

# Secretary of Defense Environmental Award

# Environmental Quality Award — Overseas



# Ramstein Air Base, Germany



## FY 2002





**SECRETARY OF DEFENSE  
ENVIRONMENTAL AWARD  
ENVIRONMENTAL QUALITY – OVERSEAS  
RAMSTEIN AIR BASE, GERMANY**



### INTRODUCTION

*Meticulously managing requirements for massive KMC mission*

Ramstein Air Base is the main operating base within the Kaiserslautern Military Community (KMC) and extends over 5,100 acres of land in the German State of Rheinland Palatinate. The major units on the base include the 86th Airlift Wing (AW), Headquarters United States Air Forces in Europe (HQ USAFE), Headquarters North Atlantic Treaty Organization, the 415th Base Support Battalion, the 721st Air Mobility Operations Group, and a host of smaller tenant organizations. The 86th AW is the largest wing in the U.S. Air Force, encompassing six bases and 27 geographically separated units (GSUs); these locations are home to 10 groups, four flying squadrons, and 41 aircraft that fulfill tactical, distinguished visitor, nuclear airlift, and aero medical evacuation missions throughout Europe, Russia, Africa, and the Middle East. Significantly, the 86th AW is the host unit for over 44,000 personnel within the KMC, the largest population of Americans outside of the United States.

### BACKGROUND

*Tackling many environmental challenges with clear-cut goals*

The first years of the new century increased the environmental aspects of the mission with the Air Force's massive initiative to close Rhein Main Air Base (AB) near Frankfurt and to transfer the majority of its mission to Ramstein AB by the year 2005. This necessitated the development and implementation of a variety of



**Ramstein AB supports the largest number of Americans in Europe**

environmental projects within KMC to facilitate a transition that will make Ramstein AB the Gateway to Europe—or more appropriately, the Gateway to Peace. The Environmental Management Flight (Flight) played a critical role in the land acquisition process for the transfer by securing 544 acres of land to allow for future expansion. Significantly, this challenge presented itself at a time when world events conspired to increase the operations tempo at Ramstein AB that alone drove a dramatic increase in the number and variety of environmental issues that had to be resolved.

Besides the increase in responsibilities due to the transition, the Flight continued striving for excellence in the four pillars—cleanup, compliance, conservation, and pollution prevention (P2). Under cleanup, contaminated sites resulting from historical fuel spills, disposal trenches dug outside base maintenance shops, former faulty pesticide and asphalt disposal practices, and the consequences of historically inadequate oil water separator maintenance confront the Flight. In the

compliance arena, the Flight ensures the base meets or exceeds the strict German environmental regulations and laws through close partnering with the 86th AW organizations and German regulators. The conservation challenges include KMC protects wetlands directly outside the south fence spanning across 3.2 miles and six different “red-listed” bird species inhabit the many wooded areas within its boundaries. The Flight maintains a strong, smart P2 program, one that meets the challenging requirements of the German recycling and composting laws. Despite the many challenges, the Flight continues to excel with one of the strongest environmental programs in the Air Force.

Within this extensive and dynamic setting, Ramstein’s Flight must assure the environmental integrity of the foreign lands that accommodate a vital mission supporting the national security of the United States and its allies. In order to accomplish its extensive mission, the Flight Chief divided the Flight into two branches, Environmental Compliance branch with six program managers and the Environmental Protection branch with seven program managers, totaling 17 positions composed of German civilians and Air Force personnel. This excellent staff managed the largest budget of any such flight in USAFE; \$8.6 million in FY01 and \$5.8 million in FY02, reflecting the scope of its responsibilities.

Accordingly, the Flight diligently applies its efforts to implement the plans, programs, and procedures required to prevent damage to the environment, effectively respond to environmental mishaps when they occur, ensure KMC-wide compliance with environmental laws and regulations, and be sensitive to the expectations of the host nation. To cope with the scope of its responsibilities, the Flight employs a number of data management tools,

including the Automated Civil Engineering System (ACES) for programming projects, Environmental Management Information System (EMIS), the Hazardous Materials Information System, and other databases related to hazardous waste, Compliance Site Inventory, Environmental Compliance and Assessment Management Program (ECAMP) database, storage tanks database, online asbestos database, and lead-based paint database.

Through close partnering between base leadership and the German federal, state, and local governments, the Flight met or exceeded Germany’s extremely strict environmental laws and regulations without adversely affecting mission accomplishment. Significantly, the Flight sponsors regular meetings between base leadership and host nation regulators. Several of the notable forums for these interactions include the Environmental Protection Committee (EPC), the Koordinierungsgruppe (KoG), and ECAMP Working Group, the P2 Working Group, and the German-American Environmental Working Group.

The Flight holds quarterly EPC meetings attended by all the Group Commanders and chaired by the Vice Commander. These meetings provide updates and visibility to the wing leadership on each of the four pillars of the Air Force’s environmental program—cleanup, compliance, conservation, and P2. Using a “stoplight status system” approach, the Flight presents a clear, concise picture of the status of each of the 25 different program areas with more than 100 different subareas. The Flight advises wing leadership if the program status is green, yellow, or red based on comparing the status of the program to predetermined goals.

The KoG (Koordinierungsgruppe Altlasten: coordination group contaminated sites), which has proven to be a very powerful and effective

management forum, started meeting in the year 2000. It keeps all concerned parties informed about the status of KMC restoration projects and it provides a mechanism for involving key stakeholders in project planning and execution. The KoG members include: the SGD Sued (the German Water Authority), LBB Kaiserslautern (the State Construction Agency analogous to the Army Corp of Engineers), Kaiserslautern County and other impacted counties, the City of Kaiserslautern, the Military District Administration (WBV West), Headquarter U.S. Army in Europe, Headquarters U.S. Air Force in Europe (HQ USAFE), the 415th Base Support Battalion, the 86th AW, as well as various cleanup specialists. In 2001 and 2002, the Flight sponsored four KoG steering group meetings and more than 60 KoG working group meetings. The KoG has proven a non-bureaucratic way to expedite the project performance of every restoration project within the KMC. Their successful approach ensures minimizing the lengthy paper trail and concentrating on an vital discussion and on the spot decisions in unison with all working group attendees. This pro-active forum ensures that environmental issues (e.g., the discovery of unexpected restoration sites) do not stop construction projects or adversely impact the mission.

The ECAMP Working Group includes the environmental representatives from each base organization that must ensure its operations are compliant with environmental regulations. This 100 plus member working group meets monthly to coordinate upcoming ECAMPs, determine how to close open findings, communicate problems that are preventing findings from being closed, review the thirteen ECAMP protocols, and discuss lessons learned focusing on root cause identification. The Flight has held 15 ECAMP Working Group meetings during past two years, directly contributing to the 57 percent decrease in findings from the 1998 to 2001 external ECAMP.



**Hazardous Material Storage at Ramstein AB**

The Flight manages the development, update, and implementation of 23 Air Force required plans and surveys. The most significant and labor intensive plans completed or updated in 2001 or 2002 include the Hazardous Waste Management Plan, Storage Tank Management Plan, Cross Connection/Backflow Prevention Survey, Asbestos Management Plan, Hazardous Materials Emergency Response Plan, Integrated Natural Resource Management Plan, Noise Study, Wastewater Characterization Study, Pollution Prevention Management Plan, Tree Inventory, Bird Air Strike Hazard (BASH) Study, and Endangered Species Survey.

### **PROGRAM SUMMARY**

*Extensive program guarantees Environmental Excellence*

In order to manage the breadth of the program, the Flight utilizes Environmental Standards of Excellence with 25 program areas and established specific goals. The Flight examines each program area quarterly and annually. If the Flight does not meet a goal, immediate action is initiated to bring the program back to a level where it meets or exceeds standards.

**ECAMP** – The Flight inspects 13 environmental protocols each year under this program with an external every two years and internal in-between. The Flight creates a Management Action Plan to manage closing the findings works with organizations to close findings quickly.

**Hazardous Waste Management** – The Hazardous Waste Management Plan identified several aggressive goals. Site manager training has a goal of attaining over 80 percent train rate. Monitoring of accumulation and storage areas assists with a goal of 80 percent meeting standards, and tracking related significant and major ECAMP findings has a goal of closing all findings. The Flight met all the goals under this area in 2001 and 2002.

**Hazardous Materials Management** – This program includes the HAZMAT Spill Response Plan, the HAZMAT Response Team meeting the goal of more than 80 percent of the members trained, and tracking HM ECAMP findings with the goal to close all findings.

**Storage Tanks Management** – The Flight maintains an inventory of 798 underground and above ground storage tanks, operates under a Management Plan, conducts tank testing according to regulations, and ensures all 502 KMC-owned tanks in compliance pending funding.

**Air Quality** – This program includes the Emission Source Survey which identifies all stationary air emission sources; the Flight also ensures the Emission Source Compliance Audit is complete. Compliance of all sources is required under this area.

**Asbestos** – This program includes a management plan which the Flight updated in 2002, asbestos survey that includes all KMC facilities, and training every two years for team members. The Flight met all the goals under this program area in 2001 and 2002. Of particular note is the new \$1.5 million asbestos

database. This online database includes asbestos information for all buildings in the KMC. It sets the standard for the command as USAFE starts implementing the Geobase initiative.

**PCBs** – The goals for this program include accurate inventory and testing, no significant or major ECAMP findings, and PCB free with no equipment greater than 50 ppm. The base has been PCB free since 1999. Through this program, the Flight will ensure that equipment which uses this harmful chemical is not purchased by any base organization.

**Pesticides** – This program includes a Management Plan which must be current and approved, has a goal of no significant or major ECAMP findings, and all personnel certifications must be kept up to date. Due to the golf course, the base does not meet the standard, but the Flight is working with the golf course manager to reduce overall pesticide use.

**Deicing** – In this area, the Flight monitors deicing operations to make sure they meet Federal Governing Standards (FGS) and Host Nation Agreements. Even with record cold temperatures and snowfall in 2001, the Flight ensured the base met the standards.

**Open Enforcement Actions (OEA)** – The Flight boasts no OEA's in 2001 and 2002 despite the target amount of military construction and operations and maintenance construction.

**Water** – The program completed the cross-connection/backflow program survey in 2002, as well as the sanitary survey/contingency plant, ensuring testing and quality. Program also manages significant and major ECAMP findings.

**Wastewater** – The Flight conducts regular testing to ensure compliance with the FGS, they inventoried and maintained oil/water separators in 2002, and completed a Local Operating and

Instructions Manual that is plant specific. They also conducted a characterization of industrial sources with all sources identified, ensured wastewater quality complies with FGS, and work toward a program with no significant or major ECAMP findings.

**Lead Based Paint** – This program includes a lead-based paint survey, management plan, no significant or major ECAMP findings, and training every two years for all team members. The Flight met all the goals in this program area.

**Radon** – This program includes a survey and any required mitigation. Ramstein AB survey indicates the base does not require mitigation.

**Spill Prevention Plan** – This program created a map showing all possible spill locations, a pollution discharge map, a prevention action plan, and any required corrective actions plan. The Flight expertly managed the spills in 2001 and 2002.

**Discovery** – This program area includes the discovery team, spill inventory, and monitoring of uncontained spills. The Flight had no uncontained spills in 2001 and 2002.

**Validation** – This program includes an EPC subcommittee, a quarterly site status list, and validation of the status of the cleanup program. The Flight met all the goals in this program area.

**Risk Assessment** – This area involves a contaminated sites risk assessment to be completed each year. The assessment was completed in both 2001 and 2002.

**Remedial Action** – Under this area, the Flight has the Remedial Action Management Plan, remedial action list that must be submitted to headquarters, and monitoring of completed actions. The Flight met all the goals in this area.

**Environmental Impact Analysis Process (EIAP)** – This program area mandates clear EIAP procedures, closes ECAMP findings, assures proper EIAP documentation and procedures. All these objectives were complete in the award period.

**Noise** – The Flight updated the noise map in 2001 and established comprehensive complaint procedures to support the Rhein Main transition in 2002. All goals were met in this area.

**Natural Resources** – This programs accomplishments include completing the list of endangered species, updating the Integrated Natural Resources Management Plan, and closed all of the ECAMP findings in this program area.

**HAZMAT/Waste Minimization** – The Flight tracks the Hazardous Waste minimization for a 1992 baseline and the EPA 17 ITP determined the 1994 baseline. The Flight monitors the Pollution Prevention Management Plan that was updated in November 2002. The HAZMAT/WASTE minimization goals are examined under this objective. The minimization goals were met in 2001 and 2002.

**Municipal Solid Waste Minimization** – The Qualified Recycling Program, composting, and Municipal Solid Waste (MSW) are managed under this program. The Flight well exceeded the goals set in all areas of this program in 2001 and 2002.

**Ozone Depleting Substances** – ODC/ODS “use” waivers, certification of ODC/ODS technicians, requirements and excess ODC/ODS identification, and shipping excess ODC/ODS are controlled under this area. The Flight met all the goals in this program area in 2001 and 2002.

**ACCOMPLISHMENTS**

*Superb Dedication! Exceeding goals, supporting the mission*

**Noise Prevention** – *Dedicated effort to reduce noise and keep local community happy*

The 86th AW, as the busiest airlift wing in the Air Force due supports many deployments which potentially could frustrate the local community with noise pollution. The Flight fosters a good relationship with the local German communities by striving to reduce noise levels associated with the installation’s mission. As an integral member of the wing noise abatement committee, the Flight provides expert advice on all noise standards. The Flight partnered with the flying squadrons to implement quiet hours from 2200 to 0600 hours for noise control. The Flight also sponsored a two-phase noise prevention study during which a contractor studied options to reduce ground noise.

**Pollution Prevention Program** – *Practice and promote three R’s Reduce-Recycle-Reuse*

The Flight partners with base organizations to ensure that if spills occur, the airman on site can quickly clean up the spill and prevent catastrophic environmental damage. The Flight distributed 50 spill kits worth \$65,000 to various flightline locations. A 24-hour spill response team was also formed to quickly contain releases of hazardous materials.

In addition to protecting the environment from hazardous material or hazardous waste spills, the Flight strongly encourages recycling. The KMC boasts the largest recycling program in USAFE, with over 100 different items collected, separated, and recycled. The program recycles more than 15 million pounds of materials each year, successfully diverting these wastes from landfills while saving the Air Force \$4.5 million. In 2001 and 2002, the KMC had waste diversion rates of 41 and 68

percent, respectively; well above and in advance of the 40 percent diversion rate by the 2005 goal set by the U.S. Government.

Of particular note, the Flight spearheaded the opening of an \$800K composting facility in July 2001 and has undertaken management of the associated contract to ensure smooth operation. This facility provides another worthwhile resource for diverting material from landfills and, in the process, converting it to an end product that can be used for base landscaping, in the biological soil treatment facility, and by construction contractors on base. The composting program alone reduces disposal costs by approximately \$600,000 per year and provides a cost avoidance for landscaping of \$30,000 per year!

The Flight operates three recycling centers across the KMC that are open from 0700 to 1800 hours, six days a week, to help achieve the goals and facilitate recycling by base personnel and their dependents. As part of its outreach program, the Flight includes a briefing covering various aspects of the environmental protection program and German recycling requirements at every newcomer’s orientation that has reached more than 2,500 personnel. In addition, the Flight distributes over 10,000 recycling brochures per year, comprising of important environmental references within the KMC making recycling a simple and uncomplicated activity for all base personnel and dependents.



**Example of Kaiserslautern Military Community Recycling Center**

**Hazardous Material/Waste Management Program** – *Smart management saves Air Force Money*

The Flight works diligently to improve the management of more than \$230,000 worth of hazardous materials used by 233 customer accounts in the KMC. The hazardous material management team trains and educates users on how to use hazardous materials. The Flight developed a “HazMats 101” guide to aid customers in the process of requesting hazardous materials through the EMIS. An innovative way the Flight worked to decrease hazardous waste in 2001 and 2002 was through an assessment of 24 high-volume waste streams to determine ways to reduce and/or eliminate waste. The study identified 10 waste streams that could be reduced. For example, a new \$21,000 bead blaster now recycles beads used for removing paint, thus, reducing the amount of waste beads. The Flight worked hand-in-hand with the base photo laboratory, the number three hazardous waste producer in the KMC, to switch to digital equipment, almost eliminating a major hazardous waste stream.

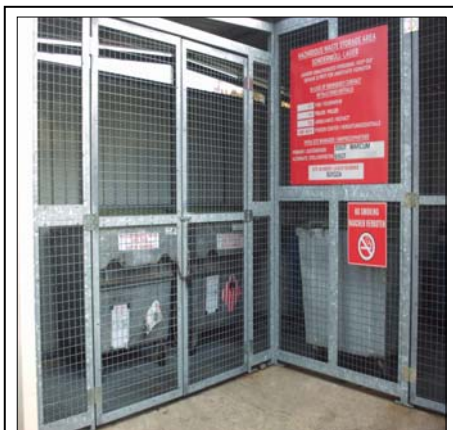
Despite the efforts to reduce hazardous material use, mission requirements still generate a significant amount of hazardous waste that must be managed and disposed of properly. In 2001, the Flight managed the disposal of

347,495 pounds of hazardous waste while recycling 506,935 pounds. In 2002, the Flight managed the disposal of 286,658 pounds of hazardous waste while recycling of 587,598 pounds. This magnificent management feat could not be accomplished alone. Notably, the Flight trains on average more than 200 hazardous waste monitors per year.

The Flight worked tirelessly to ensure the Centralized Hazardous Waste Storage Facility opening in October 2002. It consolidated 23 storage areas and 33 accumulation points into 12 storage areas and 35 accumulation points, saving \$1.5 million. Additionally, with the opening of this centralized facility, generating sites now use 200 liter drums instead of 1,000 liter containers; meaning less hazardous waste storage space required at the generating sites, thus reducing associated hazards and spill potential. The use of a permitted contractor assures wastes are segregated and packed according to host nation standards. This consolidation drastically reduces the costs for “repackaging” and the risk associated with uncontrolled chemical reactions caused by commingling incompatibles. The consolidation further provides faster service through an on-call pick-up service at no additional cost to the generators.

**Community Relations Program** – *Outreach and education - key part of a strong program*

A successful environmental program requires the involvement, cooperation, and support of base leadership, local governments, and the local communities. Ramstein AB boasts a strong relationship with all involved parties. The base celebrated “Earth Week” and “Recycle Day” organized by the Civil Engineering Division (CEV) in 2001 and 2002 and applied for the KMC to become a Tree City USA. Earth Week’s activities included a fun run, golf tournament, and trash pick up with more than 400 participants. In 2002, the base celebrated “Arbor Day” with German



**Centralized Hazardous Waste Storage Facility**





**Arbor Day Celebration with Local Dignitaries and School**

community leaders, base leadership, and 5th grade students. The Flight routinely publishes articles in the base paper and gives briefings at commander's calls, community fairs, and schools to educate the community about the environment and recycling.

#### **Environmental Compliance and Assessment Program (ECAMP) – Goal= zero findings**

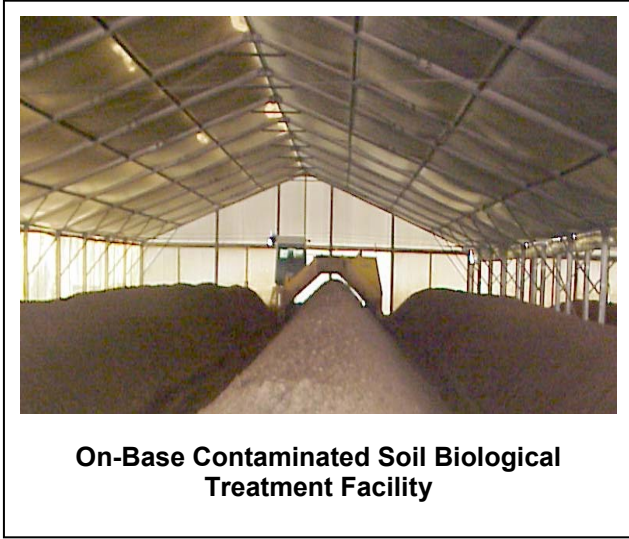
Ramstein AB takes compliance seriously through an aggressive Environmental Compliance and Assessment Management Program. In 2001, the Flight had an external ECAMP inspection with no significant findings, 20 major findings, and 150 minor findings. This number of findings represents a 57 percent decrease in the number of findings from the last external ECAMP. To date, Ramstein AB has closed 134 of these findings. In 2002, the Flight conducted an internal ECAMP with no significant findings and 101 findings. Significantly, the Flight spearheaded a three-day environmental assessor training class during October 2002. This training helped the assessors properly examine the 13 protocols during the internal ECAMP, and it will ensure that our next external ECAMP will be even better than the last.

#### **Natural Resources Program – Protecting the environment for future generations**

In 2001, the Flight worked hand-in-hand with the Air Force Forester, German Forestmeisters, and all affected military units to create Ramstein's first ever Integrated Natural and Cultural Resources Management Plan. The German Forest Department controls the 794 hectares of forests on base and must approve all tree cuttings. Through weekly meetings with the forestmeisters, the Flight ensures that tree-cutting requirements do not delay construction projects. To show the authorities the KMC's commitment to protecting the environment, the Flight had a \$200,000 tree survey conducted. This survey provided valuable information for future tree cutting and land acquisition requirements so the authorities know in advance the base leadership's plan for the base. In 2001, the Flight sponsored an \$80,000 BASH study. This study validated removing trees around the runway to prevent potentially fatal accidents.

#### **Site Restoration Program – #1 Program praised by host nation for outstanding results**

Ramstein AB has one of the largest restoration programs within the Air Force with 63 sites identified within the KMC; of these, 36 are closed and 27 are ongoing. Since 1990, the Air Force has spent over \$30 million on restoration projects within the KMC. The reason the Air Force funded such a large amount of restoration in the KMC has a lot to do with the way the restoration team expertly identifies requirements and pushes for funding. In 2001, \$4.6 million were expended on restoration projects within the KMC and three sites were closed; in 2002, \$1.9 million were expended on restoration projects within the KMC and another three sites were closed. The aggressive restoration program of the last two years has clearly precluded the spread of any contamination off base. For the future, the



**On-Base Contaminated Soil Biological Treatment Facility**

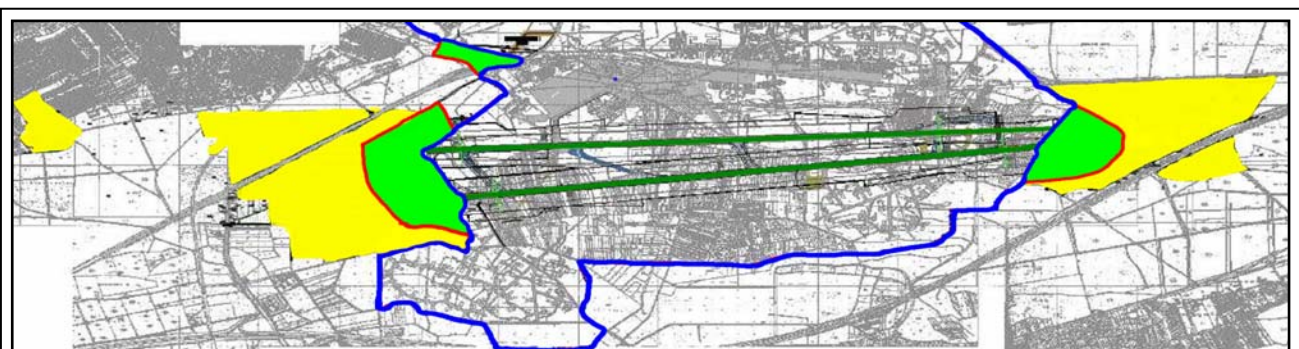
A particularly innovative part of Ramstein AB’s restoration program includes the on base biological treatment facility that is used to remediate Petroleum Oil and Lubricants (POL)-contaminated soil. This unique land farm in USAFE provides an economical alternative to other off-base disposal or treatment options. Since 1991, the facility has been used to clean an impressive 106,000 cubic meters (cbm) of contaminated soil, resulting in an estimated savings of \$500,000 per year over traditional treatment or disposal methods. The facility cleaned some 14,000 cbm of POL-contaminated soil in 2001 and another 9,000 cbm in 2002. The base utilizes the cleaned soil for construction projects and landscaping.

Flight identified \$15.6 million in restoration requirements and programmed projects to fix the remaining 27 sites.

Notably, when groundwater contamination threatened our base drinking water supply, the Flight worked fast to clean up the contaminated site that was causing the problem. The Flight has already implemented a \$2.25 million program to clean up the groundwater contamination, and it has programmed another \$3.22 million to close the site by 2013. The groundwater contamination treatment system includes 17 wells—four wells to pump the contaminated water from the ground, four to pump the treated water back into the groundwater, and nine monitoring wells to make certain the contamination does not spread.

**Rhein Main Transfer** – *Guaranteed smooth transfer with no environmental delays*

One of the major challenges facing the Flight in 2001 and 2002 included the closure of Rhein Main AB and transfer of the mission to Ramstein AB. The Flight assisted in six studies required by the German Air Traffic Act, paragraph six, including, Ground Noise Study, Flight Noise Study, Air Emissions Study, Medical Impact Study, Habitat Conservation Plan, and Flight Climatologic Report costing a total of \$500 thousand. The Flight opened the door for the transition with the success of the 544 acres land acquisition and swap required for the lengthening of the runway. Annex B “Environmental Cleanup of Ramp 5” from the



**Land Acquisition/Swap to Support Rhein Main Transition**

Rhein Main Closure Agreement mandated that cleanup be included in the project for a total of \$3 million in soil and groundwater cleanup that the Flight brilliantly programmed and awarded. The Flight had to relocate the biotreatment facility that involved planning the demolition of the old facility, constructing a new facility, and using the cleaned soil in the old. The transfer also required five EIAP's to examine the proposed site locations of Rhein Main AB-related construction projects.



**Students from a local school clean up the on base forest as part of Earth Week**

**AWARDS** – *Illustrates the success of our hard work and dedication – we excel at the job!*

The many original recycling programs, natural resource efforts, ECAMP initiatives, and community activities implemented by the Flight have garnered the following awards:

- ★ 2001 White House Closing the Circle Award (one of only five Air Force recipients)
- ★ Four USAFE Awards for 2001, including:
  - General Thomas D. White Environmental Restoration Award
  - General Thomas D. White Restoration Award for Team Excellence
  - General Thomas D. White Quality Award for Team Excellence
  - General Thomas D. White Natural Resources Conservation Award (small)
- ★ One Air Force and four USAFE awards for 2002 including:
  - Air Force Environmental Quality Overseas Award
  - General Thomas D. White Environmental Restoration Award
  - General Thomas D. White Environmental Quality Award (Overseas)
  - General Thomas D. White Pollution Prevention Award - Team Excellence
  - General Thomas D. White Pollution Prevention Award
- ★ Curtin Award for FY02 - 86 Civil Engineering Group – Best Large Civil Engineering group in the Air Force

## **SUMMARY**

The future of Ramstein AB's environmental program looks bright due to the positive environmental culture that every member of Team Ramstein embraces and the strong partnership we have developed and fostered with the German environmental authorities and other government agencies. These relationships will ensure a smooth transition of operations from Rhein Main AB to Ramstein AB by the scheduled target date of 2005. We recognize this program will present many environmental challenges, but the Flight remains dedicated to achieving success through cooperation, innovation, and responsible stewardship. The Flight has and will continue to strive to ensure that Ramstein AB and its GSUs continue to comply with German environmental standards and Air Force requirements without disrupting the vital missions of all units within the KMC.