

Huge Radio Transmitter Dedicated

Round-The-World Message Sent

(Pictures on Page 14)

By WILLIAM SCHULZE

ARLINGTON, Nov. 18.—

The most powerful radio transmitter ever built sent its first 1,200,000-watt message traveling around the world today as the United States Navy dedicated its 14 million-dollar Jim Creek installation in the Cascade foothills near here.

In cloud-shrouded Jim Creek Valley, under dripping grey skies, naval and industrial "brass" and scores of newspaper, magazine, radio and television representatives gathered from all over the United States for the ceremonies.

EXPLANATION

"Where life is cheap and where ignorance is normal, perhaps rapid communications are of little importance, but to us of the free world where man's dignity and his life are valued, speedy communication is the handmaiden of government and of command and it is the vehicle for controlling the technological advantages which our genius has evolved," said Adm. Robert B. Carney, Chief of Naval Operations, in his dedicatory address.

Perhaps the best explanation of the purpose of the giant installation was best explained by Rear Adm. William B. Arman, Director of Naval Communications, who said the Navy decided, as a security measure, to obtain a transmitter that could instantly alert its units everywhere.

GLOBE CIRCLED

Brig. Gen. David Sarnoff, chairman of the board of Radio Corp. of America, which built the "Big Jim" station in cooperation with the Navy, recalled that RCA was formed after World War I at the insistence of Navy officials that an American communications company be organized. World communication up to that time was pretty much of a monopoly of the British.

Sarnoff said messages from Big Jim will "circle the globe, will crack through magnetic storm barriers, will carry beneath the surface of the seas."

"For 47 years I have lived

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Huge Radio Transmitter Dedicated

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with the electron and my experience points to one conclusion: great as the electron achievements have been, we are still in the horse and buggy era of its development," Sarnoff continued.

"It is not difficult to visualize that day when the electron will carry sight as well as sound to our armed forces around the world.

"We already possess the scientific knowledge to make television world-wide."

Sarnoff also commented that recent scientific developments have made it possible to span the oceans with radar information that can be relayed from plane to plane.

"The range and scope of detection and warning systems can be extended beyond the continental boundaries," Sarnoff said.

MESSAGE

Rear Adm. Allen E. Smith, commandant of the 13th Naval District, presided at the ceremony, which featured Sarnoff's sending via a radio telegraph key, a message from Adm. Carney to men and women of the Navy around the world.

The Jim Creek station's messages, the Admiral said, "will penetrate to our submarines, penetrate to our submarine-tic outposts, to our ships and aircraft on and above the distant seas.

"With this first message we forge another link between you and your homeland," Admiral Carney's message said. "With it we build a new security channel from America to the Naval units which form its outer ramparts of defenses."

Vice Adm. Daniel E. Barbey (ret.) now Washington State director of Civil Defense, represented Gov. Arthur B. Langlie at the ceremony. Congressman Jack Westland of Everett and Mayor Robert Murphy of Arlington were among more than 200 distinguished guests.

Naval Radio Station Is Dedicated

(Picture on Page 16)

With David Sarnoff, chairman of the board of the Radio Corporation of America, at the key, the first message went out over the air from the Navy's powerful radio station at Jim Creek, northeast of Arlington, at 11:50 o'clock this morning. It was dictated by Adm. Robert Carney, chief of naval operations.

Sarnoff tapped the message out over the station powerful enough to reach entirely around the world on the same key he used to use when he was an obscure telegraph operator years and years ago. The message read:

"To the men and women of the U. S. Navy around the world, I greet you from Jim Creek valley in the Cascade Mountains of America's Northwest. Here today we and Radio Corporation of America are dedicating to the service of the Navy and the nation the most powerful radio transmitter ever built. Its wireless messages will penetrate to our submarines beneath the water, to our Arctic outposts, to our ships and aircraft on and above the distant seas.

"With this first message we forge another link between you and your homeland, with it we build a new security channel

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Naval Radio

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from America to the naval units which form its outer ramparts of defense.

"To each of you, best wishes and God speed."

On hand for the dedication services at the radio station that has been in the building process since 1947 were many high naval officials from all parts of the country. Included among the local dignitaries in attendance were Congressman Jack Westland, Vice Adm. Daniel Barbey, who represented Gov. Arthur B. Langlie, and Mayor Robert Murphy of Arlington.

The 14-million-dollar station, NLK, utilizes 1,200,000 watts of power. It is located on a 6,000-acre site and utilizes two parallel 3,000-foot mountain ridges to support 12 towers between which the antenna cables swing, some spanning a distance of 8,700 feet. From the cables trail the wires leading into the transmitter in the valley below.

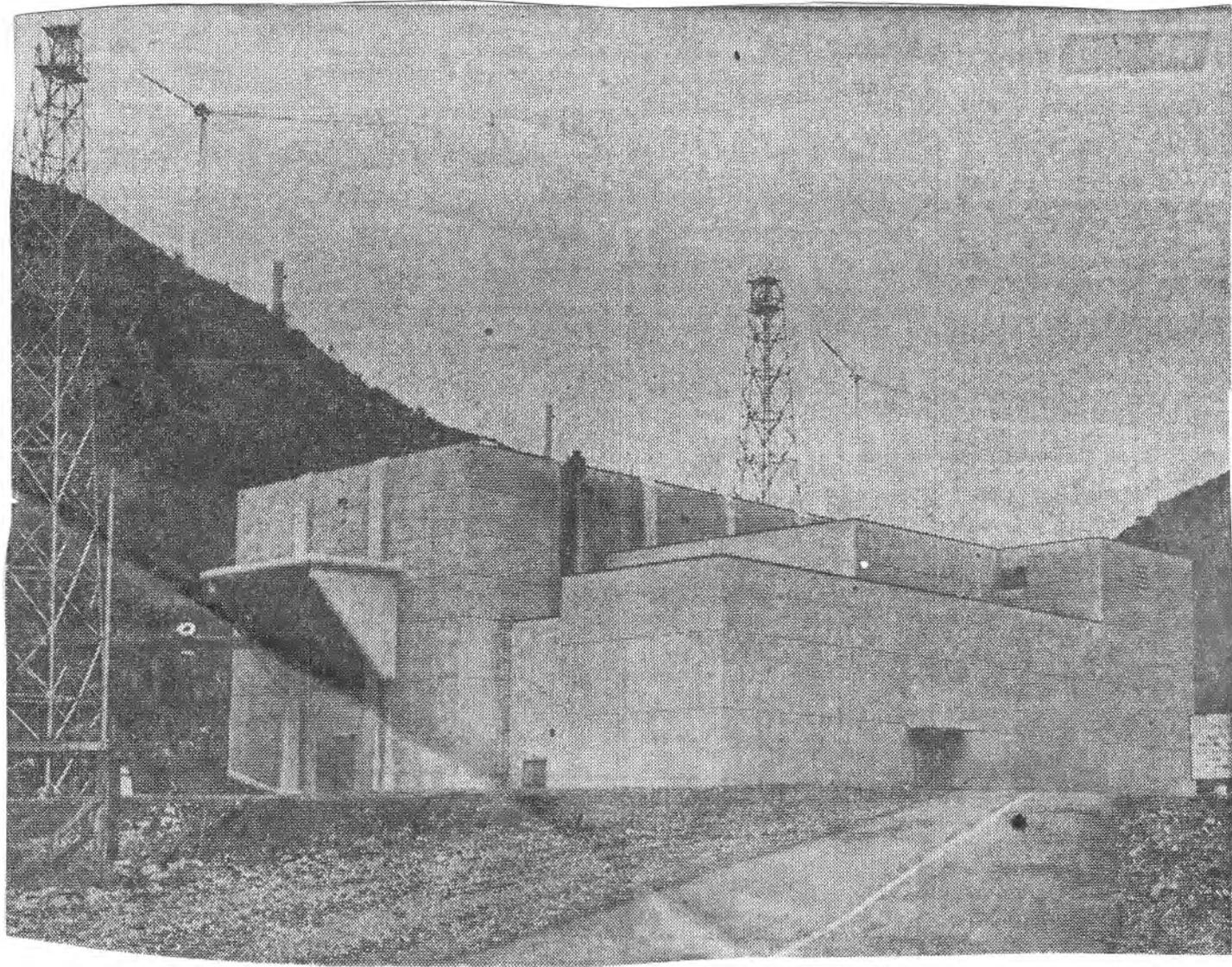
The rated power, the Navy says, is 22 times greater than the biggest commercial broadcasting station in the United States and twice the power of any military transmitters.

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'RADIO BIG JIM'

\$14 Million Transmitter Gives Navy Swift Globe-Girdling Voice

JIM CREEK VALLEY, Wash.—Although Christmas is four weeks away, the Navy couldn't wait until then to open its \$14,000,000 gift—the world's most powerful radio transmitter.

Many of the Navy's top brass, from Adm. Robert B. Carney, Chief of Naval Operations, on down, came here recently to see this amazing transmitter, located in the Cascade Mountains, 55 miles northeast of Seattle, put into operation.

What they saw elicited their most enthusiastic comments. And they could be justly proud of this Navy project which took six years to complete.

The Navy for the first time has an instantaneous link with its fleet units all over the world. Its wireless messages will swiftly penetrate to submarines beneath the waters, to ships and aircraft on and above far distant seas, and to Arctic outposts despite frequent magnetic storms and ionospheric disturbances.

LET'S LOOK at a statistical summary of this gigantic transmitter:

The transmitter, antenna system and supporting facilities are located on a 6000-acre site, once a wilderness, 20 miles inland from Puget Sound.

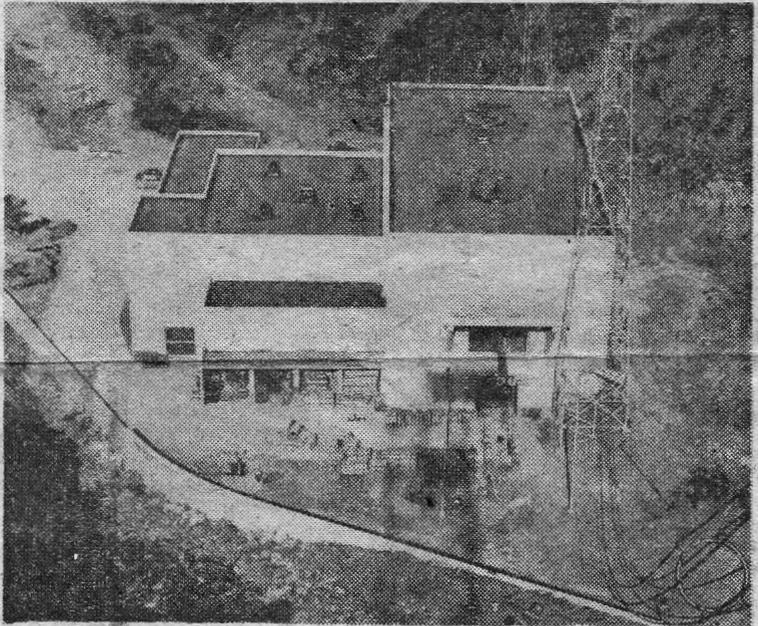
The giant antenna network consists of 150,000 feet of steel and copperweld cable hung from 12 200-foot towers on 3000-foot-high mountaintops in a series of giant strides stretching across the valley.

It transmits in the VLF, (very low frequency) range with an output exceeding 1,200,000 watts. This is more than twice that of any existing military transmitter and 22 times greater than any U. S. commercial station.

Jim Creek installation personnel consists of four Navy officers, 70 enlisted men and 35 civilians. Complete housing and recreational facilities are available.

The transmitter building is a window-less concrete structure, air conditioned. It is coppersheathed throughout as a safeguard against the intense electromagnetic field around it. Its foundation extends 35-feet below the ground surface and is stabilized against earthquakes.

RCA constructed the transmitter at its factory at Camden, N. J., and shipped it in 27 freight cars



TRANSMITTER BUILDING: Birds-eye view through steel framework of 200-foot summit ridge tower shows building which houses the world's most powerful radio transmitter—1,200,000 watts—which will be run by Navy. It's located in Cascade Mountains, 55 miles from Seattle, Wash.

to Seattle. It is the largest piece of electronic equipment ever built.

Each day the transmitter uses enough electrical power to operate the average home for more than a year.

ADMIRAL Carney reflects the Navy's feelings about electronic progress and atom-powered submarines in what he calls "an era of split atoms and split seconds."

Because atom-driven ships would be able to remain at sea for long periods, he said, there is an "increasing need for the use of effective radio in directing our tremendous and complicated maritime operations."

The speed of "Radio Jim Creek" was illustrated when the battleship *Wisconsin*, anchored in Japanese waters, answered the initial globe-girdling message within six minutes.

BRIG. GEN. David Sarnoff, chairman of the board of the Radio Corporation of America and one of the outstanding pioneers in the electronics field, spoke at the transmitter dedication, praising

the Navy's traditional position in the forefront of world communications.

Gen. Sarnoff said that great as the electron's achievements have been up to date, "we are still in the horse-and-buggy era of its development."

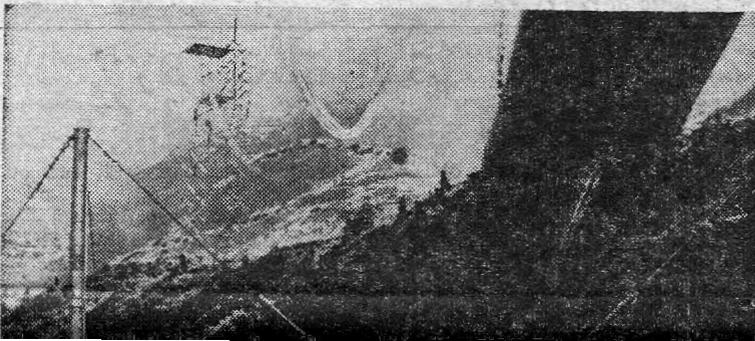
"It is not difficult to visualize the day when the electron will carry sight as well as sound to our armed forces around the world," he added. He indicated military exploitation of television is a feasible possibility.

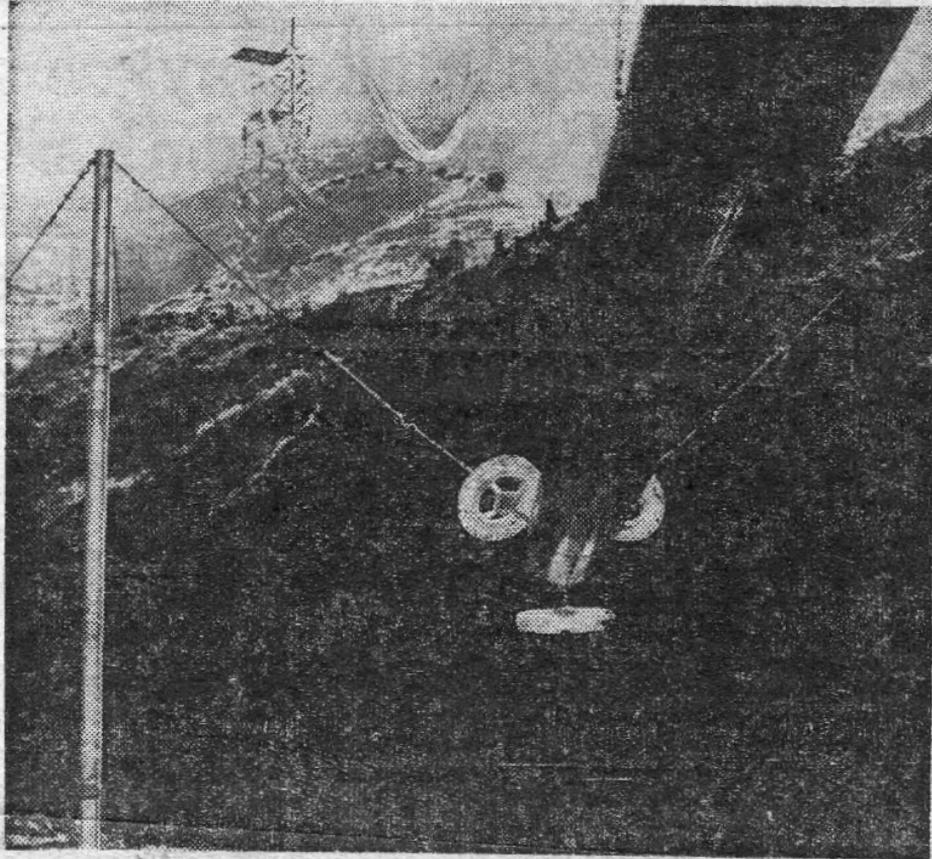
"We already possess the scientific knowledge to make television world-wide. It is technically possible to circle the globe with a land chain of microwave relay towers—a bridge that could relay television signals from continent to continent."

"Such advances will lead us to new uses of the electron for military as well as commercial purposes. . . . Recent scientific developments make it possible to span the oceans with radar information that can be relayed from plane to plane. The range and scope of detection and warning systems can be extended beyond the continental boundaries.

"Enemy planes and missiles could be tracked down and destroyed at considerable distances away from their intended targets. In this day of supersonic speeds, all this would be of greatest help to our national security. We must harness the electron for maximum mobility."

The Navy already is looking beyond its amazing "Big Jim" project, taking full cognizance of Sarnoff's prophesy.





LARGEST ANTENNA: One hundred and fifty thousand feet of steel copperweld cable looped in giant strides across Jim Creek Valley form largest antenna ever constructed. Photo shows lead-in trunk and one of 12 towers which support transmission line.