



Statement of Qualifications



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Core Engineered Solutions, Inc. (Core) engineers, furnishes, and installs (EFI) environmentally compliant fuel storage systems that meet the highest standards for safety and reliability. Our capabilities range from providing pre-engineered systems for standard applications to complex large-scale systems. Our system expertise includes –

- Emergency power systems
- Vehicle dispensing systems
- Aviation fueling
- Marina fueling
- Waste oil
- Alternative fueling

Core works with owners, engineers and project teams to provide systems design expertise and comprehensive support through installation and commissioning.

- Founded in 1990 – Core Engineered Solutions was initially formed to manufacture and market the proprietary UL 2085 ConVault concrete encased Aboveground Storage Tank (AST), a technology developed for the storage of petroleum products. This pioneering system offered a less costly and superior alternative to upgrading or replacing existing underground storage tanks. Since that time, Core has developed its capabilities to become a leading provider of integrated fuel systems, having sold over 5,000 fuel storage systems to worldwide customers, ranging from independent owner/operators to Fortune 500 companies and all levels of government.
- Serve government, military, and commercial markets.
- Pre-engineered Factory-Assembled Storage Tank (FAST) Systems for standard fueling applications.
- Engineered-to-order custom system applications.

Safety. Compliance. Reliability.

Our mission is to provide integrated fuel storage and transfer systems that are recognized for being the safest, most reliable and code compliant solutions available.

Our innovative FastPlan capabilities and production methods set the industry standard for delivering project design, production and installation on time and on budget for any fueling application.

- Federal GSA contract (GS07F-011GA)
 - 361-20A, Aboveground Storage Tanks & Systems
 - 361-24, Fuel Management Systems/Units, Fuel Dispensing Units, Fuel Monitoring Systems
 - 361-27, Ancillary Services Related to Tanks and/or Systems, Fuel Dispensing Units and Fuel Management Systems
 - 361-28, Installation and Site Preparation for Tanks and/or Systems, Fuel Dispensing Units and Fuel Management Systems



Concept to Completion

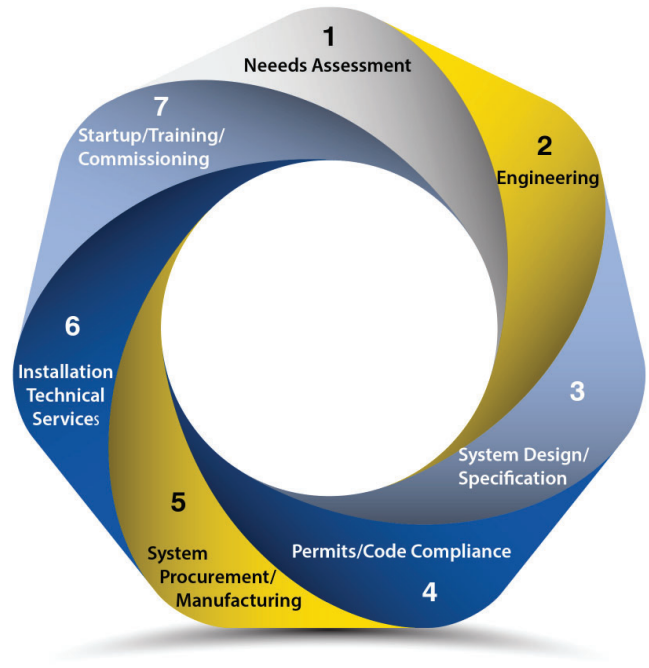
We assist facility managers and engineers up front to determine user facility requirements and the most efficient system design. Single-source design-build responsibility ensures system compatibility, timely production, coordinated delivery, superior quality and operating performance. Core's unique design-assist FASTPlan provides the essential information to jump-start projects.

Custom Solutions

Core specializes in integrating the best available technology and components to create a unified, efficient fuel system solution that meets the unique needs of each customer. It is difficult for manufacturers, distributors, and contractors to perform well as a system integrator. These firms have capabilities that fulfill other functions. Core is proficient in a variety of disciplines that focus on providing a single-source solution for all fueling applications. EFI services include the following:

- Needs analysis
- Cost estimates
- System design (BIM/3D CAD)
- Code compliance
- Customization of mechanical and control systems
- Component selection
- Production/Fabrication
- Implementation
- Commissioning/System validation

Customization can result in expensive fabrication and programming. Core efficiently oversees all fabrication and integration. Specific system drawings and wiring diagrams are produced for the entire system. System components are assembled and tested at the factory. These value added services save valuable time and reduce costs.



Core Engineered Solutions, Inc.

Federal GSA contract: GS07F-011GA

NAICS Codes: 332420, 237120, 336992

DUNS #: 623398922

DUNS # (CES Northeast, LLC): 965804540

CAGE Code: 0P5S8

Storage Tanks



The ConVault UL 2085 aboveground storage tank is designed to meet all regulatory requirements and provide maximum safety. The exterior vault design minimizes maintenance costs. This is the only tank available with a UL 752 Security Listing for ballistics.



The UL listed SafeSite™ below grade Fuel Vault system is comprised of a steel fuel tank enclosed in a seamless reinforced concrete vault. Fuel is safely contained and water is sealed out. Because the fuel tank is located within a vault that allows for easy access and visual inspection, the system is not subject to UST regulations since it is classified by the EPA as an aboveground storage tank.

Day Tank and Fuel Transfer Pump Sets



Includes all UL listed components, supply and/or return pumps and PLC based control cabinets.

Integrated Touch-Screen Controls



Total integration of all components assures performance and can reduce the number of individual controls needed when using multiple vendors.

SafeSite Advanced Filtration System



Filtration with the highest performance level certification (SAE J1488 ver. 2010 – removes 100% of emulsified water.

Powered By:
DieselPure

Stainless Steel Pipe Systems



Flexible, double-wall stainless steel pipe system with permanent leak detection capability. Eliminates intermediate joints and fittings.

Leak Monitoring System



Continuous vacuum leak monitoring system for double wall piping and tanks. This system is certified by the National Work Group for Leak Detection Evaluations.

Preferred Petroleum Equipment Manufacturers



Emergency Power

- Fuel storage
- Integrated fuel system controls
- Fuel transfer
- Fuel filtration
- Stainless steel pipe systems



Emergency Power/Boiler Fuel

Dispensing

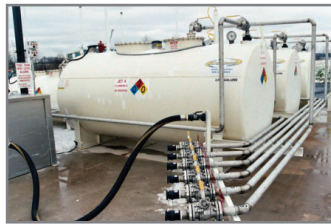
- Fuel Storage
- Fuel management systems
- Dispensing system controller
- Stainless steel pipe systems



Fleet Fueling

Aviation and Marine Fueling Systems

- Fuel Storage
- Tank monitoring and gauging
- Dispensing
- Fuel filtration
- Stainless steel pipe systems



Aviation Fueling Systems

Alternative Fuels

- Fuel storage
- Tank monitoring and gauging
- Compatible dispensing systems
- E10 and E85 Ethanol
- B20, B50, and B100 biodiesel
- Methanol and methanol blend
- Fuel management systems



Marina Fueling Systems



Alternative Fuels

Engineered-to-Order

- Fuel Storage
- Process systems
- Custom system applications
- Fuel skids



Engineered-to-Order

Frank B. Evans, Jr. – President

Frank has served as President of Core Engineered Solutions, Inc., since its inception in 1990. He is responsible for the overall leadership; and corporate goals, plans and strategies. Frank is a Certified Public Accountant and holds a BS from the University of Maryland and a MBA from the University of Southern California.

Jeanne Murphy-Murck – Vice President of Operations

Jeanne oversees all aspects of project management and company processes for emergency power, fuel dispensing, and specialty fuel system projects with a focus on regulatory compliance and best practices. She also manages product development and supply chain partnerships. Jeanne has a BA in Environmental Sciences from the University of Virginia and a MBA from George Mason University. Jeanne is a thought leader in the industry with active participation in the following organizations:

- Past Member, Petroleum Equipment Institute Board of Directors, representing District 11 for Manufacturers
- Member, Underwriters Laboratories Standards Technical Panel 142 for Aboveground Storage Tanks and Below Grade Vaults
- Member, Underwriters Laboratories Standards Technical Panel 87 for Power Operated Dispensing Devices for Petroleum Products
- Current Member, Petroleum Equipment Institute RP 200 Aboveground Tank Installation Committee
- Alternate Member, Steel Tank Institute SP001 Tank Inspection Standard Review Committee
- Past Member, Petroleum Equipment Institute Convention/Education Committee

Karen Evans – CFO

Karen has the primary responsibility for managing the company's finances, including accounting and reporting. Karen is also responsible for administration and insurance. Karen is a Certified Public Accountant and has a BS in Accounting from George Washington University.

Tarana Aliyeva – Project Manager/Engineer

Tarana creates and produces project related AutoCAD drawings, specifications, and other technical documents. She coordinates production scheduling, delivery coordination, project status correspondence, and services between manufacturers and customers. In addition, she assists in the processing of contracts, payments, and change order requests. Tarana's previous experience includes designing traffic and transportation plans for Wells and Associates and drafting shop drawings for the fabrication and erection of steel products for S. A. Halac Iron Works. Tarana has a MS in Civil Engineering from Volgograd State University in Russia.

Ian Leigh – Project Manager/Engineer

Ian is responsible for quality control, purchasing system components, and the coordination of production, installation and delivery of fuel systems. Prior to working at Core, Ian studied industrial engineering at Universidad de Piura, Peru, receiving a BS in Engineering Sciences. Ian previously managed operations and logistics at Precision Peru, an industrial equipment supplier in Peru.

Mitchell Ramos – Project Manager (CES Northeast, LLC)

Mitch is responsible for cost estimation, design consulting, project management, and drafting. He is also qualified in the inspection and maintenance of fuel systems. Mitch has a BS from Binghamton University.

Tony Ramos – Operating Manager (CES Northeast, LLC)

Tony is responsible for all operations in the Northeast region, as well as product development. He serves as the primary client contact for the design, sale, and installation support for fuel systems throughout the Northeast U.S. Tony's system application expertise includes fleet fueling, mission-critical power, aviation and marine fueling, and alternative fuels. Tony has a BS from SUNY Plattsburgh and is a certified Steel Tank Institute AST inspector.

Gene O'Brien – Vice President of Sales

Gene directs all aspects of fuel system sales for generators, vehicles and aviation applications. His experience includes managing projects for methanol fuel systems, ethanol and bio-fuels for wastewater treatment plant operations, as well as aviation refueling infrastructure. Gene's proficiencies include compliance with federal, state and local codes; technical design development and modifications; budgetary analysis; project management and implementation.

Deborah Ulbrick – Vice President of Sales

Deborah manages the federal sales market. This includes the Department of Defense and government agencies within the U.S., and internationally. Deborah advises customers on technical requirements, and provides specifications, drawings and customized proposals based on specific facility requirements. In addition, Deborah develops and maintains relationships with leading architectural and engineering firms nationwide. Deborah has a BA from the University of Western Ontario.

Jessica Evans - Assistant Controller

Jessica is responsible for accounting operations and IT related activities. Before joining Core in 2020, she held the positions of Chief of Inventory Management and of Marine Logistics Operations for worldwide bulk petroleum acquisitions at Defense Logistics Agency – Energy. Jessica served as the Agency's Technical Expert in all matters related to petroleum supply and distribution. Jessica holds a BS degree in Supply Chain & Information Systems from the Pennsylvania State University.

Chuck Nance – Construction Manager

Chuck has been managing the installation of fuel systems for Core since 2006. As construction manager, he oversees operations, coordinates subcontractors, and obtains permits and materials. He also assists clients with designing fuel systems, estimating costs, and writing specifications for bids. Chuck is responsible for the start-up and commissioning of new fuel systems as well as training personnel in the operation and servicing of equipment. Chuck's extensive industry experience includes management positions at Guardian Fueling Technologies Inc., National Environmental Service Company Inc., and Jones & Frank Corporation. Chuck has training/certifications in the following areas:

- Hazardous Waste Operations and Emergency Response (OSHA)
- UST Installation
- Xerxes Tank
- Containment Solutions
- Red Jacket Pumps
- EBW Tank Monitors
- INCON Tank Monitors
- Environ Pipe
- Total Containment Pipe
- Smith Inland Fiberglass Pipe
- Ameron Fiberglass Pipe
- Underground Corrosion Control
- FuelMaster Fuel Management Systems
- Omntec Tank Monitors
- STI -SP001 Tank Inspection

Nick Genghini - Lead Technician

Nick is the Lead Technician for Core field services, responsible for technical assistance, quality assurance, installation, customer training, STI-SP001 tank inspections, and warranty work for fuel system components. He has certifications for construction industry OSHA regulations and is also a factory certified technician for several petroleum equipment manufacturers, including ConVault, SafeSite, Franklin Fueling products, Pneumercator, Red Jacket, and Brugg. He is the only authorized Brugg trainer in the US. Nick holds a BBA degree from Temple University.



Federal

- Department of Defense
 - U.S. Air Force
 - U.S. Army
 - U.S. Navy
 - U.S. Marine Corps
 - U.S. National Guard
 - U.S. Army Corps of Engineers
 - Defense Logistics Agency
- Department of Transportation
 - Federal Aviation Administration
- Department of Commerce
 - NOAA/National Weather Service
- Department of Justice
 - Federal Bureau of Prisons
- Department of Homeland Security
 - Department of Immigration & Naturalization
 - Federal Emergency Management Administration
 - U.S. Coast Guard
 - Customs and Border Patrol
 - Federal Law Enforcement Training Center
- Department of Energy
- Department of the Interior
 - National Park Service
 - White House
 - U.S. Fish & Wildlife Service
 - U.S. Geological Survey
 - Bureau of Indian Affairs
 - Bureau of Land Management
 - Bureau of Reclamation
- General Services Administration
- U.S. Postal Service
- Department of Veterans Affairs
 - VA Medical Centers
 - VA National Cemeteries
- Central Intelligence Agency
- NASA
- Department of State
 - U.S. Foreign Service/U.S. Embassies
- International Boundary & Water Commission
- Department of Agriculture
 - U.S. Forest Service

State & Local Government

- Fire Department of New York City
- Southeastern Pennsylvania Transportation Authority
- Michigan State Police
- Maryland Transit Administration
- Pennsylvania State Parks
- Chicago Department of Aviation
- O'Hare International Airport
- Michigan Department of Transportation
- Port Authority of New York and New Jersey
- Baltimore Washington International Airport
- New York State Thruway Authority
- State of Colorado
- State of Nevada
- Baltimore County, Maryland
- New York Power Authority
- Massachusetts Department of Correction
- New Jersey Department of Transportation
- Birmingham Airport Authority
- Gwinnett County, Georgia
- New Jersey Parks and Forestry
- Port of Jacksonville
- Pennsylvania State Police
- Florida Department of Agriculture



U.S. Customs and Border Protection Sites Nationwide Vehicle Fueling Systems

Core furnished U.S. Customs and Border Protection with turnkey fueling systems at multiple sites throughout the country. This included design, production, installation, start-up and training. Electronic fuel management systems were installed at all sites for security and accountability. Systems were linked to a site PC and

have capabilities for remote monitoring. Core's pre-engineered fueling systems provided the Border Patrol with standardized equipment throughout the country.



U.S. Marine Corps Camp Fuji, Japan Vehicle Dispensing Systems

Camp Fuji, located at the base of Mount Fuji, Japan, is part of the Marine Corps Base Camp Butler complex. Camp Fuji's mission is to support military training by U.S. Forces. The USMC required secure fueling systems at the base to refuel a multitude of fleet vehicles.

The project included three separate refueling stations with a total capacity of 24,000 gallons. Each station included a split 4,000 gallon gas/diesel fueling system. Dual wall UL 2085 rated ConVault storage tanks were used to ensure the safest system possible. ConVault tanks are surrounded by six inches of reinforced concrete, protecting both the primary and secondary containment. Each tank included two twin hose high speed fuel dispensers, leak detection, remote fill system, hold down restraints and fuel management systems. Custom canopies were installed over each tank. The systems have given the Marine Corps added safety and environmental security. Camp Fuji has become a flagship fueling facility for the U.S. Navy within the Pacific Rim.



U.S. Coast Guard San Diego, CA Aviation Fueling System

Core was selected to provide a design-build aviation refueling system for the U.S. Coast Guard capable of fueling and de-fueling Jayhawk helicopters at 75 GPM and 47 GPM, respectively. The installation included three 12,000 gallon fuel storage tanks with multiple pumps feeding each tank. Each redundant system featured tanks, piping, control systems, tank monitor, filtration and spill containment. In addition, the scope of work required Core to

relocate an existing 400 Hz power system used to power the Helicopters. Core's scope of services included design assistance, manufacturing, procurement, installation, permits, inspection and training for the entire system.



Federal Emergency Management Agency (FEMA) Berryville, VA Emergency Power Fuel Vault System

FEMA Logistics center in Berryville, VA is one of eight centers within the continental U.S. designed to support first responders with equipment needed to manage an emergency situation as well as providing life-saving and life-sustaining resources for disaster victims.

For maximum security, FEMA chose to use an innovative SafeSite Fuel Vault to house their emergency power and boiler fueling tanks. The Fuel Vault is a unique concrete sectional vault created from a specially formulated concrete mix, factory poured in two parts, that encloses a steel tank. SafeSite Fuel Vault systems offer uncompromising protection for soil and groundwater. They also offer protection from corrosion, rising water tables and even the sudden impact of earthquake activity or an external explosion. Because the storage tanks are located within a vault that allows for easy accessibility and visual inspection, they are classified by the EPA as aboveground storage tanks (AST) even though they are located at or below grade.



U.S. Missile Defense Agency Romania and Poland Emergency Power Systems

U.S. military bases in Romania and Poland are part of NATO's overall ballistic missile defense system. The Aegis ballistic missile defense system is a key component in the phased deployment of a missile defense umbrella in Europe, to protect U.S. forces and NATO allies from regional threats.

Core provided ConVault tanks meeting UL 2085 and UL752 (Level VIII Ballistics). In Romania, Core provided one 8,000 gallon, one 10,000 gallon, and eight 12,000 gallon tanks. In Poland, ten 12,000 gallon ConVault fuel storage tanks were installed. Core created custom drawings for each component supplied and seamless delivery which was expedited to meet the time-sensitive nature of this project. All components were tested prior to shipping.



U.S. Air Force Diego Garcia Fleet Fueling System

Diego Garcia has been used primarily as a military base by the United States since 1973.

To service the fleet of vehicles at Diego Garcia AFB the U.S. Air Force required the purchase and delivery of two new 5,200 gallon diesel fuel storage systems. Diego Garcia AFB chose Core Engineered

Solutions because of Core's experience in manufacturing fuel storage systems for worldwide shipment around the world. Many of Core's installations are in remote locations such as Diego Garcia. The U.S. Air Force was able to use Core's GSA contract to purchase the fueling systems which allowed them to bypass the lengthy and often expensive bidding process.

Diego Garcia AFB chose two 5,200 gallon ConVault aboveground storage tanks as the cornerstone of its fuel storage systems. ConVault tanks were chosen in part because they are covered with a low maintenance concrete exterior that will not rust or corrode in a salt air environment. The systems included Astra fueling systems installed on each tank with separate fuel management systems to track vehicle history and monitor fuel consumption.



U.S. Department of Veterans Affairs Nationwide Replacement Fuel Storage/Dispensing Systems

Core has completed upgrades at 30 Veterans Affairs cemetery and hospital facilities throughout the U.S. Core's full scope of services under its GSA contract allowed the VA to rely on one point of contact for the design, procurement and installation of state-of-the-art equipment to replace existing underground storage tanks across the United States.

Most recently, Core provided upgrades to the fueling system at the VA Cemetery in San Joaquin California. Core's scope of services included the removal of two 2,000 gallon underground storage tanks and the installation of a 1,500/1,500 dual capacity ConVault tank for gasoline and diesel dispensing and related equipment. The new system was equipped with a fuel management system to help track vehicle history and monitor fuel consumption. In addition, Core provided all the materials, design, labor and testing necessary for the successful delivery and installation of a fully operational and compliant system. On-site labor included permits and approvals, unloading, setting, grounding, and electrical connections in compliance with all applicable regulations.



Fire Department New York (FDNY) New York City, NY Marina Fleet Fueling System

The FDNY is the largest municipal fire department in the United States. Their responsibilities include fire hazards, providing emergency medical services, technical rescue as well as providing first response to biological, chemical and radioactive hazards. FDNY Marine Battalion 6 required two new fueling systems to service their first response team.

Core provided project drawings, specifications, procurement, manufacturing and installation assistance for both systems. The facility design included an 8,000 gallon ConVault (diesel) marina refueling system to service a number of boats including a converted Navy Destroyer. In addition, the site required a 2,000 gasoline system to refuel other land based emergency response vehicles. Core assisted in getting approval for the first aboveground UL 2085 gasoline dispensing system in New York City. This fueling system consisted of a NYC approved ConVault AST.



DSNY – Bett's Avenue Incinerator Maspeth, NY Critical Mission Boiler Feed Fuel Oil System

The City of New York Department of Sanitation required substantial upgrades for the Bett's Avenue Incinerator Plant in Maspeth, NY. Core worked with the New York City Department of Design and Construction for support designing and supplying the new boiler plant fuel oil system. Core helped the engineer with the budgeting,

plan drafting and equipment specifications for the entire fuel oil system.

Core furnished five 9,978-gallon ConVault ASTs with submersible turbine pumps, tank immersion heaters, control valve assemblies for boiler supply and return, and control valve assemblies for remote tank filling and filtration; 2,000-feet of double-wall stainless steel piping; a Veeder-Root Automatic Tank Gauge to monitor the levels of five ASTs; three DieselPure Fuel Oil Filtration Systems; a SmartFill remote fuel oil fill station with on-board controls and pumping capability; and the Master Control Panel and Remote Control Panels to control all aspects of transfer, filling and heating of the fuel oil system.

System components were factory-assembled on the tank and tested prior to shipment employing Core's Factory-Assembled Storage Tank (FAST) Model which allowed the contractor to fully complete the installation of the fuel oil system in less than six weeks.



Brooklyn Navy Yard – Citywide Ferry Service Brooklyn, NY Marina Dispensing System

The NYC Economic Development Corporation selected the ConVault Aboveground Storage Tank to build a Citywide Ferry Service for public transportation at Pier C in the Brooklyn Navy Yard. ConVault was chosen for its UL Security Listing (ballistics), safety record, and economical life cycle costs. The City anticipated an estimated 4.5 million people would be carried annually by the 18 ferries and

determined they would require approximately 40,000-gallons of diesel fuel be stored on premises to dispense fuel to their new fleet.

Core provided four 9,978-gallon ConVault ASTs fully-outfitted with the necessary tank and pipe monitoring, submersible turbine pumps, and remote filling stations. Also, 1,600 feet of BRUGG Flexwell-HL piping was installed underneath the pier to service each of the six dispensers remotely located at the fueling docks.

The ConVault AST concrete exterior, together with the double wall stainless steel BRUGG piping are designed to withstand the harsh environment of being located on the banks of the East River.



Commercial and Institutional Customers

- Amazon Web Services
- British Petroleum
- Verizon
- General Motors
- Ford Motor Company
- UPS
- AT&T
- Motorola
- IBM
- DuPont
- USX
- 3M
- Pfizer
- Marriott Corporation
- Georgia Pacific
- JP Morgan Chase
- Siemens
- Tiffany & Company
- Indiana Michigan Power Company
- Pennsylvania Power & Light Company
- Mercedes Benz
- Capital One
- Lockheed Martin
- Verisign
- Macy's Department Stores
- MedImmune
- Abbott Laboratories
- Johnson & Johnson
- Wall Street Heliport
- Merck & Company, Inc.
- Air Products
- Coca-Cola
- Delta Airlines
- Time Warner
- U.S. Air
- Exelon
- Burlington Northern Railroad
- Dominion Power
- Goya Foods
- Raytheon
- Monsanto
- American Electric Power
- Avis
- Enterprise Rent-A-Car
- Entergy Corporation
- BMW of North America
- Bombardier Aerospace
- Bristol Meyers Squibb

Institutional

- Howard Hughes Medical Institute
- University of Rochester Medical Center
- Mount Sinai Hospital
- Bryn Mawr Hospital
- George Washington University Hospital
- Holy Cross Hospital
- INOVA Mount Vernon
- Shore Memorial Hospital
- Metropolitan Hospital
- Dartmouth College
- Harvard University
- University of Maryland
- Princeton University
- Seton Hill University
- Rutgers University
- Clemson University
- Johns Hopkins University
- University of Virginia
- Catholic University
- University of Notre Dame



University of Rochester Medical Cancer Facility (URMC) Rochester, NY

Factory Assembled Mission Critical Fuel Storage System

URMC required a safe and secure mission critical fuel storage and transfer system. Core designed and installed a system that includes two 6,000 gallon double-wall aboveground storage tanks which serve as the source of fuel for two generators. The system includes sub-base tanks, triplex pumps, Smartpump controls, and duplex filtration/fuel polishing.



Wall Street Heliport

New York City, NY

Aviation Fueling System

The Wall Street Heliport, located in lower Manhattan, is used for both tourist excursion flights and business air traffic. Due to increased demand, the Heliport required an extensive upgrade to its existing aviation fueling system. This was a particularly complex and difficult job due to New York's stringent environmental and safety regulations (this heliport is located on the East River, very close to "Ground Zero"). In addition, heavy air traffic combined with the changing tides and waves coming from boats along the river made for challenging installation conditions.

Core was selected to conduct the upgrade of this highly visible Heliport based on our unique experience and partnerships in the combined areas of high security fuel storage, aviation fueling and double-wall flexible piping systems. Core supplied and installed a Jet Fuel Pumping and Filtration System (PFT) designed to unload and filter fuel (at up to 200 USGPM). The fuel is then stored in a 4,000 Gallon NYC approved ConVault Aboveground Storage Tank (AST) which includes stainless steel fittings, transition box, control panel and fire suppression system. ConVault aboveground storage tanks are encased in concrete and carry a UL standard 2085 protected tank listing.

The system required nearly 600 feet of pipe to connect to the dispensing systems located on the floating dock. Core used 2" double-wall corrugated stainless steel primary and secondary piping to connect the remote dispensers. The inherent flexibility of the corrugated pipe compensates for changing tidal conditions without any fittings. The fuel is then delivered to helicopters via two separate remote dispensing systems which can refuel at 25-50 USGPM.



Baltimore Washington International Airport (BWI) Baltimore, Maryland Aviation Fueling Systems

Baltimore Washington International Airport (BWI) required upgrades for their Midfield Cargo Complex Fuel Farm. The design-build project called for a complex design that would enable off-loading of fuel transports at 200 GPM as well as bottom loading of refueler trucks at 180 GPM.

Core provided BWI with a total turnkey system that included design, installation, engineering, fabrication, start-up, training and support services. The finished system consisted of two 15,000 gallon fire-rated storage tanks; a 20,000 gallon oil water separator; and two aviation fueling modules for off-loading and dispensing. The PFT (pump & filtration) module consisted of a pump, filter/separator, relaxation tank and rate-of-flow control valve. The TLO (truck loading) module comes complete with fueling control valve, L.C. meter with printer, aircraft refueling hose and underwing nozzle. The system controls included a custom designed control panel with dual tank monitoring and hi-lo alarm annunciation and Scully Intellitrol System installed to provide overfill and continuous vehicle ground proving protection as well as deadman control functionality.



Harvard University Massachusetts BioDiesel Fleet Fueling

Harvard University converted its bus fleet to a more environmentally friendly Biodiesel system. To refuel these vehicles, the University required a fleet fueling system compatible with alternative fuels. Harvard chose Core Engineered Solutions because of Core's experience with alternative fuels and our pre-engineered solutions.

Core provided a turnkey installation that included design, drawings, installation and startup. The dispensing system included a 2,000 gallon concrete encased ConVault storage tank delivered complete with Astra pump and monitoring system. Both the ConVault storage tank and Astra pump are compatible with most alternative fuels including Biodiesel. A fuel management system including Windows based FMS software allows Harvard to accurately track fleet dispensing and fuel demand. Core also provided and installed a fence and a concrete barrier that matched the ConVault tank.



**Delta Airlines Engine Test Cell Facility
Atlanta International Airport, Atlanta, GA
Fuel Oil Piping Systems**

Delta Airlines recently completed the construction of the world’s largest engine test cell facility at the Hartsfield-Jackson Atlanta International Airport in Atlanta, GA. In order to transfer the Jet A fuel from the tank farm to the test cell facility, approximately one mile of three inch piping was necessary. The pipe system was required to be stainless steel for compatibility with the Jet A product being transferred.

Core’s solution for this requirement was to offer a flexible stainless steel piping system. The required material included three pipe drums (each 1,600 feet). Core technicians utilized a double-wall mechanical through coupling to connect the three lengths of pipe and maintain the secondary containment throughout the entire length of the installation.



**Coler Hospital Specialty Boiler Plant Project
Roosevelt Island, NY
Critical Mission Boiler Feed Fuel Oil System**

The New York Power Authority and NYC Health + Hospitals upgraded the boiler plant at Coler Specialty Hospital on Roosevelt Island in NYC. One of the key components of this project included upgrading the Hospitals fuel oil system that would provide fuel to four new boilers.

As part of the project team, Core assisted the engineers with the design, budgeting and construction review of the fuel oil system. Comprehensive technical support and oversight was provided over the 4 year project life to ensure timely fabrication of the specified equipment, cost controls, and the installation support essential for a system of this magnitude.

Core provided three 9,978-gallon ConVault ASTs with factory-installed and tested equipment, including supply and return control valves to and from the boiler loop. Core also provided the stainless steel piping solution, duplex fuel oil pump set, fuel oil filtration system and an integrated state-of-the-art SafeSite™ CMFTS Critical Mission Fuel Transfer System that controls all aspects of the fuel system, including monitoring the tank levels and secondary containment piping via vacuum, fuel transfer, and fuel oil filtration.

Core’s responsibilities included arranging a complex transportation plan for the delivery of the storage tanks to Roosevelt Island. The Roosevelt Island Bridge is not rated for the weight of the fuel oil equipment. Core teamed up with supply chain partners in the transportation industry to deliver and offload the equipment to the installation site via barge.



Memorial University of Newfoundland St. John's, Newfoundland Emergency Power Fuel Oil System

The Core Science Facility at the Memorial University of Newfoundland (MUN) required an emergency power backup fuel oil system to ensure the power at their facility was never out. Core provided MUN with a complete fuel oil system, including a 6,000-gallon ConVault Aboveground Storage Tank, SafeSite™ Duplex Fuel Oil Pump Set, and SafeSite Fuel Oil Day Tank and Transfer System.

The entire system is controlled through the integration of the SafeSite Fuel Oil Controls with a Master Controller located on the Duplex Fuel Oil Pump Set. This integrated system communicates with the Veeder-Root TLS-450 PLUS Automatic Tank Gauge which is monitoring the main fuel oil storage tank and Remote Control Panels at each of the generator day tanks. The day tanks are located on the penthouse floor of the building. The Master Controller and TLS-450 PLUS are both interfaced with the facilities Building Automation System to ensure that all communication and functionality are monitored easily by facilities personnel.

The ability to customize the SafeSite Fuel Oil Controls allowed for a simplified installation and unified operation of the emergency power fuel oil system. Core was able to re-engineer the project in order to reduce the number of controls manufacturers from four to two.



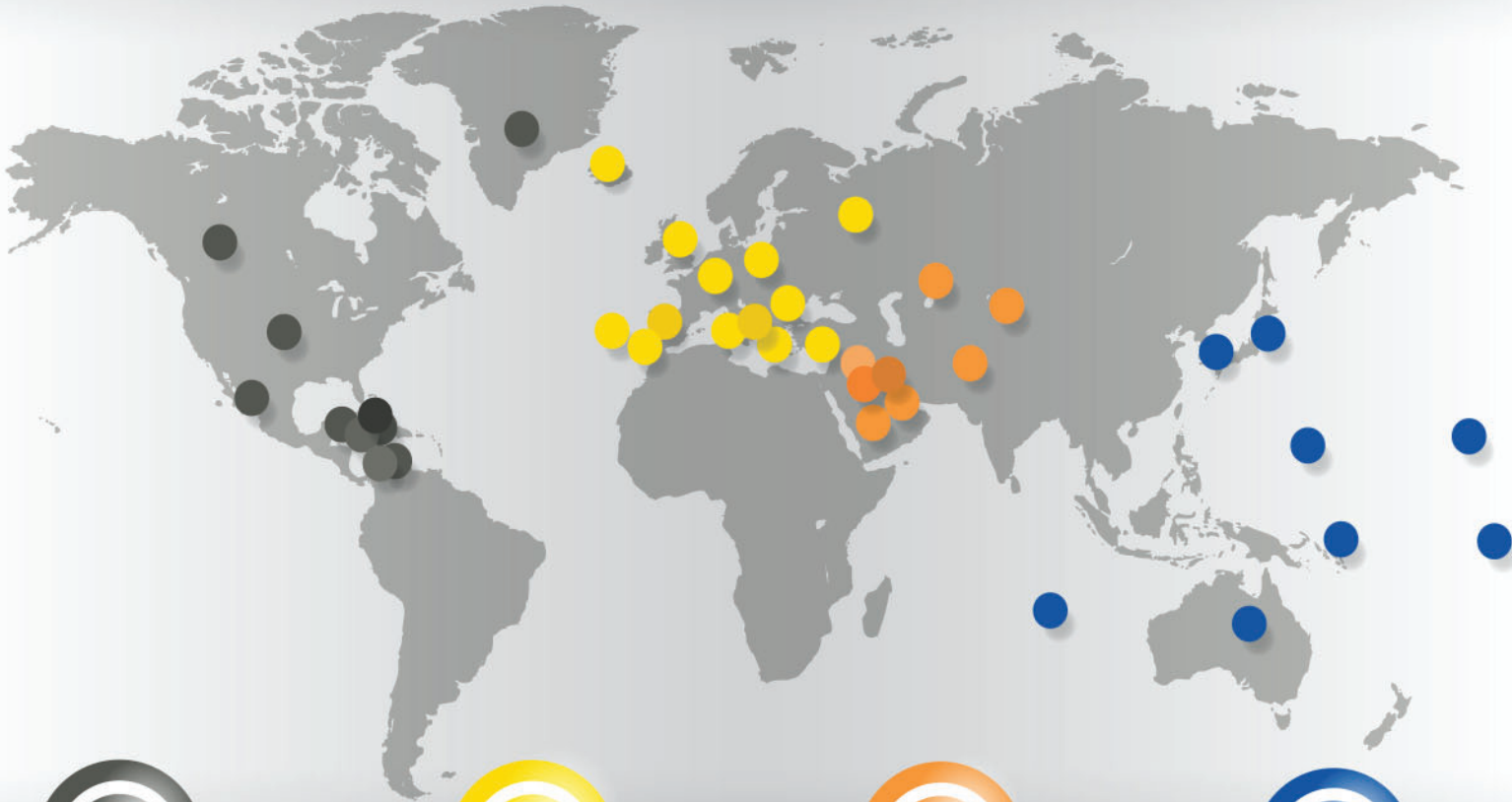
Hovione East Windsor, NJ Manufacturing and Process for Chemical Applications

The Portuguese pharmaceutical company, Hovione, required the expansion of their facility in East Windsor, NJ, to accommodate growth of their US business. Part of the expansion was a two-phase addition to their chemical bulk storage and transfer facility. The chemicals being used included: Flammable Organic Waste, Aqueous Hazardous Waste, Acetone, and Recovered Acetone.

Under the first phase of the project, Core was able to assist in a design-build solution to provide the customer with a comprehensive chemical storage and transfer facility, including a split compartment 12,000-gallon triple wall, cylindrical stainless steel storage tank with foam insulation for storing both flammable organic waste and aqueous hazardous waste; remote filling stations equipped with ground verification; custom-built internal vent condensers; nitrogen inerting valves; combination pressure vacuum and flame arresting valves; and, stainless steel emergency relief vents. Core also furnished a 96-Drum Chemical (Hazardous Materials) Storage Building with an integral containment sump, fire-rated exterior walls, fire suppression, explosion proof heaters, air exhaust, and air conditioning.

Components were made from corrosion resistant stainless steel. Nitrogen inerting valves prevent chemical vapors from building inside the storage tank. Internal vent condensers that utilize a Syltherm coolant are used to chill any evaporating product back to its liquid form.

Worldwide Installations



AMERICAS

- Greenland
- Canada
- United States
- Mexico
- Cuba
- Puerto Rico
- US Virgin Islands
- Aruba and Curacao
- Venezuela
- Haiti
- Jamaica



EUROPE/RUSSIA

- Iceland
- United Kingdom
- Portugal and Azores
- Spain
- Poland
- Germany
- Italy
- Romania
- Kosovo
- Greece
- Turkey
- Russia



MIDDLE EAST

- Kazakhstan
- Tajikistan
- Afghanistan
- Iraq
- Kuwait
- Qatar
- Saudi Arabia
- UAE



AUSTRALIA/ASIA

- Australia
- Korea
- Japan
- Guam
- Marshall Islands
- Pohnpei
- American Samoa
- Diego Garcia

International Services

Core provides design assistance and installation drawings for projects worldwide.

Equipment and materials are consolidated at one facility, inspected, tagged, and repackaged for efficient shipping.

System controls are tested at our production facility.



New York City Heliport



U.S. Coast Guard in New Jersey



Loudoun County, VA Sanitation Dept.



U.S. Navy Fuel Depot in Rota, Spain



Waste Water Treatment Plant in Maryland



U.S. NATO Facility in Romania