



HPAC

*(Hazard Prediction & Assessment
Capability)*

- Ronald Meris, HPAC Team
 - Collateral Effects Branch
 - Weapons Effects Division

DTRA Requirements

- Agency's current requirement: **The mission of DTRA is to reduce the threat to the United States and its allies from nuclear, biological, chemical (NBC), conventional and special weapons through the execution of technology security activities, cooperative threat reduction (CTR) programs, arms control treaty monitoring and on-site inspection, force protection, NBC defense, and counterproliferation (CP); to support the U.S. nuclear deterrent; and to provide technical support on weapons of mass destruction (WMD) matters to the DoD Components. HPAC is a Transport and Dispersion system that is forward deployable and used for counterproliferation, counterforce and counter-terrorism for weapons of mass destruction (WMD) for DoD and Civil Support.**

HPAC Capabilities

- What models are currently used for operations: **HPAC, Navy/AF Weather Models, DoD C³ (NIPRNET/SIPERNET), VLSTRACK**
- How does modeling capability meet agency requirements: **HPAC is distributed on a CD, designed for PC operation for T&D, and used for NBCR collateral effects in counter-force, counter-terrorism and counter-proliferation. Will be available on SIPERNET.**
- How are models evaluated: **HPAC modules and system-level performance are developed using extensive V&V evaluation criteria consistent with DoDI 5000.59, DoDI 5000.6, and traditional software practices as outlined in MIL-STD-498. HPAC has an extensive V&V history and associated documentation.**

DTRA Requirements cont'

- How current requirements are being met: **HPAC is the current program and a tool of selection that meets DoD and Civil Support requirements (includes NBCR source terms, high resolution wind field, transport and dispersion, and human effects).**
- New/Unmet Requirements: **The role DTRA and/or HPAC is going to play in collateral effects and consequence management for the urban environment and Real-time quantification of prediction uncertainty.**

HPAC Capabilities cont'

- Who are the users/what product is distributed and how/what are user training time requirements: **DoD--NCA, NMCC, STRATCOM, JFCOM, EUCOM, SOCOM, PACOM, USFK, JTFs, DIA, J2T, The USN Fleet, FNMOC, AFWA; DOE, DOJ, DOS, FEMA/ HPAC is distributed as well as DTRA Operations Exercise Support/ DTRA/CPWE conducts a 5 hour training course but HPAC use is going to be a self-taught Computer Aided program.**
- What are R&D activities aimed at unmet user needs: **HPAC has a rigorous program that continues R&D to meet all customer requirements; specifically, urban modeling for Civil Support Agencies, weather uncertainty, improved climate database with AFCCC, Smoke Model for US Army, NBC Messaging for STRATCOM, and Conventional Casualties for EUCOM.**