



# ORDNANCE EMISSIONS CHARACTERIZATION PROGRAM

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The U.S. Army Environmental Command (USAEC) leads and executes environmental programs and provides environmental expertise that enables Army training, operations, acquisition and sustainable military communities. USAEC supports the Army's mission of readiness and training by consistently integrating environmental compliance into all aspects of base operations; and promoting the well-being of Soldiers and Family members, civilian employees, and citizens of neighboring communities. Although USAEC's programs vary in subject matter and scope, each program is dedicated to furthering the Army's mission through environmental sustainability.

USAEC developed a comprehensive Emissions Characterization Program to identify and quantify (through testing) the emissions from approximately 220 munition items, including firing point (FP), exploding ordnance (EO), and smoke/pyrotechnic (SP) items.

The program tactically fires munitions as they are used in training, in a closed facility to capture the airborne emissions generated. The emission data is collected using state of the art sampling techniques. During each test, over 280 chemical species and particulates are monitored to determine if they are present, and in what quantities. In order to ensure valid data for the Army's future use, munition emissions are collected in accordance with U.S. Environmental Protection Agency (EPA) approved Detailed Test Plans. Testing is conducted at facilities located at Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland and at the West Desert Test Center (WDTC) located at Dugway Proving Ground, Utah.

The collected data will support Army responses to regulatory questions directed at many training and testing issues. Uses for this data include Health Hazard Assessments,



### For more information

U.S. Army Environmental Command  
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<http://aec.army.mil>

Environmental Impact Statements, Environmental Assessments, Resource Conservation and Recovery Act (RCRA) Subpart X Permits, Title V Air Permits, Emergency Planning and Community Right-To-Know Act (EPCRA) input, and Health Risk Assessments for surrounding communities. This data may also be used to support, define, and possibly modify future Army training and testing practices.

Coordination for this program has been established, and is ongoing, with agencies and laboratories with the U.S. Army, U.S. Air Force, and U.S. Navy, with review by the EPA Emissions Measurement Center, Research Triangle Park, North Carolina and the Clean Air Act Services Steering Committee (CAA SSC).

The Army has worked with the EPA since the inception of the program to ensure the program produces scientifically defensible emission factor data for the munition items used on training ranges. As a result, the EPA has accepted USAEC's munitions emissions factor data for publication in the EPA's Compilation of Air Pollutant Emission Factors, also known as AP-42.

