NAWCWD Quick Facts
China Lake & Point Mugu, CA NAVAIR

F-35 Foreign Military Sales (FMS) Reprogramming Laboratory

Mission. Provides mission data to foreign customers and a data production capacity for FMS F-35 aircraft.

Unique Features. The F-35 FMS Reprogramming Laboratory (FRL) will be part of the F-35 Reprogramming Enterprise that supports mission data production needs for all countries. The current construct of F-35 reprogramming includes two major reprogramming centers, one at Eglin Air Force Base, Florida, and the other at Point Mugu, California. Each reprogramming center consists of independent laboratories supporting dedicated customers with shared support services. When fully operational, these centers will be configured with mission data production, testing, and validation capabilities. These centers will use the latest available intelligence data to build and test mission data products and verify and validate these products prior to deployment.

RDT&E. NAWCWD provides hardware and software engineering, mission planning, sensor integration, pilot vehicle interface, software architecture, and systems design integration and test. The Division provides expertise in weapons integration such as stores management, fire control and stores, suspension equipment, loading supportability, and gun systems. Lethality assessment is provided for the entire kill chain from target detection and identification to weapon delivery and battle damage assessment.

Survivability and vulnerability efforts include live-fire testing and analysis, effectiveness of countermeasure systems, electronic defense systems, and signature expertise. NAWCWD provides engineering expertise in system security engineering, crew escape systems, and M&S support. F-35 subsystems development ground and flight testing are currently being conducted at various test facilities including the Radar Reflectivity Laboratory (RRL) and Sea Range at Point Mugu, as well as the Land Range at China Lake. Engineers also participate in verification and test planning. With the addition of the FRL to NAWCWD, mission data development, testing, and deployment will also fall into this list of capabilities provided to the F-35 program.

Size / Description / Location / Scope. 48,000 SF facility at Point Mugu with the ability to support multiple customers simultaneously and will include 15,000 SF of raised floor, RF shielded, secure laboratory space. In addition, the FRL will house a workforce of over 100 engineers, technicians, and other government professionals that work on FMS mission data products. **Year Opened:** groundbreaking winter 2014. **Plant Value:** $200M+.

Sub-Facilities

- **Mission Data Development Tools.** Capability to design, build, and unit test mission data
- **Mission Environment Development System.** Capability to build emitter simulations and scenarios
- **Verification and Validation System.** Capability to test mission data files in a real-time scenario driven environment
- **T&E Analysis Laboratory.** Capability to analyze data produced during verification and validation testing

Equipment / Instrumentation

- F-35 prime mission equipment (PME)
- Emulations of F-35 mission systems: distributed aperture system, electro-optic targeting system, weapons, and communication, navigation, and identification system
- Mission data development databases and unit testing capabilities
- Verification and validation system: instrumentation, scenario and test control system, data collection, and storage
- Spectrum simulation system: RF signal generation and scenario creation in real time