

ENVIRONMENTAL AWARDS

Robins AFB / Environmental Quality – Industrial Installation

INTRODUCTION

Robins Air Force Base is the Warner Robins Air Logistics Center and is this year's winner of the Thomas D. White Environmental Quality – Industrial Installation Award. The base is located on 6,935 acres in Central Georgia, bordering thousands of acres of wetlands, which create a natural buffer preventing population encroachment.

Robins is home to five major Air Force Materiel Command (AFMC) units and five major associate units. Over 22,000 employees work at Robins making it the largest industrial facility in the State of Georgia. Distinct capabilities at Robins include the worldwide management and engineering responsibilities for the F-15 Eagle fighter, C-130 Hercules transport, C-5 Galaxy transport, U-2 Dragon Lady surveillance, E-8 Joint Surveillance Target Attack Radar System (JSTARS) surveillance, United States Air Force (USAF) helicopters, and United States Marine Corps (USMC) helicopters. Robins also manages a worldwide ground fleet of more than 126,000 vehicles and supports hosted units.

Robins creates an annual \$4.1 billion economic impact across the state, its location and myriad missions create a unique blend of environmental aspects. Robins Environmental Management System (EMS) is fence-to-fence and extends to everyone working on the base. Additionally, Robins partners with various internal and external stakeholders to sustain a world class environmental program. Robins, along with the greater community of Middle Georgia, make up Team Robins Plus, which is dedicated to protecting the environment while providing affordable combat superiority, readiness, and sustainability to the war fighter. Robins has enjoyed unprecedented support from the surrounding communities since its humble beginnings in 1941. Community members perpetually live their motto 'EDIMGIAFAD', Every Day in Middle Georgia is Armed Forces Appreciation Day.

The mission at Robins is to be America's dominant air and space power sustainer and ultimately achieve the AFMC vision of providing war winning capabilities...on time, on cost.

FY2009 and FY2010 ACCOMPLISHMENTS

- Met and exceeded EMS specific program goals:
 - ❖ Goal: Increase alternative fuel consumption 10% annually
 - Result: Increased flex fuel vehicles by 43% in one year. Increased alternative fuel consumption 10% in FY09
 - ❖ Goal: Ensure 50% of renewable energy purchases from new (after 1999) sources
 - Result: Implemented 100% of renewable energy from new sources in FY09
 - ❖ Goal: Reduce solid waste disposal by 40% annually (Air Force goal)
 - Result: Reduced solid waste disposal by 51.4% in FY09 and 67.4% in FY10
 - ❖ Goal: Reduce construction and demolition (C&D) debris disposal by 50% annually (Air Force goal)
 - Result: Reduced C&D debris disposal by 71.4% in FY09 and 54% in FY10
 - ❖ Goal: Reduce water consumption intensity 2% annually or 16% from baseline (FY07) through FY15
 - Result: Reduced water consumption by 29.3% through FY10. Met and exceeded FY15 target years ahead of schedule
 - ❖ Goal: Reduce usage of hazardous materials from Robins AFB Priority List 2% annually through CY11
 - Result: Exceeded goal of 2% reduction annually; Decreased 5.5% in CY09 and 5.3% in CY10
 - ❖ Goal: Eliminate Class II ozone depleting substances (ODS) by 50% by CY15
 - Result: Decreased 92.9% through CY10. Exceeded goal 5 years in advance
- Robins AFB Green Purchasing Program (GPP) was a winner of the coveted 2009 White House Closing the Circle Award

- Winner of both the AFMC and Air Force General Thomas D. White Environmental Quality Awards - Industrial for 2010
- Winner of the Air Force General Thomas D. White Sustainability Team Award for 2010
- Superior Air Program Management led to the 18th consecutive year with no Clean Air Act violations. This accomplishment was noted by the Georgia Environmental Protection Division. Robins AFB is a Title V major source with more than 1,400 air sources
- First Air Logistics Center (ALC) to attain Remedy in Place (RIP) at 42 Environmental Restoration Program (ERP) sites and 10 Areas of Concern (AOC) years ahead of AF goals and DoD 2014 goal. No Further Remedial Action planned at all AOCs and 31 ERP sites
- Winner of the 2010 AFMC Qualified Recycling Program (QRP) Award
- Robins AFB received Keep Warner Robins Beautiful Commission Environmental Partnership Award for the 16th year in a row
- In 2010, Robins Groundwater Treatment Plant (GWTP) was the first industrial wastewater facility in Georgia to receive the Platinum Award for five consecutive years without a NPDES permit violation. GWTP team also awarded the Plant of Year in 2008 and 2009 and the Gold Award and Safety Award in 2008

PROGRAM SUMMARY

The unique blend of environmental aspects is a challenge for the EMS at Robins, which extends to everyone working on the base. Robins EMS was first established in 1997 as a Department of Defense (DoD) pilot study and has matured to be ISO 14001 compliant and includes all 22,000 people employed at the base. EMS training is required for everyone at Robins and ensures the entire workforce understands not just compliance and conservation but also pollution prevention.

Robins partners with stakeholders and the community to sustain a world class environmental program. Regular center working group meetings are held, including Green Procurement Team, Hazardous Material Management Process Team, Water Working Group, and QRP meetings. Robins is an active member of the Keep Warner Robins



The award winning Robins AFB Environmental Management Team is responsible for planning, programming, and implementing the Installation's environmental protection programs in support of Center, Wing and hosted units at Robins AFB.

Beautiful Commission (electronics recycling, Earth Day Awareness Displays, Christmas Tree Round-Up), Clean Air Coalition, Clean Air Campaign (carpooling initiative), and Clean Cities Coalition (E-85 Station, Waste to Energy).

Robins AFB created a focused driven EMS by incorporating the existing environmental programs into an integrated management system. The EMS has been instrumental in educating the base populace on various Federal, state and local environmental laws and regulations.

Key to the success of Robins' EMS is its strong training program that provides:

- Awareness training to all new employees through the mandatory Robins AFB newcomers briefing for civilian and Right Start for Military personnel
- Ongoing program-specific training (Air Quality, Hazardous Waste, Hazardous Materials, GPP)
- One-time computer-based EMS training for all employees and contractors
- Month-long Earth Day events each spring including the Environmental, Safety, and Occupational Health (ESOH) Fair
- Articles for the base newspaper, the Robins REV-UP, on multiple topics on a recurring basis

- Center-wide working group meetings to promote the cross feed of information and provide peer review dialog
- Quarterly community environmental advisory boards to keep the public informed of base initiatives in environmental stewardship

ACCOMPLISHMENTS

EMS Goals and Objectives

Robins EMS goals are closely linked to existing executive order, regulatory compliance, and mission requirements. EMS goals set by Robins AFB were not only attained but exceeded. The goal to increase alternative fuel usage by 10% annually was met and exceeded. Flex fuel vehicles were increased by 43% in one year and alternative fuel consumption increased by 10% in FY09. The goal to ensure 50% of renewable energy comes from new sources implemented after January 1999 was met and exceeded with 100% of renewable energy coming from new sources in FY09. The goal to reduce solid waste disposal by 40% annually was met and exceeded by reducing disposal by 51.4% in FY09 and by 67.4% in FY10. More than \$1 million in solid waste disposal costs was saved. The goal to reduce C&D debris disposal by 50% annually was exceeded with 71.4% reduction in FY09 and 54% in FY10. Water consumption was set to be reduced 2% annually or 16% from the baseline year (FY07) through FY15. Robins AFB is ahead of schedule with a reduction in consumption of 29.3% through FY10, exceeding even the EO 13423 goal. Usage of hazardous materials from Robins AFB Priority List was set at 2% reduction annually through CY11. The goal to eliminate Class II ODS by 50% by CY15 has already been met five years in advance! Robins AFB has reduced Class II ODS by 92.9% through CY10. Successful achievement of these goals has not only preserved the environment but also saved dollars while sustaining the mission.

Robins AFB EMS's success is based on the Plan-Do-Check-Act process solving methodology. Comprehensive "checking" EMS activities include:

- Annual base wide ESOH Compliance Assessment and Management Program
- Compliance Site Inventories development and maintenance
- Quarterly inspections of operational areas

- Monitoring and maintenance of over 3,000 environmental compliance sites
- Tracking all findings of non-compliance to closure in the Electronic Findings Database
- Tracking over 500,000 individual hazardous material and waste items in the Hazardous Material Management System

Environmental Restoration Program

By being proactive and efficient, Robins ERP is accelerating their cleanup program and finding cost savings in return. In 2009, Robins AFB won the Thomas D. White Restoration Team Award for AFMC. Robins is the first Air Logistics Center to attain RIP at 42 ERP sites and 10 AOC years ahead of DoD and Air Force set goals. No Further Remedial Action is planned at all AOCs and 31 of the ERP sites. Robins is a leader in using the Remedial Process Optimization (RPO). As a result, Robins removed two wells from the annual base wide groundwater monitoring program and reduced the sampling frequency at 15 other wells. This saves \$45,000 biennially. Effective management of a large complex site resulted in approval from both US Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) to transition the remedial approach to Monitored Natural Attenuation (MNA). Georgia EPD approved another rigorous RPO resulting in projected cleanup years ahead of the current system. A Solid Waste Management Unit 61 site study yields no contaminant rebound and the base is working to transition the site remedy to MNA. A full-scale RPO evaluation is underway at Site OT17 producing a comprehensive update to the conceptual site model. The better understanding of the contaminate migration pathway is resulting in an accelerated cleanup time at the site.

Innovative, green, and alternative technology is resulting in hundreds of thousands of dollars in savings. Two restoration sites were converted from thermal to catalytic oxidation resulting in savings of \$80,000 annually. Robins implemented risk-based soil cleanup levels that reduced the excavation volume at Site Pad 9 by more than 25% saving \$50,000. Green technology has been installed at the JP8 site using a peat moss barrier to bioremediate free product under the taxiway. Alternative technology saved \$200,000 per year in Operations & Maintenance costs and is expediting site closure. The solar-powered product recovery system at the petroleum, oil, and lubricant storage area is saving \$25,000 annually.

Pollution Prevention

Robins AFB encourages a partnership with the Georgia Department of Transportation and the Georgia Clean Air Campaign; personnel answer the challenge to carpool or vanpool to work in a big way. As a response to public awareness efforts, the number of registered clean commuters continues to increase each month.

Between FY09 and FY10, Robins AFB carpoolers have reduced the number of vehicle miles traveled by 1.5 million, which equates to 62 trips around the globe resulting in over \$700,000 in fuel and maintenance cost savings. In addition to the cost savings realized by participants, carpooling reduces hydrocarbon, nitrogen oxide, and carbon dioxide emissions - smog and greenhouse gas contributors. Active participation by carpoolers and vanpoolers resulted in the prevention of over 700 tons of pollutants being released into the local community's air.

In 2010, Robins AFB also implemented 'BiRD', Buses Into Robins Daily, a community bus system that provides transportation between Robins AFB and Macon, Georgia. One Robins employee riding the bus from Macon to Robins for a single day will prevent the release of 34 pounds of pollution such as carbon dioxide and particulates. If that person chooses to use mass transit all five workdays they would prevent over 150 pounds of pollution being released.

Robins AFB reduced the number of reportable Toxics Release Inventory (TRI) chemicals from 12 in CY08 to 11 in CY09. Robins also reduced the number of reportable Tier II chemicals by 20 (58 chemicals in CY07, 38 chemicals in CY08/CY09).

Robins AFB improved storage tank management by reducing leak potentials. Five 37-year old single-wall fiberglass 10K-gallon underground storage tanks (USTs) were replaced with three 15K-gallon "Glassteel" Jacketed double-wall USTs.

New depainting techniques at Robins AFB resulted in a 50% reduction of methylene chloride usage, the use of less hazardous benzyl alcohol and peroxide-based chemicals, which contain no Hazardous Air Pollutants, and enhanced shop safety.

Robins AFB continues to qualify new environmentally-friendly materials to prevent pollution. Implementing recyclable cornstarch, corn husk blasting or Flashjet could eliminate methylene chloride usage in the radome depainting process. The testing phase is underway.

Recycling Program

Robins AFB was the winner of the 2010 AFMC Qualified Recycling Program Award. The new Recycling Center opened in 2009 and has collected and sold over 1 million pounds of scrap metal and lead acid batteries. This has generated recycling proceeds totaling over \$150,000. Over 50% of solid waste has been diverted from municipal landfills and recycled including 1,658 tons of waste wood, 1,614 tons of cardboard, 758 tons of paper, and 16 tons of spent toner cartridges. Robins is the first AFB to partner with Happy Hour Service Center to launch a statewide "You Gotta Be Kidding" Recycling Campaign. This campaign is designed to raise awareness about the convenience and benefits of recycling. Robins AFB exceeded an AF goal by achieving a construction and demolition debris diversion rate of 71.4% in FY09 and 54% in FY10



Winner of the 2010 AFMC Qualified Recycling Program Award! Robins AFB is proud to announce the opening of the new Quality Recycling Program (QRP) Recycling Center in FY10. This center collected and sold over 1 million pounds of scrap metal and lead acid batteries, generating recycling proceeds of over \$150K!

Environmental Enhancement

Due to continued pressures for more parking spaces, the 78 CEG/CEAN developed and implemented a project to install a dual technology permeable parking lot at the Environmental Management Branch building in accordance with low impact development practices. Pervious parking systems reduce the volume and rate of storm water runoff by storing water in the cross section of the system and recharging the groundwater supply. Additionally, the reduced runoff volume translates to a reduced discharge of heated storm water into an adjacent waterway that would be typical of an asphalt parking lot. A grass paver system was chosen for the parking spaces and porous concrete was selected for the center aisle.



The first green parking lot on Robins AFB was developed and constructed resulting in zero discharge of stormwater! In accordance with low impact development practices, the grass paver system was chosen because it reduces the volume and rate of storm water runoff by storing water in the cross section of the system and recharging the groundwater supply.

The grass-paver/porous concrete has proven beneficial for this application. The project has increased awareness of permeable parking design practices and will result in future planned pervious parking projects to further reduce impacts of flooding associated with runoff from large impervious areas.

Community Relations

Accolades received for commitment to environmental stewardship proves Robins AFB is going above and beyond. The base partnered with the Keep Warner Robins Beautiful Commission, Happy Hour Recycling, and numerous community volunteers to divert over 66,000 pounds of electronics waste during the annual Earth Day Electronics Recycling Event.

For the 16th year in a row, Robins AFB received the Keep Warner Robins Beautiful Commission Environmental Partnership Award. A partnership with the Keep Warner Robins Beautiful Commission and the Environmental Advisory Board (EAB) provides a community forum for Robins AFB environmental updates. The EAB has been rated “outstanding” by regulatory agencies and the local community for keeping the community informed. Robins AFB hosted annual tours for the Keep Warner Robins Beautiful Youth Advisory Board. ERP Fact Sheets were published detailing recent and ongoing activities to keep interested stakeholders informed.

Interviews conducted with six mayors and other community leaders reveal the public is ecstatic with outstanding dedication of Robins AFB in cleaning up remedial sites. The base joined forces with the city of Warner Robins and the local county to collect and share groundwater data resulting in cost savings for all parties. Collaboration with the local library keeps the public informed by providing easy access to a user-friendly electronic storage files. Robins is providing guidance to the Georgia-Robins Aerospace Maintenance Partnership on appropriate National Environmental Policy Act procedures to ensure compliance and proper base representation while continuing to foster positive community outreach.

Green Procurement

Robins AFB was the winner of the coveted 2009 White House Closing the Circle Award. The GPP includes all base organizations, hosted units, and contractors. The Robins GPP plan, approved by the installation commander, includes the following procurement elements: recovered materials; bio-based products; energy and water efficient products; ozone depleting substances; priority chemicals; and environmentally preferable products.

In order to make the GPP visible, a GPP website was developed, offering GPP guidance, training, and resources. Base wide green procurement briefings are available to ensure proper documentation of green purchases. The base partnered with the International Center for Leadership Development to convey an outstanding green procurement training package for contractors to push the “Buy Green” philosophy to the Robins contractor population. Promoting recycled content items was enhanced through the incorporation of GPP mandates in all appropriated funded contracts. Green purchases have increased by 37% from \$612,000 to \$965,000.

Groundwater Treatment Plant

Robins AFB centralized state-of-the-art GWTP is a perennial award winner. The GWTP is the first industrial wastewater facility in Georgia to receive the Platinum Award for five consecutive years without a National Pollutant Discharge Elimination System permit violation. The GWTP team was also awarded the Plant of the Year in 2008 and 2009 and the Gold Award and Safety Award in 2008. Plant operations and GWTP sites have been showcased during multiple visits from base, AFMC, and agency dignitaries.

Since the system startup in 1997, the GWTP has had zero lost time accidents. The GWTP continually achieves greater than 99% run-time every year with annual flow greater than 337 million gallons; cumulative total volume of contaminated groundwater processed by the GWTP since startup exceeds 3 billion gallons. More than 13,130 pounds of Trichloroethylene and 28,650 pounds of volatile organic compounds have been removed from six GWTP sites through November 2009. The GWTP saves more than \$80,000 annually through optimization of ultraviolet and hydrogen peroxide treatment systems.

CONCLUSION

Robins continues to lead the Air Force in providing an environmental stewardship benchmark, preserving mission capability.



RAFB centralized state-of-the-art Ground Water Treatment Plant (GWTP), designed to remediate contaminated groundwater from multiple restoration sites, is a perennial award winner. The Robins AFB GWTP is the first industrial wastewater facility in Georgia to receive the Platinum Award. High level of safety is unsurpassed!