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The rescue swimmer and "victim" practice the two man hoist to the helicopter.



The 1,350-foot-high tower begins its downward descent.

## The Un-tenna

By HS2 William Cranston LoranSta Marcus Island

he morning of March 21, 1986, was a bright, sunny morning on Marcus Island. At 8 a.m., SA Steve Comeau, the duty watchstander, would purposely pull the plug to the operating oscilator. Comeau was joined by the crew in the timer room. Everyone was filled with anticipation, especially the ETs.

ETC Lowe gave the go ahead for Comeau to pull the plug. This was immediately followed by the Loran alarm, indicating the station was off-air. Everyone in the timer room let out a cheer. SN Matthew Turcola radioed Yokota monitor. "How do you see this station." Yakota replied, "I don't." Again the crew cheered. The ETs were happy now. They knew that for the next 90 days there would be no Loran alarms; no more "50-yard dashes" to the timer room or the transmitter building in the middle of the night...at least for awhile. This event started the official off air time for the tower replacement project.

Working under the watchful eye of Mr. Kono, 14th District civil engineering, contractors from Kajima Corp. and Denki Kogyo Co. had previously installed nine structural guy anchors and 12 radial guy anchors. Each anchor consisted of a rebar frame and about 90 tons of concrete. When finished they resembled icebergs, the majority of them underground.

During the tower replacement many of the contractors became friends with the crew. Even though a language barrier existed, we were able to understand each other. Each of the contractors learned a little about American culture and we learned a little about Japanese culture. We each learned some of the others' language. This made the project an educational experience for all.



The collapsed tower lies in a heap on the ground.

The crew was filled with anticipation on April 6, as we waited for the 1,350foot Loran C tower to come crashing down. The Japanese contractors had loosened cables on one side of the tower which made the tower lean in the direction that it was intended to fall. Earlier. a demoliton team set charges on one of the tower guy anchors where the cable attaches to the concrete structure. However, April 6 was not the day the tower was to come down. The direction and the strength of the wind were wrong for safe destruction of the tower. The demolition was set for the next day. The weather on the 7th was worse than the day before. The demolition was again postponed.

The wind was better on April 8. The crew members, all feeling positive, set out to their favorite observation areas. The contractors were bustling around doing last minute jobs. When one of the contractors came walking from the direction of the tower with a red box in hand, we knew the demolition was on. Over a nearby two-way radio, the voice of a Japanese contractor counted 10,9,8,...3,2,1. The charged exploded

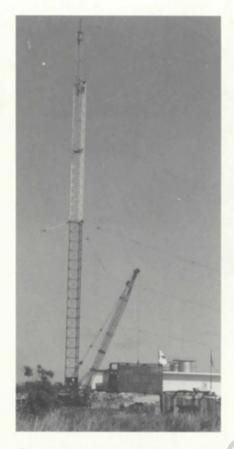
and the guy cables went flying in the air like pieces of string. A few seconds passed and the tower did not move. Finally it started to fall. It buckled and twisted, and for a few seconds it looked as if the earth was swallowing the tower. It stopped falling with about 200 feet still standing. Six seconds passed before it continued to fall.

Now it fell towards the transmitter building. The wind was blowing enough to keep it from landing on the building. A total of 25 seconds had passed from the time of the blast to the time the tower was officially down, but it seemed to take an eternity. The tower was supposed to fall like a giant tree, but it didn't go quite as planned. The crew anxiously awaited for the "all clear" from the contractors so they could go see the fallen tower. The tower's legs were made of 7-inch solid steel round stock. Now they looked like a pretzel. The tower plunged into the coral of the island 25-30 feet. This gave it the effect of being swallowed up. The transmitting building did not escape injury. One of the structural guys tore through the eves, causing minimal damage. It was all over, except for the clean-up.

The new tower arrived on Marcus Island in numerous crates. Mr. Imanaka, of the 14th District civil engineering branch, oversaw as members of the Denki Kogyo Co. preassembled the new tower in 30-foot sections. Each part was numbered and made to match a corresponding part. Construction of the new tower began the day after the demolition. In one day the first structural guy wires were connected. Day after day, in all types of weather, the construction crew worked. Meticulously and diligently they added more of the 30-foot sections to the tower. Each day the tower grew. The process was slowed only by the placing of guy cables and the cover of darkness.

In three weeks the tower was fully erect; all 700 feet of it. Laying the ground radials and connecting the transmitter up were all that was left to do.

Upon completion of the tower erection, the ETs could work safely in the transmitter building. This gave them time to tune, calibrate and clean the transmitters. The MKs also had work to



do at the transmitter building: cleaning and repairing the cooling system for the transmitters.

LT Layne from the 14th District relieved Mr. Imanaka. While Layne was on the island, he qualified members of the crew on climbing towers of 700 feet or less. Everyone climbed the tower. We made many trips to the top. Each trip took about 45 minutes going up. Marcus Island, a small island to begin with, looked even smaller from 700 feet above ground. Everyone who climbed the tower was impressed or maybe depressed by the size of the island. Looking in all directions, no other land can be seen. The closest land, Wake Island, is about 600 miles away. No formal means of communication makes Marcus Island the most isolated and remote duty station in the Coast Guard and possibly the world.

Officials from the 14th District, Pacific Area and the Electronics Engineering Center arrived prior to the station going on air to inspect the project. Many of these inspections were accomplished during the Air Force C-130 ground time. However, there were times when overnight accomodations at the station were necessary. Although the station was filled to capacity with contractors, BMC Dirksen and his staff made every effort to see to the comforts of each visitor.

On June 18, Loran Station Marcus Island was offically back on air.

The new tower goes up.



An aerial view of Marcus Island: The buildings closest to the runway are the Coast Guard's.