



---

# Environmental Technology Verification (ETV) Program Site Characterization and Monitoring Technologies Pilot

---

## **ABOUT THE ENVIRONMENTAL TECHNOLOGY VERIFICATION PROGRAM AND THE SITE CHARACTERIZATION AND MONITORING TECHNOLOGIES PILOT**

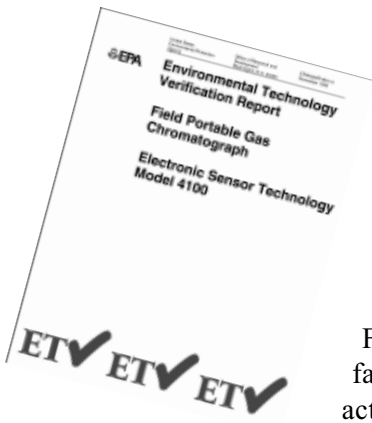
The Environmental Technology Verification Program is a service of the Environmental Protection Agency designed to accelerate the development and commercialization of improved environmental technology through third party verification and reporting of performance. The goal of ETV is to verify the performance characteristics of commercial-ready environmental technologies through the evaluation of objective and quality-assured data so that potential purchasers and permittees are provided with an independent and credible assessment of the

technology that they are buying or permitting. ETV is intended to expand the environmental technology choices of public and private decision-makers, both in our country and abroad.

ETV is a voluntary program that seeks to make objective performance information available to all of the actors in the environmental marketplace for their consideration and to assist them in making informed technology decisions. ETV does not rank technologies nor compare their performance, label or list technologies as acceptable or unacceptable, nor seek to determine "best available technology", nor approve or disapprove technologies. The program does not evaluate technologies at the bench- or pilot-scale and does not conduct or support research.

**Visit the Pilot home page**

**<http://www.epa.gov/etv>**



The program now operates twelve pilots covering a broad range of environmental areas. ETV has begun with a 5-year pilot phase (1995-2000) to test a wide range of partner and procedural alternatives in various pilot areas, as well as the true market demand for and response to such a program. In these pilots, EPA utilizes the expertise of partner “verification organization” to design efficient processes for conducting performance tests of innovative technologies. EPA has selected its partners from both the public and private sectors including Federal laboratories, states, industry consortia and private sector facilities. Verification organizations oversee and report verification activities based on testing and quality assurance protocols developed with input from all major stakeholder/customer groups associated with the technology area.

The Site Characterization and Monitoring Technologies (SCMT) Pilot is one of twelve pilots operating under ETV. The U.S. EPA National Exposure Research Laboratory Environmental Sciences Division in Las Vegas manages the pilot. Their partners (Verification Organizations) are the U.S. Department of Energy’s Oak Ridge National Laboratory and Sandia National Laboratories. The SCMT Pilot conducts verification testing of environmental characterization and monitoring technologies. Commercial-ready technologies are evaluated to provide potential technology users and permittees with an independent and credible assessment of technology performance. The verification process includes the development of formal test protocols, on-site field testing, and data evaluation. One of the end products of the verification process is an Environmental Technology Verification Report (ETVR). The ETVR contains a Verification Statement that is signed by EPA and the Verification Organization.

## VERIFICATION PROCESS

Each technology demonstration follows a similar process that includes the steps listed below.

- ↻ Identification of user-community needs
- ↻ Solicitation and selection of technology
- ↻ Planning of demonstration
- ↻ Field demonstration
- ↻ Reporting of results
- ↻ Information dissemination



## **Cone Penetrometer/Laser Induced Fluorescence**

The Site Characterization and Analysis Penetrometer System (SCAPS) LIF Sensor and Support System

EPA 600-R-97-019

The Rapid Optical Screening Tool (ROST) LIF System for Screening of Petroleum Hydrocarbons in Subsurface Soils

EPA 600-R-97-020

## **Field Portable Gas Chromatograph/Mass Spectrometers**

Field Portable GC/MS; Viking Instruments Corporation SpectraTrak™ 672

EPA 600-R-97-148

Field Portable GC/MS; Bruker-Franzen Analytical Systems, Inc. EM640™

EPA 600-R-97-149

## **Field Portable X-Ray Fluorescence Analyzers**

Field Portable XRF Analyzer; Scitec MAP Spectrum Analyzer

EPA 600-R-97-147

Field Portable XRF Analyzer; HNU Systems SEFA-P Analyzer

EPA 600-R-97-144

Field Portable XRF Analyzer; TN 9000 and TN Lead Analyzer

EPA 600-R-97-145

Field Portable XRF Analyzer; Metorex X-MET 920-MP

EPA 600-R-97-151

Field Portable XRF Analyzer; Metorex X-MET 920-P and X-MET 940

EPA 600-R-97-146

Field Portable XRF Analyzer; Niton XL Spectrum Analyzer

EPA 600-R-97-150

## **Field Analytical Methods for Measuring Polychlorinated Biphenyls (PCBs)**

EnviroGard PCB Test Kit; Strategic Diagnostics Inc.

EPA 600-R-98-113

4100 Vapor Detector; Electronic Sensor Technology

EPA 600-R-98-114

PCB in Soil Tube Assay; EnviroLogix, Inc.

EPA 600-R-98-173

RaPID Assay System for PCB Analysis; Strategic Diagnostics Inc.

EPA 600-R-98-111

L2000 PCB/Chloride Analyzer; Dexsil Corporation

EPA 600-R-98-109

D Tech PCB Test Kit; Strategic Diagnostics Inc.

EPA 600-R-98-112

PCB Immunoassay Kit; Hach Company

EPA 600-R-98-110

## **SOIL GAS/SOIL GAS SAMPLING TECHNOLOGIES**

AMS Dual Tube Liner Sampler; Art's Manufacturing and Supply

EPA 600-R-98-093

JMC Environmentalist's Subsoil Probe; Clements Associates, Inc.

EPA 600-R-98-091

EMFLUX Soil Investigation System; Quadrel Services, Inc.

EPA 600-R-98-096

Gore-Sorber Screening Survey Passive Soil Gas Sampling System;

W.L. Gore & Associates

EPA 600-R-98-095

Core Barrel Sampler; Simulprobe Technologies, Inc.

EPA 600-R-98-094

Large Bore Soil Sampler; Geoprobe Systems, Inc.

EPA 600-R-98-092

## **Well-head Monitoring/Measurement of Volatile Organic Compounds (VOCs) in Water**

Model 4100; Electronic Sensor Technology

EPA 600-R-98-141

HAPSITE with Headspace Sampling Accessory; Inficon, Inc.

EPA 600-R-98-142

Type 1312 Multi-gas Monitor; Innova AirTech Instruments

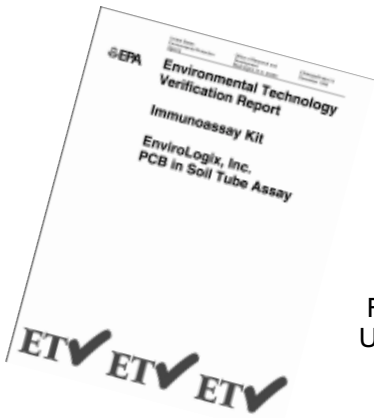
EPA 600-R-98-143

Voyager; Perkin-Elmer Corporation (Photovac Monitoring Instruments)

EPA 600-R-98-144

Scentograph Plus II; Sentex Systems, Inc.

EPA 600-R-98-145



## To OBTAIN HARD COPIES, CONTACT:

National Service Center for Environmental Publications  
P.O. Box 42419  
Cincinnati, OH 45242  
Phone: 1-800-490-9198  
Fax: 1-513-489-8695  
URL: <http://www.epa.gov/ncepi>

---

## UPCOMING VERIFICATION AREAS

Verification testing is under way, or soon to be under way, in a number of environmental monitoring technology categories that include:

- ↪ Groundwater Sampling
- ↪ TPH Test Kits
- ↪ Geophysics
- ↪ Explosives Test Kits

## FOR MORE INFORMATION ON THE SITE CHARACTERIZATION AND MONITORING TECHNOLOGIES PILOT:

<http://www.epa.gov/etv>  
or  
<http://clu-in.org/char1.htm>  
or  
<http://www.ornl.gov/etv>

## Or Contact:

### *Wayne Einfeld*

Sandia National Laboratories  
PO Box 5800, MS 0755  
Albuquerque, NM 87175-0755  
Phone: 505-845-8314  
Fax: 505-844-0968  
Email: [weinfeld@sandia.gov](mailto:weinfeld@sandia.gov)

### *Roger Jenkins*

Oak Ridge National Laboratory  
PO Box 2008, MS 6120  
Oak Ridge, TN 37831-6120  
Phone: 423-576-8594  
Fax: 423-576-7956  
Email: [jenkinsra@ornl.gov](mailto:jenkinsra@ornl.gov)

### *Eric Koglin*

EPA Project Officer  
U.S. Environmental Protection Agency  
National Exposure Research Laboratory  
PO Box 93478  
Las Vegas, NV 89193-3478  
Phone: 702-798-2432  
Fax: 702-798-2261  
Email: [koglin.eric@epa.gov](mailto:koglin.eric@epa.gov)