

## INTRODUCTION

USS CARL VINSON (CVN 70) and her crew of 2,700 are homeported in San Diego, California. Our mission is to promptly and efficiently execute any and all national tasking – project power at sea and ashore; protect CARL VINSON and all aboard against threats at home and abroad; and through our actions make this ship the "Finest Warship in the Fleet."

## BACKGROUND

USS CARL VINSON overcame many challenges while assigned the most operationally demanding schedule ever executed by a post-Refueling Complex Overhaul (RCOH) aircraft carrier.

Just one month after completing a 42-month RCOH period, CARL VINSON focused on a combined SOUTHERN SEAS 2010 deployment and homeport change from Norfolk, Virginia to San Diego, California. One day after being deployed, CARL VINSON responded immediately to an urgent 911 call for Humanitarian Assistance and Disaster Relief (HA/DR) in support of millions of Haitian earthquake victims. The crew answered quickly, safely and with enthusiasm. From 476 complex medical evacuations to landing zone deliveries of more than one million pounds of emergency rations and more than 10 tons of water during 2,226 helicopter sorties in 18 days, every evolution was devoted to protecting life and preserving an already damaged ecosystem.

During the SOUTHERN SEAS 2010 deployment CARL VINSON successfully completed three precision anchorages off the coasts of Brazil, Chile, and Peru, two of which were deep-water anchorages, and successfully transited the Straits of Magellan. Protective Measures Assessment Protocol (PMAP) was employed to evaluate the locations of our anchorages ensuring all protective measures were in place and that our environmental impact was minimized. The remainder of SOUTHERN SEAS 2010 was highlighted with multiple Theater Security Cooperation (TSC) opportunities including numerous high-visibility foreign distinguished visitor embarkations involving more than 480 distinguished visitors flown to and from the carrier. A highlight of their visit was the demonstration of our commitment to the environment and our ability to reduce our environmental footprint with our sophisticated solid-waste processing equipment.

Upon arrival at her new homeport in San Diego, CARL VINSON once again faced the many environmental challenges presented by strict state environmental regulations and a fast-paced 75-day maintenance availability. The CARL VINSON crew responded to this challenge by

establishing a positive working relationship with an entirely new team of environmental coordinators, shipyard workers, and port engineers and promptly established common Operational Risk Management goals for all environment related issues resulting in zero hazardous material accidents or spills.

In July 2010, CARL VINSON performed multiple Carrier Qualification (CQ) evolutions while simultaneously executing an unprecedented Combat Systems Ship's Qualification Trials (CSSQT) Missile Exercise (MSLEX) involving the loading and successful firing of 14 NATO Evolved Sea Sparrow Missiles. Again, our PMAP Officer was hard at work ensuring that this exercise was performed in a suitable operational area with minimal impact to marine life.

August 2010 was dedicated to underway Unit Level Training (ULT) and crew evaluations. The crew demonstrated their capability to fight the ship with proficiency by completing all training objectives during Carrier Annual Readiness Training (CART), Tailored Ship Training Assessment (TSTA), and Final Exercise Problem (FEP). The Sailors of CARL VINSON achieved an outstanding on FEP with a grade of 97.6%.

Despite this high operational tempo, CARL VINSON was challenged with an extremely demanding Board of Inspection and Survey (INSURV). The crew remained dedicated and focused on the mission tasks at hand. Their tireless efforts and preparation for the material condition assessment of their ship was rewarded by receiving an unprecedented "Best in Class" and the best INSURV inspection grade in more than 10 years.

CARL VINSON could not and did not rest after these multiple successes. On the last day of November 2010, the crew deployed for a six and a half month combat deployment - just six months after her last deployment making CARL VINSON the only aircraft carrier to deploy twice in 2010. With an authentic respect for a workplace littered with potential for environmental mishaps, team CARL VINSON and her embarked air wing (CVW-17) flawlessly and safely completed Composite Training Unit Exercise (COMPTUEX) and the Final Battle Problem (FBP) with the ferocity of steel-hardened combat warriors.

After spending more than 165 days underway in 2010, CARL VINSON executed a rare "COMPTUEX and Go" and turned west on 22 December 2010 to carry out any mission her country would ask her to accomplish.

To begin the new year, CARL VINSON and her crew were undeniably our nation's most reliable workhorse in the fleet. She spent a total of 234 days underway and bookended the year with another six month

3) USS CARL VINSON (CVN70) INSTRUCTION 5090.2, Oil and Hazardous Substance (OHS) Spill Contingency Plan, 23 Aug 2010, reviewed Jun 2011.

**Program summary and accomplishments:**

CARL VINSON's command environmental programs were formally assessed twice during FYs 2010-2011. The Board of Inspection and Survey (INSURV) assessed the programs in October 2010 with CARL VINSON's Environmental Protection program scoring an 82, well above the class average of 71, and was praised as "one of the best in her class". The best programs were Collection, Holding, and Transfer (90) and our Oily Waste System (97), which was praised as "The best in the fleet". Our solid waste program scored 74 for discrepancies with 6/11 Compressed Melt Units (CMUs). All 11 were fully operational in time for our November 2010 WESTPAC deployment.

In March 2011, the AEPC conducted a Fleet Forces Command and Commander Naval Air Forces directed environmental assessment using Appendix K of OPNAVINST 5090.1C. Only three minor PQS and training discrepancies were discovered from more than 90 checklist items.

CARL VINSON's most innovative environmental program is our "Green Machine" which was established by a group of motivated Sailors in early 2010. Their mission is to generate policy, practices, and partnerships to measure and improve overall environmental impact afloat and ashore related to trash processing, recycling methods, transportation-related carbon emissions and fuel consumption. While underway during WESTPAC 2011, CARL VINSON's Green Machine recycled more than 760,000 pounds of cardboard waste and aluminum (equating to 257 cardboard bales and 169 tri-walls of crushed aluminum cans). This tremendous accomplishment was made possible by the installation of a cardboard baler prior to our deployment. This bailer allowed us to efficiently store large bales for weeks at a time vice incinerating or dumping the cardboard overboard. Aluminum cans were crushed and stored in large tri-wall containers vice disposal at sea. Additionally, CARL VINSON also donated more than 3,000 pounds of aluminum to two separate charities, helping not just the environment, but local charities as well. The Green Machine eliminated single use plastic condiment containers on our mess decks in favor of bulk containers further reducing our plastic waste.

During 2011, the Green Machine and family members participated in six San Diego area beach cleanup events maintaining and improving our beautiful local beaches. Additionally, carpool initiatives were established for Sailors to reduce their carbon footprint during daily commutes. In August, the Green Machine sponsored a Navy-wide Green

combat deployment. Early in the year, her crew transited the Pacific and Indian Oceans contributing directly to Operations ENDURING FREEDOM and NEW DAWN flying 1,594 combat sorties totaling 9,280 combat flight hours and safely delivering lethal combat air support to ground troops with ZERO oil and hazardous material spills. Port visits included Busan, South Korea; Port Kelang, Malaysia; Jebel Ali, UAE; Pearl Harbor, Hawaii; and anchorages in Manila, Philippines and Hong Kong, China. The crew was able to utilize our recent hazardous material and oil spill clean-up training in Jebel Ali when host nation contractors spilled oil on the pier while transferring oily waste from the ship. The in-port duty section quickly deployed our oil spill kits to assist the local contractors and quickly prevented any oil from entering the water. Our 2011 WESTPAC deployment was completed on 15 June 2011 with ZERO reported oil or hazardous substance spills. Upon returning to her homeport we prepared for a three month Carrier Incremental Availability (CIA).

Less than three months after her return from deployment, CARL VINSON got underway for Sustainment Exercise, ending the fiscal year at sea. It is obvious that environmental protection is not a program run by any one person or group on CARL VINSON, but rather a collectively shared culture that not only permeates within the command but also sets the standard on the waterfront.

The ship's Environmental Compliance Board (ECB) was defunct during RCOH and was reestablished under new leadership in August 2010. Quarterly meetings addressing our environmental compliance and most pertinent concerns were held in August and December 2010 and March, June, and September of 2011. The ship's Industrial Hygiene Officer is assigned the duties and responsibilities of Afloat Environmental Protection Coordinator (AEPC) and he informs and advises the Commanding Officer on all environmental matters. The AEPC completed the required A-4J-0021 AEPC Course in March 2010.

In addition to complying with all aspects of OPNAVINST 5090.1C, CARL VINSON created several local environmental instructions to govern day-to-day operations and plan for all contingencies. Our local directives include:

- 1) USS CARL VINSON (CVN70) INSTRUCTION 5090.1B, Environmental and Natural Resources Protection Program, updated 13 Apr 2011
- 2) USS CARL VINSON (CVN70) INSTRUCTION 5090.3C, Plastic and Solid Waste Management at Sea, 25 Feb 2001, reviewed Feb 2011

Coordination Meeting hosting NAVSUP, NAVICP, NAVFAC, NAVAIR, NESDI, NAVSEA, CNAF (N41/43/45), CNAP, and MSC developing working groups to enact initiatives regarding recycling, afloat waste management, shop towel reuse, and supply chain waste reduction. CARL VINSON will begin the reusable shop towel program after our 2011 WESTPAC deployment. Additionally, bulk recycling bins were acquired at our pier and from July to September 2011 we recycled more than 12,000 pounds of aluminum, plastic, and glass saving the ship more than \$6,600 in waste processing costs. We also recycled 63% of our waste and kept it out of local landfills. The CARL VINSON and her Green Machine received an Honorable Mention for the Navy Community Service Environmental Stewardship Flagship Award which recognizes shore, sea, and overseas commands for outstanding community service, including service that promotes good stewardship of environmental resources.

During the reporting period, CARL VINSON had one reportable Aqueous Film Forming Foam (AFFF) spill of approximately 50 gallons while in port San Diego (Oct 2010) and one reportable oil spill of approximately 24 gallons (Sep 2011) also while in port San Diego. The command's highly trained duty section and Naval Base Coronado Port Operations staff deployed small boats and utilized oil spill kits (which were labeled the "most complete in the fleet" by INSURV evaluators) and collected all 24 gallons of oil. Both spills were immediately reported to all required agencies. The duty section was able to prevent any significant environmental affect by their quick actions.

CARL VINSON's leadership oversaw the installation of the newest Oily Waste System (OWS) in the carrier fleet with our system receiving a score of 97 during INSURV and being lauded as "the best in the fleet". During our 2011 WESTPAC deployment, our OWS system consistently removed oil down to 8-10 parts per million (ppm), well below the required 15 ppm for overboard discharge. We were able to pump oily waste tanks during each of our port visits to eliminate the need for any emergency overboard discharges. During CIA 2011, the Oil Content Monitoring (OCM) system was recalibrated and restored by Reactor/RP05 personnel. The oil content baffle plates and unit was overhauled and cleaned by Reactor RP05 Division personnel producing remarkable results. While underway in September 2011, our OWS produced discharge concentrations of less than 1 ppm oil. CARL VINSON Reactor/RP05 personnel performs preventive maintenance every 6 to 12 months on the OWS even though the maintenance is only required every 24 months.

Used oil, other petroleum products, and synthetics such as hydraulic fluid are collected and retained in our Used/Excess HAZMAT area. Fluids are segregated and stored for transfer or disposal at

appropriate shore facilities. They are containerized and transferred for proper shore disposal.

The ship's Hazardous Material (HAZMAT) program was evaluated five times in 2010 and CARL VINSON demonstrated her ability to lead from the front. HAZMAT inventory accuracy assessments in the Hazardous Materials Minimization Center (HAZMINCEN) and storerooms scored 97 and 98 respectively, and proved to be a significant contribution to the overall INSURV grade while outperforming all other carriers in 2010. The Naval Safety Center evaluators commented that the CARL VINSON's HAZMAT Program was "outstanding" and "head and shoulders above the competition." Additionally, we were the first carrier to request an assist visit from NSWCCD-SSES Code 635 HAZMAT subject matter experts who are assigned to help NIMITZ Class Aircraft Carriers combat design deficiencies by implementing innovative storeroom floor plans for safe material storage to prevent spills and dangerous chemical interactions. Our calcium hypochlorite storeroom was completely renovated to comply with the new requirements identified in a pending revision to NSTM 670. CARL VINSON has already installed new non-reactive polyethylene corrosive storage cabinets to accommodate our Calcium Hypochlorite inventory - only the second CVN to complete this important modification.

In all, CARL VINSON has invested more than \$100,000 in deck grating, light fixtures, flammable storage cabinets, and calcium hypochlorite storeroom upgrades improving our HAZMAT storage capabilities. Our HAZMAT disposal area was improved by a complete renovation and the removal of two unapproved CONEX boxes from Hangar Bay Three. CARL VINSON Sailors are committed to being environmental stewards and our HAZMAT program contributes significantly to this important role by setting HAZMAT users up for success. Additionally, CARL VINSON demonstrated her commitment to the environment by transferring four pallets of hazardous material to the USS RONALD REAGAN (CVN 76) when she relieved us on station in the Arabian Sea in May 2011. This transfer allowed the materials to be utilized prior to their expiration date and prevented unnecessary disposal.

CARL VINSON's commitment to the environment continued upon arrival in San Diego in June 2011, when we immediately contacted the Naval Station San Diego Waterfront Environmental Coordinator to provide critical oil and HAZMAT spill training for Command Duty Officers and watch standers. CARL VINSON's Supply Department transferred more than 40 pallets of hazardous materials not used on our deployment to shore for redistribution to other commands. This HAZMAT would have otherwise expired before use and would have caused unnecessary disposal and associated costs.

Protective Measures Assessment Protocol was employed by the PMAP Officer, CARL VINSON's Assistant Navigator, to evaluate the locations of our anchorages (12), Surface-to-Air and Surface-to-Surface Missile Exercises (1), and Small Arms Firing Exercises (63). We are required to conduct a significant number of Small Arms Firing exercises to qualify all aviators, Underway Officers of the Deck, security personnel, and weapons personnel. We make every effort to minimize our impact on our marine ecosystem.