

2002 CNO/Secretary of the Navy Environmental Award

Pollution Prevention - Individual



Mr. James J. (J.J.) Hoyt
Environmental Protection Specialist
Navy Public Works Center Norfolk
Regional Environmental Group

Background

James J. (J.J.) Hoyt is a regional pollution prevention manager for the Navy Public Works Center, Norfolk. J.J., a GS-12 Environmental Protection Specialist, is a member of the Regional Environmental Program staff, providing services to Commander, Navy Region Mid-Atlantic (CNRMA) installations in Hampton Roads.

Position Description

James J. (J.J.) Hoyt has served as the only Regional Pollution Prevention (P2) manager for the Hampton Roads region. The Regional Pollution Prevention Program originally consisted of four program managers. The program currently has several vacancies, however, J.J. adroitly balances and prioritizes the workload to keep the program moving forward. J.J. is responsible for developing policy, providing support to other regional managers (such as air, water, tanks, hazardous waste, and installation restoration) and the storefronts (Norfolk, Oceana, Yorktown, and Little Creek), and identifying and solving compliance problems.

His priorities are to support the war fighters and their missions while decreasing high volume waste streams, minimizing sources of pollution, and eliminating Emergency Planning and Community Right to Know Act (EPCRA) reportable releases. J.J. has achieved these goals by working with sailors and aviators to meet mission, taxpayer and P2 needs through the installation of pollution prevention equipment. For example, he has successfully converted 14 maintenance shops to solvent free alternatives. J.J., an energetic and modest team player who faithfully supports PWC and our customers, is dedicated to the support of the military mission. As a former Navy master chief, his military experience and acumen serve the organization well.

Accomplishments

J.J.'s professional successes in this award period are too numerous to list. Some of his most significant accomplishments over the last two fiscal years include:

PPEP Committee – J.J. serves on the CNO Pollution Prevention Equipment Program (PPEP) full committee as a key player setting Navy policies and procedures. For example, he led discussions to prioritize the Navy 2003 buy list for equipment due to anticipated cuts. J.J. also worked out a way to support the IMC test bed for MA-60 helicopters out of his regional program, saving the taxpayers hundreds of thousands of dollars and delivering equipment to the aviators several years in advance of the original plan. These are prime examples of J.J.'s "Navy-wide" job performance and support of the Navy mission.

Regional P-2 Plan – J.J. has developed and refined a regional pollution prevention plan (first in the Navy) and produced shop reports documenting all the industrial processes and associated

environmental impacts for every shop in the Hampton Roads area. The Commander, Atlantic Fleet environmental staff has singled out the Hampton Roads plan and shop reports as a prototype for other regions.

Blast and Powder coating operation – J.J. has researched and located equipment and funding to make the blast and powder coating operation at the shipyard more environmental and employee friendly, while cutting costs and associated labor.

Baler installation – J.J. worked with many different departments and agencies to award a contract for the manufacture and installation of a Floor-feed cardboard and waste paper baler at Naval Amphibious Base Little Creek. This should significantly decrease the associated labor and costs of this recycling operation.

Pollution Prevention equipment issues – Each month, J.J. installs and issues over 20 pieces of pollution prevention equipment. In each instance, he ensures a payback period of less than two years, minimizes impacts on the environment, and provides support to the military mission.

Re-use vice Waste - J.J. is a master at “finding a good home” for items vice paying for disposal. He regularly works with the ships to cross-deck materials, reducing the amount of waste and significantly reducing costs for both waste disposal and material acquisition. J.J. has worked with customers to find re-use opportunities for chlorine and propane gas cylinders and has found homes for concrete and demolition debris from many projects in the region by working with external agencies to create artificial reefs.

Ranges - J.J.’s expertise and military experience has proven invaluable in the region’s efforts to solve compliance problems at various ranges. He has researched and worked with vendors to develop better targets for our war fighters and the environment – resulting in a “win-win” situation for all.

Rag Washing - J.J. has developed, tested, and worked with NAVSEA and the Type Commanders to implement rag-washing technology that utilizes microbes and a regular washing machine. This reduces the amount of waste and the associated costs of disposal and rag replenishment. Even more significant, it reduces the amount of storage space needed to store used rags during a deployment.

Paint delivery - After observing a young sailor attempting to apply touch-up paint to small areas, he invented, prototyped and ultimately produced and distributed a small container and brush unit for this purpose. Similar to a shoe polish unit, sailors can fill it with small amounts of paint and carry it throughout the ship to touch up areas conveniently and easily (less time, less mess, and less cost for disposal).

Paint Heater – While working to reduce the volume of paint waste (our largest waste stream) and the amount of paint thinner used (worker exposure, air permit issues), he invented, tested, prototyped and arranged for mass production of a paint heater that is now used DoD-wide. The paint heater heats the low-VOC paint to a higher viscosity; it doesn’t require the (illegal) addition

of thinner and paints go on better and quicker than previous methods. Again, hundreds of thousands of dollars have been saved in waste disposal, paint thinner purchases, and sailor labor with additional benefits of less exposure and environmental compliance.

Spill Prevention and Management - J.J. has served as a member of the Spill Management Team, a regional team that has trained to respond to large spills and other disasters. He has worked with microbe suppliers to develop “bugs” and “bug storage containers” that can be effectively used in various petroleum spill responses, and with the regulators and the chain of command to obtain support for the use of microbes. J.J. has also prototyped an imbiber bead technology that greatly reduces our polluted storm water discharges.

Material Substitution – Over the past two years, J.J. has focused much of his efforts on technologies to eliminate the two major waste streams – paint and solvents - and to eliminate permitted sources of air and water pollution. His successes at material substitution include:

- Replacing PD-680 Type I & II in all 160 Paint Gun Cleaners in the region with non-solvent EP-921, which has eliminated disposal of several thousand pounds of regulated waste and numerous air emission sources.
- Issuing 363 HVLP paint guns in the region, replacing all high pressure and airless units and insuring paint pot size is no more than pint quantity. This greatly reduced emissions and improved air quality in all aviation workspaces.
- Replacing solvent cleaners in all avionics repair operations in the region with six Mini-Max Steam cleaning units. Two of these units are located at the Shore Intermediate Maintenance Activity and provide support in the cleaning of electronic components from ships and submarines.
- Replacing of over 250 lead acid batteries in the region with rechargeable gel-cells; eliminating disposal of acid from associated processes.
- Introducing Natural Orange or other like non-solvent cleaning products in all 91 Aqueous Parts washers in the region.



- Installing powder coating and cure ovens at two major repair facilities, eliminating wet paint booth operations.
- Replacing aluminum oxide blast units with six Plastic Bead Media Glove Box blast units at two Aircraft Intermediate Maintenance Depot facilities, thus reducing paint and media waste disposal.

- Issuing stencil label makers at two locations to reduce aerosol can and stencil paper related waste by creating computer-generated adhesive back labels for all types of equipment. At one command, this has reduced aerosol can waste by 4500 cans annually and also has the potential to reduce reporting under installation air permits.

Air Pollution Reduction - As part of the “Solvent Free Shop Program”, J.J. has eliminated the use of solvents in 14 production repair shops in the region. J.J. also reduced air pollution by replacing exterior-vented abrasive blasting glove boxes with interior vent units and working with the air program managers to provide commands with alternatives to reduce usage of epoxy thinner, MEK, and other Clean Air Act non-compliant aerospace solvents.



Process modifications

- New vacuum sanding system design for aircraft paint removal - In May 2002, an industrial hygienist identified a concern with personnel exposure to paint dust generated in aviation hangars. The current orbital-sanders used for aircraft paint removal were the sources of this dust. J.J. partnered with Naval Air Engineering Center in Lakehurst, several aircraft squadrons, and the paint sander manufacturer to design an orbital angle sander and shroud housing for existing vacuum pickups. J.J. arranged for demonstrations and user evaluation of the equipment and then worked to gain approval to change the sanding process in the Navy’s Corrosion Control Manual. A \$60,000 Pollution Prevention Equipment Program (PPEP) contract was awarded for the manufacture and delivery of 12 kits. The kits were delivered in November 2002.
- Non-point source storm water management - Norfolk Naval Station has over 50 Helicopter tie-down spots located on a paved concrete apron that lies adjacent to Willoughby Bay. During heavy rain events, the oil-soaked concrete can become a source of contamination to the Bay. J.J. identified an underutilized piece of equipment (a glycol recovery vehicle) and brokered a partnership usage agreement between different commands to better utilize the equipment and solve the storm water concerns. The glycol recovery vehicle now serves a dual purpose. In winter months, it is employed as needed to recover antifreeze if an aircraft requires deicing. In warmer months, the unit is utilized as a scrubber for cleaning oil and grease from tie down spots. This allows full utilization of an \$80,000 asset. The self-propelled scrub, vacuum vehicle cleans a path 50 inches wide and takes 30 minutes to clean and vacuum each tie down spot. The cleaning solution, a mixture of organic compounds and enzymes, is automatically delivered by the scrubber during the cleaning operation and has proven effective as a degreaser and cleaning agent.

Improved Material Management – J.J. works closely with The Fleet and Industrial Supply Center Norfolk (FISC) and other supply commands to refine material management procedures to reduce costs and environmental impacts. FISC supplies hazardous materials to work centers throughout the Region utilizing the Consolidated Hazardous Material Reutilization and Inventory Management Program (CHRIMP). One aspect of CHRIMP involves turn-in of unused materials for reuse by others. J.J. has worked hand-in-hand with FISC managers to improve the reuse program and get the word out to the Fleet. J.J. also works closely with regional and base safety representatives to continuously refine the Authorized Use List (AUL) and validate new hazardous materials for use in various shops and work centers. J.J. is constantly researching and recommending more environmentally friendly alternatives that still meet the military mission. J.J. also works closely with Navy Public Works Center Hazardous Waste Group to develop better procedures to recover and reuse unopened hazardous materials turned in for disposal by ship and shore activities.

Compliance with EO 13123, Fleet and Transportation Efficiency, and 13149, Efficient Energy Management - J.J. has worked for the past two years with the Virginia/DOD Pollution Prevention Partnership to share information on DOD's efforts to comply with these Executive Orders. J.J. has also worked with our regional water managers to implement various water conservation initiatives. In another instance, J.J. worked with MWR managers and design engineers to incorporate efficient energy management and water conservation into a gym remodeling project.

Compliance with Executive Order (EO) 13148, Leadership in Environmental Management - J.J. is constantly striving to eliminate the release of EPCRA reportable chemicals. He eliminated the last reported chemical, ethylene glycol, by providing recycling units to users. New units that will remove particulates and maintain low fluid acid levels will be delivered to six customers in January 2003. J.J. also assisted in the development of an automated EPCRA reporting system that reduces the time required to prepare reports by 55%. With respect to his efforts in support of Section 201 of EO 13148 (environmental management), J.J. developed standard pollution prevention checklists and trained storefront staffs to use these questions as a tool to identify and resolve compliance deficiencies in advance of regulatory inspections.

Recycling – Prior to his position as a regional pollution prevention manager, J.J. served as the region's recycling manager and J.J. continues to work closely with the recycling community. J.J. recently brokered a deal for Naval Weapon Station Yorktown where over 16,000 tons of concrete generated from the demolition of a pier was diverted from landfill disposal. The Virginia Fisheries and Oyster Heritage Program used the concrete for three oyster sanctuary reefs, a key component in restoring a viable oyster population in the Chesapeake Bay.

Affirmative Procurement – Working through the PPEP Program, J.J. has procured several pieces of equipment to reduce waste generation.

- Dry Dock Blast Media - A current dry dock operation uses 360 tons of blast media per year. J.J. has worked closely with the dry dock to convert to a fully enclosed, high-pressure water jet blast vacuum system. This will eliminate all blast media and reduce

disposal of paint and non-skid. Return on investment for this process change is estimated to be four months.

- Backpack vacuum system – J.J. worked with ship personnel and private manufacturers to develop a backpack vacuum system used primarily for paint removal in high places or over water. The system has three attachments: a needle gun for thick paint removal, a 4” sander, and a standard vacuum head. The system pulls paint chips and debris into the vacuum rather than letting them fall on to the deck or into the water. The systems are widely used in port by ships and submarines.
- Titan Abrasive Glove Box Blast Units – J.J. is working with the regional shops and work centers to install blast boxes throughout the region. The units are used for component de-painting and have replaced unconfined sanding or vented units that were permitted air sources. These are fully contained systems with air filtration and media recovery.

Education, Outreach, and Partnering – As described throughout this award package, J.J. shares his inventions, lessons learned and success stories across DOD and with our local communities. J.J. has provided technical assistance to the Elizabeth River Project, a non-profit organization chartered to help restore the Elizabeth River, a tributary to the Chesapeake Bay. His efforts resulted in Naval Station Norfolk achieving the top level in the River Star Program for P2 initiatives and mentoring efforts by industries in the Elizabeth River watershed. J.J. is always called upon to host environmental tours for local school children, visiting dignitaries from foreign Navies, and Congressmen and members of their staffs. In January 2002, he shared P2 technologies and success stories with several members of the Latvian Defense Department.

- Team Submarine Homeport Environmental Focus Group – J.J. is a vital member of the Team Submarine Homeport Environmental Focus Group. J.J. recently hosted this national group in Norfolk and facilitated several tours and technology exchanges. One success story from this effort is the successful reduction of the amount of required hazardous material to 14 line items compared to over 300 required on the LOS ANGELES class submarine.
- Virginia-DoD P2 Partnership – J.J. is an active member of this team and of many of its subcommittees. He is often called upon to host tours of our P2 initiatives and is always willing to provide lessons learned and success stories to all members of the partnership. Virginia Department of Environmental Quality (DEQ) regulators often refer folks to J.J. for potential solutions to their compliance problems. Last year, they asked him to visit several locations in Virginia to help them improve their compliance posture through implementation of P2 initiatives.
- Chesapeake Bay Program’s Businesses for the Bay – J.J. fully supports the EPA Chesapeake Bay Program’s Businesses for the Bay (B4B). J.J. has helped them to establish, implement, and meet annual P2 goals, provided P2 and hazardous waste minimization training, and served as a mentor to provide technical assistance to other businesses in the region.
- Shop and work center training - For shop and work center POCs, training on P2 technologies directly pertinent to the wide array of processes conducted in the region is a formidable challenge. To address this challenge, J.J. has initiated and conducted training seminars on

common Regional processes and P2 technologies and equipment. These include HVLP spray gun painting and cleaning, operation and maintenance of aqueous-based parts washers; and operation and maintenance of “Pressure Island” parts washers. Concurrently, an aggressive training program is in place to inform customer commands of Best Management Practices and approved technologies for painting and paint removal from ships, submarines, and aircraft.

Reductions Achieved – J.J. is a champion of continuous reduction of toxic chemical releases. He was instrumental in CNRMA far exceeding the President’s goal of a 50% reduction in toxic chemical releases. From 1994 to 2001, a 100% reduction of releases and offsite transfers of toxic chemicals was achieved and our Right-to-Know reporting burden reduced from 8 chemicals in 1994 to zero chemicals in 2001. J.J. has also worked to ensure the reduction of generation of other types of waste. His efforts at one installation, Naval Station Norfolk, saves the Navy nearly \$3M million dollars a year. Overall, the P2 Program has decreased the demand for hazardous materials, reduced the volumes of waste requiring disposal, and reduced the Navy’s external liability. With outstanding support from Region and tenant commands, J.J. works hard to implement new initiatives and to identify new opportunities. J.J. continues to seek new pollution prevention opportunities in his quest to minimize our hazardous waste disposal and toxic chemical releases.

Awards and Service



CAPT Jim Hollrith, CO PWC Norfolk, presents Mr. Hoyt with the Employee of the Year Award.

In October 2002, J.J. was honored as the PWC Employee of the Year for 2002. J.J. has been a runner-up for the same award in previous years. J.J. was a core member of the FY1999 CINCLANTFLT, Chief of Naval Operations, and Secretary of the Navy award-winning pollution prevention team. He has also been a primary team player on community awards received by the Navy such as the Elizabeth River Project River Star designation and Hampton Roads Sanitation District P2 awards.

J.J. has always been an outstanding performer, continually receiving on the spot and performance monetary awards and letters of appreciation. The pollution prevention ideas that he has developed and implemented have saved the government literally millions of dollars. Except as a

taxpayer, J.J. has not monetarily benefited from these savings via beneficial suggestions and other programs. His work is consistently outstanding and his efforts are recognized across the Fleets.

A team player, J.J. serves effectively and efficiently on many teams, including: DoD, Navy, Fleet and Regional Pollution Prevention Teams; Naval Amphibious Base Little Creek Storefront Compliance Team; Commander, Atlantic Fleet P2 Management Team; Naval Sea Systems Command and Submarine Forces Atlantic Task Forces, and Chief of Naval Operations PPEP Team. His work ethic and personal initiative and drive are unmatched. He brings fresh ideas and enthusiasm to his team members in his quest to find better, cheaper, faster, and safer ways to exceed customer expectations.

J.J. has attended, presented and taught at numerous professional development and technical seminars over the past two years. Most recently, he spoke at the DoD Pollution Prevention Conference in San Antonio, Texas and facilitated numerous technical sessions. J.J. is constantly on the move, learning the customers' processes so he can "invent a better mousetrap" that reduces cost and pollution. On average, J.J. is developing, inventing, and researching at least 20 process and equipment improvements per month. Not only is J.J. always abreast of the latest developments and publications, he is often the initiator and inventor of the new technology. Most recently, J.J. highlighted his pollution prevention successes to more than 40 dignitaries and members of the Chesapeake Bay Commission.

While finding ways to minimize and save, J.J. is also a very active and giving individual in our community. J.J. extends his pollution prevention efforts and successes to work with other agencies and groups, such as the Elizabeth River Program and Hampton Roads Sanitation District. Also, as a long-time supporter of ODU's Home Stay Program for Exchange Students, J.J. and his wife have welcomed international students into their home during the summer. J.J. and his wife also volunteer at the Battered Women's Shelter in Norfolk, VA. Does J.J. ever take time for himself? You bet. His hobbies include bowling and woodcarving.