Area Source Assessment Tool

Steven Boone, E. H. Pechan and Associates, Inc.
Stephen Anderson, Texas Natural Resource Conservation Commission
Till Stoeckenius, ENVIRON Corporation

Area Source Assessment Tool

- Introduction
- Requirements
- Design Parameters
- Database Design
- Data Flow
- Next Steps/Enhancements

ASAT - Introduction

- State/Local/Tribal agencies
- NIF
- Area source emissions estimation tool
- County-level activity data
- One database versus multiple spreadsheets/databases

ASAT Introduction

- Facilitate inventory development by allowing users to calculate emissions using similar methodologies for the same categories
- Modeled after TNRCC's Ammonia Tool and EPA's Area Source Emissions Model
- Structured systems life cycle design methodology

ASAT Requirements

- 5 Major Requirements
  - Generate “what-if” scenarios
  - Store and document multiple cases
  - Base Data Flexibility
  - Reporting
  - Data Conversion/Transfer

ASAT Requirements

- What-If Scenarios
  - Use default or county-specific data
  - Allow for control strategy development
    - Variable application of controls
    - Limitations of activity
  - Temporal designations

ASAT Requirements

- Store and Document Multiple Cases
  - Allow for all variables to be documented as to the where/when/how/who of the data derivation
  - A case is defined as emissions for a specific selection of one or more emission calculation methodologies (equation), inputs (activities, controls, factors and/or physical data), pollutants, SCCs, time periods, and counties
  - Allow user to select from cases generated to create an emission inventory

ASAT Requirements

- Base Data Flexibility
  - Ability to assign/change equation for a case
  - Ability to update the equation inputs – i.e., activity, control, factors (emission/growth) and physical data such as temperature and use default or case specific values
  - Ability to update groupings of SCCs and counties
  - Ability to update pollutant list
  - Ability to define time periods

ASAT Requirements

- Reporting
  - Emission summaries
    - By county group
    - By time period
    - By SCC group
    - Compare cases
  - Generate to screen/printer or file

ASAT Requirements

- Data Conversion/Transfer
  - Export
    - NIF – (EPA EI Reporting) Access format
    - NIF – ASCII format
    - EPS2 – Emissions Model
  - Import
    - Activity data
    - Growth Factors

ASAT Design Parameters

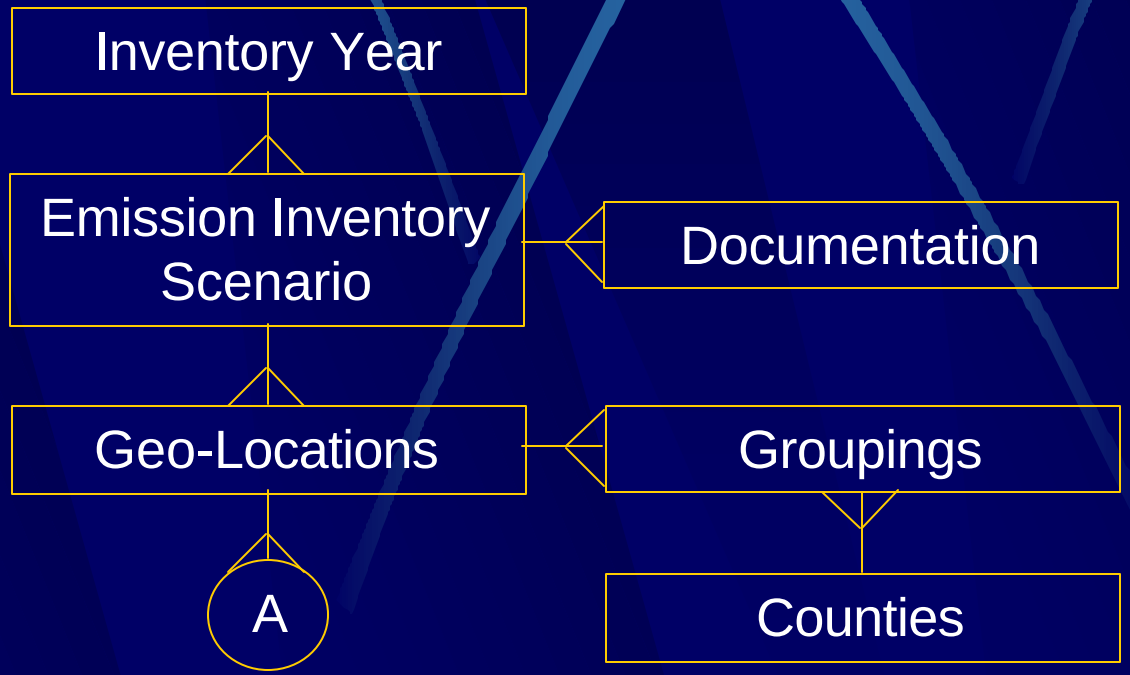
- Specifications
  - Multi-user, medium database size, security
  - Visual Basic front end
  - Oracle back end
- Reality
  - Microsoft Access 2000
    - Front end
    - Back end – multiple MDB files employed

ASAT Database Design

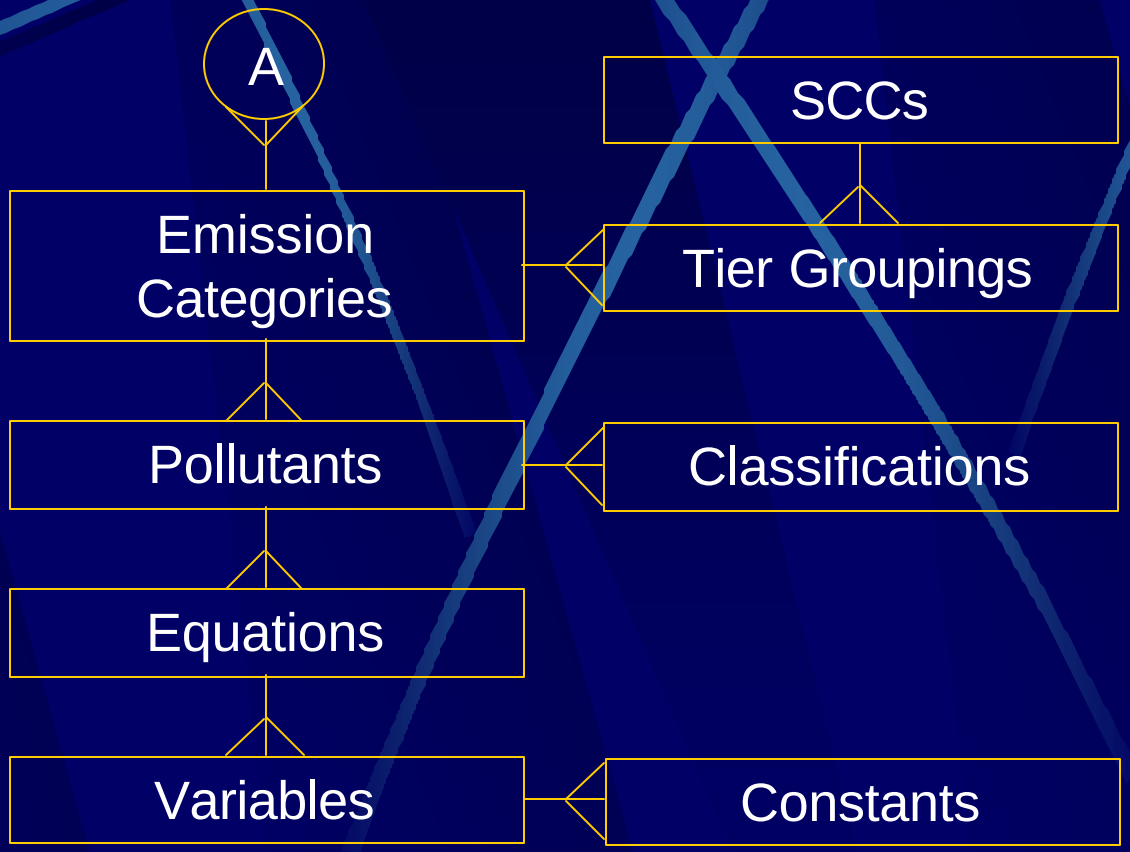
- Parameters
  - ODBC for connectivity and future upsizing
  - NIF Transportable
  - Relational

ASAT Database Design

- High Level Entity Relationship Diagram



ASAT Database Design

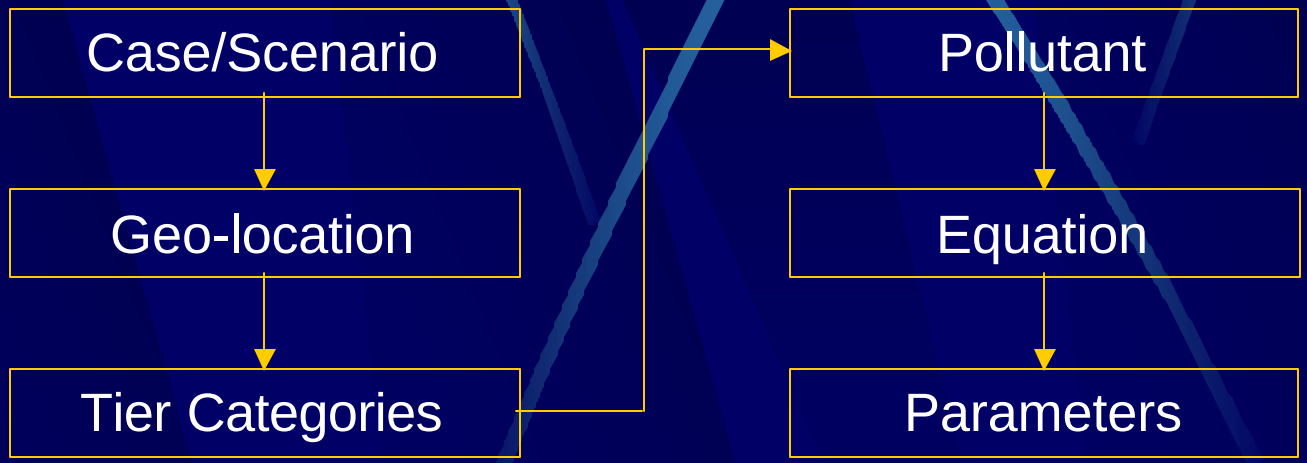


ASAT Data Flow

- Base Data Setup
  - Pollutants
  - Equations
  - Equation inputs (activity, factors, controls and/or physical data)
  - SCC groups
  - County groups

ASAT Data Flow

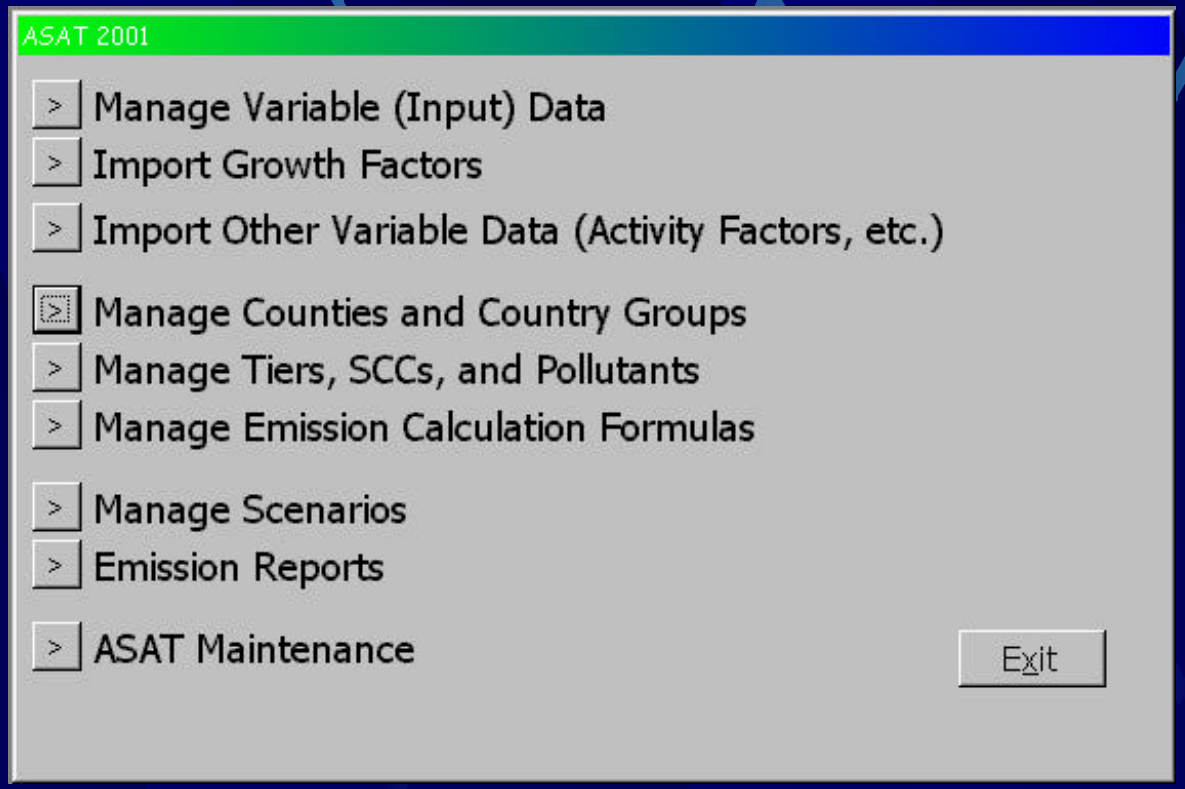
- Case Generation



ASAT Next Steps

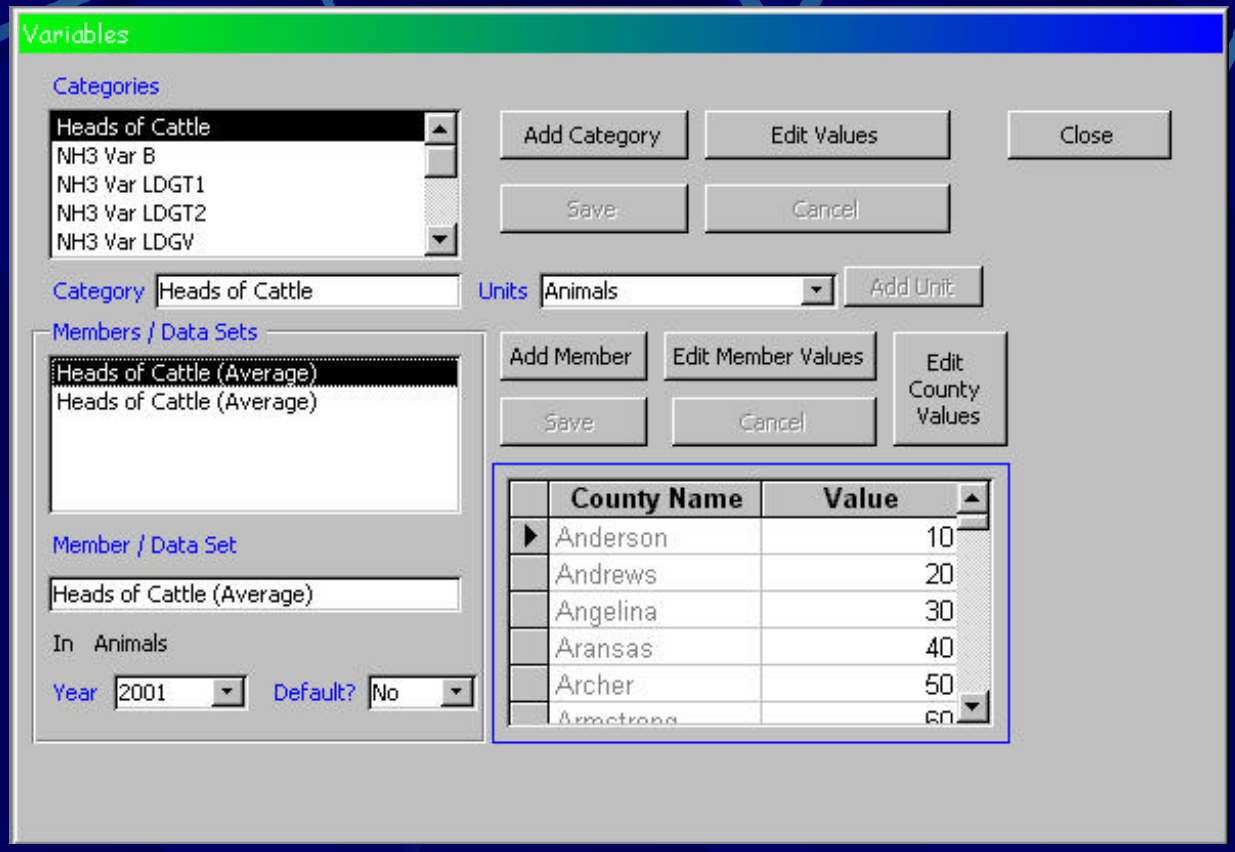
- Default data
- NIF/EPS2 Export
- Multi-user, security
- Platform
  - Web enabled
  - VB/Java front end
  - Oracle back end

ASAT Slide Show



Main Screen

ASAT Slide Show



Variable Management

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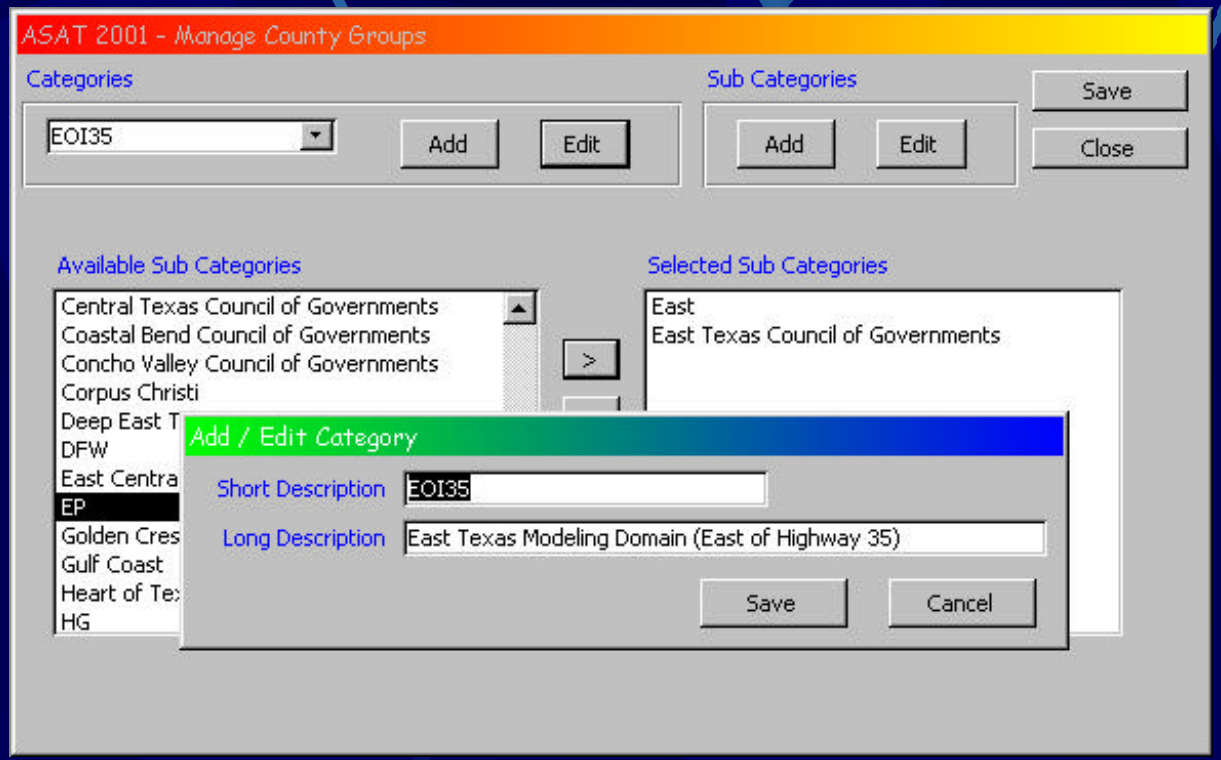

Manage County Groups

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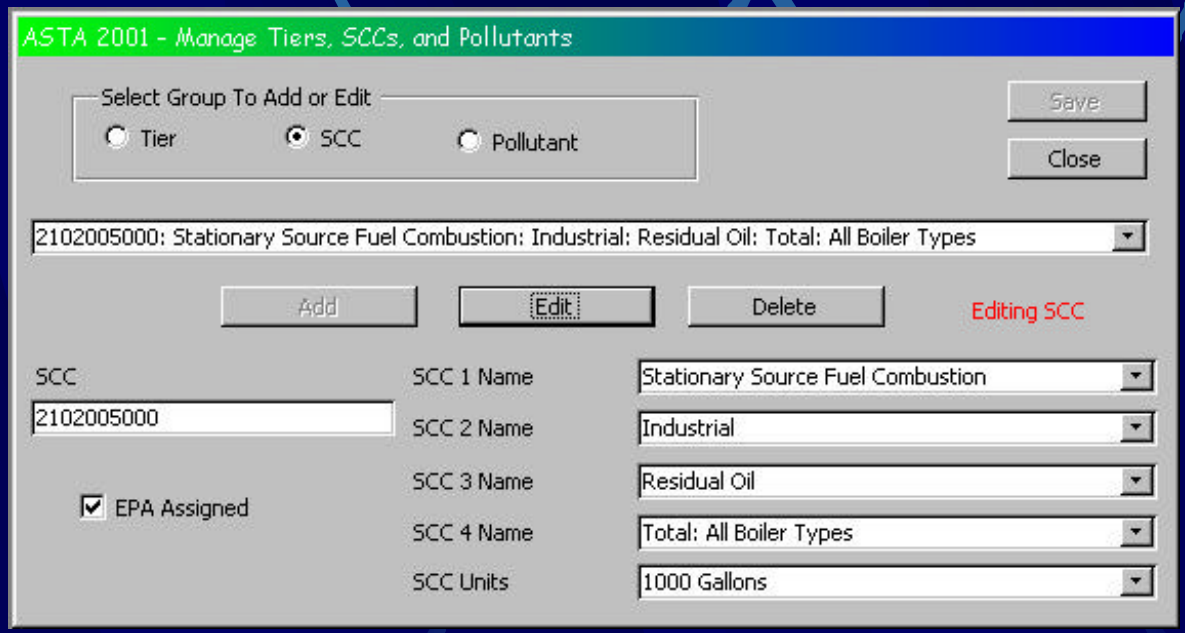

Manage Tiers, SCCs, and Pollutants

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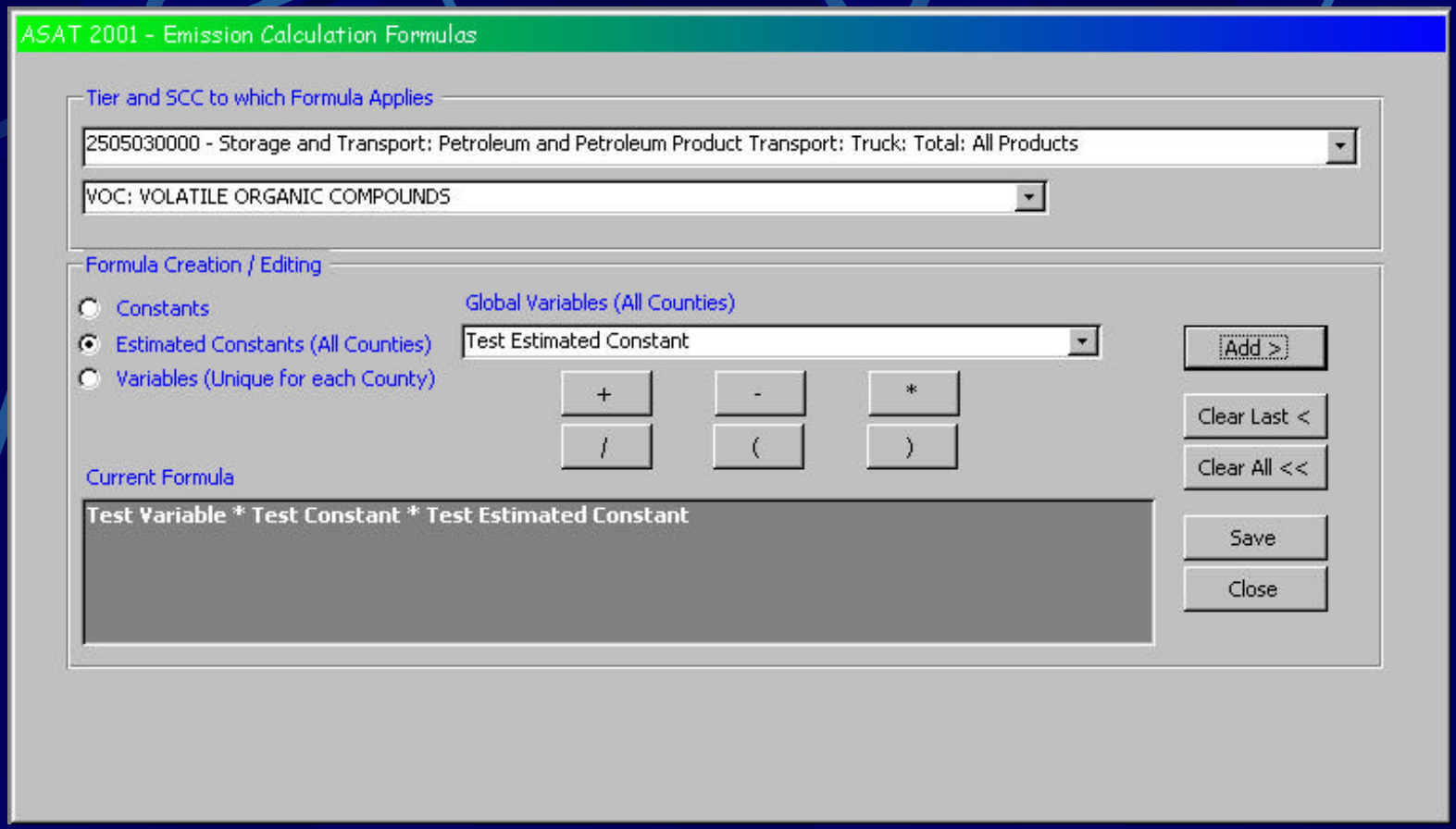
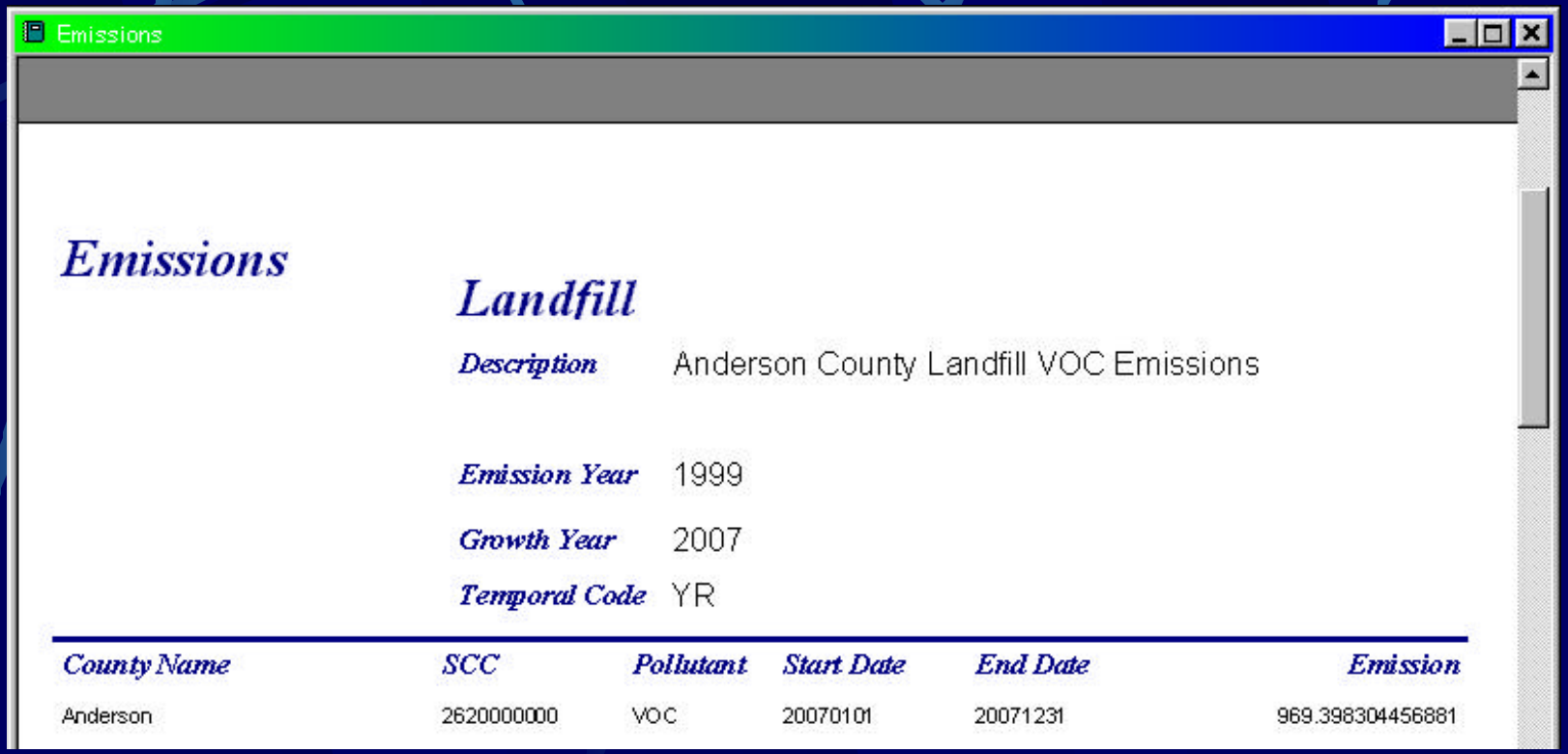


Equation Editor

ASAT Slide Show

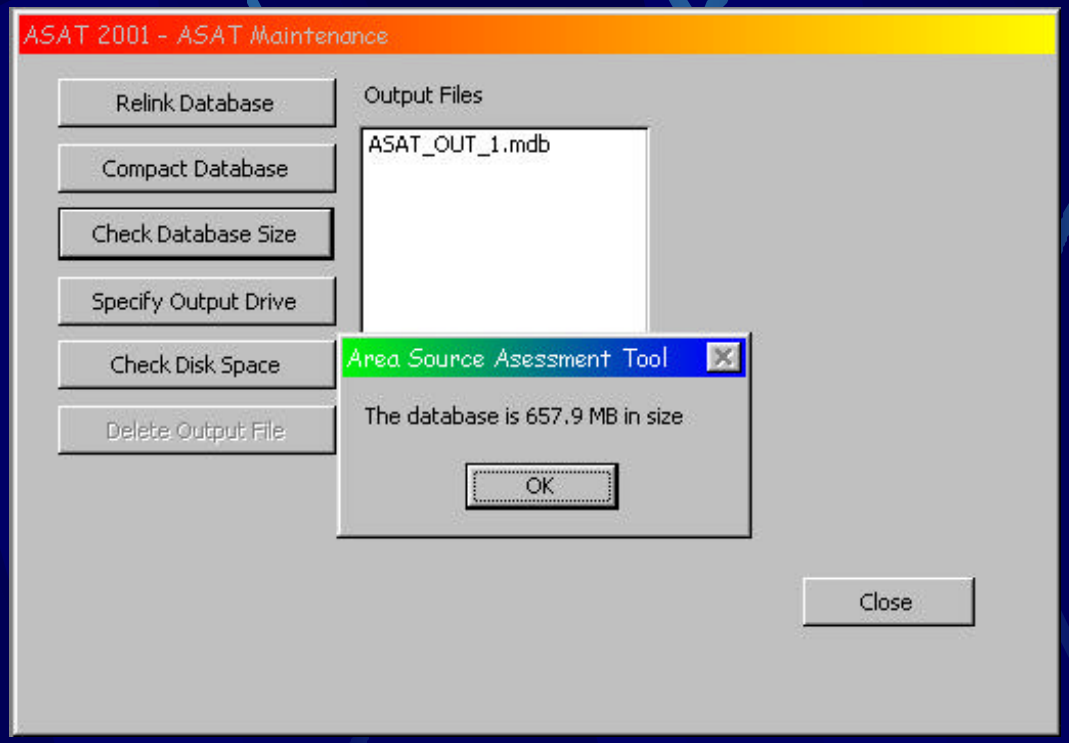
Case Management

ASAT Slide Show



Emissions Report

ASAT Slide Show



ASAT Maintenance

ASAT

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