

## **Topic 4: Weapons Systems & Platforms (WP)**

Proposals in this area should address the current and future environmental liabilities associated with the design, construction, maintenance, repair and operations of Department of Defense weapons systems and platforms. Areas of interest include:

### **Manufacturing and Maintenance**

**Alternative Materials:** Demonstrate environmentally benign materials for application in weapons and platforms.

**Alternative Processes:** Demonstrate processes that eliminate or reduce the generation or use of hazardous or toxic materials.

**Alternative Inspection Methodologies:** Demonstrate new technologies for the inspection of weapons systems that would reduce the requirement for maintenance and overhaul.

**Monitoring and Control of Emissions:** Demonstrate technologies to detect and monitor hazardous materials used in industrial processes as well as the technologies to control the release of these materials into the environment.

### **Green Energetics**

**Alternative Materials:** Demonstrate new propellants, pyrotechnics and explosive materials that reduce or eliminate the release of toxic materials into the environment.

**Alternative Manufacturing Processes:** Demonstrate environmentally benign synthesis and production processes for energetic materials and munitions.

**Monitoring and Control of Emissions:** Demonstrate technologies to detect, monitor, and control hazardous materials used in munitions manufacturing.

### **Noise and Air Emissions**

**Diesel and Turbine Engines:** Demonstrate new technologies that reduce or eliminate the production of, or control the release of, hazardous or toxic air emissions or that reduce noise emitted from military turbine engines.

**Weapons and Munitions:** Demonstrate monitoring and control technologies that address air and noise emissions from weapons and munitions.

### **Waste Reduction**

**Ships:** Demonstrate technologies that reduce or eliminate liquid wastes from ships or control their release into the environment.

**Forward Operating Bases:** Demonstrate technologies that reduce or eliminate solid waste streams.

### **Greenhouse Gases**

**Alternative Fuels:** Demonstrate feasibility and assess the impacts of alternative fuels with reduced carbon lifecycle footprints in weapons systems.

**Weapons Systems Maintenance and Operations:** Demonstrate new chemical compounds with significantly lower global warming potential that replace “super” greenhouse gases such as hydrofluorocarbons (HFC) and sulfur hexafluoride (SF6).

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