

Improving Air Quality Through Environmental Technology Verifications

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Overview



- ETV Program
- Air Pollution Control Technology Verification Center
- Completed Verifications
- Ongoing & Planned Verifications

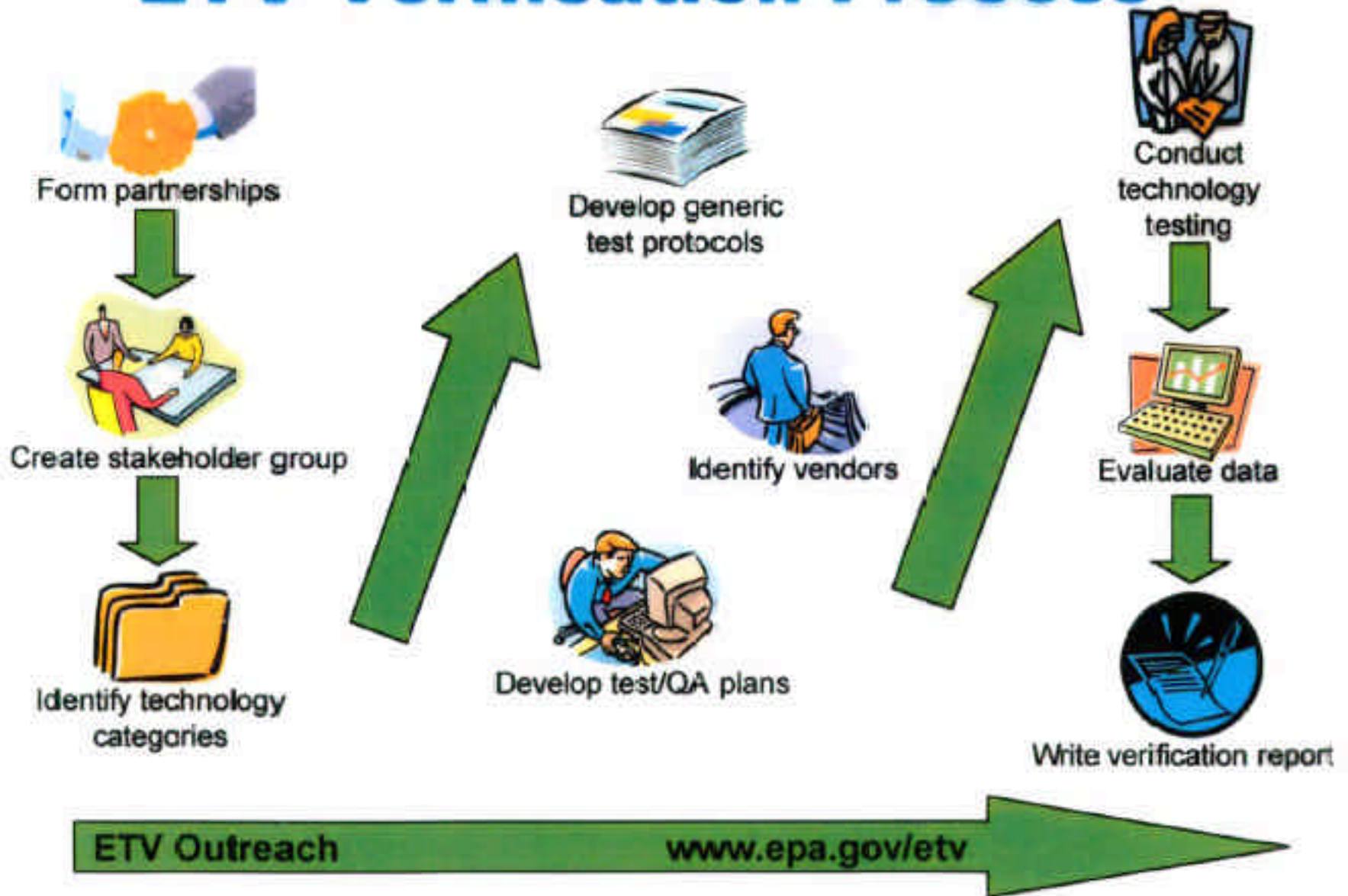
The ETV Program

- Part of National Environmental Strategy (1995)
- Goal: To improve the environment by accelerating new environmental technologies into the market
- Objective: To verify the performance of commercial-ready air pollution control technologies using objective and quality-assured data resulting in publication of verification statements for the technologies
- Voluntary, stakeholder oriented program

ETV Provides

- Stakeholder driven process
- Measurement of the right things
- Publicized method & results provides transparency
- Integrity from independence & QA
- Verification – Not certification

ETV Verification Process



APCTVC

- Focused on PM, NO_x, VOCs, and Hazardous Air Pollutants.
- Test protocols completed or in process for:
 - ↳ Paint overspray arrestors
 - ↳ Baghouse filter products
 - ↳ NO_x controls
 - ↳ Dust suppressants
 - ↳ Emulsified fuels for boilers
 - ↳ Mobile source retrofit controls
 - ↳ Biofiltration systems

Paint Overspray Arrestor



Baghouse Filtration Products Test Apparatus



NO_x Control Test



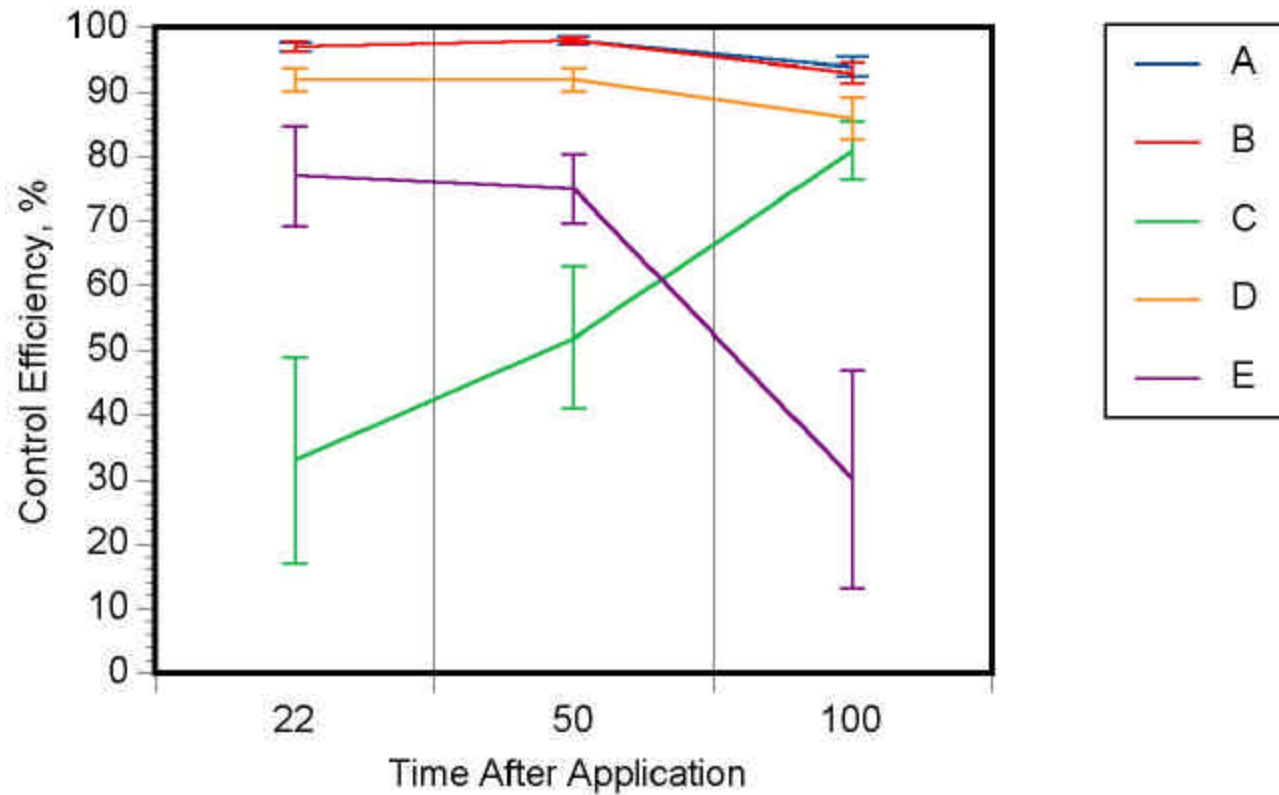
Dust Suppressant Verif 2002-2003

Fort Leonard Wood, MO
5 products, 3 vendors



Maricopa County, Arizona
2 products, 1 vendor

Dust Suppression Control Efficiency Fort Leonard Wood, 2001



Schedule

- Stakeholder meetings through May 2001
- 3-month test, Fort Leonard Wood, MO Fall 2001
- Tests at Maricopa County, AZ and Fort Leonard Wood, MO
 - ↳ Site survey & vendor meetings March 2002
 - ↳ Product application June 2002
 - ↳ Control efficiency tests Quarterly
 - ↳ Verification reports Winter 2004

Mobile Sources

- Why: voluntary retrofit program
- EPA/ETV --- EPA/OTAQ
- Technical Panel of expert stakeholders

ETV EPA/ORD

- Coordinates testing with EPA-OTAQ
- Prepares test/QA plan
- Audits ETV test labs
- Conducts ETV tests
- Issues ETV verification reports and statements

VDRP EPA/OTAQ

- Evaluates total application package
- Accepts emissions reductions data from ETV
- Sets emissions reductions for technologies and posts on VDRP website
- Extends applicability to other engines (and adds requirements for additional data)

Mobile Source ETV Protocol Status

- Devices (retrofit hardware) -- complete and posted on web
- Fuel and Lubricant Modifications -- near completion
- Selective Catalytic Reduction (SCR) -- near completion
- SCR similar to devices protocol with some additional safety emphasis and NH_3 measurements

Technologies

— Devices

- ↳ Diesel Exhaust Catalysts (DECs)
- ↳ PM filters
- ↳ Engine modifications
- ↳ Other devices

— Fuels

- ↳ Alternative fuels (emulsions, biodiesel)
- ↳ Reformulations
- ↳ Fuel additives
- ↳ Lubricants and lubricant additives

— Selective Catalytic Reduction

Mobile Sources Verif

- 1 applicant completed testing (8 VS/VRs)
- 2 applicants signed Terms & Conditions
- 8 applicants in discussion to plan Statement of Work

Inf

—APCTVC

↳ <http://etv.rti.org/apct/>

—EPA ETV Program

↳ <http://www.epa.gov/etv/>