



PRESS RELEASE

Telephone: (732) 323-2620
Fax: (732) 323-7676

News Release No. 5-3
Date: 2 May, 2003
www.lakehurst.navy.mil

Contact: Thomas Worsdale, Public Affairs Officer
Lawrence Lyford, Deputy Public Affairs Officer

Critical and unique aviation site

Jet Blast Deflector site and team support joint tests

Recently, a team at NAVAIR Lakehurst operated the instrumented Jet Blast Deflector (JBD) site for a Joint Navy/Air Force Joint Strike Fighter (JSF) baseline test for a NAVAIR crew systems team. NAVAIR sent an F/A-18E/F Super Hornet to the Lakehurst base to collect data for the even newer multi-service Joint Strike Fighter.

For the tests, the survey team placed the F/A-18 E/F aircraft in front of the JBD, reconfigured with special side panel cooling, developed by NAVAIR Lakehurst for the F/A-18E/F. A special holdback device held the Hornet stationary for the tests while aircraft thrust increased to full afterburner. As on an aircraft carrier, the exhaust wake was deflected upward by the JBD as if protecting other aircraft, equipment and personnel on the flight deck.

Nancy Tillmann, test operations site engineering manager, used support from the base's military, air operations, fuel department, crash crew, information management department, safety, in-service, police, information security, manufacturing, ground electronics, test operations people and public affairs to produce the cooperative team effort to accomplish the entire mission in just one afternoon and evening.

The JSF program required these tests to measure near and far noise levels for the baseline data as this new aircraft progresses through its development. Ultimately, the Navy will use all the new testing data to redesign its protective cranial helmets for flight deck personnel. The redesign goal is to maximize hearing protection and eliminate

ground crew hearing loss around the louder JSF aircraft. To do this, the services needed the JBD test site at NAVAIR Lakehurst to understand the complex environment created by engine exhaust dynamics around the newest aircraft just prior to launch.

The survey team used a night operation to exploit proper winds and other conditions. “The operation went very smoothly and the test team chose to continue operating and completed the program in one session,” according to Carl Carew, test site operations division manager. “We got 20 aircraft engine run-ups to full power for 35 seconds and got data from all 42 acoustic data points.”

This completed initial aircraft acoustic environment survey and obtained JSF acoustic/noise baseline data to help analyze the acoustics for the air and flight line crews on ship and ashore.

NAVAIR Lakehurst advances aviation readiness with this unique site whenever required. It is the only shore based JBD site in the world having a dedicated aircraft control zone and 5 nautical mile radius low traffic environment. The site’s uninterrupted airspace allows for unrestricted research and development testing. Its remote location, surrounded by the Pinelands, provides a natural sound barrier for aircraft noise.

Beside this latest test, the Navy uses the site to develop and evaluate JBD module design, component design, coatings, cooling systems and conduct acoustics testing while demonstrating aircraft compatibility with the JBD itself. The site includes a hydraulic system to raise and lower the JBD panels that aircraft carriers require and water based heat transfer system.

“The JSF program was a great joint program success in collecting the required JBD temperature and flow module data, wind directional data, and portable and stationary acoustics for both near and far and acoustics data,” said Tillmann. “Lakehurst successfully simulated JSF aircraft positioning utilizing the JBD’s hydraulic systems to raise and lower the JBD panels while circulating the required cooling water through the JBD to simulate full power during the

launch cycle required on aircraft carriers.”

