

**NAS NORTH ISLAND - NAVY REGION SOUTHWEST
NAVY ENVIRONMENTAL LEADERSHIP PROGRAM**

POLLUTION PREVENTION

NADEP POLLUTION PREVENTION IMPLEMENTATION HANDBOOK

LEAD ACTIVITY

Naval Aviation Depot (NADEP) North Island

STATUS

Complete

MISSION

Transfer pollution prevention (P2) technology

REQUIREMENT

In order to encourage the use of P2 initiatives, a method for sharing successes and providing information regarding alternative processes and materials is required.

DESCRIPTION

As part of Naval Air Station (NAS) North Island technology transfer efforts, NELP prepared a P2 implementation handbook that describes NADEP North Island P2 success stories. The purpose of the handbook is to provide information regarding approved, alternative processes and materials that can replace hazardous materials commonly used in naval aviation maintenance operations.

The handbook shares successful P2 strategies and technologies and promotes technology transfer among Navy command-level personnel. The handbook also presents P2 strategies that have been implemented successfully for Navy maintenance activities, provides sufficient information to allow working-level personnel to implement alternative P2 technologies or processes, and provides detailed cost/benefit analyses. As additional P2 options are approved, the handbook will be updated to include the new P2 alternatives. Currently, the following technologies are described in the P2 handbook.

Application Area	Project Name	Description
Metal Finishing	Boric/Sulfuric Acid Aluminum Anodizing (BSAA)	BSAA replaces a chromic acid aluminum anodizing process. This new process eliminates the use of chromic acid as an anodizing agent.
Metal Finishing	Electrolytic Recovery Unit (ERU)	The ERU recovers cadmium and destroys cyanide from the plating bath. This process reduced the amount of

		raw material required and the amount of cyanide that must be treated.
Metal Finishing	Spray Rinsing	The spray rinsing process replaces a dead rinse process. This procedure reduces water consumption and the volume of wastewater generated.
Metal Finishing	Wet to Dry Scrubbers	The open-loop scrubbers at NADEP North Island were retrofitted into dry scrubbers. The dry scrubber prevents the generation of 49,501 gallons of contaminated water per year.
Metal Finishing	Mesh Pad Demister	The mesh pad demister replaced the wet scrubber. It has a 99.9% removal efficiency to reduce chromic acid air emissions. The mesh pad demister also recycles chrome by returning it to the plating bath.
Cleaning and Surface Preparation	Power Parts Washers	The aqueous parts washer used with an alkaline cleaner replaces most PD-680 (stoddard solvent) for surface preparation. By replacing PD-680, volatile organic compound emissions are reduced.
Recycling Programs	Can Crusher/Rag Compactor	The solid waste compactor and recycling process consolidates metal containers for recycling. NADEP also uses this process to reduce the volume of hazardous waste and solid waste.
Recycling Programs	Plastic Media Recycling	NADEP contracted with an outside vendor to lease plastic media for the plastic media blast (PMB) booth. The vendor collects the spent plastic media with paint solids, recycles the material, and incorporates it into a new product (such as tabletops). The plastic media leasing program reduced hazardous waste generated from the paint removal process at NADEP.
Material and Waste Management	Hazardous Material Management System	NADEP adapted the Depot Maintenance Hazardous Material Management System (HMMS) to track hazardous material usage for all shop level activities. The HMMS inventories and helps personnel control the flow of hazardous material at various material

		issuing locations.
Compliance Program	Self-Inspection Program	NADEP instituted a self-inspection program to track potential notices of violations (NOV). This aggressive self-inspection program enables NADEP to maintain compliance.
Various	Stardust Super Absorbent	NADEP replaced the traditional clay absorbent used for spill cleanup with Stardust Super Absorbent. The Stardust Super Absorbent reduced absorbent disposal volumes and associated costs. The total cost savings were estimated to be \$55,121 per year in waste disposal costs.

BENEFITS

- Successes and lessons learned are shared with others
- P2 initiatives are encouraged, waste reduction is promoted, and provides information on the hazardous materials commonly used

ACCOMPLISHMENTS/CURRENT STATUS

Date	Activity
FEB 1995	NAS North Island reviewed existing EPA, DoD, and Navy P2 technology transfer formats and prepared a format considered most useful to working-level personnel
MAR 1995	NAS North Island collected P2 success stories from NADEP activities
APR 1995	A Draft P2 implementation handbook was submitted for review and approval
OCT 1996	Additional P2 information was updated into the P2 Implementation Handbook. The handbook was submitted to NAS North Island for review and approval
MAY 1997	P2 implementation handbook placed on the NELP Web site for download; Project Complete, Exported

FUTURE PLAN OF ACTION & MILESTONES

Date	Activity
------	----------

MAR 1999	Prepare a similar document specific to Aircraft Intermediate Maintenance Departments (AIMD)
----------	---

COLLABORATION/TECHNOLOGY TRANSFER

NADEP has shared P2 technologies with other Navy activities to encourage use of P2 methods. NADEP expects that the P2 implementation handbook will be useful to Navy personnel for (1) conducting depot aircraft maintenance operations (in accordance with OPNAVINST 4790.2E) and (2) implementing P2 programs and techniques to meet the requirements of Executive Order 12856 and OPNAVINST 5090.1B.

BIBLIOGRAPHY

- Naval Facilities Engineering Service Center (NFESC). Navy Pollution Prevention Opportunity Handbook (Draft). 1994.
- Gallop, Lt. Mike. USS Theodore Roosevelt Environmental Compliance Program "Cookbook."
- Chief of Naval Operations. Naval Shore Installation Pollution Prevention Planning Guide. October 1994.

RELATED GOVERNMENT INTERNET SITES

[Pollution Prevention Implementation Handbook](#)

RELATED NAVY GUIDEBOOK REQUIREMENTS

- 10008 P2 Annual Data Summary (P2ADS)

[BACK TO NERP POLLUTION PREVENTION PAGE](#)