HMM-265 "Dragons"

By Captain Joseph McConnell of HMM-265

HMM-265 aircrews overfly the devastated regions of Northern Japan to conduct initial reconnaissance. (Photo courtesy of LCpl Matthew Denny)

Medium Helicopter Squadron 265 (HMM-265) "Dragons" of the 1st Marine Air Wing (1st MAW) disembarked from the USS DENVER on Friday, March 4, 2011. Personnel immediately went to work unpacking, inspecting, and putting away gear in hopes of wrapping up any loose ends by the following Thursday. After almost two months away from home, participating in Exercise Cobra Gold 2011 in Thailand, the Dragons were going to get a well-deserved day of rest. However, the plan quickly changed on March 11, 2011, when a 9.0 magnitude earthquake struck Northeast Japan, and was followed just nine minutes later by a massive tsunami.

The resultant destruction created a humanitarian crisis beyond the Japanese government's response capability. In response, the United States Forces Japan Commanding General requested the prepositioning of U.S. forces. Less than 24 hours later, Brigadier General William D. Bedlyer, Commanding General of the 1st MAW, tasked HMM-265 to deploy eight helicopters over 1,100 miles to mainland Japan to support the Humanitarian Assistance Disaster Relief (HADR) operations.

The Dragons knew that they would be called upon, even before the order was issued, and as the Marines watched the crisis unfold on television they began repacking their bags. Within 18 hours of the initial disaster, HMM-265 launched four CH-46E Sea Knight helicopters as well as maintenance equipment, parts, and personnel on a C-130 from Marine Corps Air Station (MCAS) Futenma, on Okinawa. Four more helicopters followed the next day.

On March 13, six of the eight of HMM-265 helicopters arrived at Naval Air Facility (NAF) Atsugi. All hands immediately began clearing out a dilapidated hangar for use during Operation Tomodachi. Personnel of HMM-265 were hampered by the lack of power,

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Immediate Relief Efforts

plumbing, heat, and communications in the hangar, but quickly overcame these obstacles. The Dragons were operations capable at NAF Atsugi before sunset—only two days after the disaster. Rolling blackouts and aftershocks often disrupted the Dragons efforts. The next day, a full detachment of eight helicopters and 100 personnel was on hand and prepared to execute tasks in support of the operation.

Less than 72 hours after the initial disaster, on March 14, HMM-265 transported the Forward Command Element (FCE) and their support equipment to Camp Sendai. The stated goals of the FCE were to initiate immediate HADR supply delivery, coordinate and facilitate non-Japanese Search and Rescue (SAR) efforts, and provide a link to other U.S. Military and Government assistance as needed. The eight CH-46E helicopters of HMM-265 became the backbone of the relief effort.

On March 16, the United States Air Force delivered the first large-scale U.S. military contribution of food and bottled water to Matsushima Airbase via C-130. Despite the uncertainty surrounding the condition of reactors at nuclear power plants in Fukashima, personnel of HMM-265 were determined to reach Matsushima in order to distribute these supplies around the devastated region.

Helicopters fought their way through blowing snow, low visibility, and low cloud ceilings on the 190-mile flight to Matsushima, where continual supply runs to isolated areas became the norm. At the end of each long workday, flight crews had a 1 hour and 45 minute return leg to NAF Atsugi, typically arriving after dark and utilizing night vision goggles.

On March 17, while attempting to fly north, one section of Dragons encountered sub-freezing temperatures, severe snow showers, and deteriorating conditions. At the insistence of the Japanese, the Marines had to land and remain overnight at a Japanese Self Defense Force (JSDF) airfield. The aircrew slept in a conference room inside a damaged building at Kasuminome Airfield. The Marines got to work the following morning by deicing the helicopters by hand, and scraping off the ice and snow with cardboard boxes and pressed forward with their mission.

They continued north and landed on the flight deck of the USS *RONALD REAGAN*, which was conducting SAR operations along the northeast coast in conjunction with the JSDF. HMM-265 helicopters were loaded with 4,000 pounds of food and water. The relief supplies were distributed to zones identified by a U.S. Navy E-2 from Carrier Air Group 5, which was on station providing airborne control.

Operations soon began to normalize and regular supply runs commenced. In order to maximize time on station and deliver relief supplies more efficiently, HMM-265 positioned forward elements near the heart of the affected region at Kasuminome Airfield and Sendai International Airport.

The Camaraderie between the JSDF and Marines made sleeping on floors in evacuated and unheated buildings dur-

Amid devastation in Northern Japan, personnel unload food and water. (Photo courtesy of LCpl Matthew Denny)

Crew Chiefs and Japanese Self Defense Forces work in tandem to unload a CH-46E from HMM-265. (Photo courtesy of LCpl Matthew Denny)

Supporting Operation Tomodachi

ing continuous flight operations tolerable. The JSDF graciously provided space heaters, water, tea, and facilities to the Marines, who in turn gave their Japanese hosts gifts of homemade cookies and American-style treats sent from friends and family at Okinawa.

The combined efforts of JSDF and the Marines of HMM-265 during Operation Tomodachi highlighted the unique design features of the CH-46E Sea Knight, which seemed to be tailor-made for this mission. The helicopter does not have a tail rotor, instead it has two tandem rotors that provide high overhead clearance and produce minimal downwash. These characteristics provided a safe platform for operations in conjunction with Japanese civilian volunteers, local authorities, and JSDF units, because most were unfamiliar with helicopters.

The Japanese Self Defense Forces assist in unloading a CH-46E. (Photo courtesy of LCpl Matthew Denny)

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Volunteers were able to form lines from the front doors of relief shelters right up to the rear of the helicopter and unload supplies by passing them hand-to-hand, without a risk of rotor blades spinning nearby or potentially harmful debris.

The Sea Knight's small size and large capacity was ideal for landing in remote areas throughout the devastated region, allowing the Dragons to deliver large quantities of time critical supplies. The ramp of the helicopter permitted rapid loading and unloading of supplies and equipment, especially heavy 55-gallon drums of kerosene, which could be expeditiously rolled on and off the helicopter. The design features of the CH-46 facilitated operations. HMM-265 rapidly delivered over 120,000 pounds of relief supplies to the stricken areas.

From March 17 through April 6, HMM-265 participated in the delivery of food, clothing and water to shelters, established portable shower units at various shelters in the Sendai, Ishinomaki, and Matsushima areas, and delivered diesel and kerosene fuel throughout the Iwate and Miyagi Prefectures.

Even after HMM-265's participation in Operation Tomodachi officially ended on April 7, the Dragons still faced a major challenge before they could return home. Early in the operation, as a result of a reactor meltdown at the nuclear power plant, *continued...*

A Dragon CH-46E makes its way north through subzero temperatures to reach the devastated Sendai region. (Photo courtesy of Sgt Eric Atwood)

Helicopters from HMM-265, aboard the USS *Ronald Reagan,* pick up supplies to deliver to relief shelters. (Photo courtesy of Kyle Zelonis)

Learning Lessons for America's Future

Lance Corporal Anthony Jecker, a crew chief assigned to the Dragons, passes a bag of relief supplies donated by residents of Naval Air Facility Atsugi, to a man at an evacuation center.
(U.S. Navy photo courtesy of MC2 Ben Farone)

a radiological threat was identified at the Fukashima facility. As a precautionary measure, all aircraft and aircrew received daily scanning for radiation levels. The aircraft were initially determined to be safe to operate and the mission continued.

At the completion of Operation Tomodachi, the U.S. Navy established standard allowable radioactive contamination levels for helicopters. Unfortunately, all of HMM-265's aircraft that participated in the relief operation exceeded this level. The Marine Corps had never been in a position where mission essential equipment was contaminated by radiological material and required decontamination.

Marines and Japanese Self Defense Forces unload food, water, and 55-gallon drums of kerosene from a CH-46E near a relief shelter in Northern Japan.
(Photo courtesy of LCpl Matthew Denny

Talks immediately began at higher headquarters about scrapping the aircraft, and potentially replacing them with retired CH-46E helicopters. However, this did not sit well with the Dragons. Just as a rifleman never leaves his weapon and has not finished his day's work until he has cleaned it and ensured its serviceability, the Dragons were unwilling to leave their aircraft and determined to clean them and return them to serviceability.

While the disaster suffered by the people of Japan was tragic, Operation Tomodachi proved invaluable to the U. S. military from a strategic point of view. This rapid deployment of forces for a contingency operation better poised the Navy and Marine Corps to respond in the future. Perhaps the greatest lesson was derived from encountering a radioactive threat. Recently, the focus of this effort has been on counter-insurgency tactics in a third world environment. It is not implausible that Marines could find themselves operating in a radioactive environment caused by similar natural disasters, attacks on power plants, detonation of dirty bombs, or even a nuclear weapon from a developed world power. The damage to the reactors at the Fukashima power plant has affirmed the possibility of a nuclear disaster. The experiences of HMM-265 Dragons provide invaluable lessons, and will pave the way in dealing with future threats.

In the weeks following the conclusion of Operation Tomodachi, squadron personnel of all ranks assisted Chemical, Biological, Radiological, Nuclear (CBRN) teams in scrubbing down aircraft, pioneering methods to reduce radioactive contamination to acceptable levels. All Marines were outfitted with protective equipment. Navy and Marine radiological specialists allowed none to work on aircraft or parts that they determined unsafe.

The Dragons took a methodical approach to the situation. Starting with one aircraft, they began removing the radioactive contamination. Marines recorded their methods of decontamination and which part had been processed. Readings were taken before and after

Taking a Methodical Approach

to determine the effectiveness of their methods. Marines discovered that radioactive contamination sometimes bonded to loose dirt, oil, and grease and could be removed with mild solvents and elbow grease. Radiation that was fixed to the aircraft could be removed with mildly abrasive pads. Interestingly, the standard household scrubbing pads seemed to work best! To prevent contaminating the surrounding area, all waste products were contained.

During the process, many misconceptions about radioactive contamination were dispelled. It was assumed that leading edges of the aircraft such as the nose cone, the stub-wings, and the fast spinning rotor blades would accumulate the majority of the radiation. To the contrary, the radioactive particles seemed to slide over the streamlined parts of the aircraft and accumulate in sharp corners and nooks that are less aerodynamic. Radiation levels were higher on woven materials, rubber and plastic parts as well as air-breathing and porous parts such as rotor heads, fans, oil-coolers, radiators, and airflow multipliers. As a result, most of the oil coolers were removed and marked as hazardous waste.

During the operation, U.S. Navy CBRN teams used an aircraft sketch to log radiation levels at certain points and designated metrics for aircraft contamination. The maintenance Marines of HMM-265 developed a systems-based map of the entire aircraft to accurately log radiation levels during the decontamination process. This later became the Commander Naval Air Forces standard for recording and tracking radioactive contamination. The system was significant because it identified the "hottest," parts of the aircraft, and provided the safety information to the aircrews and future maintenance Marines who will work on the aircraft. Once the aircraft were mapped for radiation, Marines logged the amount of time spent decontaminating specific aircraft parts. Sometimes the cost of decontamination outweighed the cost of removing a part and installing a new one. If this was the case, personnel replaced the contaminated part.

The decontamination attempts were not in vain. CBRN teams scanned each of the scrubbed aircraft and reported significant progress. Contamination levels soon dropped below the U. S. Navy standards. Finally, after weeks of perseverance, the last aircraft rolled off the wash rack and on April 25, the first section of Dragon aircraft launched homeward bound. All Dragons were home by May 3., and quickly exchanged the Operation Tomodachi patch for the HMM-265(REIN) patch, and joined the 31st Marine Expeditionary Unit.

Wearing special gear, maintenance Marines of HMM-265 supervise the decontamination efforts. (Photo courtesy of Cpl Paul Rathbun)