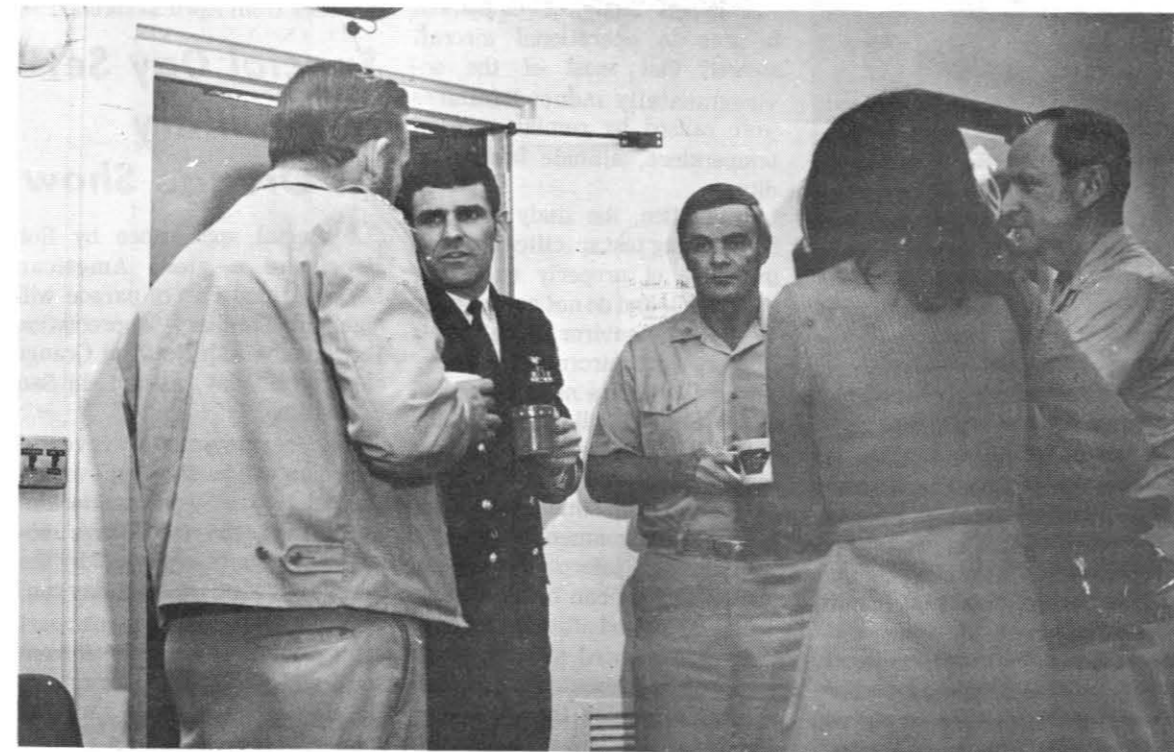
WELCOME EXTENDED--Lcdr. Barry Kunkel, duty officer at NAF when the aircraft bringing Lt. David Rehmann here for a brief visit arrived, warmly welcomed the ex-POW.



BRIEF VISIT ENDS--Ready to board a plane for his return to the Balboa Naval Hospital in San Diego, Lt. David Rehmann flashes a happy smile. He was accompanied here by Ltjg. James Nathwick, who is seen chatting with Jim McGlothlin, head of the NWC Public Affairs Office.



TWO EX-POWS MEET--Common experiences as prisoners of war were shared by Lt. David Rehmann, at left, who was returned recently from North Vietnam, and by Ralph Levenberg, a former Air Force officer, who was on Bataan and was taken prisoner by the Japanese when that Philippine peninsula fell to the Nipponese early in 1942. Levenberg, now the associate director of the NWC Security Department, was among the guests who attended a luncheon honoring Lt. Rehmann during his recent visit here.



INFORMATION GAP BRIDGED — Lt. David Rehmann (second from left), a former POW in North Vietnam, listens attentively to Cdr. Howard Alexander (on left), NWC's Assistant Technical Officer (Air) who, along with others, did their part to help bridge the information gap created by Lt. Rehmann's confinement as a prisoner of war. Others shown in this informal group are Capt. R. S. Moore (center), Commanding Officer of the Naval Air Facility; Capt. T. C. Wimberly, NWC Technical Officer, and (back to camera) Joan Taylor, Public Affairs assistant at NWC.

Varied Research Carried Out at Code 35 Ranges

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range, and a shielded room for measuring RF components. These five advanced RF measurement areas provide a broad and diverse measurement capability covering a frequency spectrum of 30MHz (Mega Hertz) to 40 GHz (Giga Hertz) at widely varying power levels (up to 1 Kilowatt).

The original facility, consisting of an outdoor antenna range and one anechoic chamber, was constructed for use in the Shrike development program. To meet the needs of later models of Shrike and other advanced anti-radar missile guidance programs, the existing medium size (microwave) anechoic chamber was modified extensively and construction was begun in 1965 and completed in 1966 on a large (VHF) anechoic chamber.

Later, a shielded room was added for RF component testing, and in 1971, due to increased RF measurement workload, the small utility anechoic chamber was built—mainly from surplus materials. In the last decade more than \$2 million has been invested in buildings and instrumentation.

In the past, the RF Measurement Facility was used in direct support of projects within the Electronic Systems Department, such as SHRIKE, HARM, SARM, HARPOON and ERASE. In recent months, however, due to increasingly variable requirements for this facility within the department, it has become practical, from an economic standpoint, to offer the services of the facility to groups outside the department.

Two of the recent, more interesting projects handled for other than NWC customers have been the Viking UHF Antenna tests (designed for use in the Mars probe) and another project under the sponsorship of the Army Security Agency, called TEAM-PACK.

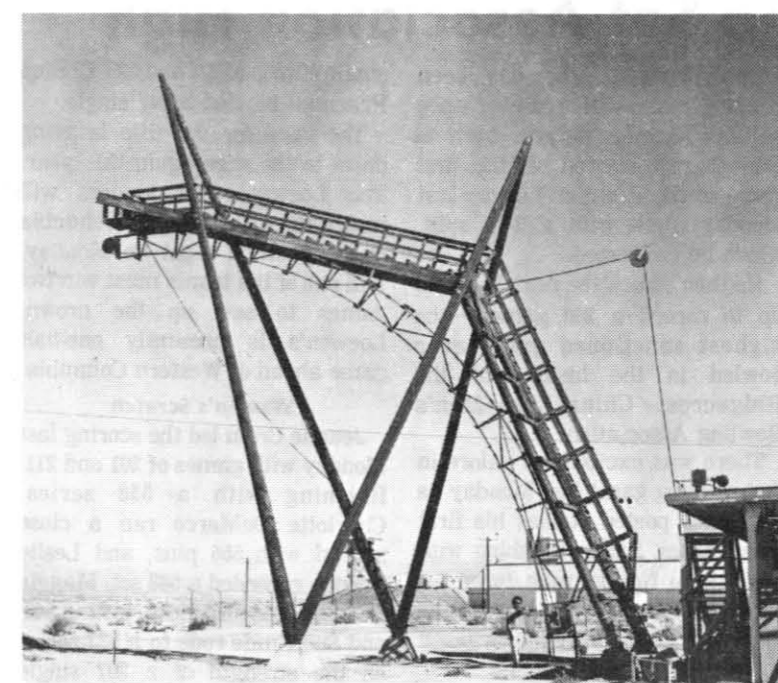
Antenna Range

This range was constructed in 1961 at the tower building in Area R to record radiation patterns of R&D-type antennas and antenna systems. This range consists of an instrumentation area, and two outdoor ranges (elevated and arch).

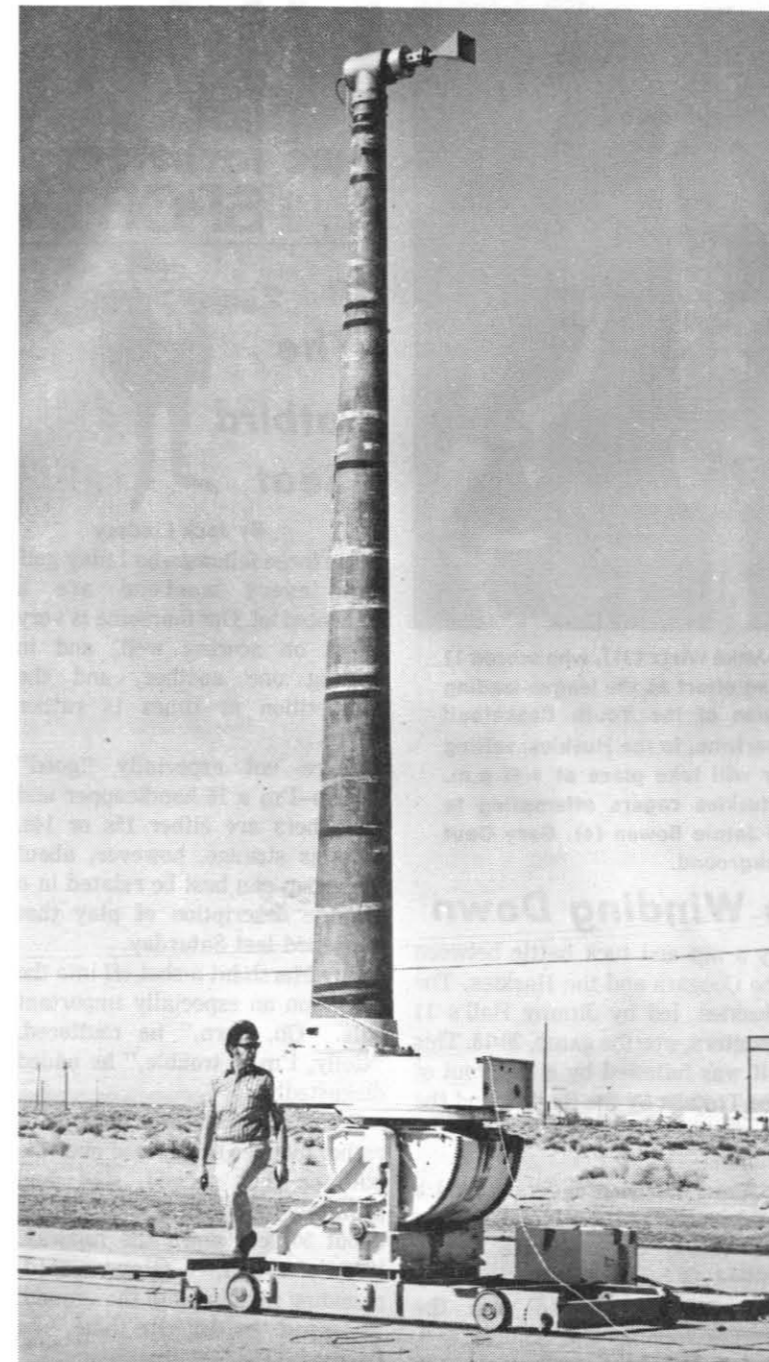
The length of the range is 200 ft. The low frequency limit is 500MHz and it will accommodate test units up to 15 ft. long and 125 lb. in weight. The major use for this range is in testing of avionics systems. M. E. Crawford operates and maintains the Antenna Range.

Microwave Anechoic Chamber

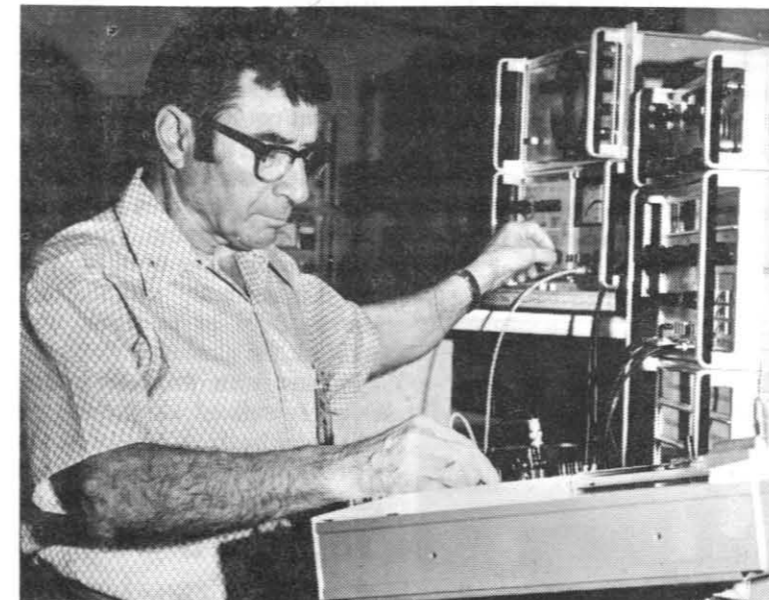
The anechoic chamber at Point Mugu was found to be inadequate for the Shrike project in 1961, hence it was decided to build one on-Center. An old spare parts building was found and refurbishing was begun in January 1962 to house the medium size anechoic chamber. Also housed within this building are 22-ft. long temperature-conditioning chambers that are capable of generating heat ranging from 100 to plus 240 deg. F. The small utility anechoic chamber and the shielded room, discussed separately, are also located in this



THE ARCH — This strange looking apparatus at the outdoor Antenna Range is used for testing vehicular mounted antennas.



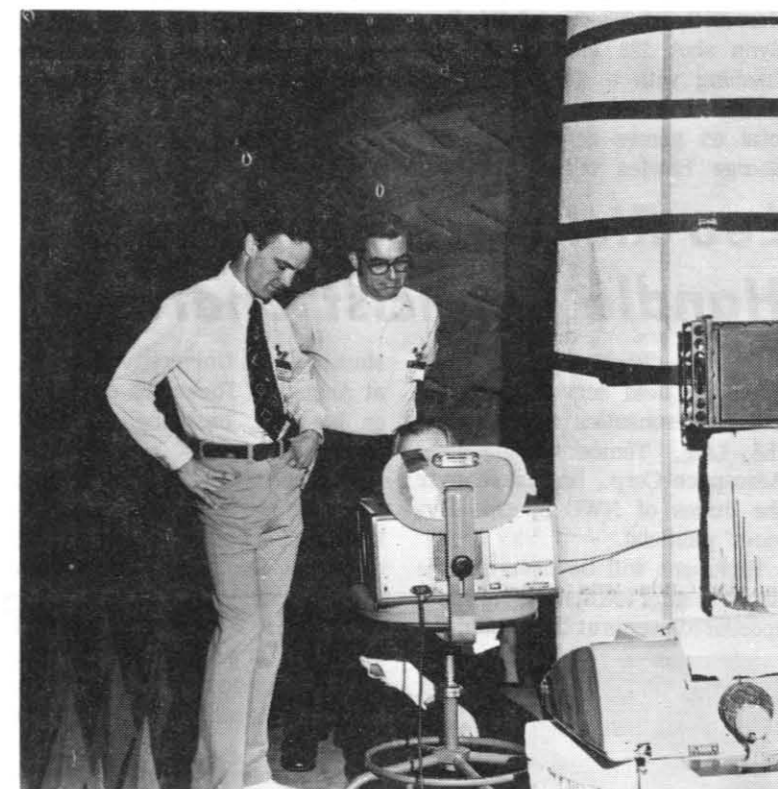
TEST TOWER — The outdoor antenna range is used for testing large pieces of equipment. With this tower, the items to be tested can be elevated as high as 27 ft. to prevent ground reflections. The azimuth elevation positioner can be lowered for ease in mounting the test item. Maximum load limit is 125 lb.



A. A. HEIL is shown performing measurements on RF components.



DICK WOOD is testing a fuze antenna on the Shrike guidance system.



AN ARMY Security Agency project, called Teampack, currently being tested here, required the low frequency characteristics of the large (VHF) chamber at NWC. Above, two of the contractors connected with the tests examine the facilities.

building. W. F. Johnson performs the tests and maintains this chamber.

The microwave chamber has a range 33 ft. in length and will accept items 7 ft. long, weighing up to 100 lb. The low frequency limit is 400MHz. This range is mainly used for testing guidance systems.

Large Anechoic Chamber

The large (VHF) anechoic chamber, maintained and operated by G. W. Gregory, is housed in a specially constructed building. The tapered chamber, 115 ft. long, consists of a pyramidal horn section which flares from a small cross section to a cuboidal region 40x40x48 ft. The range is 65 ft. long and its low frequency limit is 30MHz. Items 10 ft. in length and weighing up to 400 lb. may be tested here, thus the major use is for indoor testing of either large items, or items where low frequencies are required.

Shielded Room

The shielded room is a small 8x12x24 ft. solid, double-clad steel enclosure in the Microwave Anechoic Building. This facility offers high isolation to a wide range of electromagnetic interference for RF component testing.

Small Anechoic Chamber

In 1971, the increased RF measurement workload made necessary an additional anechoic chamber for use primarily in the X-band region. Initial test requirements were such that a small, low-cost chamber with limited instrumentation and capability was all that was needed. The new utility chamber, which was constructed in the Microwave

Anechoic Building and instrumented, mainly from surplus materials and equipment, is 20x10x8 ft. The test range is 14 ft. long, and it has a low frequency limit of 2000 MHz.

The items tested in this chamber are mainly fuze antennas where higher power readings are required to simulate actual conditions of use. Only small items, not more than 4 ft. in length and weighing not more than 50 lb., can be accommodated. R. A. Wood maintains and operates this facility.

Swept-frequency techniques are used to provide automatic recording of impedance, insertion loss, and phase shift over octave bandwidths. The accuracy of the swept-frequency measurements approaches that of a standards laboratory.

Fixed-frequency measurements can be conducted at standards laboratory accuracy. This facility is maintained and operated by A. A. Heil.

Photos by **PHAN D. M. Jenereaux**