What is ETV?

The U.S. Environmental Protection Agency (EPA) established the Environmental Technology Verification (ETV) Program in 1995 to verify the performance of innovative technical solutions to problems that threaten human health or the environment.

ETV's mission is to accelerate the use of new environmental technologies in the domestic and international marketplace. ETV provides third-party, quality-assured performance data so buyers and users of environmental technologies can make informed purchase and application decisions. ETV operates through public/private testing partnerships (called Centers) to evaluate the performance of environmental technologies for monitoring, pollution control, and pollution prevention.

Various groups are actively involved in ETV, including stakeholders, technology buyers and users, vendors, permitters, technology experts, consulting engineers, and investment companies. All test protocols, test plans, verification reports and statements are on the ETV Web Site at http://www.epa.gov/etv.

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Advanced Monitoring Systems Center

Battelle, a nonprofit technology research and development organization with headquarters in Columbus, Ohio, manages the Advanced Monitoring Systems (AMS) Center for the U.S. Environmental Protection Agency's (EPA). The AMS Center, which began in October 1997, verifies the performance of commercially available technologies for monitoring, sampling, and characterizing contaminants and natural species in a variety of matrices including air, water, and soil.

The AMS Center develops test plans, conducts independent tests of technologies, and prepares verification reports and statements for the technologies tested. Vendors of these technologies can use the verification reports and statements for marketing purposes. Regulators, permitters, and users of the verified technologies can refer to the verification reports and statements to help make permitting and purchasing decisions.

To date, the AMS Center has completed verification tests of over 125 technologies, including continuous emission monitors for mercury, dioxin, and ammonia; ambient monitors for fine particulate, ammonia, hydrogen sulfide and ozone; test kits for arsenic, cyanide, atrazine, and other water contaminants; and multi-parameter water probes. Nearly 20 additional technologies are currently in the verification testing process.

How the AMS Center Works

Assisting Battelle are stakeholder committees whose members are drawn from diverse backgrounds, such as state and local regulatory agencies, professional and trade associations, industry, academia, environmental groups, investment companies, and the federal government. The stakeholders help Battelle prioritize environmental monitoring needs, identify commercially available technologies that meet those needs, develop test plans, serve as test collaborators, and review verification reports.

Once a technology category has been prioritized for verification, a call for vendors is announced and vendor applications are received (see http://www.epa.gov/nrmrl/std/etv/howtoapply.html). The test plan is drafted by Battelle, with input from stakeholders and vendors, and reviewed by participating vendors, stakeholders, and EPA representatives. The test location is selected, with input from vendors participating in the test and the AMS Center stakeholders.

The AMS Center seeks test collaborators that can provide the test site, testing equipment, technical support personnel, funding, or other contributions. Battelle conducts the test and drafts a verification report and statement for each technology verified. The draft is reviewed by the vendor's representative, stakeholder volunteers, and EPA officials. After reports and statements are approved, they are signed by an EPA laboratory director.

Battelle
The Business of Innovation

EPA United States Environmental Protection Agency

Potential Benefits of ETV

For technology developers and vendors:	Increased credibility due to independent, third-party testing, providing high-quality, consistent, and widely accepted data
	Access to expertise in developing, verifying, and applying environmental monitoring technologies
	Reduced technology verifications required for the technology's acceptance by multiple states and localities
	Enhanced acceptance of environmental technologies by regulators and permitters
	A sound, science-based marketing tool
	Increased public awareness due to ETV's outreach efforts, e.g., publications, Web site, conferences
	Increased markets and business opportunities
	Added confidence for investors, stockholders, and lenders
For technology users and purchasers:	Aid in evaluating a variety of environmental monitoring technologies
	Access to credible performance data
	Assurance that the technology's performance is independently verified
	Increased availability of technologies that meet users' needs
For regulators and permitters:	Confidence that the technology's performance has been verified by an independent third party
	Validation by colleagues who are ETV stakeholder committee members
	Test data addressing realistic requirements but not limited to any single state's regulations
	Technological basis for streamlining the regulatory process and/or simplifying and revising regulations
	Increased ability to make informed decisions
	More rapid deployment of technologies to meet an agency's requirements
For everyone:	Cost-effective and efficient solutions to environmental challenges
	Growth of the environmental technology sector.

Two leak detection and repair (LDAR) technologies were tested in collaboration with the American Chemistry Council and the Texas Chemical Council at a BP facility in Naperville, IL. Technology vendors can use ETV verification reports and statements (left) in marketing their technologies.

Useful Marketing Tool

Vendors have realized the value of having independent verification data for use in marketing their technologies. In a survey of vendors who participated in ETV verification tests, nearly all reported that ETV's verification statements were useful in marketing and that they would consider submitting another technology for verification.

Two vendors who participated in the AMS Center's verification test for portable nitric oxide/nitrogen dioxide (NO/NO_2) emission analyzers said customers waited to buy until the analyzers had been verified by ETV. Other vendors said the process was valuable because of the credibility of independent testing under EPA oversight, the assurance of verification statements and reports given to potential customers, and the marketing visibility of the ETV logo.

For additional information or to receive the AMS Center's newsletter, The Monitor, please contact Amy Dindal at Battelle.

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EPA United States Environmental Protection Agency