

SUBMITTAL FOR
2012 SECRETARY OF DEFENSE - NAVY
ENVIRONMENTAL QUALITY - INDUSTRIAL INSTALLATION AWARD
MARINE CORPS AIR STATION CHERRY POINT

INTRODUCTION

a. **Mission:** Marine Corps Air Station (MCAS) Cherry Point maintains and operates facilities and provides services and material to meet the operational requirements of the assigned tenants and commands. The missions of the major tenants that the Air Station hosts are as follows:

(1) The Second Marine Aircraft Wing (2d MAW). The supporting air component of Marine Forces, Atlantic, the mission of the aircraft wing is to conduct air operations to include offensive air support, antiair warfare, assault support, aerial reconnaissance including active and passive electronic countermeasures (EMC), and control of aircraft and missiles. As a collateral function, the wing may participate as an integral component of Naval aviation in the execution of such other Navy functions as the fleet commander may direct.

(2) The Fleet Readiness Center – East (FRC-East). Performs a complete range of depot level rework operations on designated weapons systems, accessories, and equipment. It manufactures parts and assemblies as required, provides engineering services in the development of changes in hardware design, and furnishes technical and other professional services on aircraft maintenance and logistics problems. This is the largest single-sited industry in eastern North Carolina, employing over 4,100 personnel.

(3) The Naval Clinic (NAVC). Provides general clinical and hospitalization services to all armed services active duty and dependents, and other authorized persons. The hospital cooperates with military and civilian authorities in matters pertaining to health, sanitation, local disasters, and other emergencies.

b. **Environmental and Geographical Setting:** MCAS Cherry Point encompasses 11,485 acres and is located in the Coastal Plains area of eastern North Carolina, Craven County, approximately midway between New Bern and Morehead City. U.S. Highway 70 and NC Highway 101 provide highway access. The Air Station proper is located on a peninsula bounded on the north by the Neuse River, on the east by Hancock Creek, and on the west by Slocum Creek. The southern boundary borders on NC Highway 101. The Croatan National Forest is located adjacent to the Air Station boundary. In addition, the Air Station maintains three outlying airfields and two target complexes totaling 15,732 acres. The Air Station, 2d MAW, and its industrial tenant command, the FRC-East, have continued for more than a half-century to carve their places in history as service/industrial organizations that support the training and maintenance of our nation's sophisticated national defense machine. One might think of MCAS Cherry Point as being comparable to a small city with a large industry and an international airport (120,000 operations per year) populated by 10,000 marines and sailors, their 13,500 dependents, and more than 6,500 civilian employees for a total population of approximately 30,000.

BACKGROUND

a. **Environmental Challenges at MCAS Cherry Point:** Enactment of the Resource Conservation and Recovery Act (RCRA) in 1976, followed by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or "Superfund" of 1980, and the Hazardous and Solid Waste Amendments (HSWA) of 1984 provided impetus to clean up federal facilities, preserve the natural environment, and improve quality of life. Prior to passing RCRA, CERCLA, and HSWA Congress had passed the Clean Air Act, the Clean Water Act, and the National Environmental Policy Act (NEPA). Those laws and their amendments, together with additional state and federal environmental laws and Executive Orders, resulted in a mammoth undertaking by the Air Station to properly manage environmental resources and properly respect the

environment in the planning and execution of new projects. Headquarters Marine Corps (HQMC) incorporated the environmental management requirements set forth in current law in the USMC Environmental Compliance and Protection Manual, Marine Corps Order (MCO) P5090.2A dated 10 Jul 98. This Order and other environmental directives required U. S. Marine Corps commands to comply with federal, state, and local environmental and natural resource laws and regulations. Guidelines were thus established for a Marine Corps-wide policy to address environmental concerns.

(1) The three Marine Air Groups of the 2d MAW, located aboard MCAS Cherry Point, operate facilities and maintain aircraft in support of the wing mission. Aircraft currently based at MCAS Cherry Point, in squadron strength, include the AV-8B Harrier II, EA-6B Prowler, and C-130 Hercules. Marine Aircraft Group-14 operates maintenance and repair facilities for 145 aircraft currently assigned. Marine Wing Support Group-27 operates engineering support and construction equipment. Marine Air Control Group-28 operates electronic support equipment, air defense operations, and facilities in support of the 2d MAW. These groups operate maintenance and repair facilities for the wide variety of equipment assigned to each unit.

(2) The Air Station maintains support and maintenance facilities for two C-9B aircraft, two C-12 aircraft, and three CH-46 search and rescue helicopters. More than 1,000 items of garrison mobile equipment are in use by the Air Station in support of the 2d MAW and tenant commands. The Air Station operates two equipment maintenance facilities for mobile garrison equipment.

b. **Organization, Staffing and Management Approach:** The Environmental Affairs Department (EAD) of the Air Station Facilities Directorate manages all environmental matters for MCAS Cherry Point; Marine Corps Auxiliary Landing Field (MCALF), Bogue; Marine Corps Outlying Landing Field (MCOLF), Atlantic; and tenant commands. The department has oversight for and advises the Commander, Marine Corps Air Bases, Eastern Area on environmental matters for MCAS Beaufort; MCAS New River; and Marine Corps Air Field, Quantico. An environmental staff of thirty-two professional and technical personnel, distributed within the Environmental Compliance Division, Restoration & Recycling Division, and Natural Resources Division, carries out these tasks.

PROGRAM SUMMARY

a. **Objectives of the Environmental Management Program:** Marine Corps Air Station (MCAS) Cherry Point is committed to sustain and enhance mission readiness through compliance with relevant laws and regulations, prevention of pollution, and continual program improvement through an environmental management system (EMS).

In January 2004, the initial EMS was implemented at MCAS Cherry Point which consisted of four pilot organizations aboard the Air Station. During the period of February to November 2004, an initial inventory of practices, aspects, and impacts (PAI) was conducted at all four pilot organizations. Then, the EMS Core Team conducted a risk ranking exercise to prioritize those practices and aspects that represent a risk to the Air Station mission. Once EMS training was provided to Air Station personnel in November 2004, the Chief of Staff endorsed the EMS Core Team Charter in January 2005. In February and March 2005, the first set of objectives and targets (O/T) were developed for significant aspects resulting from the pilot organization risk ranking of practices and aspects. The O/Ts were developed by Environmental Affairs Department (EAD) personnel.

In April 2005, the Installation Commander endorsed the Environmental Policy Statement. Environmental management procedures (EMPs) and an EMS manual were drafted in 2005. During May to August 2005, the process of developing and monitoring environmental action plans (EAPs) to achieve O/Ts was implemented. In September 2005, EAD conducted EMS Policy training at different organizations, units, and departments aboard the Air Station. A plan was developed to expand the EMS across the entire installation. The Fleet Readiness Center – East (FRC-East) and Naval Health Clinic (NHC) are required to implement an EMS at the

organizational level per Navy guidance. These organizations have chosen to develop and implement EMS independently of the Air Station's EMS. However, they participate at the Air Station's EMS Core Team meetings and vice versa. This relationship has been documented in the EMS Manual.

Additionally, an EMS conformance status report was submitted to Headquarters Marine Corps (HQMC) on September 30, 2005. HQMC recognized MCAS Cherry Point for completing all seven USMC EMS implementation criteria before December 31, 2005 for the pilot organizations. Cherry Point was one of three Marine Corps installations recognized by HQMC for achieving the implementation criteria.

In September of 2007, the installation participated in an annual self-environmental audit. The installation received zero major non-conformances and only seven minor non-conformances. The installation submitted a declaration of self-conformance to HQMC documenting that the installation had met the HQMC EMS conformance criteria by the 31 December 2007 deadline.

In 2008, the installation participated in the HQMC Benchmark ECE EMS audit. The installation received zero major non-conformances and only seven minor non-conformances. The installation submitted a declaration of self-conformances to HQMC documenting that the installation had met the HQMC EMS conformance criteria by the 2008 deadline.

In 2009, the installation participated in an annual self-environmental audit. The installation received zero major non-conformances and only three minor non-conformances. The EMS Annual Review was completed and reviewed.

In 2010, the installation participated in an annual self-environmental audit. The installation received zero major non-conformances and seven minor non-conformances in which corrective actions were implemented. The EMS Annual Review was completed and reviewed.

In April 2011, the installation participated in the HQMC Benchmark ECE EMS audit. The installation received zero major non-conformances and six minor non-conformances. The installation also completed an annual self-audit in 2011.

In September 2012, the installation submitted its annual self-environmental audit to HQMC. The installation received zero major non-conformances and only six minor non-conformances.

The EMS is reviewed and updated annually to ensure it remains suitable to the current mission and is effective in achieving MCAS Cherry Point's environmental policy, objectives, and targets. MCAS Cherry Point uses the HQMC Environmental Management (EM) Portal intranet site as a tool to facilitate communication for its environmental program areas, maintain the EMS PAI inventory, and objective and target data, and also serve as a document repository. An EMS requires continual improvement, which is currently reflected through efforts such as increased EMS training, implementing EMS contract language to meet the intent of Executive Order (EO) 13423, improving document and record control procedures, continuing to develop environmental standard operating procedures (ESOPs), establishing an Air Station order to implement the 59 existing ESOPs, and tracking/modifying EAPs associated with minimizing animal air strike incidents, conserving energy and water, improving water quality, promoting renewable energy projects, and reducing greenhouse gas emissions.

b. Overview of Outstanding Program Features and Accomplishments: Recognition of past achievements in environmental stewardship is evidenced through receipt of the following awards during 2011 and 2012. This record is evidence of our commitment to environmental excellence and demonstrates our

innovative management approach.

Date Received

Award

2011	2010 Secretary of the Navy Environmental Quality Award - Industrial Installation
2012	2011 Secretary of the Navy Sustainability Award - Industrial Installation
2012	2011 Secretary of the Defense Environmental Cleanup Award – Tier I Partnering, Team

MCAS Cherry Point has excelled among DoD facilities by winning the Commander in Chief's Installation Excellence Award on seven occasions over the past 24 years since the award has been given, 1988, 1994, 1996, 1997, 1999, 2000 and 2003. This award is unique in that it provides a monetary award of \$200,000 which has been used for quality of life programs for the Marine and civilian work force. The \$1,400,000 received from this source has been utilized to improve the working and living environment aboard the Air Station. This prestigious award designation was the result of Cherry Point's sustained commitments in innovative recycling, pollution prevention, and hazardous waste (HW) management programs. Furthermore, the EAD staff has received seven prestigious Commander in Chief's Awards for outstanding achievements by individuals. This record of previous achievement sets the stage for continuing efforts toward environmental quality.



c. **Reducing Solid Waste by Education:** Education is the key to the success of an environmental program. With this idea as the corner stone, the Environmental Affairs Department started a comprehensive education program. The program includes a quarterly environmental newsletter featuring articles about various environmental subjects, pamphlets describing environmental activities and environmentally friendly tips, and outreach awareness training to various school groups. The program has been an overwhelming success with the military and civilian personnel aboard the Air Station becoming proactive in recycling plastics, aluminum cans and cardboard.

d. **Blending Facility for Burning Used Oil at the Central Heating Plant:** Blending of the recyclable petroleum required the construction and operation of a blending facility. The construction phase of the blending facility began in FY 2001 and was completed and a contract for the operation of the blending facility was awarded in FY 2003. By blending the recovered fuels, used oil, and used fuels, which amounts to 270,000 gallons per year, will save the Air Station \$237,600 per year.

ACCOMPLISHMENTS

a. **Waste Management and Resource Recovery:**

(1) **Resource Recovery:** A Recycling Program was initiated at MCAS, Cherry Point in 1988, with the development of an infrastructure for an Industrial Qualified Recycling Program (QRP) to recycle commodities on a value priority basis. The Air Station has developed a recycling program for items such as steel, white and yellow metals, fired brass, high temperature alloys, waste oil, JP-4/JP-5 fuel, tires, batteries, and HM. By recycling more than 72 million pounds through the Defense Reutilization and Marketing Office, the QRP has generated over \$4.8 million in revenue for the Air Station since the program's inception. During FY11/12,

over 6.8 million pounds were recovered and recycled, producing \$911,116 in income for the Air Station. From March 1994 to August 1998, over \$845,000 has been provided to the MCCS Directorate for quality of life projects. The following projects are among some of what the QRP proceeds were used for: the purchase of a large tour bus, a recreational addition to Hancock Boating Marina, an outdoor entertainment stage, the purchase of carpet cleaners with cleaning fluids, locks, medicine cabinets for the troops in their new barracks, and picnic shelters.

The following is a summary of the more outstanding recycling savings and income achieved in the past 2 years:

Qualified Recycling Program. The recycling of steel, white and yellow metals, fired brass, high temperature alloys, tires, batteries, and miscellaneous items.

Pounds	Income	Cost avoidance
6,806,056	\$911,116.03	N/A

Waste Oil Wealth Program. The sale of used oil as a result of adoption of a program to source segregate chlorinated solvents from used oil and resource recovery by burning used oil in the central heating plant.

Gallons	Income	Cost avoidance
206,701	\$38,556.68	\$387,564.38

Used Fuel. The recycling of jet fuels and supplying fuels for burning at the Air Station main heating plant and training for Crash Crew.

Gallons	Income	Cost avoidance
135,188	N/A	\$499,177.42

Used Solvent Elimination. The removal and recycling of spent solvent from parts cleaning machines.

Gallons	Income	Cost avoidance
17,272	N/A	\$103,632.00

Household Recycling Program. The recycling of aluminum and steel beverage cans, glass and plastic containers, office/mixed paper, cardboard and newsprint; initially utilizing a drop-off type program and then adopting a curbside collection for 1719 air station housing units.

Pounds	Income	Cost avoidance
667,120	N/A	\$50,784.00

Wood Waste Recycling. Wood wastes deposited into the construction debris landfill aboard the Air Station.

Pounds	Income	Cost avoidance
5,084,000	N/A	\$96,596.00

Total Income: \$949,672 Total Cost Avoided Savings: \$1,137,753

(2) **Toxic and Hazardous Material Management:** The Air Station has made significant progress in improved material management by creating and maintaining a *hazardous materials control center* (HMCC), which provides hazardous material (HM) management at all levels. The Supply Directorate consolidates all HM aboard the Air Station into one central warehouse. This has allowed the Supply Directorate HMCC to have complete control over procurement, issue, delivery, stocking, and reclamation of unused material. Services provided by the HMCC include shelf-life management, just-in-time procurement, and delivery and pickup of HM. Operation costs are limited to manpower, with no direct implementation or maintenance costs. The organizations taking advantage of this program include not only Cherry Point, but other military installations, so that excess material collected at MCAS, Cherry Point is advertised for reuse at MCAS Beaufort, SC and MCAS New River, NC. Actual cost savings for FY 11 and FY 12, for the reuse program are:

HM reissued by HMCC.....	\$200,386.
HM disposal cost avoidance.....	\$312,401.
Total cost avoidance	\$512,787.

b. Pollution Prevention Initiatives:

(1) **Blending Facility:** The annual demand for oil-based fuel at the Central Heating Plant (CHP) is approximately 1.4 million gallons. Since the recyclable petroleum can be made suitable for use at the central heating plant and the production rate is less than the demand, a viable alternative for the recycling of the blended recyclable petroleum is to use it as a fuel at the central heating plant. The construction phase of the blending facility began in FY 2001 and was completed and a contract for the operation of the blending facility was awarded in FY 2003. By blending the recovered fuels, used oil, and used fuels saves the Air Station money. At current savings levels, the investment for construction of the blending facility had a payback period of less than 23 months. The first shipments of recycled used oil to the Blending Facility began in January 2004. A total of 145,000 gallons were delivered to the CHP for burning during FY 2011-2012. Thus saving \$204,450 in purchasing virgin heating oil for the Air Station’s CHP. There has been an increase from \$.87 per gallon cost for #2 heating oil in FY 2004 to \$3.98 per gallon in FY 2008. Since the Environmental Affairs Department started providing the CHP with recycled used oil for burning in their heating plant in 2004, a total of 650,095 gallons has been recycled saving the Air Station from purchasing over \$1,191,409 worth of virgin #2 heating oil. This blending facility is the only one of its kind in the Marine Corps and is also unique in that the operation and burning includes recovered remediated JP-5 jet fuels.



(2) **Personally Identifiable Information (PII):** MCAS Cherry Point’s Environmental Affairs Department has contracted with PROSHRED® to perform on-site document destruction aimed at safeguarding personally identifiable information (PII) as set forth in the DoD Privacy Program (DoD 5400.11-R, May 14, 2007). This program allows personnel throughout the air station to place sensitive Personally Identifiable Information (PII) documents into one of 165 secured tamper proof 90-gallon or executive containers. This program allows both military and civilian personnel at 119 locations throughout the air station to place sensitive PII documents containers that are emptied bi-weekly into a specially-equipped truck that instantly shreds the paper as the container is emptied of its contents. During FY 11/12, 346,956 pounds (173.48 tons) of sensitive PII was shredded on-site with 100% of the material recycled resulting in more than \$26,022 savings in disposal costs and just as important, significantly reduced our environmental footprint. By recycling paper, we save both energy and resources that would otherwise go into producing virgin paper from trees; 580,000 gallons of water, 640,000 gallons of oil, 340,000 kilowatt hours of electricity, 5,000 pounds of air pollutants, 1,400 trees, and 250 cubic yards of landfill space! This secured on-site destruction method safeguards sensitive information, maintains legislation compliance, and avoids situations that could result in negative publicity while providing a convenient, cost-effective, and environmentally conscious method to destroy PII documents.



(3) Affirmative Procurement – Safety-Kleen Closed Loop Program: The Air Station has been buying re-refined motor oil through the Defense Supply Center – Richmond (DSCR) since 1996. This was before the mandate from the Commandant of the Marine Corps in a September 11, 1997 letter requiring the use of re-refined oil in all cases. When it became available, the Air Station started purchasing its motor oil under the Closed Loop Program. This allowed for the pickup of used oil aboard the air station in as little as a 55-gallon capacity anywhere that generated used at Cherry Point by Safety-Kleen, Corp. This has benefited the Air Station greatly when holding capacity became an issue. Under this Closed Loop Program, Safety-Kleen would pick up and remove up to 120% of the ordered quantity without charge to the Air Station. The Air Station’s Motor Transport Department services approximately 950 vehicles including gas cars, carts, diesel trucks, and aircraft handling equipment utilizing re-refined motor oil.



(4) Munitions Response Program Cleanup at Former Cat Island Bombing Target 2 (BT-2): MCAS Cherry Point Environmental Affairs Department and the Naval Facilities Engineering Command (NAVFAC) conducted a munitions debris removal effort at the former Cat Island Bomb Target (BT-2). Situated in Bogue Sound, approximately ½ mile offshore of the town of Emerald Isle, BT-2 was used for military aerial bombardment training in the 1940s and 1950s. The munitions response cleanup project removed 3,885 pounds of munitions debris and 122 pounds of civilian debris from the surface of BT-2 significantly reducing potential risks to the public from exposure to old munitions.

Narrative Summary:

MCAS Cherry Point is proud of its environmental stewardship. Our management accomplishments emphasize the mutually beneficial relationship between the Air Station, the surrounding communities, and the natural environment we share. Emphasis for the 2011 and 2012 Environmental Quality Program was founded on the development of innovative pollution prevention and comprehensive waste minimization and recycling initiatives.

During 2011-2012, environmental innovations and recycling initiatives have produced a grand total of **\$2,830,685** in income and cost avoidance. These programs have proven to be effective pollution prevention resources and waste reduction mechanisms for Marine Corps Air Station, Cherry Point.

By implementing proper and timely environmental management practices into hazardous waste/material control, pollution prevention measures, and recycling goals along with community involvement, we have saved significant funds, reduced environmental risks, improved processes, and at the same time enhanced our environment.