

**Fiscal Year 2010 Office of the Under Secretary of Defense Environmental Awards
Sustainability – Team
Defense Logistics Agency Logistics Operations
Supply Chain Sustainability and Hazardous Material Minimization Team**

Introduction

The Defense Logistics Agency (DLA) Supply Chain Sustainability Program offers the DLA supply chain customers environmentally responsible products and services that meet their requirements and support sustainability. Sustainability can be defined as a means to create and maintain conditions, under which humans and nature can exist in productive harmony. Sustainability permits fulfilling the social, economic, and other requirements for present and future generations of Americans. The Department of Defense's (DoD's) vision of sustainability focuses on maintaining the ability to operate into the future without decline – either in the mission or in the natural and manufactured systems that support it.

The DLA Hazardous Materials (HAZMIN) Program provides management policy and procedures for the receipt, storage, handling, and control of hazardous materials and hazardous wastes, including radioactive items. The Program mission is to revise standardization and procurement documents and undertake studies to minimize the supply of hazardous materials, where feasible.

DLA Logistics Operations and supply chains also manage specific programs and services to enhance sustainability for customers across DoD. These include Hazardous Materials Information Resource System (HMIRS), Hazardous Technical Information Services (HTIS), Ozone Depleting Substance (ODS) Reserve, DoD Hazardous Material (HAZMAT) Hotline Operation, and Shelf Life Extension Program.

DLA's Supply Chain Sustainability and Hazardous Materials Minimization (HAZMIN) Team was established in November 2008. The Team was initiated by a group of dedicated DLA Logistics Operations employees who had a vision to consolidate the DLA supply chain initiatives and functions to assist the military services' efforts to add sustainable (green) products (e.g., bio based, energy efficient, water conserving) into the DoD's catalog. It was also established to assist DLA supply chains in addressing emerging contaminants, and the European Union Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Program.

Four DLA primary level field activities (PLFAs) along with DLA Logistics Operations Headquarters (HQ) had representatives on the Team. The PLFAs purchase and manage a variety of supplies in eight DoD supply chains. Prior to the Team's initiation, each supply chain independently working with the military services on sustainable (green) products resulting in duplication of efforts and ideas along with inefficient use of funding resources. The Team integrated representatives from the Military services into their meetings. With this Team consolidation, ideas and information now flows freely between DLA, the DoD supply chains, and the military services.

Background

DLA's PLFA and DLA HQ Logistics Operations have representatives on the Team. The DLA individuals that participate in the Team are listed below by organization:

DLA Logistics Operations
Michael Pipan
James L. Reed
Jean Wiley
Jacquelyn Blake
Miriam Alonso

DLA Aviation
Edilia Correa
Calvin Lee
Milton Robbins
Frank Dipofi

DLA Energy
Margie Bleau

DLA Logistics Information Services
Richard Hansen

DLA Land and Maritime
Bernard Miesse
Mohammed Cisse
Alan Drais
Eric Steensen
Keith Gossett

DLA Troop Support
Richard Jankowski
Anthony Armentani
Anthony Pizzo
Gerard Corcoran
Joseph Nilsen
John Woloszyn
Larry Bruno
Greta DiGugliemo
Danielle Holland

Team Members' Positions

To address the multiple responsibilities and duties required to achieve the Team's goals, the members hold various titles including Logisticians, Product Specialist, Business Process Analysts, Chemists, Engineers, Chiefs (i.e., Division, Branch, Section), Acquisition Specialist, Standardization Specialist, Product Specialist, Program Managers, and Technical and Quality Analysts. Each Team member fills a unique role. The Team encompasses the expertise needed to assist DLA and DoD's growing effort to become green. These individuals' duties include understanding requirements, evaluating potential alternatives, writing specifications, negotiating contracts, and ensuring specification and contract compliance.

Awards and Services

In April 2009, DLA Director Navy Vice Adm. Alan Thompson recognized the DLA Land or Maritime Supply Chain located in Columbus, Ohio, with the DLA Green Product and Services Award for their work in developing alternatives to Cadmium Plated Electrical Connectors.

In April 2010, two field activity teams tied for the first place for the DLA Green Products and Services Award. The Medical Supply Chain located in Philadelphia, Pennsylvania, was awarded the DLA Award for outstanding work by the Pharmaceutical Prime Vendor Division in initiating a Reverse Distribution Program. Because of DLA Energy's accomplishments in supporting DOD's emerging renewable fuel requirements, DLA Director Navy Vice Adm. Alan Thompson presented the Biofuel Support Team with the Award.

Team's Accomplishments

DLA Logistics Operations invited the military services and Office of the Secretary of Defense (OSD) to attend meetings as a forum to discuss problems and opportunities of mutual

interest. Specifically, the military services joined DLA in identifying and prioritizing problem areas requiring resolution and opportunities where we could work together to establish future projects to resolve sustainability challenges. Addressing sustainability opportunities early in the life-cycle management process became the most significant process needing to be resolved. This program management partnership is designed to promote a cohesive DoD Sustainability approach to support mission requirements. Since the Team meets three times a year, the stakeholders work closely to bring additional sustainable products into the DLA supply system and reduce the DoD environmental footprint. The joint meetings provide the additional benefit of immediate new technology transfer, product testing successes and failures, and ongoing problem and challenge resolution. In addition, DLA, OSD, and the military services openly exchange ideas during the periods intervening between meetings. During the achievement period, examples of the major projects accomplished by the DLA Supply Chain Sustainability and HAZMIN Team for the warfighter are provided below. Other projects are listed in the table at the end of the nomination.

DLA Aviation worked with Naval Air Systems Command (NAVAIR) to identify and qualify alternatives to high volatile organic compound (VOC) and hazardous air pollutant (HAP) aircraft cleaners, whose use contributes to ground-level ozone or photochemical smog formation that harms humans and damages vegetation. Installations using high VOCs and HAP cleaners in localities with stringent air quality rules may suffer adverse impacts on their ability to perform their mission. DLA Aviation and NAVAIR partnered to perform successful tri-service (i.e., Army, Navy, Air Force) qualifying tests on low-VOC, non-HAP aircraft cleaning replacements. Based on the test, DLA Aviation was able to establish four new national stock numbers (NSNs). These aircraft cleaner NSNs fall under specification MIL-PRF-85570 Type I (low solvent aerosol foam and pre-moistened wipes) and Type II (solvent-free). The new easy to use cleaners eliminated numerous safety, environmental, and logistical challenges because they are less toxic and pre-mixed. Sales of these items have so far amounted to an estimated \$58,000, with the potential for greater savings as the items become more accepted.

In another example, DLA Aviation recently completed an effort to identify general chemical cleaning and degreasing aircraft and support equipment alternatives that do not exceed VOC and HAP restrictions and meet the military maintenance manuals, as authorized by MIL-PRF-680 and P-D-680. DLA Aviation collaborated with NAVAIR, Materials Engineering Division at Patuxent River, Maryland, to develop a specification, perform cleaning performance, determine material compatibility, validate laboratory testing, and perform field testing on authentic parts. Based on the technical results and positive feedback from military users, DLA was able to assign three new NSNs authorized for use in the new MIL-PRF-32295 Type I specification. Given the demand of the items that the new NSNs will replace, projected sales of the environmentally preferable solvent products could be as much \$700K annually.

DLA Energy is helping to expand the use of alternative fuel sources for America's warfighters by embracing the challenge to reduce military dependence on foreign oil and increase use of biofuels. DLA Energy is in the early stages of preparing to introduce these fuels into the military supply chain. Efforts are focused on working in partnership with the military services to get engines certified according to the military services' test and certification protocol. Also, DLA Energy is focused on tailoring contracts for renewable fuel purchase, including the renewable jet fuel requirement for the Air Force (JP-8) and the Navy (JP-5).

In addition, DLA Energy aligned a research and development project for the Navy requirement to develop the process and help define the specification for algae-derived hydro-treated renewable F-76 fuel as potential renewable marine diesel for Navy ships. The pre-award work for biofuel procurement is a greater challenge for the quality-assurance representatives more than for a normal procurement. The representatives need to learn about the requirement before they go out for procurement. Also, there is the challenge of obtaining the feed stock because DLA Energy must ensure there is enough to sustain the requirement. Finally, the quantities of fuel are very small and the production is so low so the cost savings are not yet evident. The hope is that the cost will reduce once it is a full-blown program. The Navy was able to conduct demonstrations that get them closer to achieving their energy goals because of the DLA Energy acquisition support.

DLA Land and Maritime developed three new alternative cadmium connector finishes (i.e., zinc nickel, nickel fluorocarbon polymer, electrodeposited aluminum) in lieu of traditional finishes that rely on the hazardous chemical cadmium. By providing a comprehensive set of cadmium alternative parts, it is conservatively estimated that the introduction of at least 200 nonstandard connectors is avoided. Using the DoD Parts Management Cost Avoidance of \$20,904 for each nonstandard electrical connector, this effort is estimated to save at least \$4.18 million annually and over the next 5 years \$209 million.

DLA Troop Support–Clothing & Textile is working with Army Natick Soldier Systems Center and Navy Naval Air Systems Command (NAVAIR) to develop a bio-degradable parachute for sonobuoys, which are a sonar canister system ejected from aircraft or ships that deploy as a buoy upon water impact. The current nylon parachutes cause entanglement of and ingestion by marine mammals and sea turtles, as well as damaging or smothering benthic resources such as coral and essential fish habitat. The Undersea Warfare Training Range (USWTR) Environmental Impact Statement estimated that 9,000 sonobuoys are annually deployed by helicopters and maritime patrol aircraft operating at training ranges off the coast of Jacksonville, Florida. During a 2009 meeting with the Navy, Ocean Conservancy, Defenders of Wildlife, and Southeast Environmental Law Center representatives agreed that sonobuoy parachutes that rapidly degrade in the marine environment would ameliorate concerns about ocean debris at the USWTR site.

DLA Troop Support–Medical demonstrated exemplary environmental stewardship and streamlined pharmaceutical disposal for customers when it awarded a FY 2008 Pharmaceutical Prime Vendor Program contract to Reverse Distribution. Improper disposal of expired pharmaceutical items often results in soil or water contamination if the items are sent to a landfill or disposed of in sewage systems. The pharmaceutical program uses reverse distribution to allow medical treatment facilities to return expired pharmaceutical items to the contractor for proper disposal in a high temperature incinerator. Customers receive from the manufacturer monetary credit, which can be applied toward future purchases. The program provided to customers approximately \$5 million in credits in each of the past three fiscal years (FY2008, FY2009 and FY2010).

DLA Troop Support–Subsistence continues to purchase 50 percent bio-based cutlery, works to incorporate 100 percent bio-based cutlery into the supply chain, and carries on to identify other DoD supply chain items for conversion to 100 percent bio-based content.

Subsistence purchased for worldwide use another \$16 million of the 50 percent bio-based content cutlery from LC Industries, the long term National Institutes for the Blind (NIB) supplier to the DoD and GSA. In accordance with the specification, U.S. Army Natick just finished evaluation and testing of the 100 percent bio-based prototype cutlery, which Subsistence expects to incorporate into the next negotiated contract sometime in late FY 11 or early FY 12. The White House cafeteria is already using the 100 percent bio-based cutlery. The other Subsistence-identified items for conversion to 100 percent bio-based content include the infamous J-spoon or Meal, Ready to Eat (MRE) plastic spoon, Unitized Group Rations (UGR) plastic serving utensils, UGR heater tray, and Arctic Meal Module clamshell. These items are presently under evaluation by LC Industries and US Army Natick, but are moving closer to incorporation into the DoD catalog.

Judging Criteria

Program Management. DLA Supply Chain Sustainability and HAZMIN Team core members wish to protect readiness, people and the environment while assisting DoD in managing chemical and material risk. DLA's Logistics Operations Directorate Management recognized that internal, as well as external, communication was the key missing ingredient preventing the Team from prospering and becoming a viable asset. Getting the word out concerning DLA's efforts consisted of providing presentations and exhibits at various conferences and events such as the 2010 Coalition for Government Procurement; the 2009 and 2010 National Defense Industrial Association Environment, Energy Security, and Sustainability (E2S2) Symposium and Exhibition; the 2010 ASETSDefense DoD Vehicle Workshop; the 2009 and 2010 National Defense Center for Energy and Environment (NDCEE) Program Review; and the 2009 and 2010 DLA Aviation and Troop Support's Green Industry Days.

Technical Merit. The DLA Supply Chain Sustainability and HAZMIN Team coordinates with experts from academia, industry, and the military services to develop strategies to fulfill DoD environmental, energy, health, and sustainability requirements. The development of Low VOC, HAP-Free, MIL-PRF-32295, Type I solvent alternatives is one example of this collaboration.

Orientation to Mission. DLA's mission in warfighter support is to provide the best value integrated logistics solutions to America's Armed forces and other designated customers in peace and in war, around the clock, around the world. DLA's Supply Chain Sustainability and HAZMIN Team is able to support the mission and to bridge the gap between environmental responsibility and logistics readiness. The Team supports the Deputy Under Secretary of Defense Installations & Environment, Chemical and Material Risk Management (CMRM) Directorate as well as the Assistant Secretary of Defense for Logistics and Materiel Readiness, Supply Chain Integration (SCI) Directorate, providing guidance on issues such as REACH. In the area of REACH, DLA supported the military services by using HMIRS to determine what Substances of Very High Concern (SVHC) to the European Chemicals Agency (ECHA) could potentially disruption the DoD supply chain in Europe. ECHA's restriction of chemicals or alteration of chemical formulas could adversely impact military operations. DLA is assisting CMRM to implement its REACH Strategic Plan, which is designed to protect military readiness by minimizing negative potential impacts and unintended consequences of REACH.

Transferability. DLA’s Supply Chain Sustainability and HAZMIN Team’s methods can be used in any organization. Communication, team work and adaptability to change are the key ingredients that help make our team successful.

The Team participated in the Army Sustainable Painting Operations for the Total Army (SPOTA) meetings in 2009 and 2010 where the development of the Low VOC, HAP-Free, MIL-PRF-32295, Type I solvent alternatives were discussed. This discussion prevented the Army from duplicating what the Navy had already done, saving time and funding resources.

Stakeholder Interaction. DLA leaders stress the need for synchronization with the military services and OSD. DLA’s Supply Chain Sustainability and HAZMIN Team understands DLA’s position as America’s combat logistics support agency. The Team collaborates with the experts from academia, industry, and the military services to assist DoD in its quest to become a better steward of the environment, and to addresses environmental, health, and safety concerns for materials that are either not currently regulated or that may be subject to new regulatory standards and guidance. Assisting DoD with the lifecycle management of weapons systems and DoD Supply Catalog Items from cradle to grave is the priority of the Team.

| PLFA (Supply Chain) | Additional Example Projects |
|--|--|
| DLA Aviation, Richmond, Virginia Aviation Weapon Systems Support <ul style="list-style-type: none"> • engine components • air frames • flight safety equipment • maps • environmental products | <ul style="list-style-type: none"> ▪ Chrome Free Pretreatment Applicator Pen (MIL-DTL-81706 Type II) ▪ Electrical Contact Cleaner (MIL-PRF-29608 Class L CPC) ▪ Cold Spray/Kinetic Metallization Development for Military Aerospace Application ▪ Micro-Fiber Cloths for Non-Chemical Cleaning of Canopies and Optics ▪ Environmentally Compliant Chemical Paint Strippers ▪ Commercial, off-the-shelf, Environmentally Compliant Non-Structural Adhesives ▪ Non-Aqueous Low-Volatile Organic Compounds and Hazardous Air Pollutant-Free Cleaner (MIL-PRF-32295 Type II) ▪ Bio-Based Hydraulic Lubricants ▪ Aircraft Waterless Cleaner Evaluation |
| DLA Energy, Fort Belvoir, Virginia Energy <ul style="list-style-type: none"> • bulk petroleum • aviation fuels • natural gas • coal • electrical power | <ul style="list-style-type: none"> ▪ Bio-diesel fuels derived from vegetable oils ▪ Ethanol and gasoline blend (85% ethanol) ▪ Multiple feedstock bio-waste (municipal waste, yard clippings, wood) to energy project ▪ Expanding Utility Privatization Support (Long Term Contract Administration) ▪ Pursuing long-term renewable installation level power projects to reduce green house gas emissions |

| PLFA (Supply Chain) | Additional Example Projects |
|---|--|
| <p>DLA Land and Maritime, Columbus, Ohio Weapon System Support</p> <ul style="list-style-type: none"> ▪ Land (vehicle [wheeled, tracked, heavy] parts & maintenance kits; power transmission, engine & suspension components; tires; batteries; small arms parts) ▪ Maritime (valves, fluid handling, electrical, electronics, motors, packing/gaskets) | <ul style="list-style-type: none"> ▪ Non- Cadmium Plated Connectors |
| <p>DLA Troop Support, Philadelphia, Pennsylvania Construction and Equipment (facilities maintenance, equipment, wood products, safety and rescue equipment)</p> | <ul style="list-style-type: none"> ▪ Energy efficient lighting ▪ Energy efficient HVAC ▪ Energy saving plumbing ▪ Asbestos elimination (gaskets and seals) |
| <p>DLA Troop Support, Philadelphia, Pennsylvania Medical (pharmaceutical, medical/surgical equipment)</p> | <ul style="list-style-type: none"> ▪ Elimination of X-ray film, processing machine, fixer, developer, wash water and silver recovery using digital imaging network picture archiving and communications systems ▪ Ensuring trade in and proper disposal old x-ray systems and tubes, and circuit boards ▪ Conversion of patient care items (wash basins, urinals, emesis basins) from plastic to wax coated recycled newsprint to eliminates plastic items use and disposal |
| <p>DLA Troop Support, Philadelphia, Pennsylvania Subsistence (food service, produce, operational rations)</p> | <ul style="list-style-type: none"> ▪ Conversion from 50/50 to 100% bio-based cutlery with contractor on ▪ Conversion of meals ready to eat spoon and Operational Unitized Group Ration utensils from plastic to 100% bio-based with contractor ▪ Arctic Meal Module clamshell conversion from polystyrene to bio-based/bio-degradable item |