SERDP and ESTCP

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Executive Director, SERDP
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DoD’s Corporate Environmental Technology Programs

- Basic and Applied Research
- Demonstration / Validation
What is DoD?

DoD is a Major Industrial Organization
8000+ Tanks

300 Ships

15,000+ Aircraft

320,000+ Buildings on 5,543 Facilities
2.2 Million Men and Women in Uniform + 600K Civilians
What is DoD?

DoD is a Major Industrial Organization

DoD is the Nation’s Fifth Largest Landholder
DoD Lands
29 Million Acres

Broad Diversity Of Ecosystems
What is DoD?

DoD is a Major Industrial Organization

DoD is the Nation’s Fifth Largest Landholder

DoD is Operational
DoD Installations and Ranges

Operational Ranges

Surrounding Communities

Cantonment
Environmental Drivers

Sustainability of Ranges and Range Operations

Maritime Sustainability
Threatened and Endangered Species

Unexploded Ordnance

Toxic Air Emissions and Dust

Urban Growth & Encroachment

Noise
Ecosystem Management

FT. Benning, GA Terrestrial

Camp Lejeune, NC Estuarine
DoD Energy Use
Total Site-delivered Energy (BTU)

Nation’s single largest energy user
(1% of total U.S. energy use & 78% of Federal energy use)

Commodity

Jet Fuel 71%
Electricity 18%
Natural Gas 8%
Fuel Oil 3%
Coal 1.6%
Steam 1%
Other 0.8%

$10.9B
919 Trillion BTU

Application

Vehicles 74%
Buildings 22%
Industrial 3%
Exempt 1%
Environmental Drivers

Reduction of Current and Future Liabilities

Contamination from Past Practices

- Chlorinated Solvents Remain Intractable
- Large Potential UXO Liability
- New Contaminants Emerging (Perchlorate)

Pollution Prevention to Control Life Cycle Costs

- Elimination of Hazardous Materials Reduces Cost of Operation, Repair & Demil
- Goal is to achieve Compliance Through Pollution Prevention
Unexploded Ordnance (UXO)

- UXO Contamination of land and water
  - >20 million acres
  - >3300 sites
  - >$20B liability

- R&D Objectives
  - Wide Area Assessment
  - Detection & Discrimination
  - Land and Water
  - Recovery and Disposal
  - Planning and Support

- Critical technical decisions
  - Impact in the $billions
Remediation

In Partnership with Regulators

- Remediation
  - Groundwater & soils
  - Solvents, metals, energetics
  - Emerging contaminants
- Sediments
  - PAH, PCB, metals

- Science based engineering decisions
- Science based risk management

- Technology transfer
  - Regulatory acceptance
  - Protocol development
  - Training
Life Cycle Management

• Manufacturing and Maintenance
  - Green materials and processes
  - Control and monitoring
  - Depots, Field, Shipyards & OEM

• Green Energetics
  - New Materials
  - Alternative Manufacturing

• Air Emissions & Hazardous Waste
  - Diesels and Gas Turbines
  - Weapons and Munitions
  - Ship and Industrial

Partner with Acquisition and Maintenance Community
Environmental Quality Taxonomy

Weapons Systems & Platforms

Munitions Management

Environmental Restoration

Sustainable Infrastructure
Strategic Environmental Research and Development Program

• Established by FY 1991 Defense Authorization Act
  • DoD, DOE and U.S. EPA partnership

• Purposes
  • Address DoD and DOE environmental concerns through R&D
  • Share data collection and analysis capabilities
  • Identify and share DoD research technology
  • Identify private sector technologies useful to DoD
Solicitation Process

BAA Call

Pre-Proposal

Staff Review

Full Proposal

Peer Review

STC Review and Program Development

SAB Review

EWG Approval

Council Approval

STC Develop SONs

EWG Call

Federal Sector

Private Sector BAA
FY 2007 SERDP Solicitation

BAA Pre-proposals

- Federal Agency Selection
  - 162 Education
  - 69 Business

Program Office Down-select

Full Proposals

- 109 Federal

Top Band Proposals

- 39
  - 20
  - 40

Peer Review

Selected Proposals

- 15
  - 11
  - 21

STC Review
PROGRAM GOALS

- Demonstrate innovative cost-effective environmental technologies
  - Capitalize on past investments
  - Transition technology out of the lab

- Promote implementation
  - Direct technology insertion
  - Gain regulatory acceptance

Priority: needs of the DoD user community
ESTCP Method

- Partner with stakeholders and test at DoD facilities
  - Developer, regulators, end-user
  - Direct transition

- Validate operational cost and performance
  - Independent test and evaluation
  - Satisfy regulatory and user communities

- Identify DoD market opportunities
  - Technology transfer across federal and private sector
ESTCP Process

- BAA Preproposals
- Federal (non DOD) Preproposals
- DOD Preproposals

ESTCP Review Committees

Full Proposals

ESTCP Review Committees

SON

Selection
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Solicitation Timelines

**SERDP**
- Annual Solicitation - November
- “SEED” Solicitation - November
- Selection in July
- SAB Reviews in August/September

**ESTCP**
- Annual Solicitation - January
- Selection in September
Sponsored by SERDP and ESTCP

Partners in Environmental Technology

Technical Symposium and Workshop

December 4-6, 2007

Marriott Wardman Park Hotel
Washington, D.C.
Home Pages

http://www.serdp.org

http://www.estcp.org