



Bravo Zulu

Patrol Squadron Nine (VP-9)

Meritorious Service Medal
AFCM William Kasack

Navy/Marine Corps Achievement Medal
AT1 Alvin Williams

Letter of Commendation
AD1 Kevin Boluhan
AD1 Preecha Hoood
MS1 David Ragland
AO1 Todd Mequet
AD1 James Ferguson
AMS1 Theresa Anderson
AMS2 Vener Maranan
PH3 George Burton
ADAN Tac San
AN Edgar Carrera

Patrol Plane Mission Commander Qualified
Lt. Mike Moran
Lt. Jefferey Heidsieck

Safety Pro of the Month
AE2 Jeannie Quidachay
AE2 Doug Everts
AE3 Robert Stamper

Naval Brig Pearl Harbor

Promotion
MSC Juanito Liwanag

Staff Member of the Month
PO3 Imani Gudger

Around the Fleet

NAVSEA makes capital investment in Sailors with new "Smart Tools"

Pressing a right angled grinder to the floor deck panels in the engineering room of USS Caron (DD 970), Gas Turbine System Technician (Mechanical) 3rd Class Terry Sellers found it easy to remove rust and corrosion.

"It sure beats scraping the floor with a screwdriver and using abrasive pads, which is how we've done it in the past."

The grinder was just one of a number of tools being tested aboard USS Caron as part of the Capital Investment Program. The initiative is aimed at complying with Navy Secretary Richard Danzig's mandate to find ways to improve shipboard quality of life for Sailors. Besides the grinder, Sailors also tested a pneumatic chipping hammer (which looks like a small jackhammer), a power washer, a deck grinder, a newer technology needle gun, and "deck crawlers" (specialized grinders for taking up deck coatings).

USS Caron's Commanding Officer, Cmdr. William Harden, wasn't convinced that the tools would work effectively when NAVSEA materials engineer, Andy Seelinger, brought them aboard ship for the test.

"It only took me a week to become a believer," the commander said. "When I asked them point-blank whether the Navy should spend more money on them, the answer was a resounding 'yes.'"

The Naval Sea Systems Command (NAVSEA) initially tested several power scrapers, grinders, and power washers at the corrosion control facility in Key West, Fla.

The best performers were forwarded to the Sailors aboard Caron for further testing. Seelinger's team will discuss the pros and cons offered by each of the tools, and ultimately make a recommendation as to which tools should be adopted for Navy-wide use.

Seelinger hopes that the tool manufacturers will eventually produce versions of the tools that will run on batteries rather than compressed air. Such tools would prevent pressurized air

hoses from getting in the way during work, and present less of a tripping hazard to Sailors in tight workspaces. "Those types of tools would make the Sailors' lives even easier," Seelinger said.

Naval Surface Warfare Center at Annapolis closes

The Naval Surface Warfare Center at Annapolis closed Sept. 25, after more than 90 years of bringing new ideas to the fleet. The closure was in accordance with the Base Realignment and Closure Commission's decision to move personnel and facilities at Annapolis between Naval Ship Systems Engineering Station in Philadelphia, and the Naval Surface Warfare Center at Carderock, Md.

Originally known as the U.S. Navy Engineering Experiment Station (EES), this facility began its service to the Navy through boiler corrosion control experiments and metallurgical studies. In 1942 Robert Goddard began on-site testing of jet-assisted take-off (JATO) rockets. Under his direction, rockets were attached to the PBV Catalina (seaplane) and tested on the Severn River.

Toward the end of World War II, EES as it was known, investigated enemy equipment and conducted research in gas turbines, machinery bearings and noise reduction.

In 1955 EES reengineered atmospheric control systems to allow Sailors to breathe air aboard nuclear subs that were submerged for months at a time.

"This facility may close, but your legacy will live," said Captain Preisel, Jr., commander of the Naval Surface Warfare Carderock Division in his remarks at the closing ceremony. "It continues in the ships and submarines in our Navy because every ship out there contains equipment developed at this lab."

He mentioned that personnel who have worked at the Annapolis lab had impacted the Navy in a lasting way: "their fingerprints have been all over the Navy for the last century and will continue to be for probably the next 10 to 15 years."

Warning center helps ensure safety at sea

By J01 F.H. Mowry
PACFLT PUBLIC AFFAIRS

"Red skies at night, Sailors' delight. Red skies in morning Sailors' take warning."

For the past 40 years the Joint Typhoon Warning Center (JTWC) at Pearl Harbor, Hawaii, has been watching the skies to ensure the safety of United States ships, Department of Defense (DoD) and State Department personnel in the Western Pacific.

Using Air Force and Navy assets; which include state of the art satellites, thousands of reports from ships, aircraft and shore stations, JTWC tracks weather conditions from the International Date Line to the East Coast of Africa, an area of more than 53 million square miles.

JTWC in conjunction with Naval Pacific Meteorology and Oceanography Center issues weather advisories, alerts and warnings throughout the region.

"We are an important part of the team. JTWC is at the front end of a long trail of METOC [Naval Pacific Meteorology and Oceanography Center] directly supporting the warfighter's (sic) missions. Whether it be determining the movement of a ship or relocating aircraft, JTWC warnings and advisories play a crucial role and have a potential impact to the success of any mission," said Air Force Lt. Col. Wendell T. Stapler, Director of the JTWC.

Established by the Commander in Chief, U.S. Pacific Command and the Joint Chiefs of Staff after a series of deadly tropical storms, JTWC consolidates the tropical forecasting and reconnaissance efforts of both the Navy and the Air Force.

It was insufficient reconnaissance and poor forecasting that were blamed for the Dec. 17, 1944, incident where



J01 F. H. Mowry

George Dunnavan, a civilian contractor, checks the reading of a new beta system being tested at the Joint Typhoon Warning Center.

Adm. William "Bull" Halsey Jr. and the Third Fleet were suddenly overtaken by Typhoon Cobra.

The typhoon's sudden appearance inflicted damages throughout the fleet including capsizing three destroyers and the loss of 778 men and 146 aircraft. Seven months later Halsey's Third Fleet was again blindsided by a tropical storm.

Because of this second incident, the Army Air Corps' 55th Reconnaissance Squadron was tasked to provide hourly weather checks on the positions tropical weather systems. This cooperation between the Army Air Corps and Navy weather reconnaissance in the 1940s helped lay the foundation for today's JTWC.

Although designed specifically for military use, JTWC provides continuous support to all United States government agencies assets residing or operating within the Western Pacific and Indian Oceans.

In addition JTWC shares its advisories, alerts and warnings with civilian agencies as well as the general public at

<www.npmoc.navy.mil/jtwc.html>.

The center also maintains a close relationship with the research community, the National Weather Service and other members of the United Nations World Meteorology Organization, who issues advisories, alerts and warnings to local civilian areas.

JTWC's support to units in the Western Pacific and Indian Oceans fills many of the gaps left open by civilian agencies in the Western Pacific and Indian Oceans. According to Lt. Anthony Cox, a JTWC Typhoon Duty Officer, the center tracks a storm system from start to finish, providing forecasts out to three days.

This differs from civilian agencies, as their forecasting is normally out to two days, within their assigned area.

For JTWC tracking a potential storm system begins by analyzing all the available data. Watching for pressure changes, wind speed, and looking at satellite images of the cloud line and how it is moving.

"Tropical convection and synoptic data can tell us how

the winds are circulating and their strength," Cox said. "This information can alert us to the formation of a cyclone."

If a United States component is within a 72 hours range of a storm formation JTWC will begin issuing advisories based on the data they have analyzed.

"Whenever a tropical system begins genesis, initial advisories are issued to the nearest half-hour and remain I effect for up to 24 hours," said Cox. If the winds increase to reach a speed of 25 knots, roughly 30 miles per hour (35 knots in the Southern Hemisphere) the advisories become numbered tropical cyclone warnings.

According to Stapler, JTWC has a major role to play in safety of all missions taking place throughout the Pacific. Using the latest technology, a JTWC watch team consisting of a Typhoon Duty Officer, Typhoon Duty Assistant and Satellite Analyst watch the skies around the clock to provide the most accurate picture of what is happening over the Western Pacific and Indian Oceans.

Waste made good: transforming the undesirable

By Denise Emsley
PWC PUBLIC AFFAIRS

Faced with stricter federal and state environmental regulations concerning the handling of biosolids or sewage sludge, the Navy's bold decision in 1996 has solidified its place as a good steward of the environment as well as a good neighbor to the people of Hawaii. That decision was to create a Biosolids Treatment Facility in Hawaii.

Currently, a one-of-a-kind operation within the DoD, the Navy's Biosolids Treatment Facility processes sewage sludge (also known as biosolids) and greenwaste to make a safe, desirable compost product. Although there are similar facilities that compost greenwaste or organic waste products within the DoD, none are quite as large as the Navy's facility on Oahu, which is the only one composting sewage sludge today.

The Navy's Biosolids Treatment Facility in Hawaii has been in full-scale operations for the past two years. Construction began in July 1996 and was completed in March 1997. The facility has a 300 x 300 ft. lined pad for processing biosolids and greenwaste and approximately 10 acres for curing and compost storage. It receives sewage sludge not only from the Navy's Wastewater Treatment Facility at Fort Kamehameha (Pearl Harbor); but, also from the Army's Wastewater Treatment Plant at Schofield Barracks. In addition, as part of a special intergovernmental pilot project agreement with the City and County of Honolulu, the Biosolids Treatment Facility began accepting sewage sludge from the city's Honouliuli Wastewater Treatment Facility in December 1998.

"This facility has successfully processed approximately 9,000 tons of biosolids and approximately 64,000 cubic yards of greenwaste into compost in almost two years of operations," said Steven Christiansen, the hazardous and solid waste division di-

rector, Navy PWC, Pearl Harbor, "This was only possible due to numerous innovative process improvements that have been developed and implemented by the our Solid Waste team."

As an owner of a large wastewater treatment plant, the Navy in Hawaii is responsible for handling approximately 5.5 million gallons of wastewater each day. This means it must properly dispose of four to eight wet tons of the biosolids or sewage sludge that remain after the wastewater treatment process is completed. In the past, the accepted practice for biosolids disposal was to bury them in specially designated landfills.

However, with changes in federal and state environmental regulations, the Navy realized it could no longer continue with this practice and began looking for alternatives. It was the Navy PWC, Pearl Harbor that took up this challenge and settled on the idea of composting. Through the diligent actions of members of the command's Environmental Department, the Navy's first Biosolids Treatment Facility was successfully established.

Composting biosolids is not a simple proposition. There is no "cookbook recipe" and many differing variables such as, climate, the amount and types of greenwaste, water etc... come into play during the composting process.

In addition, EPA has strict regulations for biosolids handling which provide specific temperature and contaminant thresholds that must be met.

For the Navy in Hawaii, there was an added degree of difficulty to overcome if composting its biosolids was to be successful. Oil from past leaks in pipelines and tanks, as well as petroleum spilled during the Japanese attack on Pearl Harbor in 1941, find its way into the Navy's wastewater system through pipe joints and seams, contaminating wastewater treated at the Navy's Wastewater Facility at Fort Kamehameha and the biosolids it produces.

"As a result of this contamination, our biosolids from

Fort Kamehameha have an extremely high level of diesel range petroleum hydrocarbon (TPH) which must be remediated during the composting process," said Christiansen. "We conducted an extensive search of technical literature on remediating TPH through some sort of composting process."

The search revealed that the TPH concentrations in our biosolids were much higher than those found in any previously recorded composting system.

Therefore, we were essentially on our own with regard to developing a process to convert both our biosolids into compost while degrading the petroleum hydrocarbon contaminants."

The Navy PWC, Pearl Harbor immediately embarked on several research projects to deal with this unique problem. They needed to demonstrate that petroleum based hydrocarbons could be successfully remediated using the composting process it established. One of their studies was recently presented at the In Situ and On-Site Bioremediation Conference, a federal and private industry environmental conference hosted in San Diego this past April.

The study, which was quite extensive, involved the joint efforts of the Navy PWC, Pearl Harbor and Naval Facilities Engineering Service Center, Port Hueneme.

Together, they evaluated the impact a compost product derived from biosolids contaminated with petroleum hydrocarbons would have when used as a soil amendment on plant growth.

This study also examined the potential hazards of the compost, from a toxicology and a chemical constituents standpoint. This study was very thorough as it evaluated the soil, pour water, plants, and compost itself. Results demonstrated that the composting process, established at the Navy's Biosolids Treatment Facility in Hawaii, successfully degraded the petroleum based hydrocarbons found in biosolids from the Wastewater Treatment Plant

at Ft. Kamehameha (Pearl Harbor) to levels well below the regulated limits provided by the EPA. The study also determined that there was no need for concern regarding the use of the final composting product in any application.

Another unique feature of the Navy's Biosolids Treatment Facility in Hawaii is its ability to accept palm fronds or palmtious greenwaste, which is not actively composted by others, into its composting process.

Palmtious greenwaste has very long fibrous filaments which are slow to break down, and difficult to handle when using traditional composting techniques and equipment. However, the Navy PWC, Pearl Harbor has established a process that efficiently handles this type of greenwaste. As a result, the Navy's Biosolids Treatment Facility contributes even more to the state by reducing the large volume of palmtious greenwaste being sent to area landfills.

"Out of necessity, we developed a process which allowed us to use palmtious greenwaste," said Christiansen. "When we began our composting facility, the only greenwaste we could obtain was palmtious. Even today, it continues to be a large part of the greenwaste we receive at the Biosolids Treatment Facility since it is so readily abundant in Hawaii."

Through innovative thinking and bold actions, the Navy in Hawaii has built an indispensable facility and a viable composting process that successfully changes an unwanted waste stream into a useful and safe product. It has eliminated the need to establish new, expensive, biosolids landfills and reduced the amount of normal and palmtious greenwaste being delivered and buried in existing area landfills.

The Navy's Biosolids Treatment Facility has saved the State of Hawaii an important natural resource, land, for future generations.