



**EPA Office of Compliance  
Enforcement Targeting and Data Division**

# **AFS National Workshop**

Washington, DC

July 24-28, 2006

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Media Systems and Support Section, Data Systems and Information Management Branch, Enforcement Targeting and Data Division, Office of Compliance, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460

# WELCOME TO THE NATIONAL CAPITAL REGION



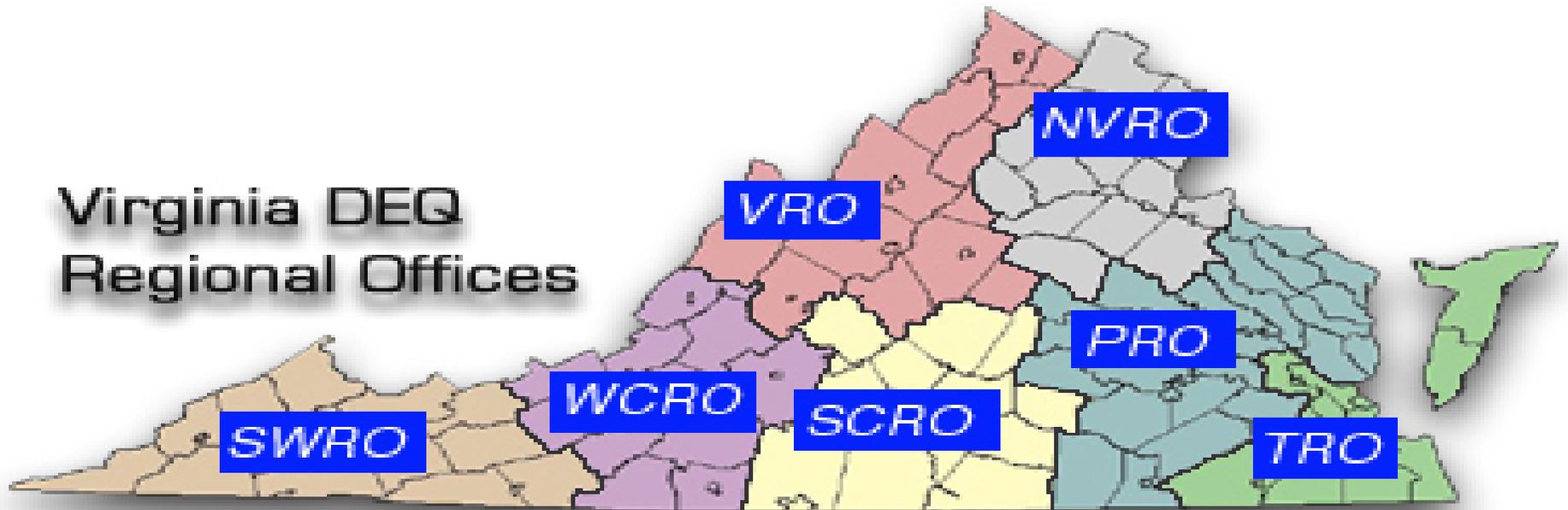
# VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY



[www.theodora.com/flags](http://www.theodora.com/flags)



## Virginia DEQ Regional Offices



*SWRO - South West Regional Office  
WCRO - West Central Regional Office  
SCRO - South Central Regional Office  
VRO - Valley Regional Office  
NVRO - Northern Virginia Regional Office  
PRO - Piedmont Regional Office  
TRO - Tidewater Regional Office*

# AIR COMPLIANCE

by the numbers.....

## Active Sources in Virginia July 2006

Major/Potential Major	315
Synthetic Minor	1355
True Minor	2970
Stage II gasoline stations	1232 (approx.)

# AIR COMPLIANCE

by the numbers.....

## FY 05 Full Compliance Evaluations

Results:

In compliance	888
Pending	2
In compliance w/schedule	8
Temp Shutdown	3
Perm Shutdown	9
<b>Subtotal</b>	<b>910</b>
Out of compliance	<b>147</b>
% Noncompliance	14%
<b>Total</b>	<b>1057</b>

# NORTHERN VIRGINIA

## AIR QUALITY CHALLENGES

1.7 Million Vehicles

Vehicle Miles Traveled for DC Metro Region region

2002 = 149,065,567

2010 = 169,740,561 (predicted)

1 482 MW Electric Generating Coal Fired Power Plant

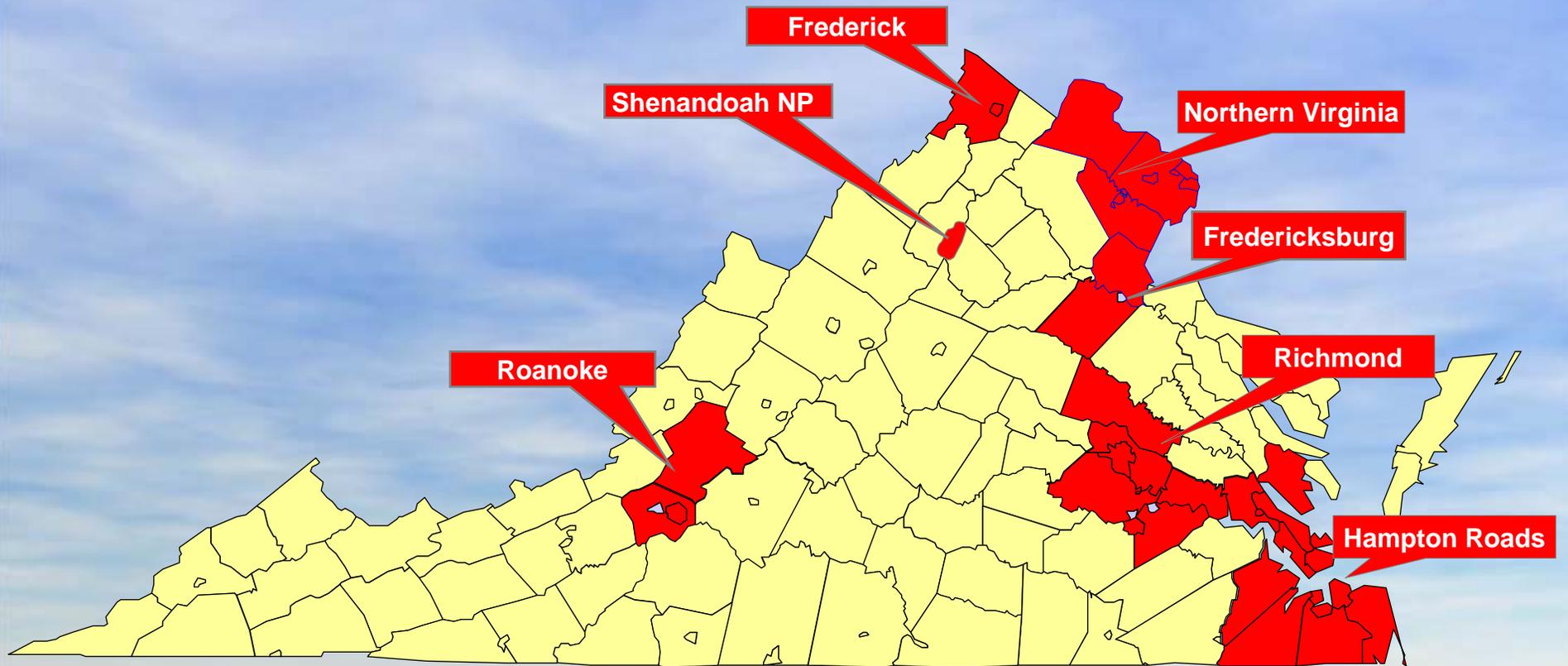
~600 printing facilities

2 Municipal Waste to Energy Plants

2 Landfill Gas to Energy operations

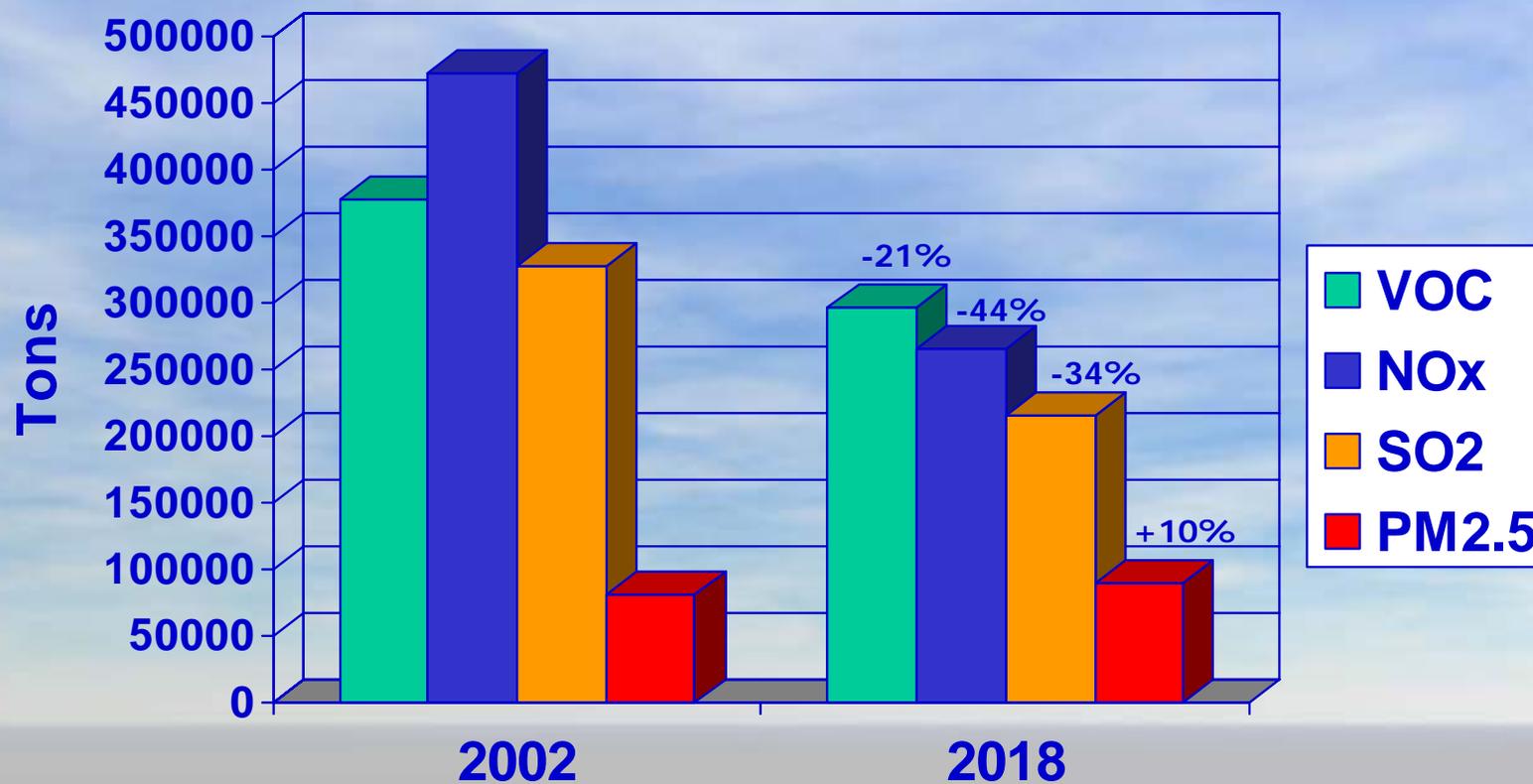
~300 auto body refinishing shops

# Eight-Hour Ozone Standard *Nonattainment Areas*



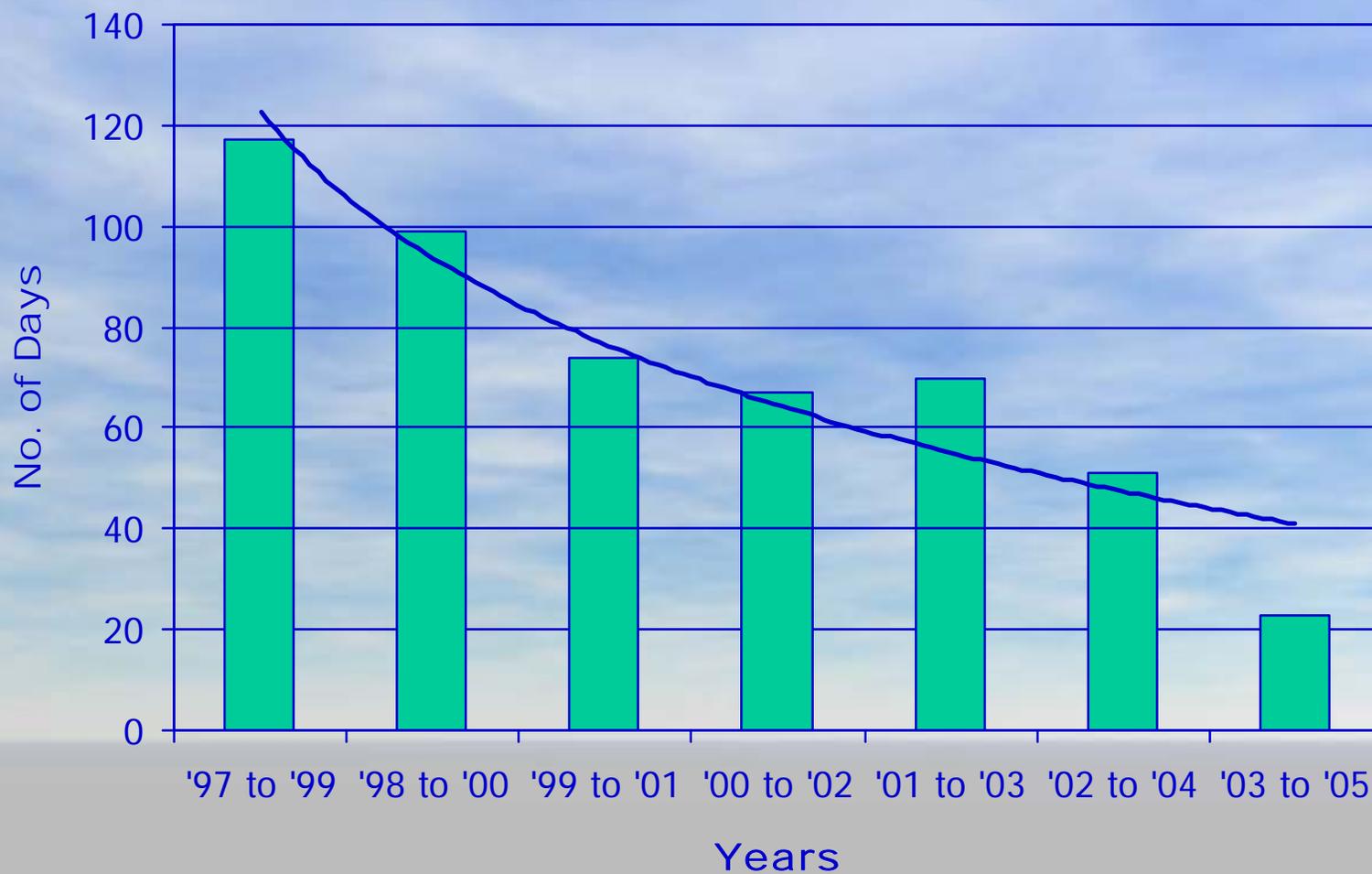
# Emissions Reduction Predictions

*Total VA Emissions – 2002 and 2018*



# Eight-Hour Ozone Standard

## *Improving Air Quality -Statewide*



# **Fine Particulate Matter Standard**

## *Nonattainment Current Planning Activities*

- Northern VA
  - No violating monitors
  - Nonattainment designation based on impact on the DC area
  - Attainment plan due to EPA by 2008
  - EPA modeling predicts compliance by 2009

# **ENVIRONMENTAL DATA MANAGEMENT**

**(why do we need it)**

**BUDGETING**

**DECISIONMAKING**

**PUBLIC ACCESS**

**PRIORITY SETTING**



**MANAGING**

**AIR COMPLIANCE**

**&**

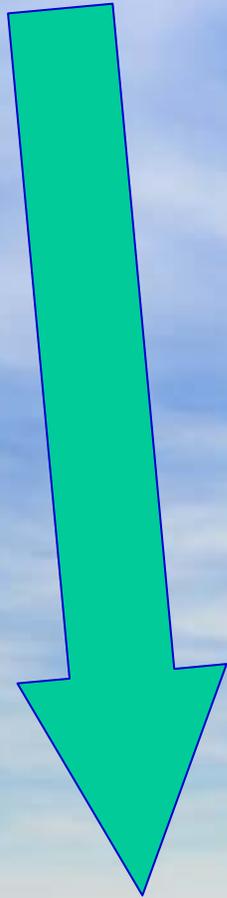
**MONITORING**

**INFORMATION /DATA**

**COMPLIANCE EVALUATIONS**

**MONITORING ACTIVITY**

**DATA MANAGEMENT**



# MOVING DATA THROUGH DEQ TO EPA

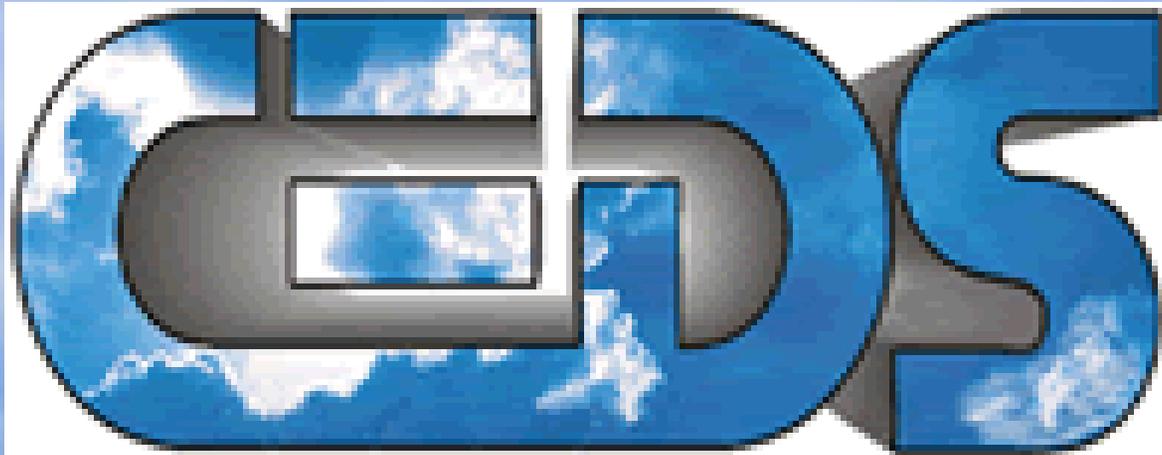
A COLLABORATIVE EFFORT BETWEEN

REGIONAL OFFICES



CENTRAL OFFICE

# VIRGINIA DATA MANAGEMENT.....



***COMPREHENSIVE  
ENVIRONMENTAL  
DATA  
SYSTEM***



File Edit Query Block Record Field Help Window



**Air Compliance**

Registration Number:	70225	AFS Plant ID:	153-00002
Plant Name:	Dominion - Possum Point Power Station	Classification:	Major/Potential Major
Location:	19000 Possum Point Rd	Plant Compliance Status:	In compliance-proced rqrmnts

Inspection Report [Event Association](#) [Copy Inspection Record](#)

General Inspection [Checklist Observations](#) [FCE Link](#)

**General Inspection**

Manager Signature/Record Locked   
  Inspector Signature   
 Pin Number:

Insp Date: **06-13-2006**    Report Date: 06-13-2006   
 Contact Name: Jeff Marcell   
 Insp Type: PCE Without Site V...   
 Inspector: Roland D Hartshorn   
 Contact Phone #: (703)441-3813  
 C Samples: N/A   
 Stack Test:   
 Reason: Review RATA/CGA Report  
 Level:   
 Pollutant:   
 Insp Result: In Compliance

Confidential Data Contained in Report   
 Visible Emission Observation Performed   
 Additional Information is Attached

Program	Subpart	Results	Comments
6A		In Compliance	Review of the 1st Quarter Calendar Year 2006 Unit 6A CEMS audit report from this facility has been completed by Department of Environmental Quality personnel. The document submitted appears adequate to demonstrate compliance with applicable
6B		In Compliance	
SOP		In Compliance	

Event Code	Event Description	Date Anticipated	Date Completed	Comments
R2RATA	Review RATA/CGA Report		06-13-2006	1st quarter CY 2006 Unit 6A CEMS CGA review.

... of the inspection - enter as mm-dd-yyyy

- **DEQ began uploading data from our in-house CEDS database in May 2000**
- **Regional staff are responsible for entering permitting, compliance, and enforcement data into the CEDS application**
- **Quality assurance activities are performed by DEQ's Office of Air Compliance Coordination weekly**
- **Continuous emission monitoring (CEM) data are input directly online by central office staff, as well as the High Priority Violator (HPV) action linking**
- **DEQ uploads compliance, enforcement, and permitting data to the plant-level of AFS every week**

## **BUSINESS IMPROVEMENT OPPORTUNITIES**

- Agency Wide Efficiency Study
- Improvements/Enhancements to Database and Data Mining Activities
- Electronic File Access/Imaging
- Risk-based inspection scopes and frequencies

## *Air Opportunities*

Opportunity 8: Clarify Title V semi- and annual reporting requirements to eliminate duplicative report preparation work by permittees

### **Efficiency and Effectiveness Outcomes**

- Decrease report preparation time (permittees) by 1 week per Title V permittee (there are 300+ Title V permits).
- Decrease report review time (DEQ)
- Reduce discrepancies/rework between second semi-annual and annual reports.

1. Clarify DEQ requirements for semi-annual deviation and annual compliance reports. (U)
2. Prepare sample report formats for 1st semi-annual deviation report and combined 2nd semi-annual and annual report. Have Peer Review Team look at sample formats and provide feedback. (U)
3. Check Part 70 regulations to confirm that deviation information in the semi-annual reports does not have to be relisted in the annual compliance certification (U)
4. If reporting dates in permit do not align with standard semi-annual and annual report submittal dates, investigate allowing permittees to align with those dates through a minor amendment/self-effecting change. (U)
5. Explore feasibility of “exception only” reporting for large data sets (F)

## *Air Opportunities*

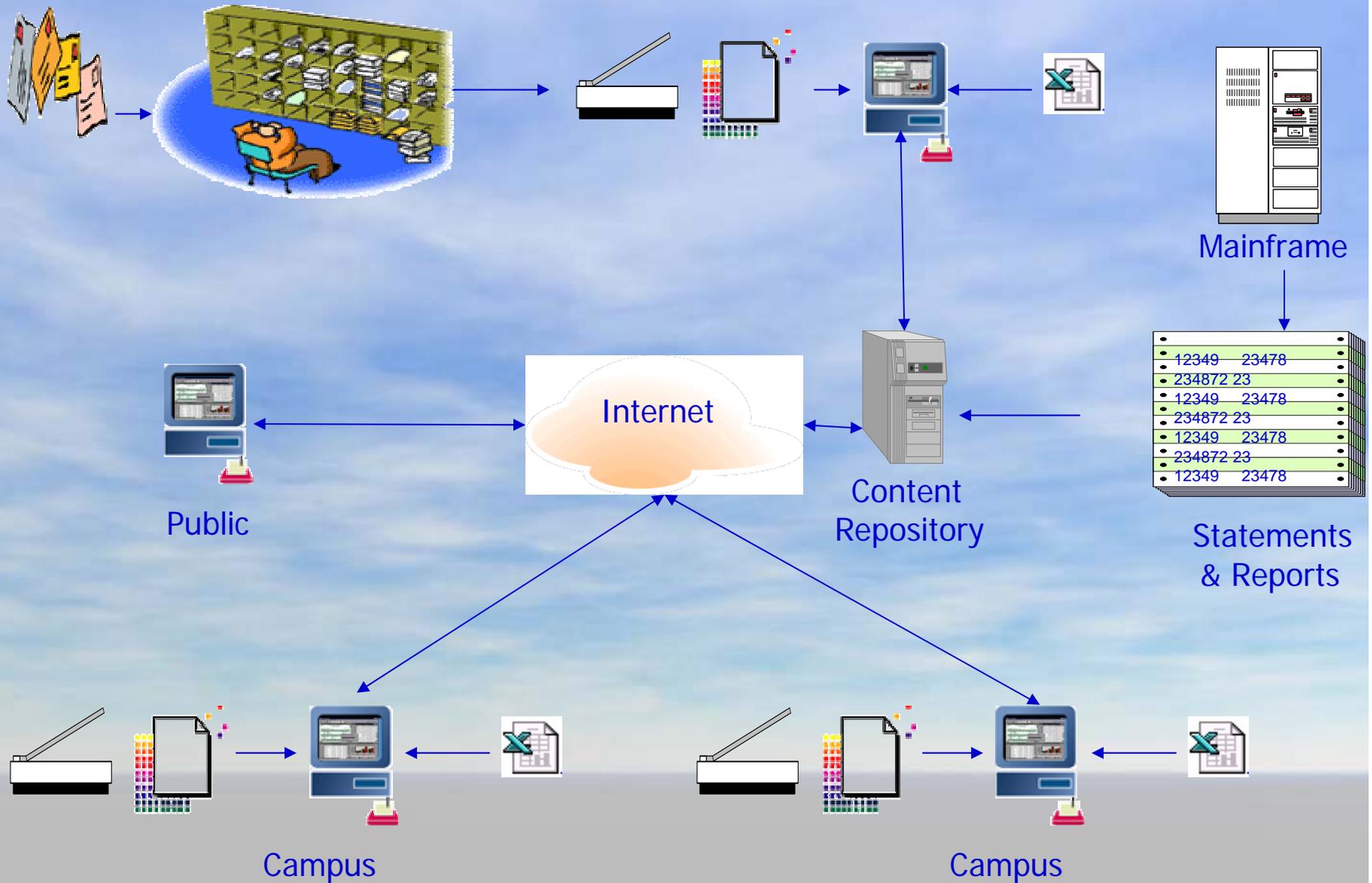
### Opportunity 7: Electronic submittal and storage of monitoring data and reports

#### **Efficiency and Effectiveness Outcomes**

- More efficient uploading of data (e.g., eliminate hand-keying in AFS)
- Reduce mail and paper costs
- Reduce file space needs
- Faster filing and accessing of reports
- Decrease amount of time spent by permittees to prepare and submit reports (estimated 50 – 100 hours/year/permittee)
- Improved public access to non-confidential information

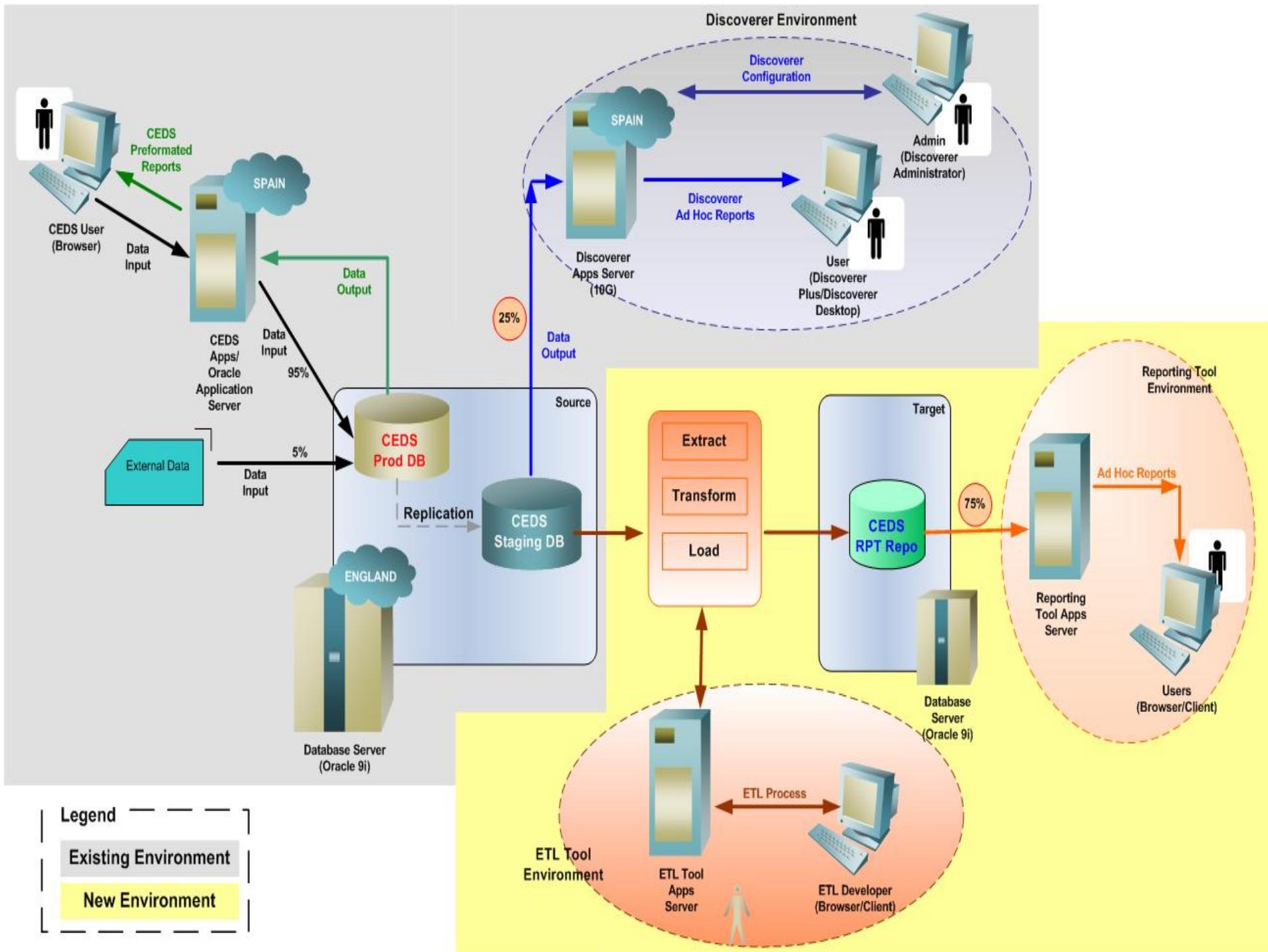
1. Identify the types of reports submitted; where they go and who processes them (F)
2. Redefine DEQ's recordkeeping and document control procedures to address electronic documents. (F)
3. Resolve barriers in statutes and regulations (electronic signatures) (F)
4. Obtain input from Peer Review Team during design stage (e.g., pre-pilot) on usability (F)
5. Identify technology changes needed, including verifying and documenting receipt (F)
6. Look at what is being done in other states (e.g. EI in NJ, Ohio) (SC accepts electronic spreadsheets) (F)
7. Utilize information learned from eDMR experience when developing other electronic data submittals (F)
8. Obtain cost justification information from E-Visory. (F)
9. Ensure automatic transfer of data into CEDS. (F)

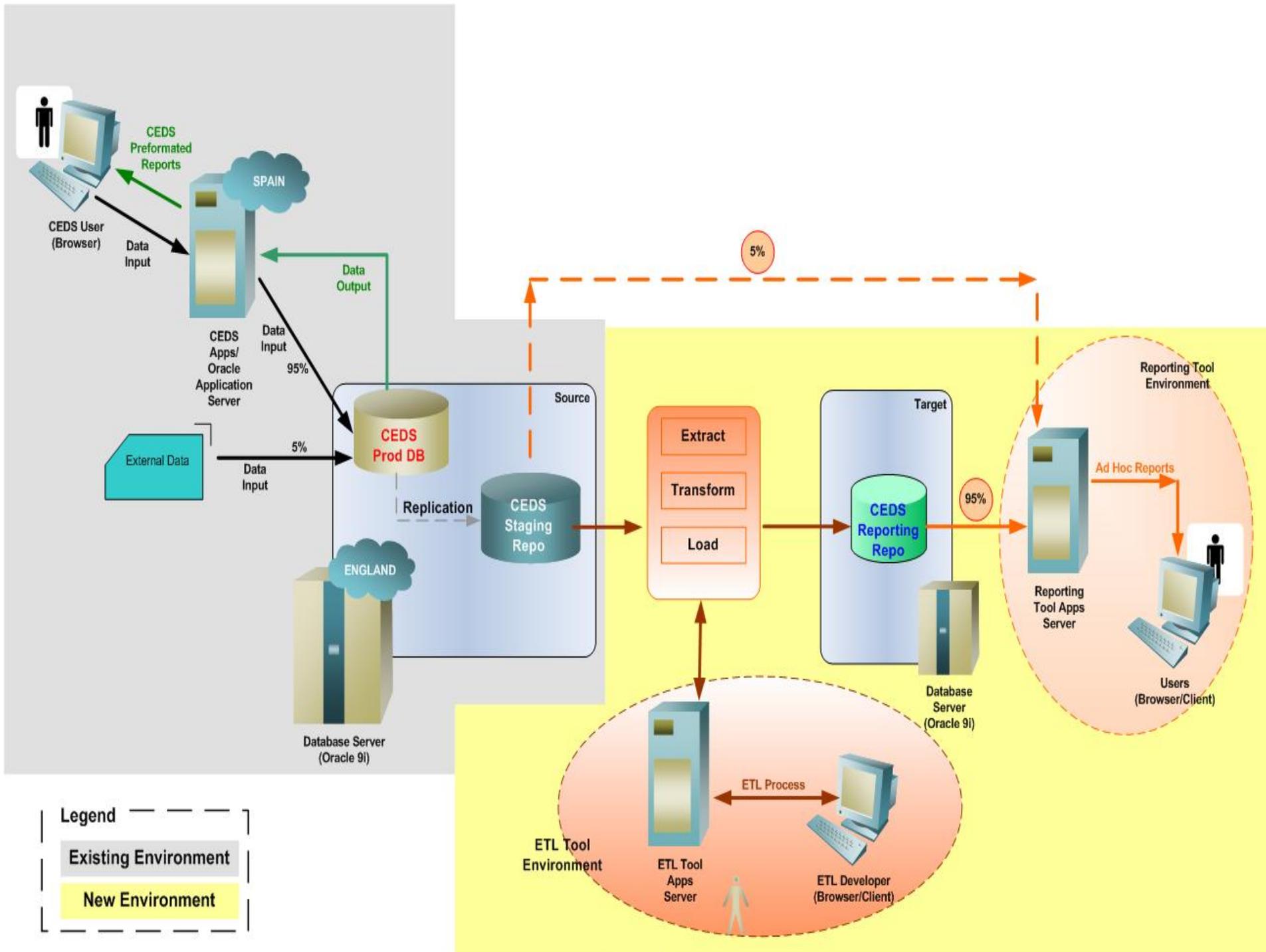
# DEQ's Imaging Initiative



# **DEQ'S DATA MINING PROJECT**

- **DEQ is currently in the early stages of vendor selection to implement a data warehouse to improve our reporting capabilities.**
- **This will empower our CEDS users to meet their reporting needs quickly and efficiently (with minimal effort).**
- **In addition, we will procure Business Intelligence (BI) software to replace Discoverer.**





## AIR QUALITY IMPROVEMENT INITIATIVES

- Developing Risk Based Inspection/Compliance Assistance Plans
- Remote Sensing Emission Testing Program
- Northern Virginia Auto Refinishing Initiative (Environmental Results Based Performance Program)
- Voluntary Emission Reduction Program for Printing Industry in NOVA nonattainment area
- DEQ's Environmental Excellence Program

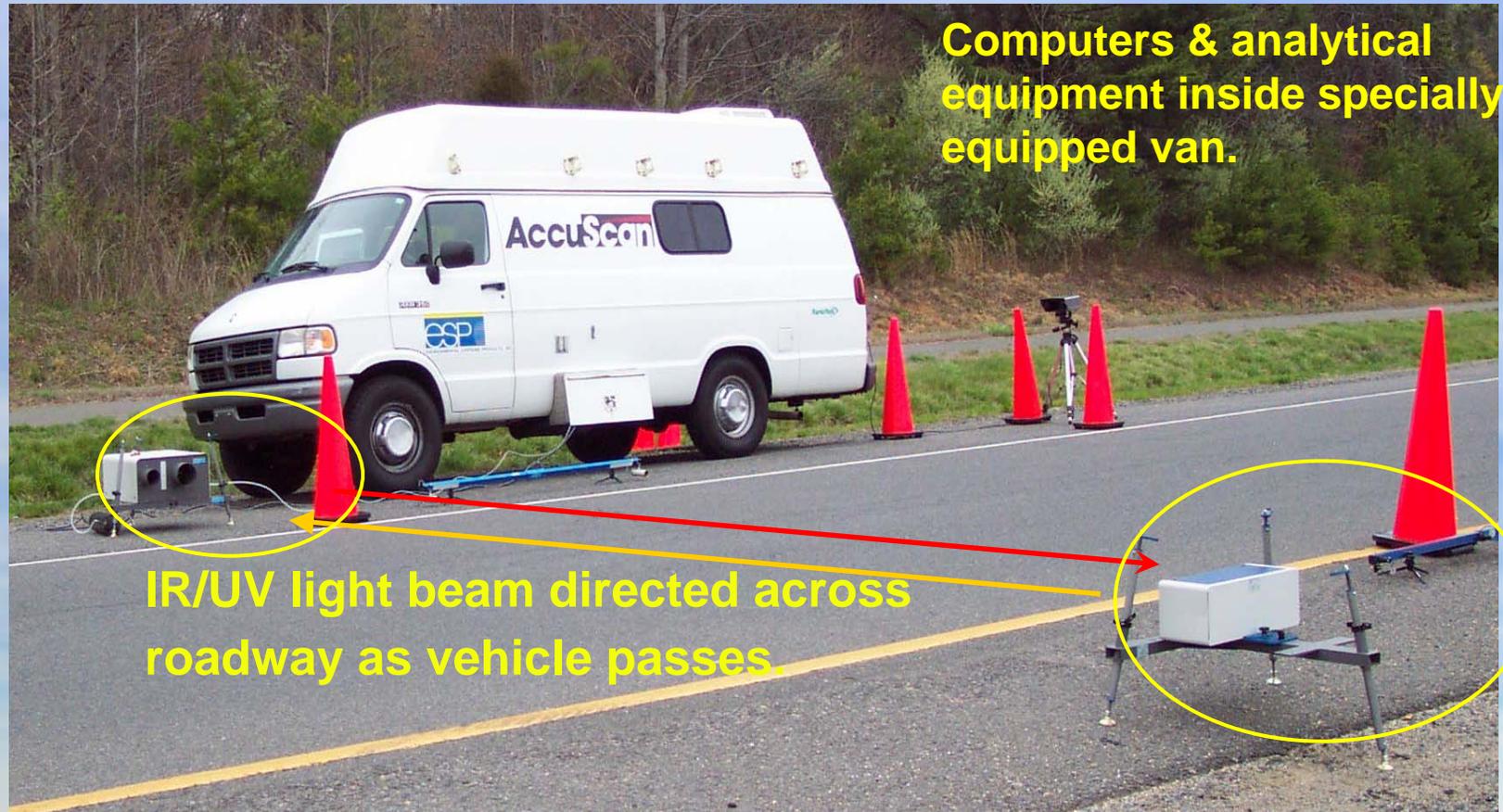
# Remote Sensing



## WHAT IS REMOTE SENSING?

. . . a method of measuring a vehicle's exhaust pollutants as it is being operated on a roadway.

## How Does it Work? (Cont'd)



# Basic Roadside Setup

The screenshot displays a software interface for configuring a roadside setup. The background is green, representing a field or roadside area. A road with yellow and red markings is visible. On the left, a window shows a car and a list of items:

- 1. Measurement
- 2. Type of Measurement
- 3. Number of Measurements
- 4. Device Configuration

Below the list, there is a blue bar with text: "Measurement of Average Speed & Position of a car" and "100m 20s, 100m 10s, 100m 5s, 100m 2s".

In the center, a diagram shows a roadside setup. A battery is connected to a power source, which is connected to a sensor. The sensor is mounted on a pole. The sensor is connected to a device configuration window.

On the right, there are three buttons:

- Type of Measurement
- Number of Measurements
- Device Configuration

At the bottom, there is a note: "Some of equipment arranged for communication purposes".



Search VA SBAP Go Advanced search

email: [Richard Rasmussen](mailto:Richard.Rasmussen@deq.virginia.gov)



### Northern Virginia Auto Body/Collision Repair Shop

### Registration Requirements and Voluntary Self-Certification Program



### Why should auto body/collision repair shop owners or operators care?

On March 24, 2004 all Auto Body/Collision Repair Shops and other vehicle refinishing operations in the Northern Virginia metropolitan area became regulated under Virginia's Air Regulations, specifically [9 VAC 5 Chapter 40, Article 48 "Emission Standards for Mobile Equipment Repair and Refinishing Operations in the Northern Virginia Volatile Organic Compound Emission Control Area"](#).

- OSBA Home
- Resources by Industry Sector
- New Resources
- Success Stories
- Regulations & Guidance

# The Five Orders of Ignorance

- **0th Order Ignorance (0OI): Lack of Ignorance**
  - I (probably) know something
- **1st Order Ignorance (1OI): Lack of Knowledge**
  - I do not know something
- **2nd Order Ignorance (2OI): Lack of Awareness**
  - I do not know that I do not know something
- **3rd Order Ignorance (3OI): Lack of Process**
  - I do not know a suitably effective way to find out that I don't know that I don't know something
- **4th Order Ignorance (4OI): Meta-Ignorance**
  - I do not know about the Five Orders of Ignorance

