



## INTRODUCTION

Commander Fleet Activities Sasebo (CFAS) is a small overseas naval installation located on the western coast of Kyushu Island in Nagasaki Prefecture, Japan. The installation serves as a logistic support center for forward deployed units and visiting operational forces of the U.S. Pacific Fleet and its tenant activities. CFAS is homeport to nine (9) U.S. Navy ships and consists of ten (10) non-contiguous areas totaling 1,238 acres, including:

- The primary administration, logistics, and support facilities
- One (1) dry dock
- Two (2) housing areas
- One (1) LCAC support and training area
- Two (2) ordnance facilities
- Three (3) POL depots

CFAS also controls approximately 6,480 acres of water assets including much of Sasebo Bay, India Basin, and the waters around the ordnance facilities.

The installation is spread throughout Sasebo, Japan, a port city of 285,000 inhabitants located on the island of Kyushu, about 600 miles southwest of Tokyo. The city is surrounded by mountains and is known as one of the best natural harbors in the world. Shipbuilding, light industry, fishing and farming are the principal sources of employment. The local population is supportive of CFAS; however, there are small groups who protest the U.S. presence for issues ranging from labor disputes, to sailor conduct, to visits by nuclear propulsion ships and submarines. CFAS community is approximately 6,500 active duty personnel, SOFA sponsored civilians, and dependents. The population varies during the year due to long deployments that displaces sailors from the community and by port calls from visiting ships that increase the impact on the community and its environment.

The non-contiguous nature of activities, the close integration of base facilities with the local community, joint activities with Japan Maritime Self Defense Forces (JMSDF), and independent tenant operations produce unique environmental coordination and compliance challenges. In spite of the great strain this has placed on limited resources, CFAS continues to provide exceptional environmental services to its 35 tenant commands, as well as the Sasebo community at large. CFAS has accomplished this while maintaining the strictest environmental standards and sponsoring new initiatives to make environmental programs even more effective.



## BACKGROUND

Operating a military installation in a foreign country presents many formidable challenges. Failure to implement adequate steps to safeguard the host nation's environment could have disastrous geopolitical consequences. CFAS adheres to the strict standards of the Navy and U.S. Forces Japan, and also ensures that its operations and practices meet or exceed the requirements

of the Government of Japan (GOJ). This responsibility is occasionally complicated by language and culture barriers which can make communication of ideas and policies extremely challenging.

One of the unique challenges is nearly all of the installation's land areas are virtually surrounded by waters which are used for multiple types of Mariculture programs. Given CFAS has the Western Pacific's largest fuel reserves, potential catastrophic spills of fuel oil are a legitimate threat which requires innovative measures to ensure rapid and effective spill response.

Another environmental aspect that garners intense scrutiny by Sasebo's city counsel, and the public in general, is the disposal of solid waste. The Japanese recycling laws are some of the strictest in the world. As a result, CFAS uses creative recycling methods to intentionally exceed all parameters and metrics set forth by the host nation requirements. Senior management regularly meets with city and prefectural officials to convey our proactive approach to this issue and the dividends of our labor are evident in the positive feedback we receive from the local community during regularly scheduled offbase clean-up activities and open base events.

The Environmental Division (ENV) is divided into three branches; namely: compliance, conservation, and services. The Services Branch is broken down into hazardous waste disposal, recycling operations, and ashore and ship services. Using in-house resources, ENV updated the following plans during the achievement period:

- Hazardous Materials (HM) Management Plan (Jan 2011)
- Stormwater Pollution Prevention Plan (Jan 2012)
- Internal Assessment Plan (Jan 2012)
- Environmental Management System Implementation Plan (Mar 2012)
- Hazardous Waste (HW) Management Plan (Jul 2012)
- Spill Prevention & Response Plan (Aug 2012)

The Asbestos (Jun 2011), Natural Resources (Jun 2012), and Cultural Resources (Aug 2012) Management Plans were also updated using Environmental Program Requirement (EPR) funding which was programmed in prior POM submissions. All plan updates effectively integrate the base's Environmental Policy, Environmental Aspects, and Environmental Management System (EMS) program requirements and are developed specifically to incorporate evolutions of our installation's mission requirements.

The outreach of our EMS program into the community has fostered numerous venues of discussion with local government and prefectural offices which help maintain our lines of communication with our host nation partners. Collaboration with city educational institutions, the Prefectural Gaming and Agriculture Bureaus, and the Japan Ministry of Environment instill a bond of trust with our Japanese counterparts that we are truly acting on behalf of both countries to continually minimize our environmental impact; both on and off Navy properties. This climate of sustained environmental stewardship has been well received by our host nation.



## SUMMARY

Our motto of “Continuous Improvement” resonates in the top tiers of management and is echoed throughout each and every member of the CFAS team. We continually strive to align mission requirements with our environmental aspects by implementing a comprehensive outreach program which ensures all levels of our community are aware of their responsibilities and opportunities under the Environmental Management System.

CFAS re-declared conformance to the ISO 14001 EMS standard 22 November 2011, having met all the Navy and Department of Defense (DoD) EMS metrics. Through the EMS, the Environmental Division establishes objectives and targets that support the mission of CFAS and consequently; the Navy and DoD. Our current objectives include reducing solid waste generation and increasing diversion rates, reduction in energy and water usage, and spill reduction and response. A fully engaged Environmental Protection Council (EPC) with senior representation from major commands, tenants, military units, and community outreach programs are the backbone of the installation’s EMS.

Operational Controls have succeeded in increasing our solid waste diversion rate to 53.1%, dramatically reducing water and energy consumption below the 2012 target levels, and were an integral component in developing the first ever external spill response Basic Ordering Agreement for a DoD installation in Japan.

These improvements to operations not only significantly reduce the impact the base has on the environment, but it saves the Navy millions of dollars each year which allows CFAS to achieve its mission in a cost effective manner. The highlights of these efforts are outlined below.



### **Environmental Management System**

The Environmental Division works diligently to sustain a robust EMS that supports the installation’s elevated operational tempo and its critical mission priorities. Our strategy is to exercise a systematic approach to identify and manage potential significant impacts on the environment that may occur because of mission requirements.

The EMS program helps active duty, civilians, and contractors to identify environmental vulnerabilities, document procedures in place, and examine how to improve processes related to the environment. To ensure the program is effective, and the installation is meeting its goals, the EMS Program Manager conducts annual gap analysis and aspect reviews of all base activities.

Simply put, EMS has proven to be a beneficial performance driven tool that integrates stakeholder involvement, training requirements, and mission operations into a framework that senior management can routinely review and easily identify areas for improvement.

EMS awareness activities for personnel include bilingual cards, flyers, brochures, monthly bulletins, and on-site presentations; as well as centrally located information boards. Most effective was the EMS Awareness training given at the bi-weekly area orientation briefs. Over 2,700 military and civilian employees received the training during the achievement period.

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**Integrating a systematic approach for managing installation security risks**

**Environmental Management Systems (EMS) and Security**  
To effectively identify, manage, and prevent environmental security risks, organizations can turn to a viable, cutting-edge tool called an Environmental Management System (EMS). Capable of assisting facilities in addressing today's realities and risks, EMS follows a well-known model called "Plan, Do, Check, and Act" which organizations can apply to assess, protect, confirm and improve their operations, products and services and establish a proactive, continuously improving security management system.

**What EMS Can Do for You**

- Integrate security into everyday business Operations
- Identify significant risks with respect to environment and security
- Assist with emergency response planning
- Improve management of environmental issues, risks and activities
- Improve employee understanding and involvement
- Enhance ability to find and fix the root cause of potential security lapses

*EMS + Sustainability + Leadership = Culture Change*

All commands are audited annually to ensure EMS conformance, awareness, and environmental compliance in accordance with the installation’s environmental policy. CFAS plans and executes its EMS program based on input from Cross Functional Teams (CFT), audit deficiencies, management reviews, and ideas from base personnel and presents the information to the EPC.

The EPC, chaired by the Installation Commander, coordinates environmental programs to preserve and enhance the environment and ensure compliance with all applicable laws, regulations, and policies. Military and civilians leaders work together to plan and execute decisions related to environmental protection, installation sustainability, natural resource conservation, energy efficiency, and security. The meeting provides a forum for open lines of communication to increase environmental performance and help integrate sustainable principles.

CFAS has included EMS language in all contracts to ensure contractors are aware of the installation’s objectives and targets; as well as compliance requirements. We distribute bi-lingual wallet sized EMS cards to all visitors conducting business at CFAS. To date, this has been adopted by three other installations in Japan. Posters are also distributed throughout the base.

**Environmental Management System (EMS)**  
環境管理システム

**Maintaining the Balance** バランス維持

<p><b>Stop Pollution</b></p> <p><b>Continuous Improvement</b></p> <p><b>Assure Compliance</b></p> <p><b>Leadership Commitment</b></p> <p><b>Everyone Involved</b></p>	<p>✦ 汚染防止</p> <p>✦ 改善継続</p> <p>✦ 法令遵守</p> <p>✦ 指導責任</p> <p>✦ 全員参加</p>
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**CFAS Priority Objectives** 佐世保基地重要目標

<p>• Reduce Solid Waste</p> <p>• Energy Conservation</p> <p>• Recycle Paper</p>	<p>• ゴミ削減</p> <p>• エネルギー削減</p> <p>• 資源再資源削減</p>
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The EMS program is changing the base's culture from a reactive and compliance approach towards a proactive integration of mission and sustainable environmental goals while educating the community and giving program "ownership" to each command, tenant, department, division, branch, and individual. The EPC and CFT ensure the EMS program support sustainable practices such as energy conservation projects and pollution prevention initiatives and they establish measureable goals to improve and ensure continual improvement of all EMS operations.

### **Compliance Assessment and Program Management**

EMS conformance and environmental compliance are evaluated during annual internal and tri-annual external audits. Root cause analysis and corrective actions for each finding are addressed at each EPC meeting. We have witnessed a significant and steady downward trend in compliance deficiencies over the last two years. An external EMS/EQA audit in June 2010 revealed 53 non-compliance issues throughout the base. In 2011 that number dropped to 29 and our last audit, conducted in August 2012, saw the number drop to 18. That equates to a staggering 66% reduction in findings during this achievement period. In 2010, there were six (6) minor EMS non-conformance and zero (0) majors. In 2012 only one (1) minor EMS non-conformance was noted and that was due to one (1) location in an outlying area that didn't have the Environmental Policy displayed in a public area. We believe the dramatic decrease is due to our aggressive implementation of our EMS program.

### **Waste Reduction, Recycling, and Pollution Prevention**

The Qualified Recycling Program (QRP) at CFAS is directly responsible for generating revenues over \$1.427 million during the achievement period. On Nov. 14, 2011, CFAS learned from a memo issued by the Office of the Under Secretary of Defense that its revenues of \$597K in FY10 accounted for 4.3% of the DoD's \$14 million in recyclable revenue. Revenues were over \$705K in both FY11 and FY12 - making CFAS one of the top-performing QRPs in the DoD.

All commands and tenant activities participate in the recycling program. Information on the recycling program is disseminated via orientation briefs, handouts, Facebook, Earth Month, community events, the CFAS website, and reports for senior leadership. As a result, CFAS has increased the diversion rate from 44.3% in FY11 to 53.1% in FY12. CFAS has exceeded the Executive Order 13423 goal of 50% by FY15 three years early. The increased diversion rates are a direct result of our comprehensive recycling program.

During the achievement period, CFAS significantly reduced Solid and Hazardous Waste disposal costs, reduced procurement of Hazardous Materials, implemented Pollution Prevention programs, and recycled 14 profitable and 20 cost avoidance waste streams. Accomplishments include:



**Public awareness positively impacts waste reduction**

- Implemented numerous environmental public awareness programs to include: base radio and television spots, environmental awareness slides at onbase movie theaters (adopted at other bases in Japan), a Facebook Page, and an Environmental brief for all incoming personnel. These programs have reduced the total amount of solid waste generated by 10% since their inception.

- Parts washers, which use recycled solvent, are utilized by various commands at CFAS. To date, there are nine (9) in service. This reduces annual hazardous material (solvent) procurement by approximately 6,000 gallons and saves \$87,000 annually in disposal costs.
- Diverted 5,393 tons of Solid Waste (SW) from landfills and incinerators into recycling waste streams. Cost avoidance versus disposal was more than \$563,000.



**Shipment ready crushed cans**



**Community outreach impacts  
next generation**

- Converted 17.93 tons of used paint cans and oil drums from Hazardous Waste to scrap metal. Size reduction reduces required space during transportation from the Disposal Center to the Recycling Center which translates into fewer trips; thereby reducing fuel consumption and costs. Cost avoidance was \$31K and scrap metal generates over \$9,000 annually for the QRP.
- Over 35 separate community outreach programs have been conducted. These include events with DoDEA schools at all grade levels, events with base military and civilian personnel, and events with local host national citizens.
- The increased amount of recycling education being presented at CFAS has resulted in a 30% increase from the last award period in the amount of glass, plastic bottles, and metal cans that were recycled. This community awareness campaign has led to over 788 tons of cardboard and paper, and 420 tons of glass, plastic, and metal cans being recycled; thereby realizing a cost avoidance of over \$130,000.
- To minimize our environmental footprint in our host nation, and increase our solid waste diversion rate, the installation began utilizing waste management facilities in 2012 which generate energy and other needed commodities. Solid wastes are transported to Environmental Recycling Energy Company in Nagasaki Prefecture and are incinerated to produce electricity for Sasebo City; energizing over 5,000 households. The resultant ash is recycled and used as an aggregate for the production of cement blocks, bricks, and lintels. The recycling process converts discarded waste materials into valuable energy and construction materials; which are currently in short supply because of the 2011 Earthquake.
- The Environmental Division runs a reissue program of used furniture and kitchen items which resulted in over 126.5 tons of items being reused. This further reduced our solid waste volume and associated disposal costs. The cost avoidance gained from this valuable program was over \$13,600. Additionally, this program benefits the different Departments and Tenant Commands at CFAS by providing them with a means of obtaining needed equipment and furniture at no additional cost to the Department of Defense.
- 63.8 tons of lead acid batteries were collected and sold by auction to local scrap metal contractors. Revenues exceeded \$57,000 for the QRP and the disposal cost avoidance was just over \$100K.
- Enhanced community awareness of the recycling programs by designing and distributing home, office, and ship recycling guides.

- Completed a base-wide sampling evolution to test all transformers and condensers for PCBs to support the Government of Japan's request to identify all PCBs in the country. A contract was awarded to sample 214 facility transformers.
- The QRP funded a variety of Pollution Prevention and Energy Conservation projects. These projects include: Upgrading street lights to LED which provides an energy savings of 44%, modifying man-lifts used for the painting of ships to prevent the release of paint or other hazardous material into Sasebo Bay, and can crushing units to minimize the generation of Hazardous Waste. Additionally, the QRP provided \$600,000 to Morale, Welfare, and Recreation (MWR) to increase the amount of MWR programs offered at CFAS.



**Recycling of cooking grease**

- Recycled 109.3 tons of cooking oil which has reduced the cost of the Solid Waste contract by \$53,000 each year. The cooking oil is sold through the QRP and it generates approximately \$10K annually. The program will be adopted by other CNRJ installations.
- CFAS awarded a Used Oil recycling contract in March, 2012. The used oil is collected at activities and ships and processed for energy recovery and refining. CFAS recycled 755,000 gallons of Used Oil which the saved the Navy over \$3.6 million in disposal costs.
- CFAS made significant progress to reduce the potential for damaging spills on the installation and its surrounding waters. The Environmental Division identified the critical need to respond to a worst case discharge; in the wake of the March 2011 Earthquake and resulting Tsunami. Our efforts, research, and promotion of its necessity up the chain of command, led to the first ever Spill Response Basic Ordering Agreement (BOA) being awarded in Japan. Not only was CFAS able to improve its spill response effectiveness but two other major DoD installations (Yokosuka and Iwakuni) were also added to the contract to improve their programs. The BOA is now used to implement coordinated training requirements and response actions across the regions in the event the unthinkable occurred.



**Bio-Fuel Pellets**

- The Recycling Center implemented a mattress, textile, and scrap clothing recycling program during FY11. This program has removed 33.6 tons of waste clothing and textile scrap from the solid waste stream and diverted them into the production of Refuse, Paper and Plastic Bio-Fuel (RPPF) pellets.
- CFAS developed a Summer Energy Awareness and Reduction Campaign in 2012 to assist the City of Sasebo in reducing its electrical consumption to due all generation plants being taken offline for safety inspections. The three month campaign reduced CFAS's electrical consumption by 6.1% from the previous year.

In summary, CFAS expanded its robust EMS program, dramatically reduce non-compliance issues, and has significantly stepped up efforts to promote and practice environmental stewardship by conserving resources through pollution prevention and energy conservation to reduce our ecological footprint in Japan. We recycled 5,584 tons of material; realized a disposal cost avoidance of \$4.347 million, and the Qualified Recycling Program generated \$1.427 million in revenue for the Navy.