

**SECRETARY OF DEFENSE AND SECRETARY OF THE NAVY
FY 2008 ENVIRONMENTAL AWARDS PACKAGE**

**Installation: Marine Air Ground Task Force Training Command (MAGTFTC),
Marine Corps Air Ground Combat Center (MCAGCC), Natural
Resources and Environmental Affairs (NREA) Division, Twentynine
Palms, California**

Award Category: Pollution Prevention – Team

- Mr. James Lessard-Director, Environmental Division, 760 830 5675 (DSN 230-5675)
james.lessard@usmc.mil
- Mr. Patrick Mills – Branch Head, Hazardous Waste Management Section, 760 830 5403
(DSN 230 5403), patrick.o.mills@usmc.mil
- Mr. David Budd – Environmental Protection Specialist, Hazardous Waste Management
Section, 760 830 5834 (DSN 230 5834), david.a.budd@usmc.mil
- Mr. Jimmie Risper – Hazardous Waste Specialist, Hazardous Waste Management
Section, 760 830 5405 (DSN 230 5405), jimmie.risper@usmc.mil
- Mr. John Vigar - Material Examiner, Identifier, Hazardous Waste Management Section,
760 830 7244 (DSN 230 7244) no email address email Patrick.o.mills@usmc.mil
- Mr. Carl Atchley - Material Examiner, Identifier, Hazardous Waste Management Section,
760 830 7244 (DSN 230 7244) no email address email Patrick.o.mills@usmc.mil
- Mr. Gary O'Gilvie - Material Examiner, Identifier, Hazardous Waste Management Section,
760 830 7244 (DSN 230 7244) no email address email Patrick.o.mills@usmc.mil
- Mr. Tim Christian - Material Examiner, Identifier, Hazardous Waste Management Section,
760 830 7244 (DSN 230 7244) no email address email Patrick.o.mills@usmc.mil
- Mr. Ken Lay – Material Examiner, Identifier, Hazardous Waste Management Section,
760 830 7244 (DSN 230 7244) no email address email Patrick.o.mills@usmc.mil
- Mr. Paul Jones – Material Examiner, Identifier, Hazardous Waste Management Section,
760 830 7244 (DSN 230 7244) no email address email Patrick.o.mills@usmc.mil
- Mr. Norman Lowe – Material Examiner, Identifier, Hazardous Waste Management Section,
760 830 7244 (DSN 230 7244) no email address email Patrick.o.mills@usmc.mil
- Mr. Plessie Ellitt – Branch Head, Pollution Prevention, 760 830 7695
(DSN 230 7695), plessie.ellitt@usmc.mil
- Mr. Ray Luzier – Branch Head, Range Sustainment Branch, 760 830 3068
(DSN 230 3068), raymond.luzier@usmc.mil
- Mr. Michael Quintana - Equipment Facilities and Service Supervisor, Range Sustainment
Branch, 760 830 3042 (DSN 230 3042), michael.quintana@usmc.mil

Address: Natural Resources and Environmental Affairs, MAGTFTC Marine Corps Air
Ground Combat Center, Building 1451, Box 788110, Twentynine Palms, CA
92278-8110

Nominating individual: Colonel Wes S. Weston, Director, G4 Directorate, 760 830 7472
(DSN 230 7472), Bldg 1554 Box 788110 Twentynine Palms, CA 92278
wes.weston@usmc.mil

SUMMARY:

The Pollution Prevention Program supports cutting-edge training for over 40,000 Marines annually while complying with Executive Order 13423 for the elimination or minimization of hazardous substances, enhancement of energy conservation, green procurement and increased alternative fuel vehicles usage. MCAGCC is the Marine Corps largest live fire and maneuver training facility (935 mi²). Notable accomplishments in pollution prevention include the installation's ongoing efforts to treat petroleum-contaminated soils onsite at our 2,500-cubic yard Bio-Remediation Facility. The procurement of numerous weapons cleaning systems employing ultrasonic or aqueous based parts cleaning technology has reduced weapons cleaning time allowing our war fighters more time to train while eliminating approximately 1.5 metric tons of used cleaning solvents.

Units utilizing MCAGCC's ranges and training areas generate a sizable volume of expended ordnance and range residue including unexploded ordnance. The Range Sustainment Branch is the only unit of its kind in the Marine Corps. It provides the support, expertise and manpower necessary to clear the training areas and safely process the materials for recycling in order to maintain Operational Tempo in support of our training mission. This program has diverted 1.2 million pounds of solid waste from landfill disposal. These materials are demilitarized to a safe state suitable for reuse or sale.

Other notable accomplishments include the establishment of several hazardous waste reduction initiatives that are responsible for a significant elimination or reduction of several Environmental Protection Agency (EPA), Resource Conservation and Recovery Act (RCRA) hazardous and Non-RCRA hazardous waste streams. MCAGCC's Hazardous Waste Minimization Program is responsible for returning approximately \$893,000 of reclaimed, new and unused hazardous material to tenant commands and Marine units aboard the installation. One noteworthy benefit of this program is cost avoidance of over 114 tons of hazardous waste that would have cost \$235,000 in hazardous waste disposal fees.

During 2008, MCAGCC established an EO 13423, P2 initiative working group. The working group is entrusted with ensuring that the installation is in strict compliance with the mandates of the executive order and new methods to reduce our environmental footprint are being actively pursued and emplaced. MCAGCC has also implemented a P2 initiative that will eliminate the use of plastic shopping bags at our MCCS and DECA facilities during 2009.

Introduction

a. Background:

Natural Resources and Environmental Affairs Division, Marine Air Ground Task Force Training Command, Marine Corps Air Ground Combat Center

Mr. James Lessard-Director, Environmental Division
Mr. Patrick Mills – Head, Hazardous Waste Management Branch
Mr. David Budd - Environmental Protection Specialist
Mr. Jimmie Risper - Hazardous Waste Specialist
Mr. John Vigor - Material Examiner, Identifier
Mr. Carl Atchley - Material Examiner, Identifier
Mr. Gary O’Gilvie - Material Examiner, Identifier
Mr. Tim Christian - Material Examiner, Identifier
Mr. Ken Lay – Material Examiner, Identifier
Mr. Paul Jones – Material Examiner, Identifier
Mr. Norman Lowe – Material Examiner, Identifier
Mr. Plessie Ellitt – Pollution Prevention Branch Head
Mr. Ray Luzier - Senior Unexploded Ordnance Supervisor
Mr. Michael Quintana – Equipment, Facilities and Service Supervisor

b. Position Description:

MCAGCC’s Pollution Prevention Program manages the installations Hazardous Waste Management, Range Sustainment, and Qualified Recycling Programs. This program integrates sound management and works in partnership with tenant commands and visiting Marine units while fully supporting the necessary combined arms training operations available aboard the installation. Staff personnel provides management, coordination and regulatory oversight for all matters pertaining to the installation’s hazardous waste, hazardous material, solid waste, and installation restoration programs.

c. Awards and Services:

The Marine Corps Community Services, Retail Gas Station has been the recipient of the Mojave "Green" Business Awards for the preceding three years (2006-2008). This award is given by the State of California, Water Resources Board, Mojave Desert Air Quality Management District, for program management that far exceeds all established regulatory drivers that govern the operation of a commercial bulk refueling facility.

The MCAGCC Energy Management Program was the recipient of the 2008 Secretary of the Navy Award for outstanding achievement in Energy Efficiency.

Further enhancements in environmental program management has allowed the installation to achieve its training objectives with little to no interference from external environmental agencies with regulatory oversight. MCAGCC is the sole Marine Corps

installation of its size that provides hazardous waste collection at the point of waste generation. Marines and civilians are no longer required to transport waste streams to the installation's 90 day hazardous waste accumulation site, therefore the requisite training and logistics support normally required to conduct this practice has been eliminated. In June 2008, State and County environmental regulators conducted a formal inspection of the hazardous waste management program. At the conclusion of the five day period, no violations or formal findings were discovered. These inspectors noted that for an activity our size, it is a rarity not to find any RCRA violations. It was annotated in the formal report to the MCAGCC Commanding General, "Job well done."

d. Accomplishments:

MCAGCC's hazardous waste P2 initiative focuses on the reduction of generated HW through recycling or source reduction. In January 2007, an antifreeze recycling program was created. In 2008 approximately 13,800 gallons of antifreeze was recycled and 12,500 gallons of Mil-Spec recycled antifreeze was issued at no cost to marine units aboard the installation. This has allowed units that participate in the program to reuse their funding dollars for the training mission. This program has also resulted in a cost savings of nearly \$53,000 and a reduction in new antifreeze procurement.

NREA operates a bio-remediation facility. In 2008, we processed 1,161,876 pounds of Petroleum Oil Lubricant (POL) contaminated soil which was treated and subsequently used as landfill cover. This saved the installation \$140,000 in off-site HW disposal fees.

MCAGCC is in its third phase of energy reduction expenditures while increasing energy savings measures. Upgrades to existing infrastructure include: three new, chilled water plants and associated piping that will save up to \$6.9 million per year; an air conditioning system upgrade that will save up to \$6.9 million per year; lighting controls and more than 300 skylights; and a new, 7-megawatt, dual-fueled, cogeneration plant. Other elements include a 1.1-megawatt photovoltaic plant, which will be one of the highest capacity, non-utility, solar power plants in the world. This project currently provides approximately one-tenth of MCAGCC's annual electrical needs and will eventually provide 75% of electricity demands.



MCAGCC's Solar Array Farm.

MCAGCC has experienced a dramatic increase in its hazardous waste diversion rate. During 2007, 293 tons of RCRA and Non-RCRA hazardous waste was shipped off-site for disposal. In 2008 only 179 tons of hazardous waste was shipped off site a reduction of 114 tons. This can be attributed to its recycling, sorting, segregation and

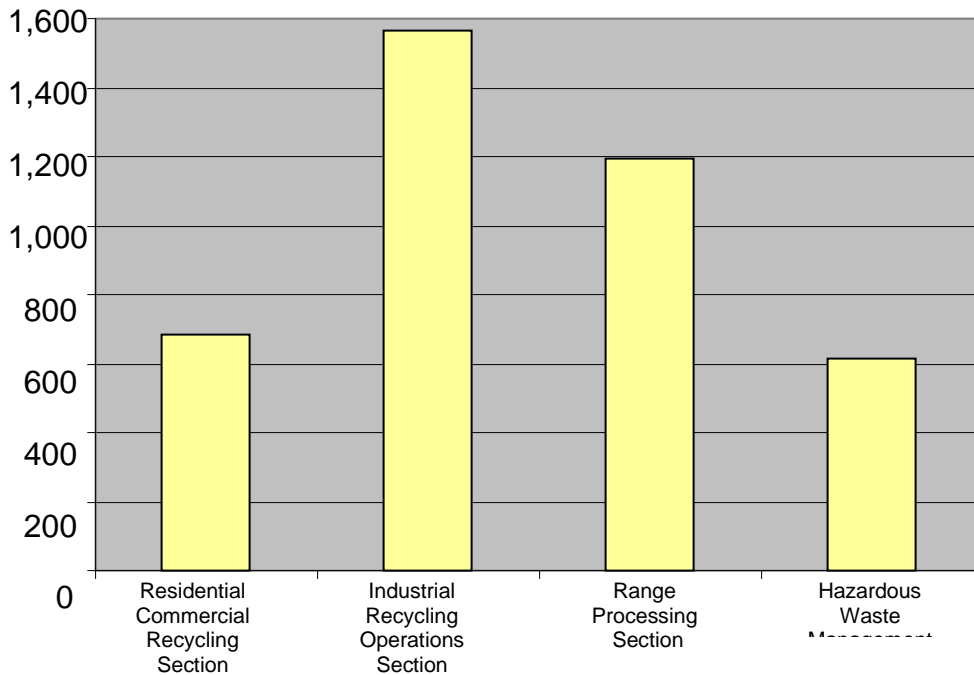
consolidation of all hazardous waste streams. HWMS personnel collect on a daily basis, all wastes generated from over 90 Satellite Accumulation Areas (SAA) aboard the installation. Furthermore, our mentoring and partnership with practice owners of these SAA's, has lead to better management and increased stakeholder ownership which has significantly minimized the chances of regulatory fines and violations as evident during our last regulatory inspection performed in June 2008, by the California Department of Toxic Substance Control.

Since the launch of the Hazardous Materials Reutilization Program, it has saved the installation \$1.7 million in cost avoidance for new HM purchases and waste disposal fees. Organizations can obtain new, unused hazardous materials at no cost. This has also led to a reduction in operating cost to Marine Corps activities aboard the installation.

Materials accepted for recycling aboard MCAGCC are: asphalt, concrete, ferrous and non-ferrous metals, glass, brass, aluminum, steel, plastics, cardboard and paper and are collected through four main centers within the QRP Program:

- Hazardous Waste Management Section (HWMS) – Responsible for collecting, transporting, consolidating, classifying, storing, and disposing of discarded and expired Hazardous Material and Hazardous Waste.
- Residential & Commercial Recycling Section (RCRS) – Responsible for collecting, recycling and transporting all residential and commercial solid wastes;
- Industrial Recycling Operations Section (IROS) – Responsible for sorting and preparing for reutilization, and recycling, all scrap items received from Defense Reutilization and Marketing Offices, military units, or private contractors;
- Range Sustainment Branch (RSB) – Sole turn-in point for range residue. Responsible for collecting and processing all range residues generated aboard the Combat Center. Consisting of two sections, a Range Clearing Sweep Team that recovers range residue from the training areas, and a Processing Section that receives range residue from commands and activities, subsequently processes the material for sale;

FY 2008 Solid Waste Management and Recycling Program Diversion Totals



Diversion in thousands of pounds.

In 2007 and 2008 the installation recovered over 4,400 tons of scrap wood. NREA's QRP performed the arduous task of processing (shredding) and selling it as an alternative fuel source to Southern California Edison for use at their Alternative Fuel Power Generation Plant, thus keeping the scrap wood out of our landfill.

In cooperation with the MCAGCC G-3 Directorate, the NREA, Range Sustainment Sweep Team routinely performs training area clearance of range residue and spent ordnance. This has amounted to a significant cost savings for the installation; were these services to be contracted out. Other tangible benefits include; training areas that have been made recently accessible by removal of range residue and unexploded ordnance allowing construction of new ranges and training facilities. By allowing significant spent ordnance and debris to accumulate poses a threat to the safety of personnel and increased likelihood that harmful munitions constituents will leach into the soil, resulting in adverse affects to on and off-installation natural resources and inhabitants. Additionally, the accumulation of debris hinders access to training areas and limits the efficiency of training; thus degrading the training opportunities available for Marines.



Before range clearing.



After range clearing.

A new cooperative venture between MCAGCC and the U.S. Air Force (Edwards and Nellis AFB) allows these installations's to use MCAGCC's recycling program to process their range residue, saving them over \$ 2 million dollars annually, as compared to past recycling costs. This venture has earned MCAGCC \$12,000 in revenues.

MCAGCC's successes in range area sustainment coupled with its environmental stewardship has lead to a widely acclaimed outreach program that has catered to Congressional and HQMC inquiries and visits, and request for guided tours from State and Local government, foreign companies, civic groups and local residents.

MCAGCC has a number of projects underway to continue compliance with EO 13423 to include GEOTHERMAL energy production, E85 alternative fuel tank installation to reduce fuel consumption, hybrid trash truck pilot test site beginning 6 Feb 2009, green procurement from recycled, biodegradable, non toxic products mandated for all users, took part in the global lights out event and have started to install artificial turf and natural desert landscaping vice grass areas to conserve our precious water resource. MCAGCC water supply is an aquifer that must not be depleted and we have several water conservation projects underway to ensure we have a water resource for years to come. Senior Leadership aboard MCAGCC supports all of the environmental programs and this has filtered down to every marine, civil service employee and contractor aboard MCAGCC. We have exceeded our solid waste diversion goal by 2% in 2008 two years early of the 2010 EO 13423 goal and we will continue to exceed our goals and lead the way in environmental stewardship for the Marine Corps which in turn will keep the strong alliance we have with our regulators, general public and private businesses.

(1) Page Narrative Summary for MCAGCC Natural Resources and Environmental Affairs, G4 Directorate, Twentynine Palms, California

During 2008, MCAGCC established an EO 13423, P2 initiative working group. The working group is entrusted with ensuring that the installation is in strict compliance with the mandates of the executive order and new methods to reduce our environmental footprint are being actively pursued and emplaced. MCAGCC has also implemented a P2 initiative that will eliminate the use of plastic shopping bags at our MCCA and DECA facilities during 2009.

By adopting sound management practices and cutting edge technology, the Pollution Prevention Program has instituted multiple initiatives that seek out new and inventive ways to reduce our footprint and impact on the fragile desert environment. Notable achievements include hazardous waste reduction, thorough recycling and reissuing; which is exclusive to this installation, onsite treatment of contaminated soil; antifreeze reclamation, and solar and geothermal energy initiatives. In addition, our mission of supporting the war-fighter is complimented by the induction of new, state of the art weapons cleaning systems through which Marines are able to reduce cleaning time as well as eliminating used waste solvent.

Achievements of the program are substantiated by citations awarded and include the Mojave "Green" Business Award and the 2008 Secretary of the Navy Award for outstanding achievement in Energy Efficiency (EO 13423). In addition, observations by state and county regulators have given accolades to the size and efficiency of the management program that earns zero regulatory violations while reducing its environmental footprint.

Clearing training ranges for ordnance remnants to demilitarize and sell; is unique to this installation the only one of its kind in the Marine Corps. Training areas are kept safe for training through the efforts of range clearing sweep teams that collect ordnance residue and mark unexploded ordnance for later destruction. Processing teams compile and convert material for sale through the QRP Program.

During the past year, several military and civilian organizations have accepted invitations to visit our installation to examine our successes. They include other USMC installations, Flag Officers, Air Force installations, local community members and a British recycling company. With enthusiastic outreach initiatives and opportunities like these for others to emulate our accomplishments, reducing our environmental footprint, and liabilities, is an earnest goal.

Although the program has led to an increased awareness of environmental issues while enhancing the quality of life for Marines that live and train aboard the installation, providing realistic, live fire and maneuver training for over 40,000 Marines is our priority. Supporting the mission of the war-fighter while meeting the demands of our unique desert environment is what the Pollution Prevention Program strives to achieve.