Energy Source

April 2010

Defense Energy Support Center

DESC Americas fuels two continents

Who does what in DESC?

2010 Worldwide Energy Conference

From the Commander

Our mission, support and expectations continue to grow

DESC Commander Rear Adm. Kurt Kunkel in Kuwait

While we may face new challenges along the way, we have the team to be successful.

In my first few months as the Defense Energy Support Center commander, I have already seen the incredible commitment and undertakings this organization is capable of. It truly is my honor to assume command of an organization that provides the foundation of our warfighter's and armed forces' capabilities, which is the energy solutions needed to ensure global stability, mission sustainment and national defenses.

These past few months have included some significant support accomplishments and steps toward new energy solutions for our future. Following the devastating 7.0 magnitude earthquake that shook southern Haiti on Jan. 12, DESC went into action. Immediately we had quality assurance representatives on the ground, conducting critical infrastructure assessments and reporting port and terminal damages. These QARs' undertakings were critical to overall relief efforts and the first of many support actions DESC participated in with Operation Unified Response. Our energy support actions fueled the relief efforts, increased infrastructure safety and capabilities, and played an invaluable role in the humanitarian efforts. Relief actions, such as the ones our DESC teams supported, show our organization's continued commitment not only to our armed forces and nation but to worldwide quality of life.

Additionally, in March, DESC took another amazing step forward in our interagency and joint efforts in the area of alternative fuels. On Mar. 19, we signed a Strategic Alliance for Alternative Aviation Fuels with the Air Transport Association of America, Inc., a premier association representing the principal U.S. airlines worldwide. This strategic alliance brings together the shared energy goals of the Department of Defense and commercial aviation industry to advance the development and deployment of commercially viable, environmentally friendly, alternative aviation fuels. It is a strategic forum designed to spur market growth and bring us closer in our unified support of alternative fuels as an energy source that promotes energy security and safeguards the health of our environment. The potential impact of this strategic alliance is significant to worldwide aviation.

Reaching our DoD energy goals in alternative fuels and renewable energy requires a team and collaborative effort, to include our interagencies and commercial industry. This strategic alliance creates one of those partnerships.

My initial experiences as the new DESC commander have not only humbled me, on realizing the vast reach, importance and capabilities our mission has, but have also raised my expectations. With our skilled team, advancing technology and continuing collaborating efforts, I see our mission's reach and invaluable support continuing to grow to meet the warfighter's needs, our armed forces' energy goals, our nation's energy security and our environment's heath sustainment. While we may face new challenges along the way, we have the team to be successful.

Kurt Kunkel

DESC: Providing energy solutions worldwide

Energy Source

On the cover:

U.S. Navy Quartermaster Seaman Britney Benigno signals the bridge of the Nimitz-class aircraft carrier USS John C. Stennis as it makes its approach alongside the fleet replenishment oiler USNS Henry J. Kaiser for fuel replenishment at sea Jan. 26. The Defense Energy Support Center supplies fuels for U.S. Navy missions worldwide. (DoD photo by Mass Communication Specialist 3rd Class Josue L. Escobosa)

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2010 Worldwide Energy Conference

DESC brings energy solutions to Worldwide Energy Conference

By DESC Public Affairs

Energy leaders and industry professionals are bringing energy solutions to the forefront of a new collaborative effort among industry, military and federal agencies during the 2010 Worldwide Energy Conference.

Sponsored by the Defense Energy Support Center, a field activity for the Defense Logistics Agency, the conference runs May 10-12 at the Gaylord National Hotel and Conference Center in National Harbor, Md.

The event supports the Department of Defense's continuing efforts to provide effective fuel and energy solutions worldwide, and provides leading energy experts, as well as DESC and military services, an opportunity to focus on energy security while gaining insight to where energy solution initiatives are heading.

More importantly, the conference helps customers and potential clients define how their businesses may be able to expand their supporting roles in the future, said DESC Commander Navy Rear Adm. Kurt Kunkel.

"It is also an opportunity for our customers, and potential customers, to be introduced or advance their awareness on the ongoing initiatives in the DoD fuel and energy support venues, discuss ongoing technology solutions, and share feedback on energy use and efficiency in our collaborative effort to support the warfighter," Kunkel said.

More than 110 exhibitors and 1,700 attendees participated in the 2008 Worldwide Energy Conference, and more are expected this year.

"The WWEC provides a focus on DESC's efforts and initiatives in supporting the current Class III and energy needs of the warfighter, as well as associated industry trends and developments supporting those areas. However, it will also provide an ideal forum to highlight our increasing focus on alternative fuels and renewable energy in support of the military services' energy program requirements," DESC Energy Plans and Programs Director Frank Pane said. "AFRE has rightfully received considerable interest within the Defense Department, and the WWEC will provide an opportunity to highlight how DESC is positioned and evolving to support the expanding AFRE mission in support of the warfighter and other customers."

Pane noted that in addition to the additional breakout sessions on AFRE, the conference also consists of a panel discussion with senior leadership addressing AFRE initiatives within the military services, Office of the Secretary of Defense and the Department of Energy. Questions and open discussion will follow the panel presentations and updates.

The conference, which was moved to a new location this year to support the expanded trade show, provides more than 40 breakout sessions covering program areas such as approaches to energy, environmental compliance, DoD fuel facility actions, executive agency programs, research and development, EBS energy convergence and organization regional updates.

"The WWEC also offers a 'Doing Business with DESC' session on the first day," said Col. Frank Rechner, DESC director of Operations. "This overview is given by senior DESC leadership and affords attendees a chance to get a detailed understanding of the various unit structures within DESC and our abilities and capabilities to support the operational, research and customer support roles."

Registration for the 2010 WWEC is open on the DESC Web site at www.desc.dla.mil/2010WWEC. Attendees should register early to reserve seats for specific breakout sessions and the panel discussion.

Media interested in attending the conference should contact DESC public affairs at (703) 767-5042 or via e-mail at DESCpublicaffairs@dla.mil.

WWW.DESC.DLA.MIL/2010WWEC

Bulk Petroleum Fuels improves largest energy supply chain

By Bruce Blank and Joy Mullori
Bulk Petroleum Fuels

Bulk petroleum is often delivered by tanker ships like this or by pipeline.

Defense Energy Support Center's Bulk Petroleum Fuels business unit improves the management and oversight of DESC's largest energy supply chain, providing defense fuel support to the warfighter. Bulk Petroleum Fuels, which procured $13.6 billion of bulk petroleum in fiscal 2008, accomplishes this mission through a variety of services.

DESC-B, as it is known, is located at Fort Belvoir, Va., administers all bulk fuels contracts and provides worldwide acquisition support for fuel-related services such as contractor-operated defense fuel support points, alongside-aircraft fuel delivery, lab testing, and environmental compliance, assessment and remediation.

The unit is also the single source for drafting, negotiating, concluding and amending international fuel agreements with foreign governments supporting worldwide Defense Department operations. The DESC International Agreements Division manages 40 agreements with 23 different nations or treaty organizations.

The unit procures large quantities of refined fuel meeting military specifications. In fact, DESC-B procured nearly 72 percent of the $19 billion in contracts awarded by DESC in fiscal 2008. Other purchasing programs include lube oils, jet propulsion thermally stable, fuel system icing inhibitor, strategic petroleum reserve and foreign military sales. A growing program is aviation synthetic fuels.

The fuel storage management mission, now part of DESC-B, had 157 government-owned contractor-operated and 39 contractor-owned contractor-operated sites under contract worldwide storing government-owned fuel at the end of fiscal 2008.

Bulk Petroleum Fuels provides a centralized procurement process by leveraging expertise organized into the following core competencies: Domestic Bulk Fuels, Overseas Bulk Fuels, Domestic Storage and Services, Overseas Storage and Services and International Agreements.

The Bulk Petroleum Fuels buying group makes all of these procurements with a staff of 76, resulting in operational costs of just 1.7 percent, which further maximizes stewardship of the taxpayer's dollar.

Domestic Bulk Fuels Division is broken out into three branches each headed by a warranted contracting officer. The branches are responsible for recurring program buys — Inland East Gulf, Rocky Mountain West, Outside the Continental U.S. Fuel System Icing Inhibitor, CONUS FSII, Foreign Military Sales, and various synthetic fuel purchases.

Overseas Bulk Fuels Division comprises two branches each headed by a warranted contracting officer. The branches are responsible for recurring program buys—Atlantic/Europe/Med, Western Pacific, overseas contingencies, and consulting services.

Domestic Storage and Services Division is broken out into two branches, each headed by a warranted contracting officer. The BXA branch is responsible for domestic government-owned contractor-operated facilities storage, lab testing and environmental services. And the BXB branch is responsible for alongside aircraft refueling, optimization and miscellaneous domestic large purchases.

Overseas Storage and Services Division comprises two branches, each headed by a warranted contracting officer. The branches are responsible for worldwide contractor-owned contractor-operated storage, overseas government-owned contractor-operated storage, optimization, and overseas lab testing and inspection services.

International Agreements Division provides worldwide logistical support through international agreements with foreign governments in accordance with DoD Directive 4140.25, Chapter 17, DoD Management Policy for Energy Commodities and Related Services and applicable delegations. DESC is authorized to negotiate and conclude international agreements for energy commodities, additives, laboratory testing, facilities to include storage and pipelines, related services, fuel exchanges, replacements-in-kind and direct bills.

For more information on Bulk Petroleum Fuels, visit the Web site at www.desc.dla.mil.

Three offices help shape

By Frank Pane and Tom Ashman
Energy Plans and Programs Directorate

The new Defense Energy Support Center Energy Plans and Programs Directorate oversees three offices that are helping to shape the future of fuels: Executive Agent, Research and Development and Business Development. DESC-S, as the directorate is called, was created in October 2009 to establish a synergy between these functions.

The Executive Agent Office executes the spectrum of functions associated with DESC's Class III Bulk Petroleum Executive Agent responsibilities identified in DoD Directive 5101.8, to include providing primary support to the mandated Component Steering Group. DESC-X, as the office is called, plays a DESC-wide role in developing and implementing the DoD Executive Agent Program.

The R&D office manages DESC's energy research and development program, ensuring assigned projects within the organization and initiatives are successfully planned, implemented, managed and completed. The R&D team evaluates, provides information and establishes and develops new energy initiatives to support the integrated supply chain and agency policy.

The Business Development office develops and implements a comprehensive marketing strategy and communications plan for alternative fuels and renewable energy. The team also develops and implements policies and procedures specific to AFRE and emerging mission and supply chain execution. In addition, it ensures AFRE requirements are integrated for execution within each of DESC's business units.

Regarding the Executive Agent issues, the Office of the Secretary of Defense has challenged DESC to "… be responsible for all Bulk Petroleum supply management from source of supply to the point of customer acceptance, with emphasis on improving efficiency" and effectiveness.

"That is quite a challenge based on the traditional role of DESC providing primarily contract support," said DESC-X Director Regina Gray. "But, we are up to that challenge."

The office does not act as the Executive Agent – that is the center's role. However, it can and does initiate, develop, coordinate and facilitate initiatives that assist DESC in meeting its expanded role. DESC-X works through a Component Steering Group structure – a joint body representing the entire DoD bulk petroleum community. The focus areas are equipment, end-to-end distribution, information management, and quality and training.

And how does DESC-X do all this? Originally, the method was through long-standing integrated process teams, but now DESC-X uses a staff of project management support specialists using roadmaps and plans of action. They have a wide mission and an end state with some great expectations, said Gray.

"The office has great vision and is helping DESC to face and

Defense Energy Support Center representatives visit the Colonial Pipeline facility in Lorton, Va., in 2009. DESC's Executive Agent Office orchestrated the tour as part of research into automated information technology and potential applications to improve Defense Department fuels operations.

future of fuels

achieve some pretty amazing things with the military services and combatant commands. Efficiency, effectiveness and eliminating unnecessary redundancy are the goals," Gray explained.

Just as important is the AFRE work the Directorate handles.

Supporting the stated AFRE goals of the military services is a primary focus area within DESC-S. Towards that end, DESC is actively supporting their alternative fuel testing and certification efforts.

Four contracts were recently awarded to provide AFRE fuels. The first – supporting Air Force requirements – is for up to 400,000 gallons of camelina and beef tallow-derived hydrotreated renewable jet HRJ8 fuel, with up to 200,000 gallons coming from each feedstock. The second is for up to 190,000 gallons of camelina-derived HRJ5 fuel to support Navy requirements. The third contract is for 20,055 gallons of algae-derived F76 marine diesel, and the fourth is for 1,500 gallons of algae-derived HRJ5.

DESC is currently conducting a study as mandated by the fiscal 2010 National Defense Authorization Act. This study requires that "the Secretary of Defense shall submit to the Committees on Armed Services of the Senate and House of Representatives a report on the use and potential use of renewable fuels in meeting the energy requirements of the Department of Defense. Such report shall include each of the following: (1) An assessment of the use of renewable fuels, including domestically produced algae-based, biodiesel, and biomass-derived fuels, as alternative fuels in aviation, maritime, and ground transportation fleets (including tactical vehicles and applications). Such assessment shall include technical, logistical, and policy considerations. (2) An assessment of whether it would be beneficial to establish a renewable fuel commodity class that is distinct from petroleum-based products."

When complete, this study will provide a vital, current and comprehensive picture to assist the Department in laying a strong foundation to meet its alternative fuel needs.

DESC-S continues to implement a variety of AFRE-related R&D initiatives ranging from carbon capture sequestration to the development of the Electronic Power Control and Conditioning Gamma System, a mobile 500-kW containerized system that can integrate conventional and renewable sources of electrical power and convert DC to AC, providing load management. The EPCC system is slated for delivery in spring of 2010 to the National Training Center, Ft. Irwin, Calif., as part of the U.S. Central Command-sponsored NetZero Joint Capabilities Technology Demonstration.

DESC is also the co-chair of the Interagency Working Group. The IAWG provides a unique forum by bringing together agencies across the federal government to collaborate on AFRE efforts. One of the IAWG's recent accomplishments was the development of an information sharing Web site. This site will provide a forum for members to highlight key AFRE projects, upcoming AFRE events and data sharing.

For more information on these activities, visit www.desc.dla.mil.

The Defense Energy Support Center's Research and Development and Business Development offices are helping shape the Defense Department's energy solutions for the future through alternative fuels and renewable energy applications.

Direct Delivery puts fuel at user's fingertips

By Ted Jones
Direct Delivery Fuels

The Defense Energy Support Center's Direct Delivery Fuels is the go-to business unit for Defense Department and other federal organizations that require delivery of commercial grade fuels directly to their government facilities worldwide via tank truck or tank wagon.

The business unit, also called DESC-P, procures a wide variety of commercial specification fuels such as motor gasoline, aviation gasoline, marine gas oil, fuel oils, kerosene, diesel fuel, jet fuels and alternative fuels, including biodiesel, the ethanol and gasoline mix E85 and gasohol. These are delivered directly to the users at government facilities worldwide primarily via tanker truck or wagon. DESC-P also contracts with commercial vendors at ports and airfields to supply commercial grade fuels to military and government vehicles on demand.

"Direct Delivery Fuels is committed to meeting the warfighters' requirements around the world," said the unit's director, Kathryn Fantasia. "This includes routine programmed buys as well as short-fused requirements to support natural disasters, humanitarian relief efforts and exercise support. Failure is not an option in our goal to support our military customers' requirements," she explained. "Our mission is to ensure the warfighters' fuel requirements are met through our contracting actions."

To accomplish this mission, DESC-P comprises four divisions, three of which are responsible for the procurement of fuel delivered directly to government installations worldwide under the Post, Camps and Stations program. The fourth focuses on contracting for fuel to be available from commercial vendors at airports and seaports worldwide through the Into-Plane and Bunker delivery programs.

PC&S contracts are primarily fixed price with economic price adjustment, using Free on Board Destination deliveries with a typical contract performance period of three years. FOB means the government does not take ownership of the fuel until it is delivered to its final destination.

The three PC&S divisions, called Ground Fuels I, II and III, support commercial ground fuel requirements of the military services, Defense Logistics Agency activities, and designated federal civilian agencies worldwide. These include the U.S. Postal Services, the Departments of Transportation, Agriculture, Commerce, State, the Interior, Justice and Energy, as well as the General Services Administration, NASA and the District of Columbia.

"Federal organizations interested in purchasing fuel under the PC&S program can contact their agency's procurement office," Fantasia said.

The Into-Plane team supports the military services and other federal agencies with commercial aviation fuels at commercial airports worldwide. The Bunker team provides commercial marine propulsion fuels at commercial ports worldwide for the U.S. Navy, Military Sealift Command and U.S. Coast Guard vessels. These include domestic sites such as Charleston, S.C., Seattle, Wash., and overseas locations on six continents.

"In addition to Direct Delivery's programmed contracting buys, the unit is often called upon to respond to other fuel requirements, anticipated and unanticipated," said Fantasia.

One of the largest areas of support includes ongoing contract support for Operations Enduring Freedom and Iraqi Freedom. In addition, the ground fuels divisions routinely support relief efforts due to domestic and worldwide natural disasters such as Hurricanes Katrina, Ike and Gustav, the recent Kentucky ice storms, and the earthquake in Haiti.

"While the overall quantities for these humanitarian efforts may be small, the fuel requirements are key enablers that contribute to mission success," Fantasia explained. Other short-fused requirements have included emergency fuel support for Camp Pendleton as a result of the base losing power due to the California wildfires; Jet A1 Into-Truck requirements at Baghdad International Airport, and several African locations under the Africa Fuel Initiative.

Under the current relief support to Haiti, DESC-P worked with the DESC Government Fuel Card Program Management office to support Operation Unified Response-Safe Return by quickly issuing additional AIR Cards for the purchase of gasoline, diesel fuel and jet fuel. For more information on the fuel card program, read the separate article in this issue.

DESC-P also supports various joint task force and NATO/host nation exercises within Europe. In order to assure contract support, the unit works closely with the combatant commands and DESC regional commands to ensure all contract actions meet the customer requirements.

"Direct Delivery is committed to process improvement, and to that end, we actively communicate and coordinate with our customers and vendors," Fantasia said.

Citing an example of their commitment, Fantasia said, "Recently, we coordinated and hosted two collaborative kickoff meetings to share exciting changes and goals of the upcoming procurement cycle for Customer Organized Group 6, which covers the Southwestern states." During the meetings, the DESC-P team produced and shared a timeline to ensure procurement tasks and deadlines are met while awarding contracts in accordance with the scheduled deadline for award, Fantasia continued, and they brought together a variety of subject matter experts. Representatives from Air Force

Direct Delivery Fuels serves military and other federal organizations requiring commercial grade fuel delivered directly to their facilities via tank trunk or tank wagon.

Petroleum Agency, Army Petroleum Center and DESC's experts in inventory, law, marketing, policy, quality, small business and technology discussed upcoming deadlines, small business initiatives supported under COG 6 (which include 8a reservations), as well as other improvements to the acquisition process.

"Process improvement continues throughout the acquisition cycle and includes not only pre-award but post-award initiatives as well, in our efforts to provide uninterrupted fuel support to the warfighter," Fantasia concluded.

For more information on DESC's Direct Delivery Fuels and its products and services, visit the DESC Web site at www.desc.dla.mil.

Aerospace Energy fuels space

By Charlene Smoot
Aerospace Energy Business Unit

When an Atlas V rocket launched from Cape Canaveral, Fla., Feb. 11, carrying NASA's Solar Dynamics Observatory satellite that will study effects of the sun, it did so with the help of the Defense Energy Support Center's Aerospace Energy Business Unit.

DESC supplied RP1 fuel and liquid oxygen for the first stage engine, as well high-purity hydrazine for thrusters. In addition, NASA ground support used bulk nitrogen and helium, and the satellite payload used monomethylhydrazine and dinitrogen tetroxide, which were also provided by DESC.

Supporting such missions is routine for DESC-M, as the business unit is called.

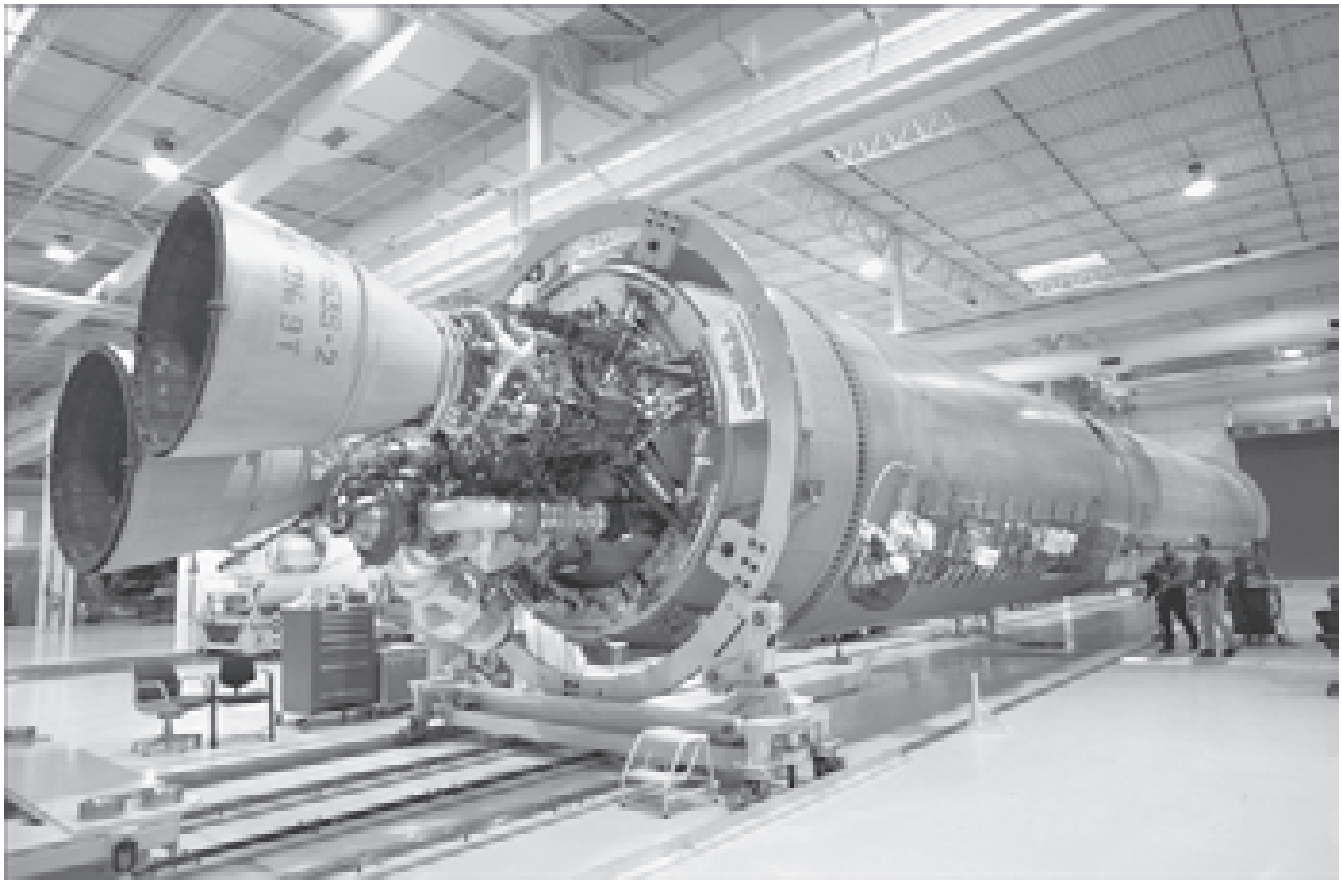
DESC-M provides worldwide logistics support of chemicals, gases, rocket and missile propellants and cryogenic fluids to the federal government. Customers include Department of Defense, NASA and the Department of Energy. The unit also supplies these products to defense contractors such as Boeing and Lockheed Martin and U.S. commercial space launch companies, as authorized under the Commercial Space Launch Act, as well as colleges and universities working under federal grants.

A relative newcomer to DESC, Aerospace Energy's mission transferred from the Air Force to the Defense Logistics Agency in 2001. DESC is a field activity for DLA.

As the business unit's director, Sharon Murphy oversees two divisions that support the Aerospace Energy mission.

The Logistics Management Division provides worldwide inventory management, transportation and container management for commodities such as hydrazine, dinitrogen tetroxide, liquid and gaseous nitrogen and oxygen for programs such as the Space Shuttle, Atlas and Delta rockets and commercial satellites. In addition, they provide special propellants such as JP10 for missiles and specialty gases such as hydrogen peroxide, argon, fluorine, deuterium, helium, neon and xenon that support programs like Stinger missiles and military aerostats.

The Contracting Division provides "cradle to grave" support to inventory managers and transportation specialists in acquisition planning. Innovative contracting produces the best methods for



The Defense Energy Support Center's Aerospace Energy supports space programs like this Atlas V rocket with propellants, chemicals, gases and other products.

missions, more

procuring both the products and associated services needed to support customers. Requirements are awarded on a competitive basis through negotiations, resulting in multiple year, indefinite delivery requirements type contracts that provide long-term coverage and extensive flexibility in meeting unique customer needs.

"That's an amazing feat for many of the commodities with only enough requirements for an industrial base of one," said Murphy.

The products managed by the Aerospace Energy business unit are primarily used as fuels, pressurants or coolants and demand total supply chain management on the part of the unit. Lack of a particular fuel or pressurant could prevent a space launch from occurring, cause property losses due to corrosion or heat damage, or even threaten force protection.

All of the commodities managed by DESC-M business unit are classified as hazardous materials, many with volatile characteristics. As a result, the Aerospace Energy transportation office has one of the most challenging and unique jobs, that of transporting a variety of hazardous materials. Traffic management specialists in this office require an astute knowledge of current federal, state and local hazardous materials regulations. In addition, the office is responsible for nearly 9,000 pieces of equipment including drums, cylinders, trailers and rail tank cars, many of which are designed especially for specific commodities.

DESC-M customers frequently require person to person confirmation when requesting support and special delivery arrangements; therefore, they phone, e-mail or fax information to the inventory manager. Real time for some customers means delivery in 24 hours.

"An aborted launch does not always mean 'back to the drawing board,' but it can mean 'Get more product here, NOW!'" Murphy said, explaining that aborted launchs often still consume product, so more is needed for a follow-on attempt.

For an Aerospace Energy mission, anything less than on time and completely on-specification delivery of products and services would be considered failure, she explained. "That is something which has never occurred."

An Atlas V rocket takes off. (Photo courtesy of Lockheed)

Installation Energy: the power behind energy

By Pam Griffith
Installation Energy

When it comes to procuring coal, natural gas, electricity or renewable energy or implementing energy conservation measures, Department of Defense and federal agency customers alike can turn to the Defense Energy Support Center's Installation Energy business unit for an energy solution that meets their needs.

DESC has been purchasing coal since the 1960s. When deregulation of the natural gas and electricity markets came along in the mid-1980s and 1990s, respectively, DESC provided customers the procurement support they needed to take advantage of the competitive market opportunities.

The Installation Energy team has built a cadre of energy and acquisition professionals to assist customers with their energy requirements, providing value through regional and nationwide procurements that allow DoD to leverage its buying power, often resulting in lower, more competitive pricing. Since 1991, DESC's natural gas program has netted more than $700 million in cost savings for participating customers. In fiscal 2009, these savings exceeded $100 million, translating to a 27 percent savings as compared to what customers would have otherwise paid their local utility provider.

The Defense Energy Support Center's Installation Energy procures electricity, natural gas, coal and renewable energy for its customers.

When customers requested DESC assistance to navigate their way into electricity demand-response programs, DESC was quick to respond, signing agreements with multiple curtailment service providers in order to give customers the tools needed to effectively participate. Customers who participate in these programs receive rebates and financial incentives based on firm commitments to reduce electricity loads during periods of high demand. In 2009, participating customers received more than $1.7 million in financial rebates and credits. DESC hopes to increase the number of participating customers this year.

Today, DESC-A, as the business unit is called, is actively managing more than 2.6 million tons of coal, 129 million DTHs of natural gas and 15.7 million MW of electricity under single and multi-year contracts.

DESC awarded its first renewable energy contract in 2001 on behalf of various DoD and federal civilian customers in Texas in response to Executive Order 13123. This launched a DESC program that has since awarded more than 4.5 million MW of renewable energy credits and received two Presidential Awards for Leadership in Federal Energy Management.

The staff is made up of integrators who are experts at bringing the services and energy providers together, said the business unit's director, Kevin Ahern.

"Energy is what we know best, it's what we do, and we do it very well," he continued. "Our procurement team is made up of a group of true professionals who are dedicated to what they do. And the result is an expertise in energy market dynamics that is unrivaled by any other agency."

With an increased focus for DoD and federal agencies to implement renewable energy and energy efficiency measures, DESC is exploring opportunities to assist customers in this evolving arena. To date, DESC has awarded more than $430 million in energy savings performance contracts and has issued multiple procurements for long term purchase agreements to facilitate development of on-site renewable projects. The DESC team participates on the Renewable Energy Working Group and Federal Utility Partnership Working Group to share information, procurement models and best practices for project success.

For more information, visit the DESC-A booth at the Worldwide Energy Conference, Gaylord National Hotel and Convention Center, May 10-12, attend a breakout session at the conference, or visit the Installation Energy page at www.desc.dla.mil.

DESC tracks shifting utility privatization goals

By Jacob Moser
Energy Enterprise

Utility privatization contracts support facilities on Wright-Patterson Air Force Base, Ohio, like this hobby shop.

Defense Energy Support Center's Energy Enterprise helps the Department of Defense implement Utility System Privatization. It provides contracting, technical, pricing and program management expertise to the military services and Office of the Secretary of Defense. As new program requirements issued in 2010 are interpreted and implemented, DESC will remain the center of expertise on this evolving program.

Utilities privatization enables the military services to upgrade and modernize utility infrastructure without upfront investments. Instead commercial sector investment capital funds the projects. Privatizing the infrastructure takes advantage of commercial expertise and timely enhancements, and it greatly enhances the reliability of installation utility systems, which are critical to supporting military missions and providing essential services to military service personnel. UP also enables the military services and personnel to concentrate on core missions rather than running utilities.

Congress approved legislation authorizing the Department of Defense to privatize its utility systems, including electrical, water, wastewater and natural gas systems, in the National Defense Authorization Act for fiscal 1998. This legislation was followed by the Department of Defense Reform Initiative Directive #9, directing the military departments to develop a plan for privatizing all of their utility systems.

UP comprises two contractual actions: first, selling the government-owned, on-base utility distribution system to a private entity, and second, contracting with that entity for utility services for up to 50 years.

Across its installations, DoD owns approximately 2,600 utility systems valued at $50 billion. If these systems were not operating effectively, this would have serious strategic implications on how DoD trains, equips and provides a good quality of life for all personnel and their families living and working on installations. DoD has been slow to upgrade these systems because of the significant upfront costs associated with the construction. But the UP program makes these upgrades more feasible.

The road to privatizing all DoD utility systems has seen its share of challenges – and they are not over yet. The UP process has been more difficult and challenging than expected, especially in the areas of contract solicitation, evaluation and administration. The program was also temporarily suspended twice due to clarifications in policy and guidance.

DRID #9 initially set a goal of Jan. 1, 2000, to complete the privatization of all systems except those where security or uneconomical reasons occur. In late 1998, Department of DRID #49 revised the original goal to Sept. 30, 2003. But, in 2002, DoD revised its guidance and pushed the UP implementation goal back to Sept. 30, 2005. Now the military services are estimating the privatization completion date will be 2017.

NDAA 2010 introduced new requirements to the UP program. It requires that, in order to privatize, the UP offer be lower than the Government Should Cost Estimate by 10 percent. The government's "should cost" is the total cost of service to own, operate, maintain and recapitalize the subject utility system to commercial standards. It is based on the number of employees, direct and indirect labor costs, contracting support, and the equipment and materials used to perform work on the utility system in accordance with commercial practice.

This means the offer must be 10 percent below what it would cost the government if it owned, operated and maintained the system(s) over a 50-year period. It also requires a five-year moratorium on UP actions where an A-76 action has taken place. An A-76 study determines whether a function can be more efficiently performed by government employees or the commercial sector.

The UP program continues to face challenges. The current schedule to complete UP actions extends to 2017. Funding and other issues continue to be constraints on the schedules and continued success of the program. Contract administration continues to grow, which consumes resources and presents ever increasing complex issues.

The DESC is a center of contracting excellence for UP. It is responsible for both pre- and post-award actions. DESC has awarded contracts for 80 systems at 40 installations, through fiscal 2009. The awards are valued at $8.90 billion, representing a $1.86 billion savings [below the Government Should Cost Estimate.]

DESC currently administers 31 contracts, including 56 systems at 30 installations with a total value of $7.86 billion. The mission is growing; DESC is improving workforce development and increasing staff to take on this challenging mission.

Quality: priceless

By Dan Jennings and Lindsey Hicks
Quality and Technical Support Office

Is quality important?

"You bet," said Pam Serino, director of the Defense Energy Support Center's Quality and Technical Support Office. "Without quality energy products, the business of Defense Department and the rest of the federal could come to a grinding halt. The dedicated efforts of this team help keep the defense energy community on track."

DESC-Q, as the office is known, leads the way in ensuring that the quality of the Defense Department's energy products is never compromised. Whether it is jet fuel for operations in Iraq, F76 for Naval humanitarian missions to Haiti, or helium for an aerostat hovering over Kabul, DESC-Q's quality assurance and product technology professionals are essential components of the supply chain.

"Quality works quietly behind the scenes to ensure the soldiers, sailors, airmen and Marines of the United States military get the right product and the right quality every time," said Serino.

DESC-Q comprises three supporting divisions—Quality Operations, Product Technology and Standardization, and Research and Development. Each division performs integral functions to provide key support to other DESC organizations, customers, suppliers and industry partners, as well as participating in numerous domestic and international organizations and forums to ensure the unfailing quality of DESC's crucial commodities.

Quality begins before the first drop of a fuel is refined. Military and commercial specifications and standards are the basis for all of DESC's procurement actions. The validation and application of these key requirements are the core functions of DESC-Q's chemists. DESC is the Lead Standardization Activity for all assigned federal supply class products, in order to ensure that products DESC procures fully meet customer needs.

As part of the procurement process, Product Technology and Standardization plays a pivotal role in developing and maintaining specification and measurement contract clauses; evaluating pre-award surveys; evaluating exceptions, deviations and waivers; and

providing technical support to resolve fuel chemistry-related issues in production, delivery and storage systems. The office also represents DoD's interests in such organizations as NATO, ASTM International, International Air Transport Association, Commercial Alternative Aviation Fuel Initiative, and the American Petroleum Institute.

One of the key elements of quality is to ensure that products are correctly defined and categorized. DESC-Q provides the cataloging functions for the center in the creation, deletion and maintenance of national stock numbers. In addition to ensuring the correct characteristics of the product are defined within the NSN, DESC coordinates with Defense Logistics Information Service to ensure standard price changes are accurately reflected within the NSN.

Quality Operations provides the formal quality policy and guidance for more than 90 quality assurance representatives worldwide. It provides standards for QARs to inspect, accept [quality assurance] and maintain [quality surveillance] DESC's energy products.

These QARs act as the eyes and ears of the DoD quality community for energy products and a single face to the warfighter or customer. DESC-Q provides them with a formal training policy for their certification in both Quality, Commodity (Chemicals) and Defense Acquisition Workforce Improvement Act.

The functions of these two divisions complement each other in both the pre- and post- procurement process. And the Operations Division also plays an important role in the areas pertaining to quality-related contract clauses, evaluating pre-award surveys, execptions, deviations and waivers, and providing field-level support in maintaining the quality and usability of DESC's vast, worldwide inventory of products up to, and even after, delivery to customers. The division also manages the commercial laboratory and commercial inspection contract support in support of the quality mission. In addition, it is responsible for the developing and maintaining the MIL-STD-3004. This standard provides the DoD policy, general instructions and minimum procedures to be used by the military services and the Defense Logistics Agency in performing quality assurance and quality surveillance functions of government-owned fuels, lubricants, and related products worldwide.

The Research and Development team is DESC-Q's newest division. Developed in response to growing mandates for energy independence, the division assists the enterprise in the many aspects of alternative and renewable energy innovation and application. New and developing technologies involving unique and conventional fuels are rapidly evolving, and it falls to this division to coordinate the necessary technical expertise, guidance and leadership to help in incorporating them to meet DoD's future energy needs.

Is quality important?

Bob Koeller, chief of the Quality Operations division, sums it up in a simple statement: "You can't put a price on quality."

Fuels specialists, like the sailors testing fuel samples here, understand the importance of fuel meeting all quality specifications. The Defense Energy Support Center's Quality and Technical Support Office helps ensure high-quality products.

DESC improves oversight of defense fuel support points

By Tracy A. Keenan
DFSP Management

Defense Energy Support Center's Defense Fuel Support Point Management, or DESC-N, was created in October 2009 to improve management oversight of the Department of Defense's 627 defense fuel support points. The business unit, located at Fort Belvoir, Va., oversees the efficient and effective operations of the facilities storing DESC's extensive fuel inventories while serving as the focal point for the worldwide inventory management of all Defense Department-owned fuel. DESC-N is responsible for management of all functions that impact the operations at a DFSP from requirements generation to inventory accounting and training.

A DFSP is a fuel storage terminal that receives, stores, issues and accounts for DoD-owned capitalized fuel. It orders product, manages on-hand inventories, facilities, equipment, personnel and local training programs, and maintains all facets of the audit trail for fuel owned through Defense Logistics Agency's Defense Working Capital Fund. A DFSP can be a government-owned facility on a military installation or contractor-owned and operated facility on or off the military installation. Before DESC-N was created, a DFSP would have to coordinate with three different DESC offices to resolve issues for the operation and management of the DFSP. DFSP Management's formation established a single face for DFSP support issues within DESC and for its customers.

"One reason DFSP Management was formed was to allow DESC to provide better support to the DFSPs. It allows us to pull in people with the right skill sets to do this. Based on my previous experience providing technical support to and managing DFSPs, it has been an issue with regard to who to go to for help. Establishment of the DFSP Management business unit is a big step toward getting better support to our customers," said Rockne Krill, director of DFSP Management.

Defense Fuel Support Point Craney Island, Va., is one of 627 the Defense Energy Support Center's DFSP Management directorate oversees.

DESC-N encompasses three divisions: Supply Chain Operations, Inventory Accountability and DFSP Support. Supply Chain Operations brings together all the functions that impact the petroleum supply chain. The division is responsible for top-level managerial oversight and technical expertise in the development of requirements to support acquisition programs for bulk petroleum products, storage and distribution, transportation and sustainment, restoration and modernization efforts impacting the bulk petroleum supply chain. It is supported by three branches: Facility Management, Inventory and Distribution Management, and Sustainment/ Restoration and Modernization.

Current initiatives being worked by the division include: optimization of U.S. Army fuel facilities in Europe; implementation of U.S. Pacific Command storage and distribution study recommendations; supply chain improvement efforts in Afghanistan, Bahrain, Southeast Asia, Alaska and U.S. West Coast; the commercial Jet A demonstration with the Air Force; migration of Supplier Relationship Management-Energy to the Enterprise Business System; and the substantial growth of the Sustainment/ Restoration and Modernization program from fiscal 2009 to fiscal 2015.

The Inventory Accountability division serves as the focal point for the worldwide inventory of all DoD-owned fuel in storage until it is issued to the end user. It is responsible for capitalization, inventory accountability and reconciliation, gain/ loss control program management, inventory variance analysis, development of inventory management policy and guidance, inventory management controls, and auditability of DoD's petroleum inventory. Four branches support this division: Accountability and Analysis, Policy and Compliance, Reconciliation, and Accountability Support. The team is currently working to launch a compliance team, region site visit metrics, and inventory accountability Web tool training.

The DFSP Support division provides BSM-E base-level application support to DFSPs and fuel customers from point of sale to enterprise-level. This is done through training, remediation and interface with users and partners, such as supply points, military services, etc. The division encompasses two branches: Base Level BSM-E Support and Retail Integration Support. The DFSP Support team is currently working on a responsible officer Web page, Fuels Management Defense 6.0 deployment and upgrade to Service Pack 4, increasing training opportunities for DFSP personnel.

For further information on DFSP Management or any of the divisions within the business unit, please visit www.desc.dla.mil.

Small Business office employs matchmaking, other techniques

By Joan Turrisi
DESC Small Business Office

Behind the scenes of the Defense Energy Support Center's warfighter support is its Small Business Office, or DESC-DU, advising DESC's leadership and contracting community in an effort to contract 28 percent of that support to small business. To achieve that goal, the professionals of DESC-DU field daily calls, host meetings with small businesses and contracting representatives, and conduct or attend various small business outreach events.

DESC's 28 percent goal is made up of the following: 20 percent for small business; 4 percent for historically underutilized business zone small business, or HUBZone; 1 percent for small disadvantaged business, or SDB; 0.5 percent for women-owned small business, or WOSB; and 3 percent for service-disabled veteran-owned small, or SDVOSB.

In fiscal 2009, DESC exceeded its goals in the categories of SB and HUBZone, but fell short in the remaining categories. DESC-DU recently met with several SDVOSB firms expressing interest in multiple DESC contract programs and has corresponded with several SDB firms interested in major Direct Delivery ground fuels programs. Further outreach efforts are ongoing to reach competent firms in under-represented categories.

Outreach events typically require DESC-DU participation via one-on-one matchmaking sessions and/or formal presentations in conference open sessions. Matchmaking sessions are back-to-back, 15-minute sessions reminiscent of modern "speed-dating." The Small Business office provides succinct descriptions of DESC programs and receives capability statements from potential suppliers. More in-depth follow-on sessions are held with the more promising prospects. If suppliers fit more suitably with another Defense Logistics Agency center, DESC-DU advises generally and refers those suppliers to that center's Small Business office for more detailed guidance.

The Defense Energy Support Center's Small Business Office employs one-on-one interviews and networking conferences to help potential contractors learn the ropes.

Small businesses can expect outreach from the highest levels of the federal government. In a recent Politico.com article, President Obama said "Jobs will be our No. 1 focus in 2010. And we're going to start where most new jobs do — with small businesses." As DESC increases its contracting to small businesses, it contributes to the administration's goal of reducing unemployment through small business contracting.

Where small businesses are not able to contract directly with the federal government, they can still participate in government contracting via subcontracts and mentor-protégé arrangements. Large businesses doing business with the federal government are required to have a subcontracting plan that describes their efforts to contract with small businesses. DESC's Small Business office monitors large business adherence with those plans via annual program reviews and visiting the large business with representation from a local Small Business Administration office. DESC-DU provides advice and assistance to large businesses who struggle to find small business subcontractors or protégés.

Planes, cars and boats:
Fuel cards allow gas and go

By Ann Sielaty
Government Fuel Card Program Management Office

The Defense Energy Support Center's Government Fuel Card Program Management Office, established in 2004, extends the Defense Logistics Agency enterprise by supporting the warfighter daily and providing military aircraft, vessels, and vehicles the ability to conveniently purchase commercial fuel from participating suppliers worldwide. The Fuel Card team manages three card programs designed for sea, air and ground use.

The office, also known as DESC-K, provides DLA with fiscal stewardship and warfighter support around the clock, with daily 24-hour customer service. The three card programs process more than 800,000 transactions for approximately $900 million in sales on an annual basis.

The newest state-of-the art program provides a sophisticated, yet easy-to-use, secure Internet-based solution to marine fuel procurement challenges. The Ships' bunkers Easy Acquisition (SEA Card®) Order Management System, known as DoD-SCOMS®, is an electronic order, receipt and invoice system that allows military services, U.S. Coast Guard and authorized federal agency vessels to purchase fuel from commercial ship refueling merchants at more than 2,500 ports worldwide. Fuel orders can be directly placed to DESC bunker contracted suppliers. If a port does not have a bunker contract in place, the vessel can place an order through a competitive quote Open Market "spot buy" process.

Open Market orders are awarded to the lowest price, technically acceptable offeror based on quotes received from registered merchants. Delivery receipt data and fuel invoices are reviewed and approved by accountable officials in real time.

"DoD-SCOMS® illustrates its value by simplifying the administrative process, improving transaction analyses, and reducing transactions processing time. It is a much more efficient and smarter means by which to make marine fuel purchases," said Deborah VanKleef, deputy director of the office.

The Aviation Into-plane Reimbursement Card, or AIR Card®, has been in place since 1987. The AIR Card® is used by almost all aircraft in the Defense Department inventory, as well as most federal agencies, to purchase fuel and ancillary ground services at commercial airports worldwide.

The program is a sophisticated tool because the AIR Card® transaction must process detailed data. This includes type of product, exact quantity, lift date, unit aircraft, contract or non-contract specifics, and billing information. These are some elements necessary to operate through the Defense Working Capital Fund. Strategic sourcing accomplishments on the AIR Card® program allow the military services to maximize the cost and quality benefits of the DESC Into-plane contracts. Leveraging the AIR Card® provider to stretch DoD fiscal stewardship has led to more than $14 million in savings in fiscal 2009 from posted airport prices when non-contract airport locations were used.

Assisting pilots with flight plans, the AIR Card® Web site provides a list of all DESC contractors, as well as a list of all non-contract suppliers who accept the AIR Card® as a payment mechanism. Ground services can also be procured with the AIR Card® and invoices are "split-billed" and sent directly to the acquiring unit. Despite the complexities, the success of this program is due to the professionalism and innovation of the fuel card team, said Van Kleef.

The Defense Energy Support Center's Government Fuel Card Program Management Office makes fuel available to air, sea and ground operators from commercial providers around the world.

worldwide

The DESC-K team won the David Packard Award for excellence in program management in 2007, and the program has been recognized as one of DoD's best acquisition practices.

The DoD Fleet Card program allows all Defense Department-owned and leased vehicles to refuel at commercial service stations. General Services Administration-leased vehicles are not covered. The program improves management of a large fleet of vehicles. DESC-K DESC Fuel Card Office manages the DoD Fleet Card under a task order issued through the GSA SmartPay® 2 contract.

The DoD Fleet Card is similar to the AIR Card® and uses the same technology as any other commercial fuel charge card. The embossed card identifies the military unit and DoD active address code for billing purposes. The card can be electronically swiped or mechanically imprinted. Emergency maintenance and vehicle parts like windshield wipers or oil can be purchased with the Fleet Card, and all non-fuel invoices are "split-billed" and sent directly to the acquiring unit. Detailed fuel card transaction data allows the DESC-K team to establish management controls and routinely audit fuel card accounts for questionable purchases, fraud, duplicate invoices, split purchases, miscellaneous transactions and over the micro-purchase threshold. It also provides data on types and quantity of fuel purchased.

The DESC-K develops program specific policies, procedures and guidance along with computer-based training for their customers. These can be found on the Fuel Card Management Web page listed below, in the Office of Management and Budget Circular A-123, "Improving the Management of Government Charge Card Programs," the DoD-Charge Card Guidebook, and the GSA SmartPay® website. This coverage levies program integrity, management and oversight responsibilities for all fuel card customers. It specifically identifies management controls, challenge and review process, authorized users, misuse and gratuities; and, it provides users with fuel card management tips.

The team also develops and manages monthly program metrics to ensure excellence in accountability and financial stewardship.

Continuous process improvement on the fuel card programs is worked through team Lean Six Sigma projects and enhancements and has been accomplished through System Change Requests handled by the specific card contractor. AIR Card® and SEA Card® Web pages are routinely updated and enhanced with many suggestions coming from the program users.

The Wide Area Workflow is a new electronic payment initiative scheduled to be used for both AIR and Fleet Card programs for non-fuel purchases. The WAWF initiative, sponsored by Defense Finance and Accounting Service, allows an accountable official to electronically approve invoices and authorize payment of non-fuel related invoices, and is directly sent to the designated DFAS payment office. To meet the DoD mandate for WAWF, all DoD accountable officials will be required to transition from approving paper invoices to approving electronic invoices.

DESC hopes to field a fourth fuel card program by the end of the year. The SWIPE SEA Card® will provide a tool to smaller vessels that need to purchase fuel in a "gas-and-go" style at marinas when a DESC bunker contract cannot be used. Implementing this program will provide the customer a total solution for purchasing propulsion fuel, with an advantage of having one program office to manage all the DESC-sponsored fuel card programs.

For more information on the fuel card programs, visit www.desc.dla.mil.

New leader assumes command of DESC

By Susan Lowe
DESC Public Affairs

Navy Rear Adm. Kurt Kunkel assumed command of the Defense Energy Support Center during a ceremony held at the Defense Logistics Agency headquarters, Fort Belvoir, Va., Jan. 27.

Kunkel, who previously served as DLA's chief of staff, has also served as the chief of Strategy Division, deputy director for Operational Logistics, and director of Logistics on the Joint Staff.

DESC already has a great workforce who is focused on all the right things, said DLA Director Navy Vice Adm. Alan Thompson. Kunkel's experience will build on that good work, taking it to the next level.

An $18 billion global enterprise providing all fuel to the armed forces, DESC is also a leader in alternative energy sources and provides much of the electrical utility support for military installations around the globe, Thompson said.

"Those of us inside DLA know how important and significant DESC is," the admiral said. "I can assure those of you on the DESC workforce ... you are fortunate to have him joining your team."

Thompson went on to express his confidence in Kunkel, noting that Kunkel's can-do spirit will help lead DESC as it continues facing new challenges in Iraq and Afghanistan and relief efforts in Haiti.

During the ceremony, Kunkel thanked many of the distinguished guests and family members who attended the ceremony, highlighting the continuous support his wife and daughters have given over his years of service. He also thanked Thompson for the opportunity to command within DLA.

"I am delighted to stay within the DLA enterprise, and it is my honor to assume this leadership role and accept command of such a committed and professional team," Kunkel said.

DESC faces remarkable challenges in providing lower cost and more efficient energy solutions to the services, he said.

"But, with remarkable challenges also come incredible opportunities for new and expanding initiatives including engagement in alternative fuels and renewable energy. I look forward to continuing our involvement in this field as one of our supporting energy solutions," he said

Energy is one of DESC's most significant and critical enablers of its support mission to the U.S. armed forces and many others, Thompson said, and Kunkel brings a lot of logistics and acquisition knowledge to this important mission.

"He is going to be a leader and an advocate on the part of defense energy in the areas of alternative fuels and renewable energy," Thompson said.

Stressing that only a collective unit can successfully accomplish the mission, Thompson said the collective DESC staff of DESC is far better than any one individual. Kunkel's contribution will play a significant role in expanding the DESC mission, he added.

"His command contribution will go well beyond his primary role as the commander of DESC," Thompson said.

As commander, Kunkel is responsible for providing the Department of Defense and other government agencies with comprehensive energy solutions and ensuring continuous energy support to America's warfighters worldwide.

"I am confident we will continue to engage in new energy solutions together while maintaining the outstanding customer support quality that DESC is known for," Kunkel said. "I look forward to our future together as a team."

Commander shares leadership perspective

By Susan Declercq Brown
DESC Public Affairs

Defense Energy Support Center Commander Navy Rear Adm. Kurt Kunkel holds his first DESC Town Hall meeting Feb. 23 at McNamara Auditorium, Fort Belvoir, Va. Kunkel shared his leadership perspectives and recognized Lawrence P. "Robbie" Robinson's 50 years of federal service. (Photo by Terry Shawn)

Navy Rear Adm. Kurt Kunkel met with the Defense Energy Support Center workforce Feb. 23 in his first town hall meeting since taking command of the organization Jan. 27.

After recognizing employee Lawrence "Robbie" Robinson for 50 years of government service, Kunkel spoke about his own experience, perspectives and leadership principles, letting employees know what he expects of them and what they can expect of him. After discussing focus areas and where he sees the center headed, as well as upcoming events and travel, the commander ceded the floor to a briefing on DESC's role in supporting humanitarian relief efforts in Haiti. He closed with a question and answer period.

Kunkel began with a slide he said was a stark reminder of "why we're here," a sampling of the names of soldiers and Marines who had died in Afghanistan in the previous week. Saying he would never have to show the slide again "because I know you already get this," Kunkel said "our most important job is to take care of those folks in the field…to enhance their safety and welfare and to make sure this list is as short as possible." This theme of warfighter support enhancement is one he carried throughout the town hall meeting.

The admiral said he had completed four operational sea tours and served for two years as the assistant chief of staff for U.S. Naval Forces Central Command in Bahrain, where he worked closely with DESC Middle East. Kunkel also served for two years on the Joint Staff as deputy director for Operational Logistics, and in the Office of the Chief of Naval Operations as deputy for Supply, Ordnance & Logistics Operations. Before coming to DESC, the admiral served as the Defense Logistics Agency chief of staff.

Rear Adm. Kurt Kunkel assumes command of the Defense Energy Support Center in a Jan. 27 ceremony at the Defense Logistics Agency, Fort Belvoir, Va. DLA Director Navy Vice Adm. Alan Thompson officiated. (Photo by Teodora Mocanu)

Kunkel said he worked for or with DLA Director Navy Vice Adm. Alan Thompson three times during his career: at the Fleet and Industrial Supply Center, Norfolk, Va., in the Office of the Chief of Naval Operations and at DLA.

The commander said he is very impressed with the DESC workforce and mission. "My perceptions are this is a fabulous team. I'm convinced people here know why they come to work each day—its to support those people in the field. What you do is vitally important. I get how important it is – why we have a DESC."

Discussing the DESC business model, he said he is very aware that DESC's core mission is in bulk fuels, and that he understands how critical that support is to the warfighter. "But, we have a new business in the alternative fuels and renewable energy field, and I'm not going to let up on that accelerator one bit," he continued.

"There's a niche market for us that's going to grow, and it's going to grow quickly," Kunkel stressed, and DESC needs to be ready to lead.

Next, the admiral shifted to his leadership principles. He stressed the importance of integrity, responsibility and accountability in all DESC employees do, saying this would be a constant message from him. "We owe it to our fellow citizenry, and to ourselves," to keep standards high, he explained.

Kunkel also emphasized the importance of open communication throughout the center. He encouraged sharing information, such as meeting minutes, and using the soon-to-be-implemented commander's e-mail box, which he will respond to directly. The admiral said he has an open door policy, but with the caveat that employees should give their supervisors and other leaders in the chain of command an opportunity to address questions or problems before raising them to his level. Highlighting the importance of two-way communication, he said, "Innovative ideas don't start on the fourth deck [on the commander's floor], they start at the deck plate [the lowest level on a ship], with the worker, employee and supervisor."

Stewardship, the admiral said, is very important. "As taxpayers, we have a fiduciary responsibility to get this right….and part of that is questioning why we do certain

things. We must challenge assumptions…," in pursuit of more eloquent and cost-effective solutions, he urged.

The commander also addressed workforce development, saying mentorship and recruitment are key to strengthening and enhancing the job satisfaction and center capabilities.

Kunkel reminded everyone that warfighter support enhancement is DESC's number one priority. Saying "there is no cookie cutter approach to this," he encouraged everyone to look for ways to enhance support. "You have to understand who the ultimate customer is and why we are here;" that will lead to many variations of enhanced customer support, he explained.

The admiral also highlighted DESC's stellar response to Operation Unified Response – the Haiti relief effort – saying Direct Delivery Fuels, DESC Americas, the DESC Operations Center, the Fuel Card Program Office and a host of others had really "stepped forward with manpower, skill sets and subject matter experts." Contractor Foster Fuels received special recognition for work in Haiti under a DESC contingency support contract. He praised DESC Americas East for what he called a Herculean effort, and announced that 16 new vessels had been added to the SEA Card program to enable their role in the relief efforts.

Next, the admiral laid out some challenges for employees—a smooth National Security Personnel System transition back to the General Schedule system, a steady flow of innovative ideas, commitment to quality in the professional climate, and a commitment to seeking and providing mentorship. He stressed employees should look for ways to make a difference and urged the continued support of alternative fuels and renewable energy initiatives, as well as continuous process improvement and Lean Six Sigma initiatives.

Kunkel also cited a Direct Delivery Fuels initiative to set up a "telework center" in Stafford, Va., as an innovative approach to improving employees' quality of life, retaining high-quality job performance and addressing space issues in the Fort Belvoir, Va., building.

Finally, the commander described his expectations of DESC employees as well as what they can expect from him. Team members should be prepared, decisive and timely; they should be adaptable, team players, and bring recommended solutions. Perhaps most importantly, he said, they should take care of themselves and their people, ensuring adequate opportunity for a balance of work and family.

In return, Kunkel said employees should expect all of that and more from him, and to hold him to those standards. He explained he sets high expectations for himself and others, will provide clear guidance along with the expectations, will work to remain approachable and open minded and will strive to be fair and treat all employees with dignity and respect.

"The energy in Defense Energy is all of you," the commander said.

Kunkel said he planned orientation trips to the Middle East, Europe, Texas [DESC Americas and Aerospace Energy], and Hawaii [DESC Pacific]. In addition, he'll be walking the halls of the Fort Belvoir contingents to meet employees and see firsthand how they contribute to the mission.

DESC and FEMA tests contractor's

By Karen Hammack
DESC Direct Delivery Fuels

Recently, Defense Energy Support Center workers, alongside personnel from the Federal Emergency Management Agency, conducted a two-day readiness drill at Fort Polk, La. The drill measured the fuel contractor's ability to respond to a disaster within a 48-hour period.

In the event of a presidentially-declared hurricane disaster, DESC's mission is to provide fuel vital to an effective emergency response. Fuel is one of the first products needed when a disaster strikes. Without fuel for all types of rescue vehicles and generators, first responders have little hope of launching an effective disaster response. So, early success of the response can hinge on the DESC contractor's ability to respond quickly and effectively.

Effective disaster preparedness and response require a clear definition of what needs to be done and by whom, and how the task needs to be performed. Despite the complexity and challenges, DESC has successfully supported back-to-back contingencies in 2008 and 2009. The team developed proven solutions for ground fuel support during presidentially-declared disasters and has successfully executed these solutions during disasters such as Hurricane Katrina, Gustav and Ike; a winter ice storm at Paducah, Ky., as well as completing several successful readiness drills conducted at Meridian, Miss., Fort Jackson, S.C., and Fort Polk.

It is important to hold drills to demonstrate the contractor's capability to mobilize assets and establish and maintain contingency fueling operations to fulfill contractual requirements.

During the most recent drill, the contractor was tasked to deliver 5,000 gallons of ultra-low sulfur diesel to the fuel farm at Fort Polk. The contracted company responsible for providing support to the DESC-FEMA team, Foster Fuels Inc. of Brookneal, Va., had a local subcontractor, Macro Oil Company of Lafayette, La., put to the test. Macro Oil Company demonstrated it could provide timely and efficient fuel support to Fort Polk.

The DESC-FEMA ground fuels contingency contract is one of DESC's most complex procurements due to the nature of the requirement and the risk imposed upon the contractor willing to provide ground fuel support during a presidentially-declared disaster. This performance-based contract is aligned with an interagency agreement signed in March 2006 that was negotiated to support the most disaster-prone states along the Gulf Coast. Award was based on "best value" evaluation criteria that considered technical capability as significantly more important than cost or price.

As outlined in the IAA, efficient teamwork between DESC and Department of Homeland Security's FEMA is essential to ensure

drill readiness

As part of the recent readiness drill at Fort Polk, La., workers transfer fuel to an external source to demonstrate the contractor's capability to provide fuel to small containers in case of an emergency.

efficient responsiveness in providing delivery of ground fuel to locations designated by FEMA in the event of natural disasters or emergencies. In addition, the contract was awarded to Foster Fuels Inc., a small business that proposed innovative solutions that lowered the government's risk and established controls that would accurately account for all fuel in order to eliminate fraud, waste and abuse.

The Fort Polk readiness drill tested the contractor's capabilities and ability to perform the requirements outlined in the contract. In such drills, the contractor's performance can be rated satisfactory or unsatisfactory. A satisfactory rating requires the contractor to meet or exceed the evaluation criteria as outlined in a contingency contract drill evaluation form. Failure to meet any one of the standards could have resulted in an unsatisfactory rating.

During the exercise, three operations were successfully completed. In the first, self-contained booms were assembled to provide spill protections during truck-to-truck fuel transfer. A tank wagon and tank truck dispensing nozzles were completely surrounded to protect against and to recover any possible fuel spills.

The second operation tested bulk fuel delivery. A tank truck was used to issue ULSD to an above-ground diesel storage tank. The tank farm manager observed this three-man operation.

The final one tests tripod emergency pumping with back-up pump operations. If main power is lost, the contractor can use battery power and/or gravy feed to complete the bulk fuel delivery to the storage tanks.

A member of the DESC-FEMA team who observed the drill summarized the results. "Foster Fuels and Macro Oil Company provided outstanding support during this drill by providing the required fuel on spec in a timely manner," said Anthony Thomas, a division chief in Direct Delivery Fuels.

DESC Americas fuels operations on two continents

By Susan Declercq Brown
DESC Public Affairs

With the Defense Energy Support Center fueling two operations in the Middle East, many Americans would be surprised to know that the nation's largest defense fueling operation is actually taking place on the home front.

DESC Americas, one of four regional offices of the organization responsible for providing energy solutions to the Defense Department and other federal agencies, provides more fuel to a larger area than any other region, according to DESC Americas Commander Army Col. Bill Keyes.

DESC-AM, as the unit is known, mericas provides timely, on-specification fuels to support customer mission success within its region through distribution management, inventory control and quality assurance. The command is responsible for DESC operations across the continents of North and South America, excluding Alaska—a landmass of nearly 16 million square miles. In 2009, the region delivered more than 2.6 billion gallons of fuel to U.S. forces and other federal customers, supporting contracts valued at $7.8 billion.

DESC-AM supports four combatant commands: U.S. Northern Command, U.S. Southern Command, U.S. Transportation Command and U.S. Strategic Command through a network including fourteen major pipeline distribution systems and 422 defense fuel support points, where DESC-owned fuel is received, stored and dispensed.

The command, which is divided along the Rocky Mountains into two subregions—Americas East and Americas West, has approximately 140 billets. Of those, 93 are assigned to DESC-AME and 32 to DESC-AMW; the rest are headquarters positions.

Inventory accountability is a huge, but relatively new, part of the command's mission, said DESC-AME Commander Army Lt. Col. Keith Sylvia. This has been the fastest growing area, from a personnel stand point, with 14 new positions acquired in DESC-AME alone last year. Nearly one quarter of the workforce in DESC-AM is engaged in managing and accounting for the distribution of approximately 10 million gallons per day of DESC-owned fuel.

Defense Energy Support Center Americas West's Keith Embree, inventory manager, and Edward Valencia, inventory accountant, review data.

"With 422 DFSPs to oversee, including those on every major military installation in the continental United States, and 400,000 to 550,000 transactions per month, it's a lot to track," Sylvia explained.

In 2009, DESC began transfer of the inventory accounting responsibilities from its headquarters at Fort Belvoir, Va., to its regional offices.

"Taking over the inventory accountability in July, and systematically reducing losses by more than 15 percent is one of our greatest successes," said Keyes. "Decentralizing the function allows us to interface directly with the customers and help resolve issues."

Keyes said DESC-AM focuses on the three biggest losers each month, helping the DFSPs to more accurately account for the fuel they receive, store and dispense. "Being able to focus directly with the DFSPs on software, infrastructure and procedural issues allows us to get a better handle on the inventory," Keyes explained.

Donna Robertson, DESC-AME distribution manager, cited Joint Base McGuire-Dix-Lakehurst, N.J., as a DFSP that benefited from DESC-AME's hands-on approach; the base's losses were cut in half through what Sylvia called DESC-AM's 'superb oversight of inventory accounting practices."

Ensuring the quality of DESC-provided fuel products is also a major role for DESC-AM. More than 60 quality assurance representatives are stationed at 44 locations throughout the United States to ensure all

products meet specifications, Keyes said, including a team at Homestead Air Force Base, Fla., that handles customer service visits and product testing in the Caribbean Ocean and Central and South America.

QARs perform inspections at petroleum refineries, including testing products, to ensure fuel meets quality specifications. Similar testing is conducted at all fuel terminals and prior to and after all transportation modes – pipeline, oiler, tanker truck, rail car, barge, etc. QARs also ensure quality of non-petroleum products such as coal, lubrication oils and fuel additives, and some are specially trained to handle cryogenics and other propulsion fuels and chemicals procured by DESC's Aerospace Energy for space programs and other applications, said Scott Artrip, DESC-AME's quality manager.

They also inspect Into-Plane contractors on both continents to ensure adherence to contracts. In addition, QARs conduct pre-award surveys to ensure contractors can produce and deliver quality fuels in accordance with contract requirements.

That means multiple inspections at 422 DFSPs, 37 suppliers, 14 major pipelines, and for approximately 10,000 fuel movements per month.

"QARs are the eyes and ears on the ground for the DESC's contracting business units and for the warfighter," said Sylvia emphasizing the large role the quality specialists play in customer relationships and in gathering customer requirements and relaying them to planners and suppliers. And customer sites may be remote, especially those in the Rocky Mountains, added Artrip.

In South America alone, QARs conduct inspections at five DFSPs, 35 marine or bunker fueling ports, 54 Into-Plane fuel suppliers at commercial airports, five remote forward operating sites and 228 aviation fuel providers.

QARs from DESC-AME also teach courses at Fort Lee, Va., and have helped warfighters learn or sharpen skills before deployment, Artrip explained.

DESC Americas recently instituted an internship to help develop qualified QARs, said Sylvia. Interns spend the majority of the two-year program in the region offices, but also train at DESC headquarters in Virginia. Though in the past, interns have been stationed in Houston, headquarters for DESC-AM and DESC-AME, soon interns will also be assigned to DESC-AMW offices in San Pedro, Calif., he added.

DESC-AMW Quality Manager Mike Koury and Distribution Manager Bo Swenson said they work extremely closely together to serve the customer. "We are virtually interchangeable as

Defense Energy Support Center America's West Leo Burruel, quality assurance representative, prepares to take a fuel sample from a fuel storage tank. (Photo courtesy of DESC-AMW)

Below: Renee Thompson and Cynthia DeGrom, Defense Energy Support Center America's East Distribution Team members collaborate on inventory accounting functions. (Photo courtesy of DESC-AME)

Sam Watson, Defense Energy Support Center Americas East inventory accountant, works to solve questions concerning a fuel movement. (Photo courtesy of DESC-AME)

far as closeness," said Koury. "His people are my people," he continued, adding that the close teamwork enables the West to accomplish more for the warfighter.

Keyes said the low-turnover in personnel in DESC-AMW makes customer support a strength as well. "The team not only knows their customers, they know the wife and kids names as well," he said.

DESC-AM's Distribution teams implement a bulk fuels distribution plan and arrange transportation for more than 2.6 billion gallons of fuel each year through 9,000 to 11,000 movements of fuel each month. They coordinate delivery to more than 2,000 separate customers.

The distribution specialists face special challenges when large exercises, adverse weather or aging infrastructure requires tremendous volume or unique delivery method.

"Aging infrastructure is one of our biggest challenges across the whole region," said Keyes.

Whether storage tanks, pipelines or piers are closed for scheduled maintenance or closed for short-notice repairs, the distribution team has to make adjustments.

"We have to know which type of conveyance is required – truck, ocean tanker, pipeline, barge—to ensure uninterrupted service," explained Koury.

DESC-AMW has many military construction projects underway to improve efficiency and distribution in the region, and each creates unique challenges.

One such challenge is the DFSP at Point Loma, Calif., which supports the Navy's 3rd Fleet in addition to other customers. As part of Military Construction Project 401, the largest such project ever undertaken by DESC, several fuel storage tanks have been demolished to make way for construction of a more capable and modern facility. As a result of the project underway, storage capacity at the facility is reduced by 50 percent.

"We've been able to support the fleet by adding F-76 fuel storage at DFSP San Pedro, Calif., awarding contracts in the Los Angeles area, and shipping via a common-carrier pipeline system," Koury explained. "We're also using Military Sealift Command tanker ships to make waterborne deliveries."

Major customers in the West include Point Loma, Calif., Puget Sound, Wash., Nellis Air Force Base, Nev., Edwards AFB and Travis AFB, Calif., Fort Lewis, Wash., and the National Training Center, Calif.

"Travis consumes more JP8 [jet propulsion fuel] than anywhere in the world," said Koury.

DESC-AM supports several high-profile exercises that create fuel challenges.

Nellis AFB holds four two-week-long Red Flag exercises each year. These exercises, designed to provide realistic combat training against adversary forces, "almost pull fuel faster than you can give it to them," explained Swenson. "It's very challenging, and the trick is to 'frontload' the system with fuel because the exercise uses more fuel in one day than most commercial airports."

DESC-AME supports PANAMAX, a multi-national navel exercise centered around defending the Panama Canal. DESC-AME sends a QAR in advance of the exercise to coordinate with bunker contractors and to provide logistics assistance once the exercise begins. Marine fuel is delivered via barge and aviation fuel by truck and then to the requesting vessel. "Road travel in Panama can be quite challenging even on a good day, and this and other factors have to be considered when planning and performing support functions on the ground," said Artrip.

Defense Energy Support Center contractor Foster Fuels Inc. provides fuel to a military vehicle during a FEMA operation. (Photo courtesy of Foster Fuels Inc.)

From the left, Leo Burruel and Talbert Hignight, Defense Energy Support Center Americas West quality assurance representatives compare notes. (Photo courtesy of DESC-AMW)

The Quartermaster Liquid Logistics Exercise, an annual exercise to train Army reservists in fuel operations including receiving, dispensing and transporting, is another DESC-AM challenge. Reservists train while performing real-world fuel operations for DESC-AM customers. Planners from the command work with Army representatives throughout the year to structure effective training while meeting the warfighter's fuel requirements.

Another way DESC-AM focuses on warfighter needs is to assign liaison officers to SOUTHCOM and NORTHCOM to ensure fuel expertise onsite. The liaisons are contracting officer's representatives, acquisition specialists with multi-functional proficiency in quality, supply, ordering, contracting and transportation, said Artrip.

"FEMA has become a huge non-DoD customer for the region," said Frank Wright, DESC-AM deputy director. Since Hurricane Katrina, the region supports DESC's Direct Delivery Fuels by coordinating with FEMA to develop the agency's requirements and then working with contractors to support those requirements, maintaining what Wright called a "symbiotic relationship" with FEMA and contractor Foster Fuels.

Wright said that relationship has "risen to the challenge" in recent years, rapidly responding to five hurricanes on the Gulf Coast and a major ice storm in Kentucky and Tennessee. Most recently, contingency contractor Foster Fuels Inc. deployed 36 people and 12 tank wagon trucks to Haiti within days of the January earthquake to provide fueling capability for U.S. aid efforts until more permanent services were available.

The DESC-AME presence in Haiti also served SOUTHCOM well, said Sylvia. When DESC Deputy Director Patrick Dulin received an e-mail from the senior U.S commander on ground in Haiti saying he would benefit from a DESC liaison, DESC had a liaison in place within an hour, Sylvia explained. "One of our QARs only had to walk over from where he was already at work in country."

DESC-AM also has its eyes on the future. The region is in the process of hiring two alternative fuels and renewable energy experts to help shape the region ability to fully support DESC's vision and warfighter requirements, said Keyes. "DESC has a great opportunity to influence the energy independence of America while helping to create a substantial market for AFRE products," he explained. "We're very excited about it."

The region has also been hiring inventory management and accounting specialists, and Keyes points with pride to its efforts to hire and train from within and the QAR intern program as successes in workforce development.

"We take stewardship seriously in the region," said Sylvia, pointing to several Lean Six Sigma projects as examples of the command's commitment to continuous improvement and

Rudy Hession, Defense Energy Support Center Americas East inventory manager describes a location he supports. (Photo courtesy of DESC-AME)

Right: *Barbara Todd, logistics systems analyst for DESC Americas, discusses software installation issues with Gary Allen, Defense Logistics Agency information technology contractor.*

Below: *Defense Energy Support Center Americas inventory managers and inventory accountants attend Customer Relationship Management training.*

Bottom left: *Defense Energy Support Center Americas Commander Army Col. Bill Keyes congratulates Quin Bragasin for 40 years of government service.*

Bottom right: *Clayton Allen, Defense Energy Support Center Americas East quality assurance representative,on the right, inspects fuel trucks in Honduras in March. (Photos courtesy of DESC-AM)*

maximizing results for investment. In an effort to save costs and streamline acquisition timelines, DESC-AM participated in a project with DESC's Quality and Technology division to improve the pre-award survey process.

Another recent project involves efforts to revamp the Into-Plane inspection program, added Artrip. "Representatives from the regions contributed their skills and experience to the redesign. The product is now in the test phase and, with tweaking, will soon become DESC policy," he explained.

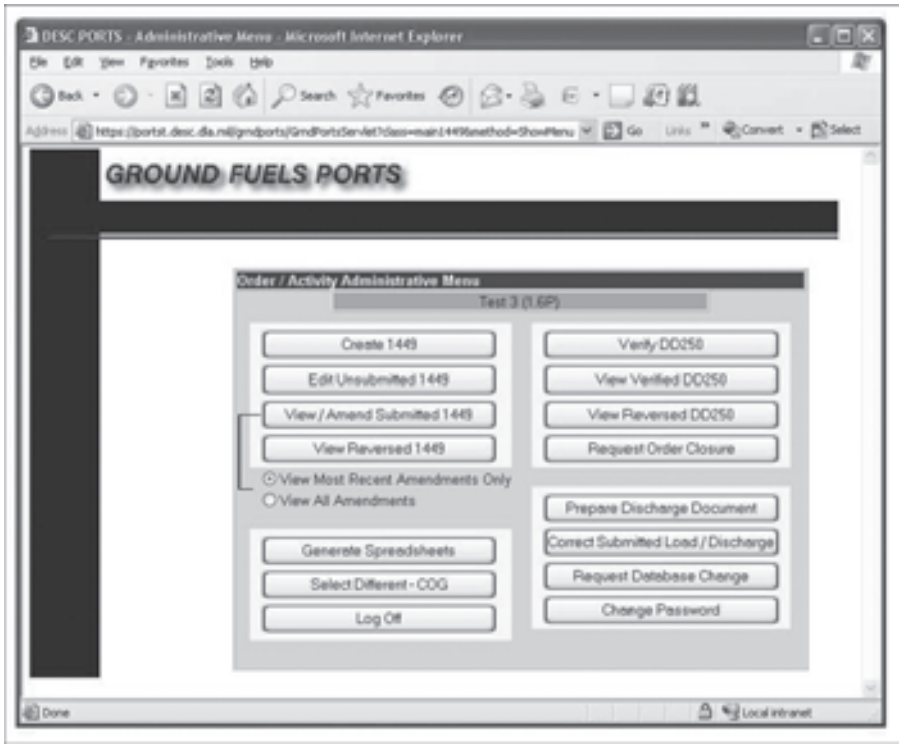
"We're using Lean Six Sigma to its best advantage and to our best advantage," Sylvia explained. "We're constantly looking for ways to better support the warfighter, enhance stewardship and provide opportunities for the team to grow and excel."

Tools of the Trade: PORTS

By James Charter
DESC Direct Delivery Fuels

Long before the latest trend of Internet tools such as Facebook and Twitter started helping people stay connected, the Defense Energy Support Center has been using the Internet to communicate with its vendors and customers. As part of the Defense Logistics Agency's initiative for automation, the Paperless Ordering & Receipt Transaction Screens application was implemented to support the bulk and commercial ground fuels business practices starting in 1999.

PORTS is a Web-based tool DESC developed to automate the process of ordering and the documentation of the shipment and government acceptance of petroleum products. Today, the software supports more than 900 bulk and 6,000 commercial ground fuels users. Users of this application include DESC inventory managers, activity regional managers, ordering officers, quality assurance representatives, vendors, and defense fuel support point and military service customers.



A screen shot from the Defense Energy Support Center's PORTS application.

PORTS provides many benefits to DESC and its customers, said Kathryn Fantasia, director of DESC's Direct Delivery Fuels.

Available electronically via PORTS are previously hardcopy-only forms such as Order For Commercial Items (SF1449), Order For Supplies or Services (DD1155), the Material Inspection and Receiving Report (DD250), and the Tanker/Barge Material Inspection and Receiving Report (DD Form 250-1). Different users, such as the activity regional manager and the actual customer accepting the fuel, are all able to view and update their portion of the forms in real time. PORTS allows permissible parties to sign any of these forms through personal electronic signatures.

The automation in PORTS of these previously manual functions has resulted in fewer errors and a reduction of workload. PORTS reduces data entry by feeding active contract information into orders, receipts and invoices. It automatically sends e-mail notices of the order and receipt documents to all appropriate personnel. In addition to providing electronic versions of the forms, registered users have the option to retrieve and print hard copies if required.

PORTS also improves efficiency in the quality assurance processes. For example, when used for bulk petroleum, PORTS notifies the quality assurance representative that a DD250/250-1 is available for approval. The QAR can then enter and review quality specification data via PORTS. In addition, the quality specification data can be preloaded in the application in anticipation of the next shipment. PORTS also has the capability for submission of data from independent test labs via the Laboratory Information Management System upload feature.

For vendors using the invoice feature, PORTS promotes accuracy, compliance and faster payments by eliminating the paper process. PORTS allows vendors to invoice in compliance with standards established by the American National Standards Institute for electronic data exchange.

In addition, the application automatically retrieves and defaults the current price escalation figures every time a vendor creates an invoice. One of the major benefits for the vendor using PORTS to submit the invoice is that invoices are automatically paired with the shipment and receipt data, resulting in less opportunity for a data mismatch to occur. In addition, vendors are able to offer discount terms automatically on each invoice submitted for quicker payment. When submitted, the invoice data is attached to the DD250 shipment document as a complete package and stamped with a date and time that defines exactly when the invoice was received by the Defense Financial Accounting Service.

Lastly, invoicing via PORTS is free.

"Payments are more timely, which lets DESC avoid interest payments, and with significantly fewer errors. In short, PORTS invoicing is a win-win solution for everyone," Fantasia said.

PORTS has been an integral tool supporting the bulk and commercial ground fuels mission for DESC for over a decade. Its contribution in automating the management of petroleum provides numerous benefits to DESC and its customers. From initial implementation, to today's enhancements, the tool continues to be an important component in fulfilling DESC's vital role of providing fuel to the warfighter, said Fantasia.

Commentary

DESC Korea guided by warfighter

By Michael Holgate
DESC Korea

"Guided by Warfighter Needs" is one of the Defense Logistics Agency's three focus areas. It is a value that truly defines Defense Energy Support Center Korea and the way this office plans to support operations in its area of responsibility.

Having been an Air Force fuels specialist for 24 years and worked closely with DESC for most of them, I've always had a great appreciation for DESC and how the workforce takes this statement to heart. During my first career, no matter where I was—in the continental United States, the Pacific theater, or in one of the lovely places in U.S. Central Command's area, I have never run out of gas, and I have always been given the best support possible. Now that I'm part of DESC, I have a perspective on how DESC provides that level of support.

How does DESC do it over and over again? By doing their best at defining what the true warfighter fuel requirement is.

I can't speak for all the DESC offices, but I would like to share how we develop our wartime requirements in Korea. Admittedly, we are at a bit of an advantage in that we have a smaller theater of operations than most. Our service component representatives and other warfighting support agencies are located in close proximity to one another. This allows us to get together twice a year in a forum we call the PAG-K, or Petroleum Action Group Korea. These PAG workshops were started a few years back, and they have proven invaluable in accurately defining requirements. Here's how.

Invite everyone to the table

To start off, all the major players are invited. Multiple decision making representatives from the Army, Navy, Air Force, Marines and DESC attend. The workshop is hosted by the sub-area petroleum officer Korea in a location that varies from workshop to workshop around the peninsula. The first order of business is for representatives from each service component to go over their concept of fuel support and operations as it pertains to the governing operations plan. This allows everyone to have a complete understanding of who is doing what, when and where. This ultimately deconflicts demand on like resources. Once everybody is on the same sheet of music, we move to actually defining our fuel requirements.

The foundation behind defining our wartime fuel requirements comes from the Integrated Consumable Item Support System. ICIS does a great job of establishing an accurate baseline from the Time Phase Force Deployment Data of record. Since a TPFDD takes 18-24 months to fully develop, sometimes there is a need to tweak some of the planning factors based on combatant command-approved changes. We capture the ICIS data and these approved changes in our fuel model, which is nothing more than a massive spreadsheet. The model shows by location the inventory, issues, receipts and whether or not capabilities were exceeded for a 180-day period. This is no easy task to build.

Consider each location

The fuel model is then painstakingly reviewed by every attendee at the PAG. With so many locations to validate, this process alone consumes two full days of the workshop. But, the end result is worth it.

Things like aircraft bed down and sortie rates, fleet hospital establishment, reception, staging onward movement and integration of forces, convoy support centers, tactical assembly areas and maneuver intensities across the forces. We end up with an accurate depiction of fuel requirements at each location that is validated by each service component.

Once each location requirement is endorsed, DESC works backwards through each supporting defense fuel support point, truck loading racks, rail tank care loading racks, pipelines, commercial terminals, barges, and eventually, tanker slates to ensure the overall concept is supportable. This task is the most difficult, but we are not quite done.

Now that we know exactly how much fuel is needed, we have to finalize our efforts. First off, we submit our Prepositioned War Reserve Requirement to the U.S. Pacific Command Joint Petroleum Office for further validation and submission to DESC's Bulk Petroleum for inclusion into the Inventory Management Plan.

Involve the host nation

Like so many other theaters, we rely heavily on host nation support. To secure that support we then must build the 120-day, pre-approved Wartime Movement Plan for all rail or sea shipments. And, we must submit requests through the Wartime Host Nation Support Program for fuel trucks, tankage and terminal access to meet our requirements.

Phew…that is a busy week!

So in a nut shell…that's it. SAPO, DESC and military service components all working together to ensure we have it right. We capture the most accurate fuel requirements possible, expend tax payer dollars wisely and maintain a maximum state of readiness. This is a joint synchronized effort that works and has proven itself year after year.

Here at DESC Korea, we know we are guided by warfighter needs.

Demand response programs cut customer costs

Installations can save money and increase electrical grid reliability through demand response programs by voluntarily reducing electricity loads during peak consumption times.

By Jezabel Aviles
Installation Energy

The Defense Energy Support Center's Installation Energy is helping customers reduce their utility bills through enrollment in electricity demand response programs being offered by utilities, regional transmission operators and independent system operators nationwide.

Customers are more likely to participate in these programs when DESC is involved because of the energy contracting expertise DESC brings to the table, said Larry Fratis, acting chief of the DESC electricity and renewables division. The Installation Energy team can execute agreements that make it easy for customers to enroll, he explained.

"DESC's customer participation in the various demand response programs has grown exponentially and netted customers millions of dollars in energy costs savings," said Fratis.

Demand response, also known as load response, is a voluntary program offered by utilities that allows large scale power users to reduce their use of electricity at certain times when electricity prices on the power grid are most expensive or when there is an emergency event and the grid is at risk of blacking out. In exchange for an installation reducing its electricity load, the independent system operator or the utility distribution company provides financial incentives to participating customers in the form of credits to their utility bills. These credits have the effect of reducing the price the government pays for a kilowatt of electricity.

Government installations participate in demand response through entities called curtailment service providers who act as third party agents between the utility and the customer. By carefully monitoring an installation's electricity usage, CSPs help determine how much load the customer may curtail and then notify the installation as to when the curtailing event will take place. In exchange for this service, the CSP providers share a portion of the energy cost savings realized by the installation. However, since this is a voluntary program, there is no penalty if the customer does not participate.

In May 2008, the DESC Installation Energy Business Unit notified CSPs that the government was interested in establishing agreements with vendors authorized to provide demand response services throughout the U.S. To date, DESC has 12 signed master agreements with CSPs.

Since the inception of this program, DESC customers, which include the Navy, Army, Air Force, Department of Homeland Security, Department of Energy, DoD and Department of Veterans Affairs, have enrolled approximately 117,260 kWs and have received more than $1.8 million in credits to their utility bills. Fourteen new customers have enrolled this year.

"The great success of this program could not have been accomplished if not for the teamwork between DESC's Office of Counsel and the Installation Energy team," said Fratis.

Commentary

Customer outreach ala DESC Alaska

It's not the end of the world, but you can see it from here

By Maria Rodriguez
DESC Alaska

For some, a trip to Alaska is a journey. Traveling to a remote region in the largest state is a trek that even the most adventurous traveler should consider very carefully. Making a customer support visit to Eareckson Air Station on Shemya Island, Alaska, is such a trip. It's a trip I recently had the chance to take as an inventory control specialist assigned to the Defense Energy Support Center Alaska.

Alaska is one of the most challenging places for DESC to support. Its remoteness and inhospitable environment create unique logistical challenges. Because of limited road and rail networks, rugged terrain and sparse population, Alaska depends on barged fuel deliveries for a large portion of its fuel resupply—both to rural coastal or river communities and to military installations. No other location in the United States relies so heavily on this type of barge delivery network. And when delivery windows are driven by weather conditions, tides or sea ice formations, access to fuel in Alaska can be a matter of survival for many communities.

Jack Appolloni, Defense Logistics Agency Enterprise Support Alaska facility manager, joined me on our trip to visit the 611th Air Support Group at Eareckson AS. We wanted to become familiar with the facilities and see the operations of DESC Alaska's farthest customer. On Shemya, we met with several representatives of the 611th ASG to discuss current and future fuels requirements. We also toured a recently completed DESC-funded facility upgrade to the station's vehicle refueling service station.

DESC provided 4.5 million gallons of JP8 to Eareckson AS last year.

Eareckson AS sits on a two by four mile rock outcropping at the end of Alaska's Aleutian chain, 200 miles from Russia and 1,500 air miles from Anchorage. The island is actually closer to Russia and Japan than to any of Alaska's largest cities. Its location in the middle of the northern Pacific Ocean makes it an ideal refueling stop for military aircraft flying between North America and the Far East. Eareckson AS also serves as a divert field for in-flight

Top right: *An aerial view of Shemya Island, Alaska, where Defense Energy Support Center Alaska's customer Eareckson Air Station is located.*

Bottom right: *The remote U.S. Air Force facilities at Eareckson Air Station, Alaska. Inset into the photo is a snapshot of a Blue Fox taken on Shemya Island, home to the station.*

Left: *The pier on Shemya Island, Alaska. The Defense Energy Support Center Alaska team travels to great lengths to serve its customers.*

emergencies, a staging base for search and rescue efforts in the Northern Pacific, and a platform for the Cobra Dane radar system.

From Shemya, one can clearly see Attu Island, the site of fierce fighting between U.S. and Japanese forces during World War II, in the distance. The gun turrets and scattered signs warning of unexploded ordnance are reminders of the war. Shemya's close proximity to Russia also makes it very important in the National Missile Defense strategy. During WWII, Shemya was used as a staging point for the effort to re-take Attu Island from the Japanese occupying forces. After WWII the military's presence diminished until the Cold War brought a renewed interest in the Northern Pacific Region.

Today, there are no permanently assigned military personnel on Shemya. The 611th Air Support Group, based at Elmendorf AFB, Alaska, manages the contracted operations on the island.

Originally opened as Shemya AFB in 1943, the station had 1,500 workers at its peak in the 1960s. In 1956, Northwest Airlines leased Shemya Island from the U.S. government to use as a refueling station on its North Pacific route. During the 1980s, facilities on the island were upgraded, and many of the old World War II structures were replaced with modern facilities that remain today.

Shemya AFB was renamed Eareckson AS in 1993 in honor of Col. William O. Eareckson; he planned the successful retaking of Attu Island in 1942 and also led difficult missions against the Japanese on Kiska and Attu Islands. In 1995, Eareckson AS began a drawdown phase and converted to contractor support and maintenance for operation of the Cobra Dane radar system on the island. Today, Chugach-McKinley and Del-Jen Inc. operate Eareckson AS facilities for the 611th ASG as part of a U.S. Air Force base operations and support contract.

The weather on Shemya can change in a flash. In fact, we needed to stay several extra days due to fog and zero visibility on the island. Driving the only road that goes around the island, we saw that the rock is molten lava, very dense and black (thus the nickname for Shemya, 'the Black Pearl of the Aleutians'). The island is positioned between the Pacific Ocean and the Bering Sea, and the meeting of these two bodies of water causes hurricane-force winds and high seas that pummel the island on a regular basis.

The primary means of fuel resupply to Eareckson AS is by barge, which can be difficult due to the severe weather conditions. DESC-contracted deliveries are limited to two per year. Both take place during the summer months when the seas are calm enough to allow off-load operations at the island's single pier.

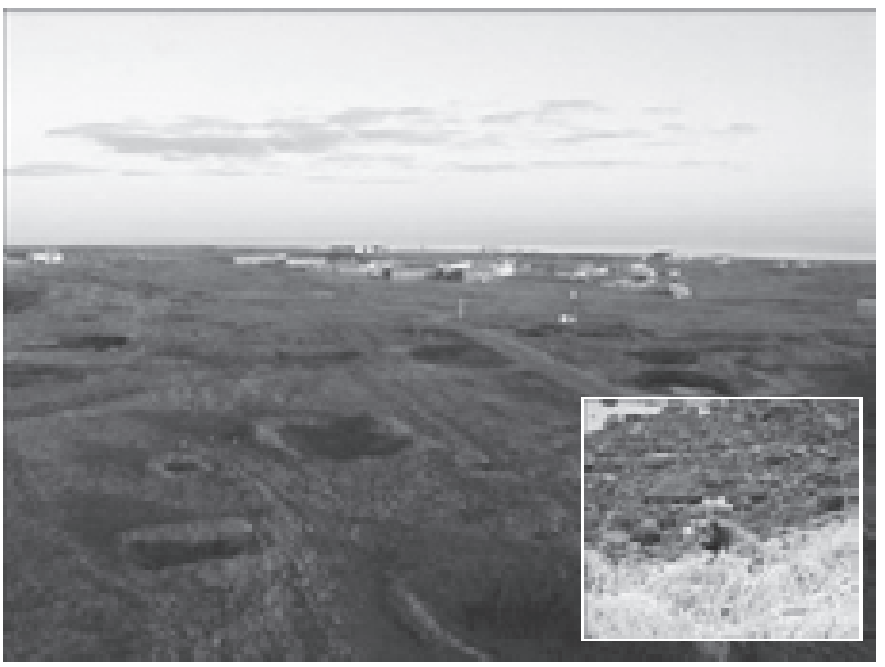
Another interesting feature is that the International Date Line bends around Attu Island, the last island on the chain. And although there are no native land mammals on the island, we did see several Blue Foxes, also known as scruffies, which were introduced by humans. They seemed tame, and they were always looking for handouts.

And, according to Appolloni, sometimes glass balls wash up on the beach that were used in the fishing nets of old Russian fishing boats.

The most recognizable feature on the island is the Cobra Dane radar system. It was built in 1976 and brought on-line in 1977 to gather intelligence to help verify terms of the Strategic Arms Limitation Treaty II. The primary mission was to track and collect data on foreign intercontinental ballistic missile and submarine-launched ballistic missile tests in the Pacific Ocean. Its greatest value now is to verify, safeguard and monitor the reduction of nuclear arms under the Strategic Arms Reduction Treaty.

Despite numerous logistical challenges, limited infrastructure and extreme distances, DESC's Direct Delivery Fuels and Alaska team together to meet ever-changing customer requirements in Alaska--the Last Frontier.

"Bottom line, DESC is working hard to provide the high level of energy support Alaskan customers have come to expect and appreciate," said Air Force Lt. Col. John Martin, commander of DESC Alaska. "'Support the customer, anytime – anywhere.' That's our motto."



New strategic alliance shapes future of aviation fuels

By Kelly Widener
DESC Public Affairs

The Defense Logistics Agency's Defense Energy Support Center and Air Transport Association of America, Inc., signed a strategic alliance agreement today in Washington, D.C., recognizing a partnership for the development and deployment of alternative aviation fuels.

The agreement highlights the shared goals of the Department of Defense and the principal U.S. airlines to advance the development and deployment of commercially viable, environmentally friendly, alternative aviation fuels.

"This is a significant step forward in the alternative fuels arena, and further shows commitment by the Department of Defense and the commercial aviation industry in our mutual goal of promoting energy security and safeguarding the health of our environment," DESC Commander Navy Rear Adm. Kurt Kunkel said.

Intent

The intent of the strategic alliance is to establish a collaborative forum focused on spurring aviation alternative fuels market growth.

This is a significant step forward in the alternative fuels arena, and further shows commitment by the Department of Defense and the commercial aviation industry in our mutual goal of promoting energy security and safeguarding the health of our environment --

Rear Adm. Kurt Kunkel
DESC Commander

"By collaborating, we reinforce our commitment to fostering the widespread commercialization of alternative jet fuel," said James C. May, president and CEO of ATA. "In the evolving landscape of alternative energy, it is in our collective interest to see aviation at the forefront.

"The airline industry and DoD collectively require more than 1.5 million barrels of jet fuel per day," added May. "By combining our talents and experience, we are better positioned to explore cooperative market engagement for fuel, improve the financial prospects for alternative fuels infrastructure, accelerate fuel certification efforts and refine our methodology for determining environmental impacts."

Kunkel noted that energy security impacts all DoD readiness, operations and business decisions. The DESC, along with the federal government and the rest of DoD, is transforming with regard to alternative fuel and renewable energy.

"Doing what is right for our armed forces is an ingrained piece of our mission at the Defense Logistics Agency and DESC. It drives us forward. Doing what is right also means doing what is efficient and in the best interest of our environment, while continuing to move forward with technology and energy advancements," Kunkel said. "The strategic alliance represents this commitment."

Organization

The alliance directs the formation of three collaborative teams composed of ATA and DESC representatives, with each team focused on specific developmental and marketing models of the alternative fuels goals.

May said that the Environment Team will identify common methodologies for life cycle assessment of greenhouse gas emissions for alternative aviation fuels. The Deployment and Logistics team will identify locations or regions suitable for alternative fuels production and deployment, as well as means of distribution to and from those locations. The Contracting and Finance team will jointly publicize supply opportunities, explore opportunities for complementary fuel-supply agreements and develop compatible pricing and finance mechanisms.

Already, the alliance teams are scheduled to participate in a special aviation session at the Advanced Biofuels Leadership Conference, Apr. 27-29 in Washington, D.C. They will also hold an industry forum at the 2010 DESC Worldwide Energy Conference where they will meet jointly with alternative fuel suppliers to discuss an array of projects across the country to deploy alternative aviation fuels. The Worldwide Energy Conference is scheduled for May 10-12 in National Harbor, Md.

Working together in the area of alternative fuels is not new between DESC and ATA.

Defense Energy Support Center Commander Navy Rear Adm. Kurt Kunkel and Air Transport Association of America President and Chief Executive Officer James C. May sign a Strategic Alliance for Alternative Aviation Fuels agreement March 19 at the ATA headquarters in Washington, D.C. The strategic alliance brings together the shared goals of the Department of Defense and the principal U.S. airlines to advance the development and deployment of alternative aviation fuels. (Photo by Susan Lowe)

Relationship

May added, "today's announcement is a key step forward in a long-standing relationship of collaboration between our nation's airlines and the military, and this alliance will generate tangible, long-lasting benefits for the entire country."

Through the combined efforts of the Commercial Aviation Alternative Fuels Initiatives, a working group composed of ATA and DESC, fuels produced using the Fischer-Tropsch process were approved for use in commercial aviation in September. Additionally, approval of a new class of fuels – hydrotreated renewable jet – is expected in the second half of 2010.

Customer focus

"Development of alternative fuels as an energy solution to our customers and the commercial aviation industry is still in the initial stages, but actions such as this alliance will make those potential solutions a reality as we work together and leverage our capabilities," said Kunkel. "We have outstanding, committed goals for alternative fuel and renewable energy in the future, but reaching our goals is a team and collaborative effort – no one can do it alone. This strategic alliance is creating one of those teams and we are happy to be part of it. "

DESC is responsible for the end-to-end supply chain management of petroleum products for the Department of Defense's customer base. The center's mission is to provide energy solutions worldwide in the most effective and economical manner possible.

ATA is the premier trade association for the principal U.S. airlines. The association serves the airline industry and its customers in providing the world's safest system of transportation, communicating technical expertise and operational knowledge to improve safety, service and efficiency; advocating fair airline taxation and regulation worldwide to foster a healthy, competitive industry; and by developing and coordinating industry actions that are environmentally beneficial, economically reasonable and technologically feasible.

DESC's telework program:
Popular option with room to grow

By Trista Holmberg
DESC Manpower and Workforce Analysis

The Defense Energy Support Center employs telework and other creative solutions to help improve worker performance and decrease commute times, traffic congestion and life stressors in DESC workers' daily routine. The telework program has been growing, and one business unit recently created a satellite office for employees to work closer to home.

In January 2001, DESC implemented the telework program with only a few employees enrolled. Since then, the program has grown tremendously. Currently, DESC has 516 employees signed up for telework.

The legislative mandate for telework, Public Law 106-346, established in 2000, "Directs each executive agency to establish a policy in which eligible employees may participate in telecommuting to the maximum extent possible without diminished employee performance." The law "…requires the Director of the Office of Personnel Management to provide that such requirements are applied to 25 percent of the federal workforce, and to an additional 25 percent of such workforce each year thereafter."

Another benefit of telework is the reduced number of vehicles on the road during commuting hours. The Washington, D.C., metropolitan area is second only to Los Angeles for having the worst traffic in the U.S., according to an online article on D.C.'s News Channel 9 Web site posted in July 2009. The area "…had more bumper-to-bumper traffic, surpassing Atlanta as the second

DESC supports Navy, Air Force

By Emma J. Smith and Farheena Khan
Bulk Petroleum

Defense Energy Support Center recently completed a hydrotreated renewable fuel buy for Air Force and Navy alternative fuel tests. The purchases, which were contracted for in August and September, were a continuation of DESC's ongoing support to the services' alternative fuels initiatives.

This is not the first time the team has procured product in support of the Air Force's testing and certification program. DESC Bulk Petroleum previously purchased Fischer-Tropsch Iso-Paraffinic Kerosene for the Air Force in 2007 and 2008. The military services are responding to goals of the Energy Policy Act of 2005 and President Barrack Obama's instructions to the federal government. These provide for an on-going assessment of alternative and renewable energy resources to reduce America's dependence on foreign oil.

The Navy and Air Force have established challenging goals to increase use of alternative energies. As a result, the services sought the expertise and assistance of DESC to procure hydrotreated renewable JP5, called HRJ5, for the Navy and hydrotreated renewable JP8, called HRJ8, for the Air Force in support of their respective testing and certification programs. HRJ5 and HRJ8 are new commodities for DESC.

The Navy requested HRJ5 fuel that consisted predominately of n-paraffins, iso-paraffins and cycloparaffins produced solely from triglycerides and free fatty acids derived from either plant or algal oils. The chemical and physical requirements of the finished HRJ5 were conform to those listed in the Navy specification for JP5. To minimize the variables during the initial testing, the Navy requested that the feedstock oil used to produce quantities of HRJ5 must come from the same source, and that the location and process used to produce the HRJ5 be identified to the service.

The Air Force requested HRJ8 fuel that also consisted predominately of n-paraffins, iso-paraffins and cycloparaffins produced solely from triglycerides and free fatty acids derived from either plant or algal oils. But, mixtures of plant and algal oils, or animal fat was also acceptable. The chemical and physical requirements of the finished HRJ8 must conform to those identified in the Air Force specification for JP8. The Air Force further requested that the volumetric proportion of feedstocks used to produce the HRJ8 be consistent throughout the contract period, that the type and number of feedstocks be the same for each delivery, and that the location and production processes be identified to the service.

After extensive consultation and coordination with the Navy and Air Force to clarify and finalize their requirements, the Bulk Petroleum's Domestic Fuels Division's specialty fuels team issued a solicitation. The Navy's purchase was to be 190,000 gallons of HRJ5, with 40,000 base year and 150,000 option quantity. For the Air Force

worst in congestion." The most recent findings from Texas A&M University's Transportation Institute show that "…drivers heading to work in the nation's capital and surrounding suburbs wasted 62 hours in rush-hour traffic in 2007, up from 59 hours."

Loss of family and relaxation time to the commute places a lot of stress on employees.

Fort Belvoir, Va., will be acutely aware of increased traffic congestion in the coming months. As a result of Base Realignment and Closure, Fort Belvoir will gain approximately 22,000 military and civilian employees by 2011. This will bring the total number of employees at Fort Belvoir to 45,000 by 2011. Allowing individuals to telework will help alleviate traffic congestion and provide drivers a safer and less stressful daily commute.

DESC Direct Delivery Fuels business unit is already tackling these issues. The organization moved an entire branch of its operation, including supervisors, senior employees, interns and Student Career Experience Program employees, to an alternative work site in Stafford County, Va.

"I like to call these employees virtual employees," said Kathryn Fantasia, director of DESC Direct Delivery Fuels. "Through the VPN, Virtual Private Network, employees have access to all their necessary files. Both employees and supervisors have adjusted to communicating through e-mail and setting up phone conferences — so there is absolutely no adverse impact on communication," she explained.

Fantasia says that with the newly opened work center in Stafford, "We shortened seven employees' commutes from more than an hour each way to about 15 minutes." This also freed up some desk space at DESC's Fort Belvoir facility where desk space is at a premium. In fact, DESC is trying to locate temporary facilities for some Fort Belvoir employees until a new facility can be built.

Another benefit of telework is as a recruitment tool that can assist managers in attracting, recruiting and maintaining a fully staffed, qualified work force. In addition, by decreasing employee commute times and other stressors, telework can help make employees more effective in their jobs.

Fantasia is a true supporter of the option and sees no downside. "Telework has not impacted our workflow or effectiveness," she explained, saying, "It's a valuable tool in every manager's tool kit. It provides flexibility to the work force, takes cars off the road, and even allows work to continue during adverse weather conditions. It also allows DESC to continue to meet the mission if there were a catastrophic event in the building or surrounding area," Fantasia said.

Editor's Note: DESC Public Affairs' Terry Shawn contributed to this article.

alternative fuel initiatives

the purchase was to be 400,000 gallons of HRJ8, with 200,000 base year and 200,000 option quantity. Subsequently, the specialty fuels team issued an amendment to the solicitation to add an additional requirement of 1,500 gallons of algal-oil derived HRJ5 for the Navy.

DESC held a pre-proposal conference prior to receipt of offers to advise potential offerors of the unique particulars in the solicitation. The team also wanted to answer any specific questions regarding doing business with DESC, the procurement process, quality and technical issues, specification requirements, and legal considerations. Approximately 40 companies and representatives from the Air Force and Navy attended the pre-proposal conference.

Subsequently, seven offers were received in response to the solicitation; all the companies were new offerors to Bulk Petroleum.

Next, the specialty fuels team coordinated discussions between the DESC negotiation team and company representatives to determine which companies were technically acceptable, and to discuss price and other considerations.

After detailed technical and price negotiations, four contracts were awarded.

Two contracts were awarded to support Navy requirements. Sustainable Oils LLC was awarded the Navy base requirement of 40,000 gallons HRJ5 using camelina feedstock, plus the 150,000 gallons option quantity. Solazyme Inc. was awarded the Navy requirement of 1,500 gallons of algal-oil derived HRJ5. The total dollar value of the contracts awarded in support of the Navy's testing and certification program is $2,887,500—$2.664 million to Sustainable Oils LLC and $223,500 to Solazyme Inc.

The Air Force requirement of 400,000 gallons of HRJ8 was split between two contractors. UOP LLC, was awarded a contract for 100,000 base gallons using tallow feedstock, plus 100,000 gallons option quantity. Sustainable Oils LLC received a contract for 100,000 base gallons using camelina feedstock, plus 100,000 option quantity. The total dollar value of contracts awarded in support of the Air Force testing and certification program is $13.08 million—$6.68 million to Sustainable Oils LLC and $6.4 million to UOP LLC.

Funding for the Navy's testing and certification program is being paid under the provisions of the American Recovery Investment Act of 2009, while the Air Force's requirement is being paid with fiscal 2009 budgetary funding.

During a time when the military services seek compliance with the Energy Policy Act of 2005 and President Obama has declared that America's dependence on foreign oil is one of the nation's most serious threats, DESC continues to grow its ability to help the services perform their missions while gaining energy independence.

Jet A or JP8?
That is the question

**By Master Sgt. Mark Walker,
Air Force Petroleum Agency, and
Richard Jaekel,
DESC Jet A Initiative team**

As the Department of Defense looks for ways to conserve money, move away from military specification products, and reduce dependence on foreign oil, the Defense Energy Support Center and the Air Force Petroleum Agency are teaming together on an effort to do all three.

Air Force Smart Operations for the 21st Century—conversion from JP8 to Jet A

The Air Force began this multipurpose effort as an Air Force Smart Operations for the 21st Century initiative by showing, through a business case analysis, that the Air Force could save approximately $40 million a year if converted from military specification fuel JP8 to a more readily available commercial jet fuel Jet A. The foundation for the analysis was two-fold: the reduced cost of fuel based on more competition and a reduction in fuel additives as the injection point is moved closer to the point of sale. As the demonstration progresses, there may be additional savings. These may result from more efficient product distribution or a reduction in reserve stocks because Jet A is commercially available. Moving away from strict military fuel specifications may make all these savings possible.

DESC and Air Force partnership

As you can imagine, one of the biggest challenges of the effort is the change necessary to the current supply chain. Knowing the supply chain implications and anticipating the potential benefits for DESC and DoD, the Air Force asked DESC to join the effort. DESC quickly rose to the challenge and established a joint initiative office to coordinate the supply chain challenges.

The timing for the demonstration was perfect, according to the DESC Jet A initiative project manager. DESC experienced a supply shortage within the East and Gulf Coast supply chain for JP8. Although DESC had other workarounds, this initiative enabled DESC to supplement the supply chain with Jet A in the most cost-

An additive injector and additive tank setup at Little Rock Air Force Base, Ark., which will be used to additize Jet A fuel.

Before the conversion to Jet A fuel, a fuel truck full of JP8 fuel approaches an aircraft at Joint Base Lewis-McChord, Wash.

effective way.

There were many moving parts involved in transitioning the Air Force demonstration locations to a commercial grade of jet fuel. The first hurdle was procurement of the product. One benefit of soliciting for a commercial grade product was the ability to accelerate procurement and award the contract in approximately four months. Concurrently, the DESC Requirement Management Team worked in conjunction with DESC Americas East and DESC Americas West to establish JP8 drawdown plans at the affected defense fuel support points. They coordinated with four bases selected for the demonstration for the receipt of Jet A. And, they moved any remaining JP8 tank truck customers to other DFSPs.

The entire process was not without its challenges, but in the end everything came together. While DESC was doing its part to get Jet A in the supply chain, the Air Force was preparing four bases to start using Jet A.

Demonstration begins at four Air Force locations

Currently, the Air Force is demonstrating the capability to receive Jet A and inject military additives at different points in the supply chain at four geographically separate locations: Dover Air Force Base, Del., Little Rock AFB, Ark., Joint Base Lewis-McChord, Wash., and Minneapolis St. Paul Air Reserve Station, Minn.

The Jet A fuel for Dover AFB flows from the Colonial Pipeline to DFSP Baltimore. From there, DFSP personnel inject Fuel System Icing Inhibitor, Static Dissipater Additive, and Corrosion Inhibitor/Lubricity Improver on the outbound barge shipment to the DFSP at Port Mahon, Del. Once at Port Mahon, the fuel is stored until transferred to the base. Future plans will involve moving the injection of FSII further downstream in the supply chain to a transfer line on Dover AFB between the large bulk storage tanks and the operating tanks supplying fuel to the flightline.

For Little Rock AFB, Jet A is delivered from the TEPPCO Pipeline to DFSP Jacksonville, Ark., before making the 6.5 mile pipeline trip to the base. Currently the necessary military additives are injected at DFSP Jacksonville, but once all the additive injectors are installed on Little Rock AFB, the Air Force will begin injecting FSII at the truck fillstands.

At Joint Base Lewis-McChord, the base receives Jet A directly from the refinery in Tacoma, Wash., via pipeline. At present, the complete additive package is injected upon transfer from the refinery to the base, but in the near future, FSII additization will be moved on base to the transfer lines between bulk storage and the hydrant fuel tanks.

As for Minneapolis St. Paul, Jet A without additives is received by truck directly from the refinery in Whiting, Ind., via a truck terminal loading rack in Warrenville, Ill. The fuel at Minneapolis is then loaded into Air Force refueling vehicles and sent to the flightline. There it is injected with all the necessary additives via truck-mounted additive injectors at the point of sale to the end user on base.

Additive injection technology improvements

Another key part of the demonstration is to highlight some of the newest additive injector technologies. During the demonstration, there are five companies installing injectors at 10 different points in the supply chain. The Air Force is learning a lot about the additive injectors and the base conversion process as a whole. The Air Force has met several challenges head-on to include product stencil removal and replacement difficulties, getting power for injectors, cold

An airman changes the product identification code on a vehicle to Jet A at Dover Air Force Base, Del.

weather impacts on additives, injector hardware and software changes, additive storage tank placements and much, much more.

"From a logistics perspective, the demonstration hasn't been easy, but the Air Force has been able to overcome every obstacle," said Mike Nelson from AFPET.

Data Collection

During the demonstration period, which is tentatively set for 12 months, the Air Force is gathering data on the equipment and labor costs of additive injection at the various points in the supply chain. They will also be learning a lot about the different additive injection technologies in case the data shows moving the injection forward in the supply chain is prudent.

The Air Force is also working with DESC to sponsor additional airframe and fuel infrastructure research that will be important to expanding the conversion outside the current airframes at the demonstration bases. The Air Force and DESC will be passing all the demonstration and research data to the Defense Logistics Agency Office of Operations Research and Resource Analysis, which will be developing a cost benefit analysis to help determine the future of this initiative. Part of the analysis will be trying to determine the financial impact to a gallon of fuel as the DoD dips into a larger and more competitive Jet A market.

That Jet A market is significantly larger than the JP8 portion, as, in 2007, 94 percent of all jet fuel produced in the continental United States was Jet A. Since DoD buys three billion gallons of fuel a year, even a small savings per gallon will net significant savings.

Program goals and decisions

This initiative is not only aimed at saving money and shifting away from military specification products, but also at helping to reduce dependency on foreign oil. Based on the Aviation Fuels Technology Review published by Chevron in the fall of 2006, refineries can produce a few percent more Jet A from a barrel of crude oil than Jet A-1, which is the commercial equivalent to JP8.

"Getting more fuel from each barrel of crude can reduce the overall need for crude imports," said Jim Richardson, AFPET. "Every little bit helps."

The question of "Jet A or JP8?" is still unresolved, but the answer is getting closer every day. Lots of work has gone into this demonstration up to this point, but there are still some major research and supply chain hurdles in front of the joint community. Critical research is either ongoing or planned regarding anti-oxidants, fuel additives, water management, filtration and infrastructure and operational impacts of the different fuel freezing points. Jet A has a freeze point of -40 degrees Celcius versus the JP8 freeze point of -47 degrees Celcius.

DESC and the Air Force, in coordination with the Army and Navy service control points, are hopeful this initiative is feasible and will save money, eliminate or reduce the need for military specification JP8, and also help reduce the nation's dependency on foreign oil.

The AFPET, DESC and Joint Initiative team expressed appreciation for several organizations essential to the demonstrations: Air Force Reserve Command, Air Mobility Command and the Air National Guard; DESC's Americas East and Americas West, Defense Fuel Support Point Management, Bulk Petroleum and Quality; and, the leadership and support personnel of the four demonstration bases.

"Their support has been critical to the success of the demonstration," said Nelson, "Without their assistance and help this demonstration would not be possible," Richardson added.

An airman at Minneapolis St. Paul Air Reserve Station, Minn., fills an additive injector tank on a refueling unit.

DESC provides key support for Haiti disaster relief

By Gerald Tinner
Direct Delivery Fuels

A magnitude 7.0 earthquake struck Haiti Jan. 12, causing more than $10 billion in estimated damages and taking hundreds of thousands of lives. Within two days, the U.S. Southern Command had begun the process to get boots on the ground by deploying the 82nd Airborne, making them one of the first units to begin Operation Unified Response Joint Task Force Haiti.

One of the immediate challenges was getting fuel support to the troops for their humanitarian assistance efforts. Over the years, Defense Energy Support Center and SOUTHCOM have collaborated to provide support to numerous exercises under very difficult situations. The Haiti earthquake presented DESC with the challenge of providing fuel under extremely adverse circumstances with lives at stake.

Defense Enegy Support Center Americas East quality assurance representatives Stan Burns and Mike Meacham inspect fuel infrastructure in Haiti just days after the earthquake. (Photo courtesy of DESC-AM)

On Jan. 15, a Ground Fuels division of DESC's Direct Delivery Fuels received the first request from SOUTHCOM to procure 8,000 gallons of diesel fuel.

Initially, there were several obstacles to overcome in order to meet this demand. Lines of communication in Haiti were down, and the only source of communication was through a few individuals with satellite phones. Additionally, there weren't any relationships with vendors in Haiti that could be leveraged to meet the requirements of the support requested. Subsequently, the search was expanded to find vendors who could provide support from the Dominican Republic to Haiti. This was challenging as vendors with whom DESC had a relationship were unable to cross the border into Haiti or required military escort. The source would have to come within Haiti or new vendors would have to be found.

Another major challenge was the language barrier. Fortunately, when contacting new vendors in the Dominican Republic to assess their capabilities, two DESC Spanish-speaking team members stepped up to translate.

The tanker ship Iver Progress is visible at the end of a damaged pier in Haiti just days after the Jan. 12 earthquake..

To make the situation even more challenging, DESC had no fuel storage or dispensing capability in Haiti.

In order to meet this initial fuel request, a contracting officer from DESC's ground fuels division contacted Haitian-based petroleum company SOL Petroleum. Despite earthquake damage, the terminal was opened specifically to provide DESC with the initial 8,000 gallons of diesel. Not only was the fuel provided, but a truck was also staged as temporary storage to mitigate storage issues.

DESC's Direct Delivery Fuels subsequently established a sustainment support contract with the petroleum company to provide fuel to DESC.

On Jan. 19, DESC employees communicated with current contractors for support of relief efforts, and a plan was developed that subsequently provided the necessary sustainment support for Operation Unified Response. The contractor's flexibility and immediate responses to overcoming in-country challenges allowed the relief operations to continue.

As operations in Haiti now move to sustainment and local fuel companies return to full operating capacity, fuel support becomes more routine and supportable. But during the early days of Operation Unified Response, the DESC team, SOUTHCOM, DESC regional offices, and our commercial partners met a critical fuel requirement that enabled rescue and rebuilding operations to begin.

Below: *A fuel transfer takes place in Haiti. Foster Fuels Inc., a Defense Energy Support Center contingency contractor, deployed people and tank wagon trucks to Haiti. CAM International provided the fuel, which originated in the Dominican Republic and was brought across the border into Haiti. (Photo courtesy of DESC-AM)*

Top: *Defense Energy Support Center America's East quality assurance representatives Mike Meacham, foreground, and Stan Burns, background, observe operations at a pier in Thor, Haiti, with Joint Task Force Haiti member Army Sgt. 1st Class Scott Kastner. (Photo courtesy of DESC-AM)*

Above: *Fuel operations at the SOL Petroleum terminal in Haiti. Defense Energy Support Center employees worked with regional offices, U.S. Southern Command and commercial partners to procure 8,000 gallons of diesel fuel requested to support relief efforts after a magnitude 7.0 earthquake struck Haiti, Jan. 12. Despite quake damage to the terminal, SOL opened it specifically to support these requirements.*

New green station provides alternative fuels

By Viki Metzger
DESC Direct Delivery Fuels

The first Defense Energy Support Center contractor-owned, contractor-operated "green station" dispensed its initial tankful of ultra-low sulfur diesel Mar. 3 at Fort Bragg, N.C. This new facility, inspected and accepted by DESC Feb. 22, answers congressional alternative fuel mandates by providing a facility for E85, ULSD, and biodiesel, which were previously unavailable on the installation. The station began dispensing alternative fuels on Feb. 26, beginning with E85.

The new "green station" dispenses three types of alternative fuels—E85, a blend of gasoline and up to 85 percent denatured ethanol used in flexible-fuel vehicles; B20, a vegetable oil or animal fat-based diesel fuel blended with petrodiesel, most commonly distributed for retail diesel; and ultra-low sulfur diesel, a refined fuel with significantly lower sulfur content than regular highway diesel.

Because the station provides convenient refueling capability on Fort Bragg of products previously only available commercially off post, it saves money.

In May 2008, DESC received a request from Fort Bragg headquarters to provide E85 fuel, ultra-low sulfur diesel and B20 alternate fuels for non-tactical vehicle fleet refueling support. The request projected 700,000 gallons of B20 and E85 would be required annually to fuel more than 600 non-tactical flexible-fuel and B20-capable vehicles, General Services Administration-leased vehicles requiring alternative fuels, and ground equipment.

Below: *The first DESC "green station," located at Fort Bragg, N.C., represents the leading edge of fueling technology. The station's three islands have double-walled underground tanks and pipes and solar-powered lighting. The site includes a "bay saver" separator to remove contaminates and pollutants from any storm water from the facility. That water is then sent into "bio-remediation" retention ponds that remove the remaining hydrocarbons before the water is released back into the environment.*

The request was a response to congressional mandates to become "greener." These include the Energy Policy Act of 1992 to purchase alternative fuel vehicles; the Energy Policy Act of 2005, which mandates use of alternative fuels in alternative fuel vehicles 100 percent of the time; and Sec. 246 of the Energy Independence and Security Act of 2007 that requires the installation of alternative fuel infrastructure at all "federal fleet fueling centers," which are defined as sites providing more than 100,000 gallons of fuel annually.

"This station highlights how DESC is a key enabler to the military services as they strive to meet their alternative fuel and renewable energy goals and objectives. Whether it's alternative fuel infrastructure support, assisting in reducing energy consumption through energy savings performance contracts, or procuring biofuels in support of their alternative fuel testing and certification efforts—DESC is proud to partner with the military services in meeting their mission requirements," said Frank Pane, director of DESC's Energy Plans and Programs.

DESC's Defense Working Capital Funds were allocated for the construction of a "green station" as an expansion of Fort Bragg's existing Long and Gruber Street superstation. Willbros Government Services began construction in August, but, as with many construction projects, there were unexpected delays. The adverse weather conditions in the winter of 2009 – 2010 caused significant delays.

There are three islands at the station, with two dispensing pumps each—one island for each product plus a ULSD rack to fill fuel trucks. The underground storage tanks are double-walled with interstitial brine filling and mechanical leak detection. The pipes from the storage tanks to the pumps are also double-walled. The entire facility has solar lighting. The collection pond is designed to retain any storm water from the facility and pollutants are removed by means of a "bay saver" separator that removes more contaminates than the traditional oil-water separator. Water from this separator is released into the "bio-remediation" retention pond, which removes the remaining hydrocarbons so that water can be released back into the environment.

Pacific fuel sites

A Hawaiian Stilt at Marine Corps Base Hawaii Kaneohe Bay. (Photos courtesy of DESC-PAC)

A sea otter dines on shellfish alongside a barge loading jet fuel in Valdez, Alaska.

By Richard Knapp
DESC Japan

The Department of Defense and the commercial petroleum industry must work hard to ensure their activities do not harm the environment. That effort applies equally to both big installations and smaller facilities like fuel terminals.

Defense Energy Support Center Pacific region is host to a wide variety of wildlife. That area of operations includes Alaska, Hawaii, Guam, Singapore, Korea and Japan.

Rather than acting in conflict with nature, many times fuel terminals can benefit wildlife and even serve as sanctuaries for long-time residents. In other cases, they end up temporarily confining visitors that have wandered inside with no harm done.

Over time, our facilities can become a last refuge as urban sprawl overtakes an area. Years of operations have generated more than a few stories to tell regarding unique visitors to and residents of our activities in the Pacific.

Known as the last frontier, Alaskan sites may be the most accustomed to co-existing with wildlife. At remote locations like Eareckson Air Force Station, at the end of the Aleutian Islands, Russian Blue Foxes roam the pier area and shoreline looking for food. These foxes are descended from the original animals left behind when Russian settlers abandoned their fox farms. In the Alaska interior, moose and other large creatures regularly show up at terminals, valve boxes and construction sites. As recently as December, a moose had to be coaxed out of a terminal area. At coastal barge loading sites like Valdez, sea otters float by on their backs feasting on shellfish. Water birds including diving ducks and cormorants, pepper the waters, while overhead bald eagles and osprey circuit through the area.

Hawaii has a much different style of animal life to interact with. On Oahu, Marine Corps Base Hawaii Kaneohe Bay manages its Nu'upia Pond and wetland areas specifically for endangered bird

coexist with wildlife

life like the *Ae'o*—the Hawaiian Stilt. On the northeast corner of the base, the Ulupa'u Crater is an even more protected area dedicated to nesting colonies of thousands of sea birds including terns, boobies and noddies. Monk seals frequent those shorelines.

The island of Guam is also notable for its resident creatures and DoD interaction with them. There are tales of *carabao*, the local water buffalo, roaming wild along portions of the fuel pipeline that runs from the Navy port to Andersen Air Force Base. Terns and other sea birds can be viewed on the bases.

Perhaps most significant are the invasive species that have been introduced on the island, like non-native insects or the cane toad. Most destructive of these has been the brown tree snake, which is thought to have arrived on a cargo vessel following World War II. With no natural predators, the snake overran the island and disrupted populations of birds and small animals.

Today DoD assists in the protection of Guamanian wildlife to combat these invasive species. Bases deploy snake traps on their fence lines. Military working dogs have been trained to detect the brown tree snake inland, and are at work in port areas to prevent any future arrivals. On the north end of the island, Andersen AFB's own sixty-acre Area 50 is used for multiple efforts in support of reestablishing threatened species. That acreage was cleared of snakes, and the perimeter was secured in support of re-introducing the Guam Rail, the Guam Kingfisher, and other bird life specific to Guam.

In still another example, a small island like Singapore enjoys its own flavor of animal life and lore. The British Royal Navy has its Senoko Fleet Fuel Depot there, which maintains an agreement with the U.S. to receive and issue DLA-owned product to our ships. Its above-ground storage tanks were built as far back as the 1930s and 1940s—some of the cement canine paw prints date from that World War II era. The dogs, as part of the Senoko security patrol, provided early warning to the presence of snakes, especially in hours of darkness. Their warning capability is still relevant today—in recent years a 15-foot long Reticulated Python was captured inside the compound and turned over to a local zoo. Dogs also keep the two local monkey troops in their established domains. Monkeys can be observed on the fence concertina wire, but they don't approach the main operations areas.

Workers at the Royal Navy's Senoko Fleet Fuel Depot in Singapore hold a common resident of the island, a Reticulated Python. This specimen was more than 12 feet long, but the species can grow to nearly 30 feet.

On the other hand, terminals in the Republic of Korea have changed with the times. Back in the 20th Century when the Trans-Korea Pipeline was operated, out of the way terminals and pump stations tended to attract local wildlife. Pheasants, rabbits, snakes, weasels and others thrived inside defense fuel support points like the one in Pohang. Small deer were visible running outside the fence line. Even domestic black goats were deployed on the grounds as grass control over the tank berms and other areas. Snakes surprised the workforce in valve boxes and pump rooms—or by winding themselves up and down the exposed bolts on the sides of storage tanks alongside startled quality assurance representatives climbing the tank ladders.

But, times change. The goats were put out of work when they escaped a Kunsan location and caused a flight line hazard at a nearby airport. Pohang DFSP and many of the other pipeline sites have since closed and were absorbed by expanding cities.

Japan's facilities have had a more steady existence. The

A Russia Blue Fox arrives at the site of a barge discharge operation at Eareckson Air Force Base, Shemya Island, Alaska. The fox has been beachcombing.

Moose are regular visitors to fuel facilities in Alaska.

Left: *A moose wanders into the tank area of a terminal in December. This one took some convincing to vacate the facility, according to Richard Knapp of Defense Energy Support Center Japan. After the workcrew made some efforts to move the catwalks out of the way, they eventually intimidated the moose with a broom, causing her to back up and walk out the main gate.*

Below: *The moose lingers in the area before exiting through the main gate.*

Below right: *A moose wanders through a fuel construction site in Alaska.*

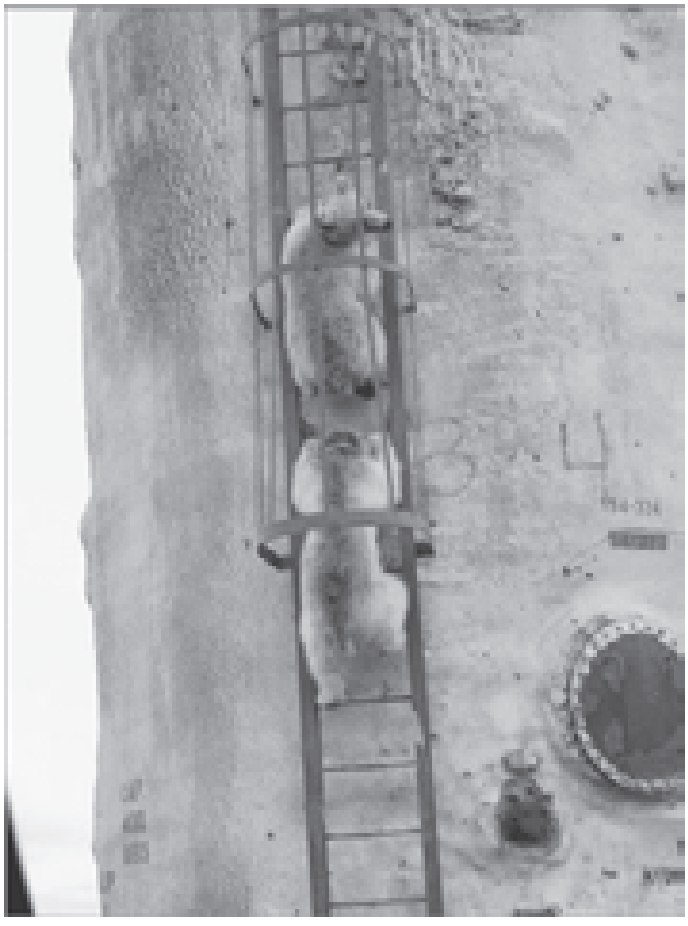
Japan environment runs from southern tropical island conditions to more rugged hills and forests in the north. In Okinawa, quality assurance representatives recall "huge manta rays" drifting under barges loading at pier side. Clear waters exposed fish, jelly fish and other marine life. Late night finishes for tanker loading revealed the surprising number of snakes within the refinery that came out to warm themselves on the road surface. The presence of the poisonous *Habu* made normal business like tank gauging a thrilling experience.

On the main islands, terminals like Defense Fuel Support Point Hakozaki near Yokosuka still serve as sanctuaries for wildlife, including some animals that might not otherwise survive in the area. The facility is actually an island separated from the mainland by a small channel of water. A ferry shuttles the workforce from shore to shore. Herons, egrets and sandpipers inhabit the shoreline, along with cormorants, grebes and seagulls feeding further out in the waters. Spot-billed ducks hang out at a small pond near the north dock where tankers load and discharge. Osprey fly by with fish held in their talons, while kites circle in the skies above. Large rabbits lunch on open fields of green grass. The most unique residents are the *tanuki*, or Japanese Raccoon Dogs, which wander the grounds.

All these locales are excellent examples of how military installations not only co-exist with the environment, but can even come to benefit the local wildlife in the long run. Over time this has become good business for everyone involved.

One of many dogs at the Royal Navy Depot in Singapore observes gauge measurements on an above-ground storage tank. Canines at the terminal provide security by keeping local monkeys away from the main operations and alerting workers to snakes after dark.

Defense Energy Support Center Pacific hears call of the wild



Left: *A Tanuki, or Japanese Raccoon Dog, is framed by piping while a tanker is loaded with jet fuel at Defense Fuel Support Point Hakozaki, Japan.*

Right: *Young polar bears cause mischief at a remote radar site in Alaska.*

All photos courtesy of Defense Energy Support Center Pacific

Biodiesel:
Are we headed for shoal water?

By Coast Guard Lt. Miles Randall
USCG Cutter Dependable

In a properly prepared, regulated environment, biodiesel is a proven alternative to 100 percent petroleum fuel. But, when a ship unknowingly receives biodiesel, problems arise. Clogged fuel lines and filters can cause a main diesel engine or ship-service generator to trip off line at the most inopportune time. Losing propulsion, ship's electrical power or both during a restricted steaming status transit of a harbor or other high traffic area would have potentially catastrophic consequences.

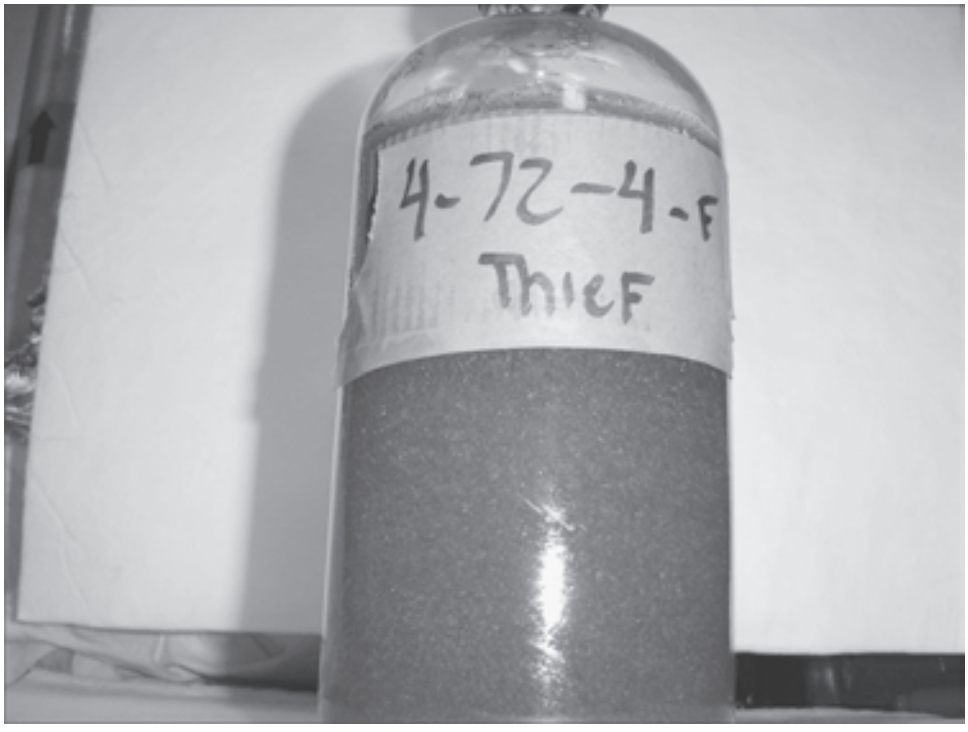
The engineers and fuel specialists of the U.S. Coast Guard Cutter Dependable learned firsthand some of the hazards of unknowingly taking on biodiesel in October 2008.

Biodiesel is a compound (fatty acid methyl ester, or FAME) produced from renewables that meets ASTM International specification D6751. This specification is recognized as the standard to describe and characterize biodiesel. Biodiesel is most often blended with petroleum diesel fuels and fuel oils, and the blends are used in the same manner as the conventional fuels. Although pure biodiesel can be used as a fuel, there are operational issues that generally discourage it. The most common materials used to produce biodiesel are animal fats, plant oils and recycled cooking oils.

Biodiesel blends are categorized by the percentages of mixtures with petroleum fuels. For example, a five percent biodiesel/95 percent petroleum distillate mixture would be classified as B5, 10 percent as B10 and so on. Pure biodiesel is known as B100.

According to the Department of Energy's National Renewable Energy Laboratory's Tech Pub 540-43672, dated January 2009, "biodiesel in concentrations of 6 percent to 20 percent can be used in many applications that use diesel fuel with minor or no modifications to the equipment." The Energy Policy Act of 1992, which mandates the acquisition of alternative fuel capable vehicles by federal government fleets, grants AFV acquisition credits for the use of biodiesel of at least 20 percent by the fleets.

It is important to recognize that biodiesel fuels are not merely diesel fuel mixed with plant or animal oils. The renewable oils have to be treated through a process known as transesterification in order to produce the actual biodiesel compound



This photo is of the 4-72-4-F storage tank. The gelling of the fuel is clearly evident, said Coast Guard Lt. Miles Randall, USCG Cutter Dependable.

On-load of biodiesel

In October 2008, the U.S. Coast Guard Cutter Dependable unknowingly lifted more than 10,000 gallons of

The Coast Guard Cutter Dependable and its crew transit through Cape May Harbor on their way home to Cape May, N.J., Sunday, Feb. 1, 2009. The ship unknowingly took on biodiesel in October 2008. (Photo by U.S. Coast Guard Petty Officer 3rd Class

biodiesel via barge in San Juan, Puerto Rico, prior to the approximately 1,500-mile return to home port. All pre-fueling procedures were conducted, and the sample drawn from the barge was clear and bright. A continuous-drip, in-line sample acquired throughout the refueling process in accordance with the in-line sampling program was also noted to be clear and bright.

There are no field test kits to detect the presence of biodiesel in commercially available diesel fuel.

Upon departing San Juan, all engines were operating within normal parameters, and the ship did not experience excessive fuel filter consumption. When Dependable entered the waters off Maryland, the cutter began to see an increase in filter use. As the ship proceeded further north, the ship-service generators were consuming primary fuel filters at the rate of one filter per eight operating hours. Both main diesel engines and ship-service boilers also experienced higher than normal filter consumption.

A mid-level tank sample was taken from the cutter's two main fuel oil service tanks. The fuel remained bright, however, it gave the appearance of gel-like globules throughout the sample. A cross-cut section of the paper filter elements also revealed the paper folds to be covered with approximately three millimeter-size gel-like beads.

It is of note that while the Cutter transited the warm Caribbean waters immediately after refueling, the crew was able to achieve positive results during a full-power trial of both main diesel engines. It was not until the ship entered colder waters (low-50s F versus mid-80s F) that the equipment began to experience problems.

[Later, following the confirmation of the presence of biodiesel, a small mid-level tank sample was placed in a compartment, and the thermostat was turned to 80 F. Within 10 minutes, the fuel sample was again clear and bright, and no globules were detectable upon visual inspection.]

Impact of lifting biodiesel

Upon returning to home port, Dependable had to pump off approximately 13,500 gallons of fuel. The increase of the total gallons compared to the amount lifted was due to the cross-contamination from bunkering partially-filled tanks. The total cost of fuel removal and tank cleaning was $7,500. After the presence of biodiesel was confirmed, the contractor who delivered the fuel to Dependable was put on quality hold by the Defense Energy Supply Center. DESC sent a quality assurance representative to inspect all DESC contractor and subcontractor operations in Puerto Rico. As a result, all Puerto Rican DESC contractors and subcontractors were placed on quality hold due to numerous quality assurance and quality surveillance problems.

The cutter filed a claim for reimbursement through DESC. Due to the cutter's strict adherence to the in-line sampling program procedures, the crew was able to accurately document the precise time and place of the lift. Following more than a year of review between the fuel supplier, DESC and the Coast Guard, DESC determined the claim was valid. However, the Coast Guard has decided to waive claim for the reimbursement, for other consideration as being in the best interest of the Coast Guard and U.S government.

In-line sampling program

It is important to highlight the importance of the ILSP. Had Dependable not been following the guidelines to the letter, the supplier could have disputed the claim and continued delivering biodiesel fuel. The fuel team of Bob Giannini and Tom Gahs at Surface Forces Logistic Center Baltimore proved to be invaluable as technical experts and resource managers. They served as liaisons between DESC, the cutter and the testing laboratories, ensuring chain of custody requirements were met, and all samples were properly processed.

Lessons Learned

Biodiesel is present in the fuel stream and available as a marine fuel source. Legally, a fuel company can sell B5 as an automotive fuel or heating oil in the U.S. without any requirements to notify the consumer, so Dependable is not the only consumer at risk. The Coast Guard representative at DESC, Chuck Willis, aggressively managed all administrative procedures during the claim process and ensured real-time data sharing between all interested parties. DESC has established requirements for adding biodiesel percentage as a line item analysis on fuel specification sheets. Lt. Sam Alvord, Coast Guard Office of Naval Engineering,diligently tracked the aftermath of the biodiesel lift and was an integral part in the tedious process of establishing long-range biodiesel management processes.

Proper documentation of fueling evolutions, in addition to the ILSP, greatly aided in the re-creation of events several months later. The processes tracked on Dependable include: date/time of lifts, total gallons and tank storage/rotation plan, type of delivery (i.e., truck, barge, pipeline, etc.), and the name of sub-contractor/trucking company. Providing daily sounding sheets in conjunction with burn sequence data both before and after the lift at San Juan proved to the satisfaction of all parties that the contaminated fuel was indeed bunkered at San Juan, Puerto Rico.

The total percentage of biodiesel in the fuel lifted is unknown. The laboratory ceased testing when the results quickly exceeded B20.

It is impossible to determine the quality of the transesterification process of the lifted fuel since it was not identified on the fuel specification sheet. Nor was the fuel advertised as containing a certain "B" rating.

At the time Dependable lifted the biodiesel, there were no field detection tests for the presence of biodiesel. In accordance with Fleet Advisory 11/09, DTG 161605Z DEC 09, when fueling in Puerto Rico, "fuel samples from the fuel delivery truck must represent an all-level sample from each truck and be tested for biodiesel." This line item requires the contractors in Puerto Rico to provide on-site test results of delivered fuel.

DESC is in the process of validating a commercially available hand-held biodiesel testing meter for use in the field. It is expected to commence field tests in early 2010. Until field test kits are readily available and biodiesel ratings are required on all fuel specification sheets, the only defense cutters fueling outside of Puerto Rico have is strict adherence to present policies and procedures. As in the case of Dependable, detection after a biodiesel lift can only identify which tanks have been affected, and help minimize further contamination until the fuel can be off-loaded and disposed of. In order to prevent placing ships and crews in danger, biodiesel must be aggressively managed both prior to onload and during consumption. Only through detection, communications and burn sequence organization can we ensure engineering systems are kept running.

Above: *This photo is an in-line sample taken from the starboard service tank, 4-143-1-F. It was taken after the fuel was exposed to two days of mid-50 degree F temperatures.*

Below: *This photo is of the ship-service boiler filter. The small gel-like globules are clearly present, said Coast Guard Lt. Miles Randall.*

References:

Biodiesel Beats the Cold, informational bulletin, published by the National Biodiesel Board, 2008.

Tech Pub 540-43672, published by the National Renewable Energy Laboratory, dated January, 2009

USCG Engineering Fleet Advisory 11/09, DTG 161605Z DEC 09

The face of the Defense Energy Support Center

One Face

Name: Shannon Wiginton

Job: Defense Energy Support Center Americas East quality assurance representative for fuel used by the military. I'm also the DESC contracting officer representative for Defense Fuel Support Point Tampa. I'm stationed in Tampa, Fla. I ensure fuel delivered and issued to our warfighters by truck, ship or pipeline meets all quality specifications necessary to mission success. This winter I supported President Barack Obama's visit to MacDill Air Force Base in Tampa by ensuring the fuel for Air Force One met all safety and performance standards.

Fuels experience: I began working in fuels in 1964 and worked in the private sector for 22 years before bringing that experience to the Department of Defense in 1986.

I began working as a QAR for DESC in 1988 when I was assigned to Singapore. Since that time, working for DESC and Defense Logistics Agency's Defense Contract Management Command [now the Defense Contract Management Agency] I performed fuel missions in 38 countries over 23 years. That includes Asia, Europe, Australia, Africa and North America, as well as several deployments to the Middle East.

Challenges and rewards of the job: I've really enjoyed working fuel logistics missions with our military overseas. It's definitely rewarding knowing that DESC provides the very best fuel to our warfighters, allowing them to be successful in their mission, and that my day-to-day efforts have been a big part of that.

A memorable mission: Supporting Air Force One. We sample the fuel delivery trucks scheduled to provide fuel then seal the trucks. Then while a military team secures the trucks, I deliver the sample to an independent lab, oversee the testing to ensure the fuel meets all military quality specifications and then report the results to the president's advance team. In Tampa, it was relatively easy, but supporting similar missions around the globe can often be quite challenging.

Future plans: I'm retiring in the Tampa area this month. My new job will be grounds keeper and pool boy for my wife. I plan to spend time with my grandchildren and take sailing lessons. When I really want to punish myself, I'll play a little golf!

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