

Fuel-Saving Green Locomotive Debuts at NSA Crane

Base Accepts Delivery of First Environmentally Friendly Locomotive

A NEW ENVIRONMENTALLY friendly locomotive entered service at Naval Support Activity (NSA) Crane, IN in January 2011, helping to ship ordnance to U.S. forces around the world while also helping reduce the Department of Defense's consumption of fossil fuels.

The "N-ViroMotive" is a 120-ton switcher locomotive that runs on biodiesel fuel. It consumes half the fuel

ordnance transfer operations, and significantly reduce its impact on the environment." PWD Crane procured the locomotive and put it into service in mid-January 2011. After the first two weeks of operation, Sims reported that "it's already exceeding our expectations."

The locomotive is one of eight used to stage Crane Army Ammunition Activity (CAAA) ordnance for ship-

brand-new locomotives and overhaul one more. Sims said the new models' improvements will ultimately allow the PWD to support CAAA using fewer locomotives.

"This locomotive includes advanced engine technology, is lighter than our older models, and is more efficient and reliable," said Sims.

The N-ViroMotive uses a Gen Set engine, which is actually a series of

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of conventional models and is certified by the U.S. Environmental Protection Agency (EPA) for low emissions.

"This is a win-win investment," said Gerald Sims, Base Support Vehicles and Equipment branch manager for Naval Facilities Engineering Command (NAVFAC) Midwest's Public Works Department (PWD) Crane. "This new locomotive will last the Navy 20 to 25 years, provide improved reliability supporting

ment to U.S. forces around the world. PWD crews operate the locomotives along more than 95 miles of railroad running between magazines throughout the heavily wooded 63,000-acre base.

This was the PWD's first locomotive to be overhauled by Illinois-based National Railway Equipment Company as part of a plan to upgrade the base's fleet. Over the next two years, NAVFAC will purchase two

engines that turn a generator. The GenSet engine, matched with a system of computer and electronic controls, provides all the horsepower of a traditional single-engine locomotive, along with a 40-60 percent reduction in fuel consumption, 85-90 percent reductions in nitrogen oxide and particulate matter emissions, an 85 percent reduction in noise, and 35-50 percent lower maintenance costs.

"All of that means it can operate more efficiently, consuming less fuel and



A new environmentally-friendly 120-ton switcher locomotive, the N-ViroMotive, pulls ordnance cars at NSA Crane. It is one of eight locomotives used on base to stage CAAA ordnance for shipment to U.S. forces around the world. Procured and operated by NAVFAC Midwest's PWD Crane, it runs on bio-diesel fuel and is certified by EPA for low emissions.

Jayna Turpin

reducing maintenance down time,” explains Sims. “If this locomotive’s diesel power plant requires major maintenance or has any mechanical problems, we can just swap it out for another power plant that’s ready to go,” said Sims. “With the older models, it has been getting more difficult and time consuming just to locate repair parts before we can even begin repairs. With this new system we can swap out the entire power plant and install a new one within a day or so.”

Approximately 50-65 percent of the total fuel savings generated are derived from advanced Cummins Engine technology and design effi-

ciency improvements. Other fuel savings are achieved by an electronically activated and controlled system which monitors engine idling and, after a specified period of time, automatically shifts the engine or engines to sleep mode.

The N-ViroMotive’s cost, about \$850,000, was paid for through Base Support Vehicles & Equipment rate charges, mainly through CAAA mission surge support.

Established in 1941, NSA Crane provides high-tech acquisition and fleet support focused on ordnance, electronics, and electronic warfare for the Navy, Marine Corps, Air Force,

Special Operations Command, Coast Guard, the National Aeronautics and Space Administration and many other military, civilian and foreign military organizations.

NAVFAC Midwest provides civil engineering, public works, and environmental support to Navy, Marine Corps and other Department of Defense activities across the 16 states that comprise Navy Region Midwest. [↴](#)

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