



*Environmental Protection Agency
Federal Technology Transfer Program*

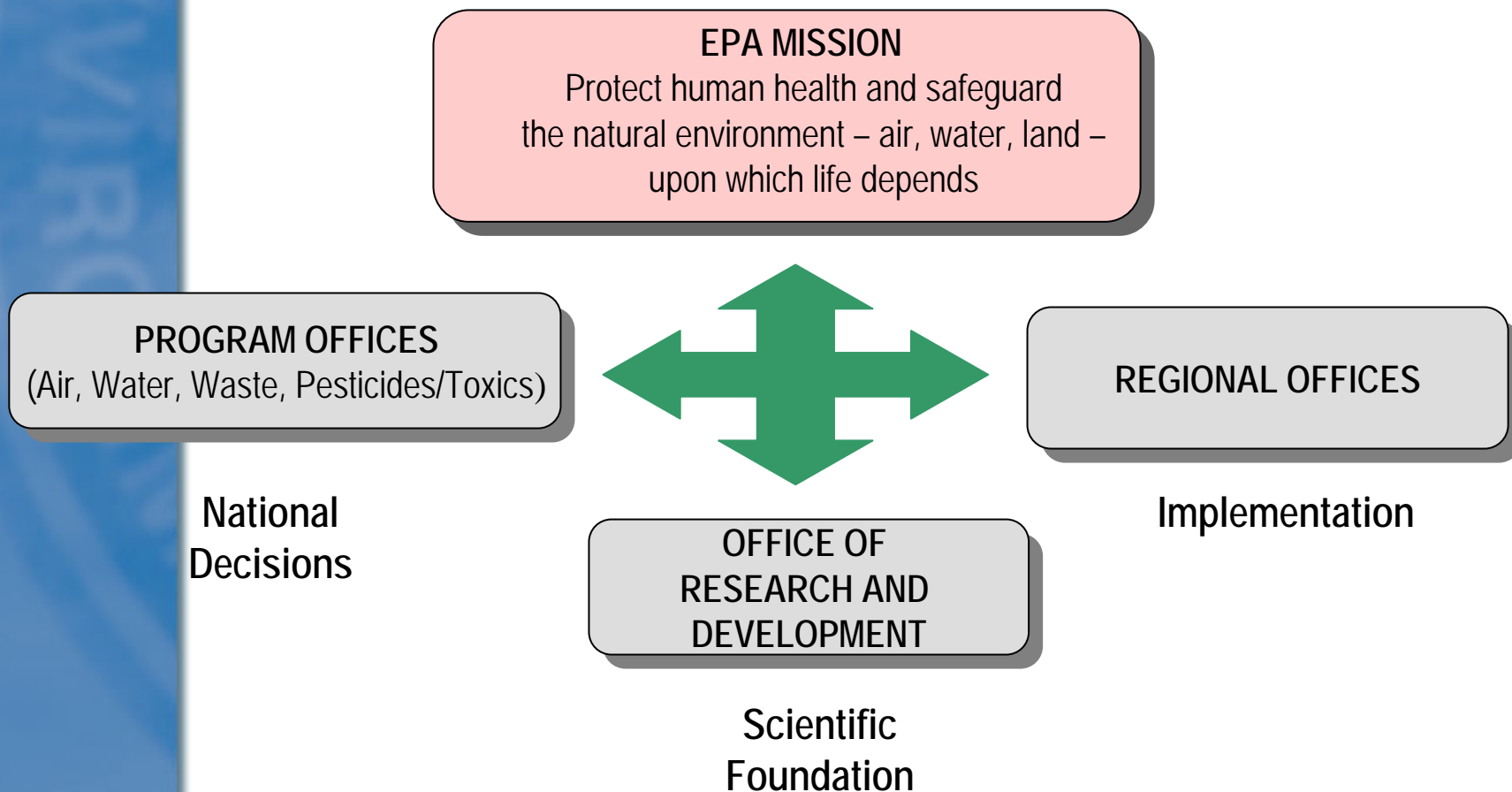
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EPA's FTTA Program

- Focus of "technology transfer" is to get technologies developed by the Federal government into the marketplace
- Managed by the Office of Research and Development for EPA

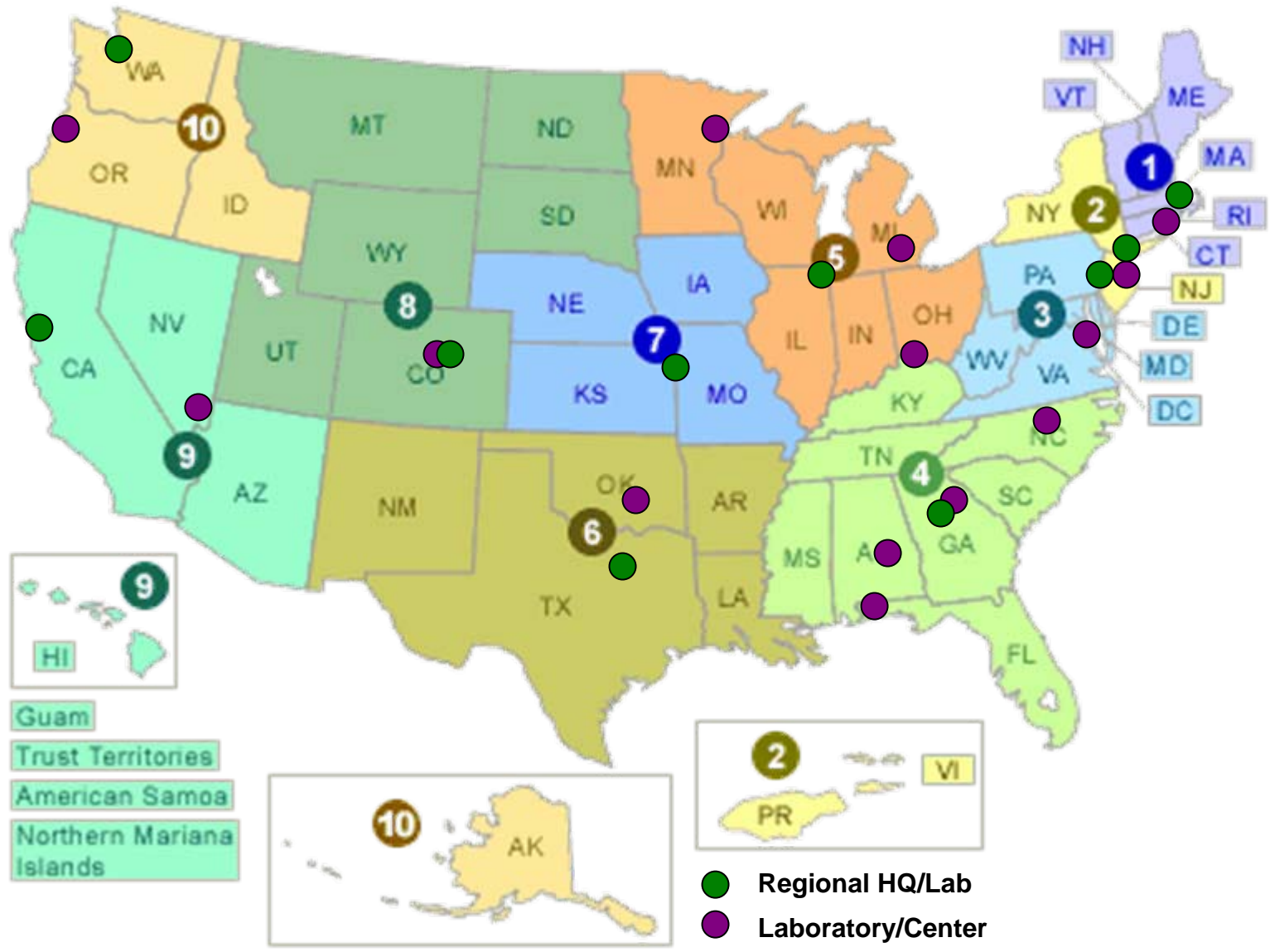


EPA Research Topics

- Air Toxics
- Contaminated Sites and Hazardous Waste
- Drinking Water
- Endocrine Disruptors
- Global Change
- Mercury
- Particulate Matter
- Safe Pesticides/Safe Products
- Water Quality
- Ecological Research
- Economics & Decision Sciences
- Human Health
- Pollution Prevention
- Vehicle and Fuel Emissions
- Homeland Security
- Air and Radiation
- Genomics/CompTox

Building a scientific foundation for sound environmental decisions

EPA Laboratories



EPA Laboratories (cont.)

- National Air and Radiation Environmental Laboratory
 - Montgomery, AL
- National Enforcement Investigations Center Laboratory
 - Denver, CO
- National Exposure Research Laboratory
 - Research Triangle Park, NC
 - Athens, GA
 - Las Vegas, NV
 - Cincinnati, OH
- National Health and Environmental Effects Research Laboratory
 - Research Triangle Park, NC
 - Narragansett, RI
 - Gulf Breeze, FL
 - Duluth, MN
 - Corvallis, OR

EPA Laboratories (cont.)

- National Risk Management Research Laboratory
 - Cincinnati, OH
 - Ada, OK
 - Edison, NJ
 - Research Triangle Park, NC
- National Vehicle and Fuel Emissions Laboratory
 - Ann Arbor, MI
- Radiation and Indoor Environments National Laboratory
 - Las Vegas, NV
- National Center for Environmental Assessment
 - Washington, DC
- National Center for Environmental Research
 - Washington, DC
- National Homeland Security Research Center
 - Cincinnati, OH
- National Center for Computational Toxicology
 - Research Triangle Park, NC

Example Partnerships & Research Areas

Example Partners and Licensees

American Chemistry Council * BP Amoco * Chevron * Dow Corning * DuPont
Eastman Chemical * Exxon * Fisher-Scientific * Ford Motor
Electric Power Research Institute * General Electric * General Motors
Georgia Pacific * Proctor and Gamble * Hewlett-Packard * International Paper
Partnership for a New Generation of Vehicles * Duke University
University of Maryland * Georgia Institute of Technology
New Jersey Institute of Technology * University of North Carolina

72% industry partners; 24% non-industry partners; 4% other

Examples of Research Areas for CRADAs and Licenses

Black Mold Arsenic Removal Hybrid Vehicles Water Security
Children's Health Clean Diesel Combustion Phytoremediation
Cryptosporidium Aerosol Samplers Soil Treatment

CRADA Examples

- Arsenic Partnerships
 - 37 CRADAs signed to cooperate with small drinking water systems to install arsenic treatment equipment and collect data for new arsenic standards. Partners include towns, tribes, housing communities, and public utilities.
- Membrane Filter Agar Medium Containing Two Enzyme Substrates Used for the Simultaneous Detection of Total Coliforms and *E. Coli*
 - EPA patented technology that rapidly detects Total Coliforms, including *E. coli*, in water. These species are typically found in fecal-contaminated water, making them indicators for the possible presence of pathogens.

CRADA Examples (cont.)

- CRADA involving the development of testing protocols for rodents and humans using Affymetrix GeneChip array technology
 - Used assay technology to conduct a toxicogenomics test predictive of chemical toxicity and hazard. This allows for use of in vitro systems in lieu of in vivo toxicology testing and screening, which is faster, less expensive, and more accurate.
- Microbial source tracking (MST) assays
 - EPA patent pending technology offers an improved method for distinguishing chicken, cattle, and human sources of fecal contamination in water—a critical component for assessing sources of contamination, health risks, and determining necessary remedial actions.

CRADA Examples (cont.)

- Detection of microsporidial species using a quantitative real-time PCR assay
 - EPA patent pending technology in which microsporidial species can be detected in samples using real-time PCR dual-fluorescent assays with species-specific primer set. This tool could be used to develop more sensitive and specific clinical diagnostic methods.
- Method of identifying and quantifying specific fungi and bacteria
 - EPA's DNA-based process can identify and quantify more than 130 species of toxic molds and fungi in indoor environments. Fungi and bacteria cause or contribute to many health problems; this technology identifies them faster and more accurately than previous methods. More than 15 licenses on this technology, with accompanying CRADAs to transfer methodologies for its use.

Current Initiatives

- Increase CRADAs and licenses
- Increase Visibility/Awareness to Partners
 - Literature and visual information – marketing materials, FLC articles
 - Catalog of patented technologies, demonstrating EPA's varied research programs
 - Partnering with the EPA brochure, explaining the benefits of collaborative research and development and licenses with the EPA, and the mechanisms for collaboration
 - Brochure specifically geared to working with small businesses

Current Initiatives (cont.)

- Increase Visibility/Awareness to Partners
 - External events
 - Partnership summit on air research (NC, Sept. 2006)
 - Planned partnership summit on water research (OH, early 2007)
 - Potential partnership summit with MEP
 - Presentations to external groups
 - World's Best Technologies
 - AUTM
 - 2006 Science Forum Training

Current Initiatives *(cont.)*

- Increase Visibility/Awareness to Partners
 - EPAtechmatch.com

The screenshot shows the EPA TechMatch website. At the top, there is a banner with the EPA TechMatch logo and a search bar. The main content area features a welcome message and a list of services. A sidebar on the left contains navigation links.

EPA TECHMATCH

Site Search:

TECHMATCH

Home
Patents
Links & Resources
News & Events
Other Opportunities
Labs
Contact Us
(Link Opens New Window)
Login
(Register Here)

Welcome to EPA TechMatch. This site is designed to provide you with:

- A one stop shop for entering into innovative technology partnerships with the U.S. Environmental Protection Agency (EPA).
- Access to EPA patented technologies to increase licensing and partnership opportunities between non-federal entities and EPA laboratories.
- Information on EPA research and research opportunities.
- Third-party independent analyses of the commercial potential of the technologies. Technologies assessed to have high market potential can be viewed within [Featured Patents](#).
- The opportunity to register to receive electronic notification of news in your desired technology areas. [Click here](#) to sign up. All information will be kept confidential.

Patents

- Browse Patents
- Browse Featured Patents
- Search Patents

Labs

- Browse Laboratories

Links & Resources

- Browse Links & Resources

Current Initiatives (cont.)

- Participation in EPA and Intergovernmental activities
 - Environmental Technology Council
 - Federal Laboratory Consortium
 - Interagency Workgroup for Technology Transfer
- Collaboration with other Federal Agencies
 - EPA' National Vehicle and Fuel Emissions Laboratory and DOT's Federal Transit Authority have initiated a discussion of a potential CRADA with CALSTART/WESTART to evaluate the potential for hydraulic hybrid buses.
 - Pending CRADA between EPA laboratories and Regional offices, USGS, and a company to analyze water samples using immunoassay kits for detection of EDCs.
 - Agreement with the Air Force addressing new soil remediation technologies at an AF site (mid-1990s).
 - Agreement with the Forest Service addressing use of a fungus to treat contaminated soil (early 1990s).

Current Initiatives (con't)

- Increase Visibility/Awareness within EPA
 - On-site training
 - On-line training
 - Recognition for patents at 2006 Science Forum



Summary and More Information

- Expertise in Environmental Technologies
- Research laboratories across the country
- Opportunities for CRADAs, Licensing
- EPA Tech Transfer Internet: www.epa.gov/osp/ftta.htm
- EPA's patents: www.epatechmatch.com
- Federal Staff:

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