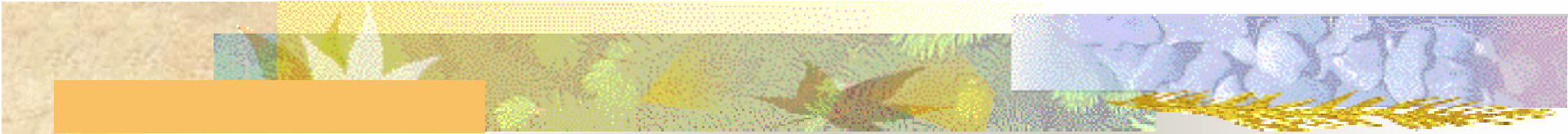


A NIF-based Validation/QA Database Management System for the Tennessee Emission Inventory



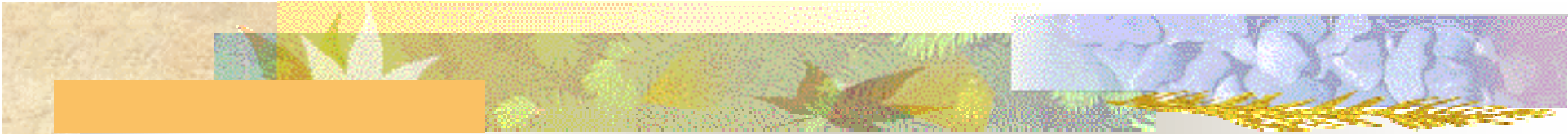
**Joshua S. Fu, Wayne T. Davis, Terry L. Miller,
Carol H. Norman**

**Dept. of Civil & Environmental Engineering
University of Tennessee**



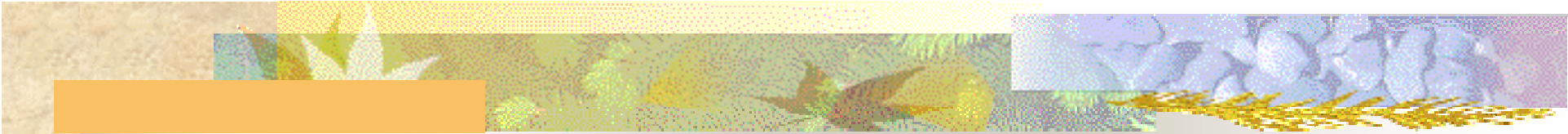
OUTLINE

- **Tennessee Emission Database Management System (TEDMS)**
 - **A NIF-based Validation/QA Database System**
 - **Systematic and Hierarchic Approach**
 - **Easier Up-to-date and Maintenance**
- **Overview of the NIF-based TEDMS**
 - **Creation of 1999 Emission Inventory**
 - **Features of the NIF-based TEDMS**
- **Future Works**



Overview of the TEDMS

- **System Structure**
 - **Microsoft Access – easy use and consistence**
 - NIF 2.0 Version Format
 - Tables, Forms, Queries, Reports, Macros, etc.
- **Creation of 1999 Emission Inventory Database**
 - **AIRS-AFS, NET96, and the State Permitting data**
- **Features of the TEDMS**



System Structure

■ Microsoft Access

❖ NIF 2.0 version Format

- ❖ **Tables:** SI, EU, EP, ER, PE, EM, CE and AI
- ❖ **Forms:** SI, EU, EP, ER, PE, EM, CE and AI
- ❖ **Queries:** SI-EU-EP-ER-PE-EM-CE
- ❖ **Reports:** Validation Report, SI, EU, EP, ER, PE, EM, CE, AI
- ❖ **Macros**



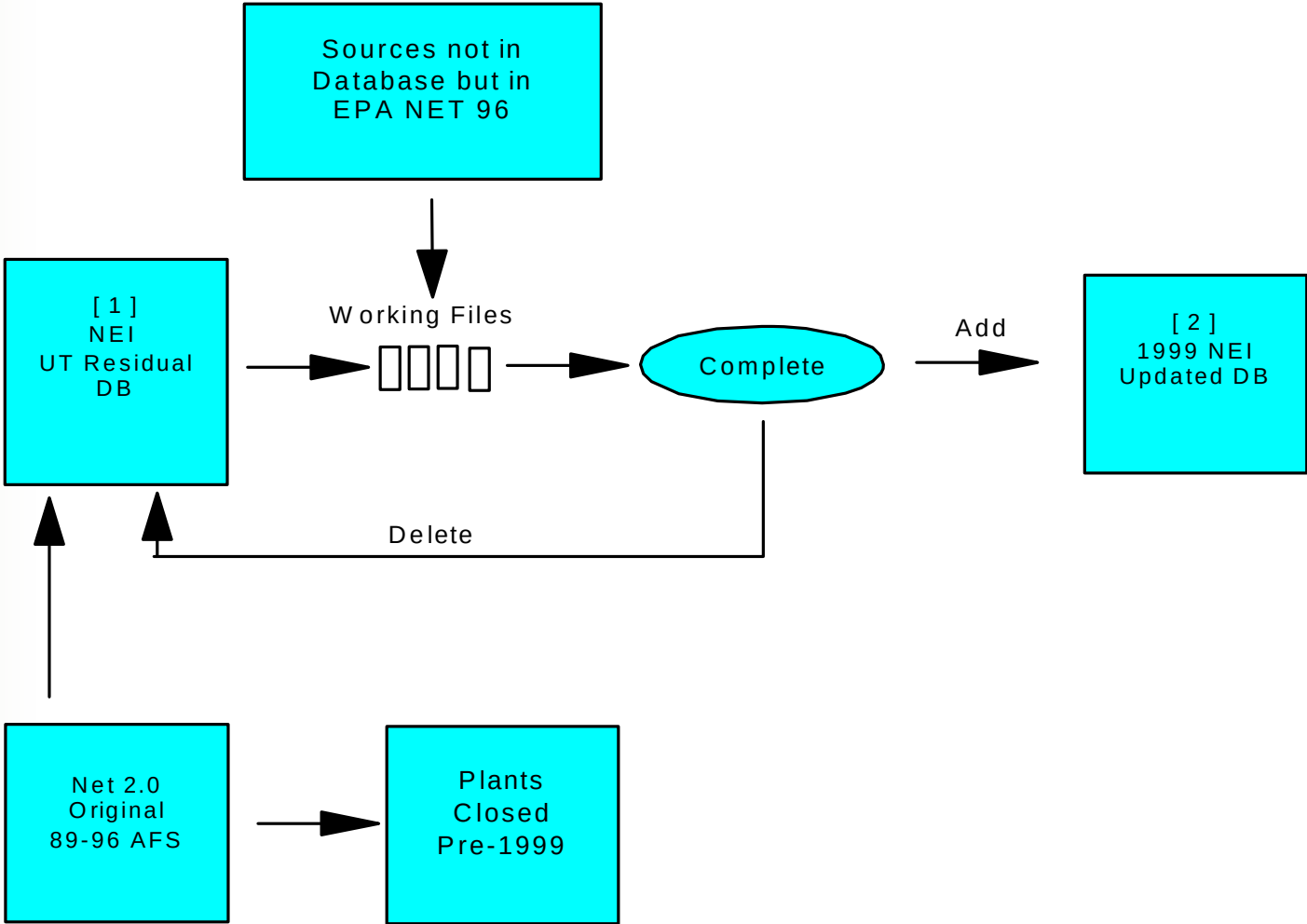
Creation of 1999 Tennessee Emission Inventory Database

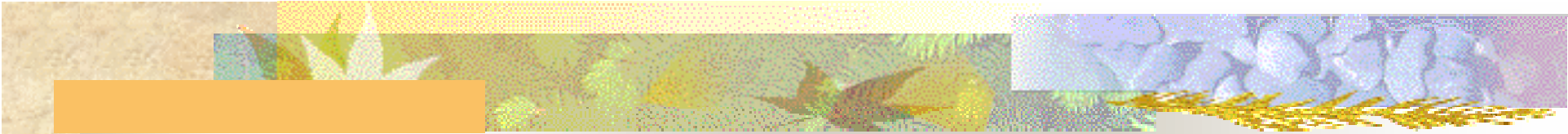
■ Data Resources

- ❖ AIRS-AFS Text Files (1989-1996)
- ❖ NET96
- ❖ State Permitting Data (Title V Applications)
- ❖ Flowchart of 1999 Tennessee Emission Inventory Database

Introduction

1999 EI is $[1] + [2]$





Features of the TEDMS

Main Window

UTEMIS

File Edit View Insert Format Records Tools Window Help

Press Companies to look up company's FIPS ID.

Company

To view detailed information of the Company, enter
County FIPS ID and Site ID; then press View.

County FIPS ID Site ID **View**

Close **Exit**

Developed by
Department of Civil and Environmental Engineering
The University of Tennessee

Contact: Dr. Joshua Fu Email: jsfu@utk.edu

Record: 1 of 1

Form View

The NIF-based Inventory Validation/QA Database Management System

Company List

UTEMIS

File Edit View Insert Format Records Tools Window Help

qryCompany TN : Select Query

	County FIPS	Site ID	Facility Name
▶	125	0097	101ST AIRBORNE DIV./ FORT CAMPBELL
	139	0004	1INTERTRADE HOLDINGS, INC.
	105	0081	A. E. STALEY MANUFACTURING COMPANY
	097	0003	A. O. SMITH
	141	0192	ADAMS USA
	129	0030	ADVANCE TRANSFORMER
	163	0041	AFG INDUSTRIES
	073	0026	AFG INDUSTRIES, - GREENLAND PLANT
	073	0003	ALLADIN INVESTMENTS, INC.
	011	0012	ALLIED SIGNAL, INC
	053	0162	ALLSTEEL, INCORPORATED
	009	0090	ALUMINUM COMPANY OF AMERICA NORTH
	009	0008	ALUMINUM COMPANY OF AMERICA SOUTH

Record: 1 of 326

The FIPS code for the County. See AIRS GeoCommon

NUM

Company Highlight

UTEMIS

File Edit View Insert Format Records Tools Window Help

qryCompany TN : Select Query

	County FIPS	Site ID	Facility Name
▶	125	0097	101ST AIRBORNE DIV./ FORT CAMPBELL
	139	0004	1INTERTRADE HOLDINGS, INC.
	105	0081	A. E. STALEY MANUFACTURING COMPANY
	097	0003	A. O. SMITH
	141	0192	ADAMS USA
	129	0030	ADVANCE TRANSFORMER
	163	0041	AFG INDUSTRIES
	073	0026	AFG INDUSTRIES, - GREENLAND PLANT
	073	0003	ALLADIN INVESTMENTS, INC.
	011	0012	ALLIED SIGNAL, INC
	053	0162	ALLSTEEL, INCORPORATED
	009	0090	ALUMINUM COMPANY OF AMERICA NORTH
	009	0008	ALUMINUM COMPANY OF AMERICA SOUTH

Record: 1 of 326

The name of the facility. NUM

Find a Company

UTEMIS

File Edit View Insert Format Records Tools Window Help

Find and Replace

Find What: TVA CUMBERLAND STEAM PLANT

Look In: Facility Name

Match: Whole Field

Find Next

Cancel

More >>

053	0162	ALLSTEEL, INCORPORATED
009	0090	ALUMINUM COMPANY OF AMERICA NORTH
009	0008	ALUMINUM COMPANY OF AMERICA SOUTH

Record: 1 of 326

Search

NUM

Find Company's ID

UTEMIS

File Edit View Insert Format Records Tools Window Help

qryCompany TN : Select Query

	County FIPS	Site ID	Facility Name
	001	0114	TITAN TIRE CORPORATION
	163	1009	TN EASTMAN INC
	163	1010	TN EASTMAN INC
	069	0006	TN GAS PIPELINE CO. STATION 71
	055	0064	TORRINGTON CO., FAFNIR BEARING DIV.
	063	0004	TRIANGLE PACIFIC #1
	063	0095	TRIANGLE PACIFIC CORPORATION
	105	0099	TRIGEN-BIOPOWER, INC.
	079	0077	TRINITY INDUSTRIES
	047	0031	TROXEL COMPANY
	059	0150	TUSCARORA INCORPORATED
	001	0009	TVA BULL RUN STEAM PLANT CLINTON 37
▶	161	0011	TVA CUMBERLAND STEAM PLANT

Record: 286 of 326

The name of the facility.

NUM

Main Window

The screenshot displays the UTEMIS application window. The title bar reads "UTEMIS". The menu bar includes File, Edit, View, Insert, Format, Records, Tools, Window, and Help. The toolbar contains various icons for file operations, editing, and data management. The status bar at the bottom shows "Form View" and a numeric keypad. The main form area, titled "frmMain : Form", has a green background and contains the following elements:

- Title:** The State of Tennessee Emission Inventory Database System
- Instructions:** Press Companies to look up company's FIPS ID.
- Buttons:** A button labeled "Company" is positioned below the first instruction.
- Second Instructions:** To view detailed information of the Company, enter County FIPS ID and Site ID; then press View.
- Input Fields:** Two text boxes are present: "County FIPS ID" with the value "105" and "Site ID" with the value "0101".
- Action Buttons:** A "View" button is located to the right of the input fields. Below the input fields are "Close" and "Exit" buttons.
- Footer:** Developed by Department of Civil and Environmental Engineering, The University of Tennessee. Contact: Dr. Joshua Fu, Email: jsfu@utk.edu.
- Record Navigation:** At the bottom of the form, it says "Record: 1 of 1" with navigation icons.

The NIF-based Inventory Validation/QA Database Management System

The Company Window of the TEDMS

UTEMIS

File Edit View Insert Format Records Tools Window Help

frmPoint-Site

The State of Tennessee Emission Inventory Database System

Company : THE GREAT ELECTRODE COMPANY

Tables Forms Report

Close Exit

Record: 1 of 1

Form View

Table Window

UTEMIS

File Edit View Insert Format Records Tools Window Help

Arial Rounded MT Bold 10 **B** *I* [List Icon] [Text Icon] [Color Icon] [Font Size Icon]

frmTables : Form

Tables

Site Info Emission Unit Emission ReleasePoint Emission Process

Emission Period Emission Control Equipment Additional Information

Close

Record: [Previous] [Next] 1 of 1

Form View [Buttons] NUM [Buttons]

Emission Table

UTEMIS

File Edit View Insert Format Records Tools Window Help

tblPointEM : Table

	Record Type	State FIPs	County FIPs	Site ID	Emission Unit	Process ID	Pollutant Code
▶	EM	47	105	0101	001	1	CO
	EM	47	105	0101	001	1	NOX
	EM	47	105	0101	001	1	PM25-FIL
	EM	47	105	0101	001	1	PM-FIL
	EM	47	105	0101	001	1	SO2
	EM	47	105	0101	001	1	VOC
	EM	47	105	0101	001	2	CO
	EM	47	105	0101	001	2	NOX
	EM	47	105	0101	001	2	PM25-FIL
	EM	47	105	0101	001	2	PM-FIL
	EM	47	105	0101	001	2	SO2
	EM	47	105	0101	001	2	VOC
	EM	47	105	0101	002	1	PM25-FIL
	EM	47	105	0101	002	1	PM-FIL
	EM	47	105	0101	002	2	PM25-FIL
	EM	47	105	0101	002	2	PM-FIL
	EM	47	105	0101	003	1	CO

Record: 1 of 74

A code that identifies the type of record. EM

NUM

The Company Window of the TEDMS

UTEMIS

File Edit View Insert Format Records Tools Window Help

frmPoint-Site

The State of Tennessee Emission Inventory Database System

Company : THE GREAT ELECTRODE COMPANY

Tables Forms Report

Close Exit

Record: 1 of 1

Form View

Form Window

UTEMIS

File Edit View Insert Format Records Tools Window Help

Arial Rounded MT Bold 10 B I

frmForms : Form

Forms

Site Info Emission Unit Emission ReleasePoint Emission Process

Emission Period Emission Control Equipment Additional Information

Close

Record: 1 of 1

Form View

Emission Form

UTEMIS

File Edit View Insert Format Records Tools Window Help

MS Sans Serif 8 B I U

tblPointEM

	Report	GoTo Table	Open CE Form	RoadMap	Close
Record Type Code	EM	Start Time (HHMM)		Material I/O	
State FIPs Code	47	End Time (HHMM)		Emission Calculation Method	05
County FIPs Code (APC V.1 Line 2)	105	Emission Numeric Value (APC V.28 Line 4)	19.71	EF Reliability Indicator	
Site ID (APC V.1 Line 6)	0101	Emission Unit Numerator (Use TON)	TON	Rule Effectiveness	
Emission Unit ID (State's worksheets)	001	Emission Type (Use 30 for entire period)	30	Effectiveness Method	
Process ID (State's worksheets)	1	Reliability Indicator		Rule Penetration	
Pollutant Code	CO	Factor Numeric Value (See RoadMap)	0.14	Control Status	
Emission Release Point ID (State's worksheets)	EP-1	Factor Unit Numerator	LB	Emission Data Level	
Start Date (yyyymmdd) (Use 19990101)	19990101	Factor Unit Denominator	TON	Submittal Flag	
End Date (yyyymmdd) (Use 19991231)	19991231	Material (See RoadMap)	189		

Record: 1 of 74

A code that identifies the type of record. EM

NUM

Drop-Down Lists of Pollutant CO

UTEMIS

File Edit View Insert Format Records Tools Window Help

MS Sans Serif 8 B I U

tblPointEM

Report GoTo Table Open CE Form RoadMap Close

Record Type Code	EM	Start Time (HHMM)		Material I/O																	
State FIPs Code	47	End Time (HHMM)		Emission Calculation Method	05																
County FIPs Code (APC V.1 Line 2)	105	Emission Numeric Value (APC V.28 Line 4)	19.71	EF Reliability Indicator																	
Site ID (APC V.1 Line 6)	0101	Emission Unit Numerator (Use TON)	TON	Rule Effectiveness																	
Emission Unit ID (State's worksheets)	001	Emission Type (Use 30 for entire period)	30	Effectiveness Method																	
Process ID (State's worksheets)	1	Reliability Indicator		Rule Penetration																	
Pollutant Code	CO	Factor Numeric Value (See RoadMap)	0.14	Control Status																	
Emission Release Point ID (State's worksheets)	<table border="1"> <thead> <tr> <th>POLLUTANT</th> <th>POLLUTANT_CODE_DESC</th> </tr> </thead> <tbody> <tr> <td>CO</td> <td>CARBON MONOXIDE</td> </tr> <tr> <td>EC</td> <td>ELEMENTAL CARBON</td> </tr> <tr> <td>HC</td> <td>HYDROCARBONS</td> </tr> <tr> <td>ISO</td> <td>ISOPRENE</td> </tr> <tr> <td>CH4</td> <td>METHANE</td> </tr> <tr> <td>MONO</td> <td>MONOTERPENES</td> </tr> <tr> <td>NOX</td> <td>NITROGEN OXIDES ((NO2 + NO, EXPRESSED AS THE MOLECULAR WGT OF NO2))</td> </tr> </tbody> </table>					POLLUTANT	POLLUTANT_CODE_DESC	CO	CARBON MONOXIDE	EC	ELEMENTAL CARBON	HC	HYDROCARBONS	ISO	ISOPRENE	CH4	METHANE	MONO	MONOTERPENES	NOX	NITROGEN OXIDES ((NO2 + NO, EXPRESSED AS THE MOLECULAR WGT OF NO2))
POLLUTANT	POLLUTANT_CODE_DESC																				
CO	CARBON MONOXIDE																				
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HC	HYDROCARBONS																				
ISO	ISOPRENE																				
CH4	METHANE																				
MONO	MONOTERPENES																				
NOX	NITROGEN OXIDES ((NO2 + NO, EXPRESSED AS THE MOLECULAR WGT OF NO2))																				
Start Date (yyyymmdd) (Use 19990101)																					
End Date (yyyymmdd) (Use 19991231)																					

Record: 1 of 74

Form View

NUM

Report of Emission Records

Emission Records

Record Type Code	EM	Start Time (HHMM)		Emission Calculation Method	05
State FIPs Code	47	End Time (HHMM)		EF Reliability Indicator	
County FIPs Code (APC V.1 Line 2)	105	Emission Numeric Value (APC V.28 Line 4)	19.71	Rule Effectiveness	
Site ID (APC V.1 Line 6)	0101	Emission Unit Numerator (Use TON)	TON	Effectiveness Method	
Emission Unit ID	001	Emission Type (Use 30 for entire period)	30	Rule Penetration	
Process ID	1	Reliability Indicator		Control Status	
Pollutant Code	CO	Factor Numeric Value	0.14	Emission Data Level	
Emission Release Point ID	EP-1	Factor Unit Numerator	LB	Submittal Flag	
Start Date (YYYYMMDD) (Use 19990101)	19990101	Factor Unit Denominator	TON		
End Date (YYYYMMDD) (Use 19991231)	19991231	Material	189		
		Material I/O	I		

Report of Emission Records

Emission Records

Record Type Code	EM	Start Time (HHMM)		Emission Calculation Method	05
State FIPs Code	47	End Time (HHMM)		EF Reliability Indicator	
County FIPs Code (APC V.1 Line 2)	105	Emission Numeric Value (APC V.28 Line 4)	19.71	Rule Effectiveness	
Site ID (APC V.1 Line 6)	0101	Emission Unit Numerator (Use TON)	TON	Effectiveness Method	
Emission Unit ID	001	Emission Type (Use 30 for entire period)	30	Rule Penetration	
Process ID	1	Reliability Indicator		Control Status	
Pollutant Code	CO	Factor Numeric Value	0.14	Emission Data Level	
Emission Release Point ID	EP-1	Factor Unit Numerator	LB	Submittal Flag	
Start Date (YYYYMMDD) (Use 19990101)	19990101	Factor Unit Denominator	TON		
End Date (YYYYMMDD) (Use 19991231)	19991231	Material	189		
		Material I/O	I		
Record Type Code	EM	Start Time (HHMM)		Emission Calculation Method	05
State FIPs Code	47	End Time (HHMM)		EF Reliability Indicator	
County FIPs Code (APC V.1 Line 2)	105	Emission Numeric Value (APC V.28 Line 4)	35.04	Rule Effectiveness	
Site ID (APC V.1 Line 6)	0101	Emission Unit Numerator (Use TON)	TON	Effectiveness Method	
Emission Unit ID	001	Emission Type (Use 30 for entire period)	30	Rule Penetration	
Process ID	1	Reliability Indicator		Control Status	
Pollutant Code	NOX	Factor Numeric Value	0.631	Emission Data Level	
Emission Release Point ID	EP-1	Factor Unit Numerator	LB	Submittal Flag	
Start Date (YYYYMMDD) (Use 19990101)	19990101	Factor Unit Denominator	TON		
End Date (YYYYMMDD) (Use 19991231)	19991231	Material	189		
		Material I/O	I		
Record Type Code	EM	Start Time (HHMM)		Emission Calculation Method	
State FIPs Code	47	End Time (HHMM)		EF Reliability Indicator	
County FIPs Code (APC V.1 Line 2)	105	Emission Numeric Value (APC V.28 Line 4)	14.48	Rule Effectiveness	
Site ID (APC V.1 Line 6)	0101	Emission Unit Numerator (Use TON)	TON	Effectiveness Method	
Emission Unit ID	001	Emission Type (Use 30 for entire period)	30	Rule Penetration	
Process ID	1	Reliability Indicator		Control Status	
Pollutant Code	PM25-FIL	Factor Numeric Value	0.162	Emission Data Level	
Emission Release Point ID	EP-1	Factor Unit Numerator	LB	Submittal Flag	
Start Date (YYYYMMDD) (Use 19990101)	19990101	Factor Unit Denominator	TON		
End Date (YYYYMMDD) (Use 19991231)	19991231	Material	189		
		Material I/O	I		

Emission Form

UTEMIS

File Edit View Insert Format Records Tools Window Help

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tblPointEM

	Report	GoTo Table	Open CE Form	RoadMap	Close
Record Type Code	EM	Start Time (HHMM)		Material I/O	
State FIPs Code	47	End Time (HHMM)		Emission Calculation Method	05
County FIPs Code (APC V.1 Line 2)	105	Emission Numeric Value (APC V.28 Line 4)	19.71	EF Reliability Indicator	
Site ID (APC V.1 Line 6)	0101	Emission Unit Numerator (Use TON)	TON	Rule Effectiveness	
Emission Unit ID (State's worksheets)	001	Emission Type (Use 30 for entire period)	30	Effectiveness Method	
Process ID (State's worksheets)	1	Reliability Indicator		Rule Penetration	
Pollutant Code	CO	Factor Numeric Value (See RoadMap)	0.14	Control Status	
Emission Release Point ID (State's worksheets)	EP-1	Factor Unit Numerator	LB	Emission Data Level	
Start Date (yyyymmdd) (Use 19990101)	19990101	Factor Unit Denominator	TON	Submittal Flag	
End Date (yyyymmdd) (Use 19991231)	19991231	Material (See RoadMap)	189		

Record: 1 of 74

A code that identifies the type of record. EM

NUM

Open CE Form

UTEMIS

File Edit View Insert Format Records Tools Window Help

Record Type Code **EM** Start Time (HHMM) Material I/O

tblPointEM

Report GoTo Table Open CE Form RoadMap Close

tblPointCE

Record Type Code **CE** Total Capture Control Efficiency (See RoadMap) 95

State FIPs Code **47** Primary Device Type Code **131**

County FIPs Code **105** Secondary Device Type Code

Site ID **0101** Control System Description THERMAL OXIDIZER

Emission Unit ID **001** Third Control Device Type Code

Process ID **1** Fourth Device Type Code (See RoadMap)

Pollutant Code **CO** Submittal Flag

Primary PCT Control Efficiency (See RoadMap) 95

PCT Capture Efficiency (APC V.13 Line 8 or 100%) 100

Record: 1 of 22

A code that identifies the type of record. CE

Emission Form

UTEMIS

File Edit View Insert Format Records Tools Window Help

MS Sans Serif 8 B I U

tblPointEM

	Report	GoTo Table	Open CE Form	RoadMap	Close
Record Type Code	EM	Start Time (HHMM)		Material I/O	
State FIPs Code	47	End Time (HHMM)		Emission Calculation Method	05
County FIPs Code (APC V.1 Line 2)	105	Emission Numeric Value (APC V.28 Line 4)	19.71	EF Reliability Indicator	
Site ID (APC V.1 Line 6)	0101	Emission Unit Numerator (Use TON)	TON	Rule Effectiveness	
Emission Unit ID (State's worksheets)	001	Emission Type (Use 30 for entire period)	30	Effectiveness Method	
Process ID (State's worksheets)	1	Reliability Indicator		Rule Penetration	
Pollutant Code	CO	Factor Numeric Value (See RoadMap)	0.14	Control Status	
Emission Release Point ID (State's worksheets)	EP-1	Factor Unit Numerator	LB	Emission Data Level	
Start Date (yyyymmdd) (Use 19990101)	19990101	Factor Unit Denominator	TON	Submittal Flag	
End Date (yyyymmdd) (Use 19991231)	19991231	Material (See RoadMap)	189		

Record: 1 of 74

A code that identifies the type of record. EM

NUM

Road Map

UTEMIS

File Edit View Insert Format Records Tools Window Help

tblPointEM

Report GoTo Table Open CE Form RoadMap Close

Record Type Code **EM** Start Time (HHMM) Material I/O

State FIPs Code **47** End Time (HHMM) Emission Calculation Method

County FIPs Code **105** Emission Numeric Value **19.71**

Site ID (APC V.1 Line 1)

Emission Unit (State's worksheet)

Process ID (State's worksheet)

Pollutant Code

Emission Release Point ID (State's worksheet)

Start Date (Use 19990101)

End Date (Use 19991231)

Roadmap-EM : Table

Field1	Field2	Field3	Field4
Record	Field	Data Element	Where to Find Data in Title V Permits:
Type	No.		APC Form No., Codes, etc.
BM	1	Record Type	EM
	2	State FIPs	47
	3	County FIPs	County FIPs table. Find County name on APC V1 Line 2.
	4	Site ID	APC V1 L6 or handwritten on front cover of permit.
	5	Emission Unit ID	See State's worksheet or create your own worksheet.
	6	Process ID	See State's worksheet. If not there, create it in keeping with State's nomenclature.
	7	Pollutant Code	See Code table for POLLUTANTS.
	8	Emission Release Point ID	State/local/tribal ID for point/location where emissions are released to ambient
	9	Start Date	Use 19990101
	10	End Date	Use 19991231.
	11	Start Time	Leave blank.
	12	End Time	Leave blank.

Record: 1 of 38

Datasheet View

NUM

SCC Link Lists

UTEMIS

File Edit View Insert Format Records Tools Window Help

tblPointEP

	Report	GoTo Table	RoadMap	SCC Link	Close
Record Type Code	EP		Spring Throughput PCT (See RoadMap)	25	
State FIPs Code	47		Summer Throughput PCT (See RoadMap)	25	
County FIPs Code (APC V.1 Line 2)	105		Fall Throughput PCT (See RoadMap)	25	
Site ID (APC V.1 Line 6)	0101		Annual Avg Days Per Week (See RoadMap)	7	
Emission Unit ID (State's worksheets)	001		Annual Avg Weeks Per Year	52	
Emission Release Point ID (State's worksheets)	EP-1		Annual Avg Hours Per Day	24	

Process
(State's
SCC
(See SC
Process
Emission
Descript
Winter 1
(See Rc

SCC_NAME : Table

	SCC w/A	SCC w/o A	SCC1_DESC	SCC3_DESC	SC
	10100101	10100101	External Combustic	Electric Generati	Anthracite
	10100102	10100102	External Combustic	Electric Generati	Anthracite
	10100201	10100201	External Combustic	Electric Generati	Bituminous
	10100202	10100202	External Combustic	Electric Generati	Bituminous
	10100203	10100203	External Combustic	Electric Generati	Bituminous
	10100204	10100204	External Combustic	Electric Generati	Bituminous
	10100205	10100205	External Combustic	Electric Generati	Bituminous
	10100211	10100211	External Combustic	Electric Generati	Bituminous

Record: 15 of 10341

Datasheet View

NUM

The Company Window of the TEDMS

UTEMIS

File Edit View Insert Format Records Tools Window Help

frmPoint-Site

The State of Tennessee Emission Inventory Database System

Company : THE GREAT ELECTRODE COMPANY

Tables Forms Report

Close Exit

Record: 1 of 1

Form View

Emission Data Validation of the TEDMS

Company Process/Emission Report

THE GREAT ELECTRODE COMPANY

US HWY 41, PATTON ROAD

SMITHTOWN TN 371230903

Site ID	Emis Unit ID (AIRS Point ID)	EU Description	ERP ID (AIRS STK ID)	Process ID (Segment ID)	EP Description	PE Record (AC Record)	Pollutant Code	Emission (ton/yr)	CE Record
0101	001	N-1N-2 CARBON BAKE FURNA	EP-1	1	N-1 CARBON BAKE FURN	PE	CO	19.71	CE
				1	N-1 CARBON BAKE FURN	PE	NOX	35.04	
				1	N-1 CARBON BAKE FURN	PE	PM25-FIL	14.48	
				1	N-1 CARBON BAKE FURN	PE	PM-FIL	16.25	CE
				1	N-1 CARBON BAKE FURN	PE	SO2	419.78	
				1	N-1 CARBON BAKE FURN	PE	VOC	20.59	CE
			EP-12	2	N-2 CARBON BAKE FURN	PE	CO	19.71	CE
				2	N-2 CARBON BAKE FURN	PE	NOX	35.04	
				2	N-2 CARBON BAKE FURN	PE	PM25-FIL	14.48	
				2	N-2 CARBON BAKE FURN	PE	PM-FIL	16.25	CE
				2	N-2 CARBON BAKE FURN	PE	SO2	419.78	
				2	N-2 CARBON BAKE FURN	PE	VOC	20.59	CE
002	BAKE PACK HANDLING		EP-16	1	BAKE PACK HNDL EP-16	PE	PM25-FIL	14.45	
				1	BAKE PACK HNDL EP-16	PE	PM-FIL	15.33	CE
			EP-17	2	BAKE PACK HNDL EP-17	PE	PM25-FIL	12.38	
				2	BAKE PACK HNDL EP-17	PE	PM-FIL	13.14	CE
003	PITCH IMPREGNATION AUTO		EP-13	3	PITCH IMP EP-13	PE	CO	0.7	
				3	PITCH IMP EP-13	PE	NOX	4.284	
				3	PITCH IMP EP-13	PE	PM25-FIL	1.716	
				3	PITCH IMP EP-13	PE	PM-FIL	1.752	
				3	PITCH IMP EP-13	PE	SO2	3.416	
				3	PITCH IMP EP-13	PE	VOC	0.056	
			EP-14	4	PITCH IMP EP-14	PE	CO	0.7	
				4	PITCH IMP EP-14	PE	NOX	4.284	

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The Company Window of the TEDMS

UTEMIS

File Edit View Insert Format Records Tools Window Help

frmPoint-Site

The State of Tennessee Emission Inventory Database System

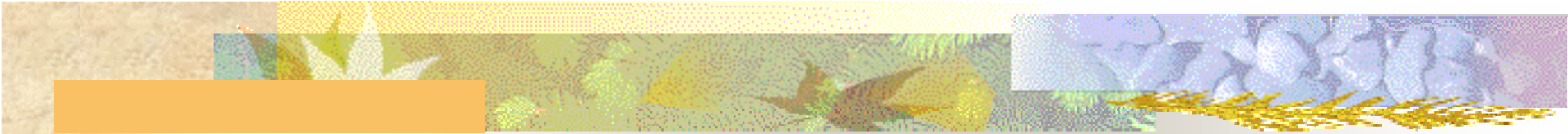
Company : THE GREAT ELECTRODE COMPANY

Tables Forms Report

Close Exit

Record: 1 of 1

Form View



EXIT TEDMS

FUTURE WORKS

2002 Emission Inventory ??

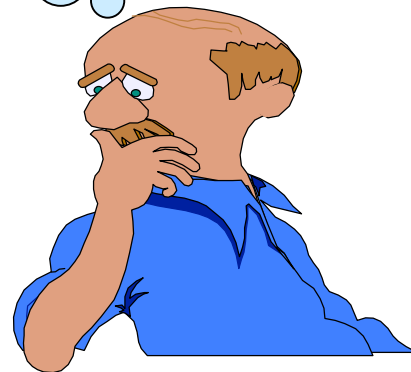
**Re-do again
Emissions Inventories
Every three years !!!!!**



What a solution is !

Should have an easy way ?

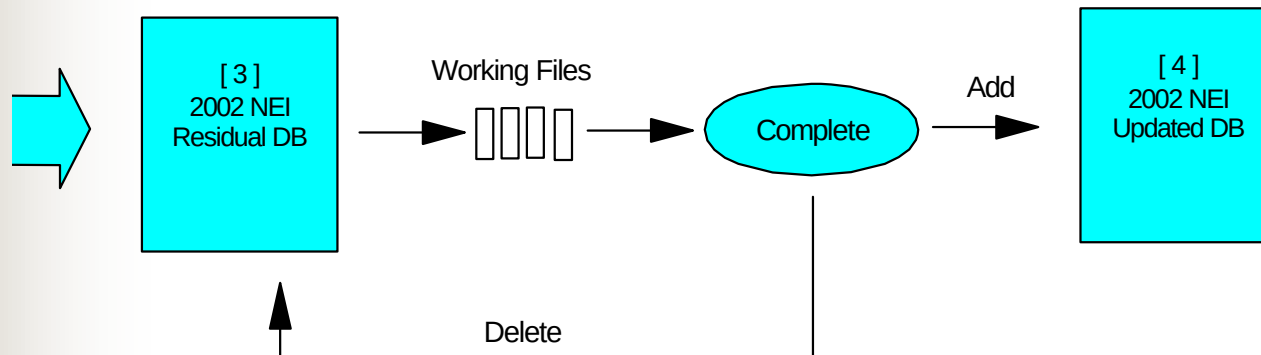
Practicality?



Updating Next Three Year Inventory- 2002 ???

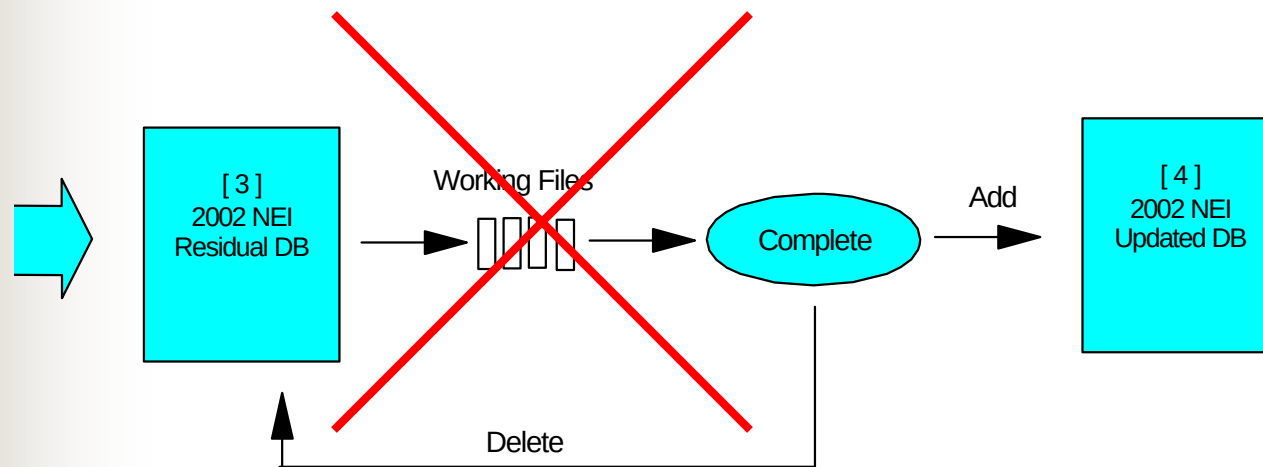
2002 Emission Inventory

?

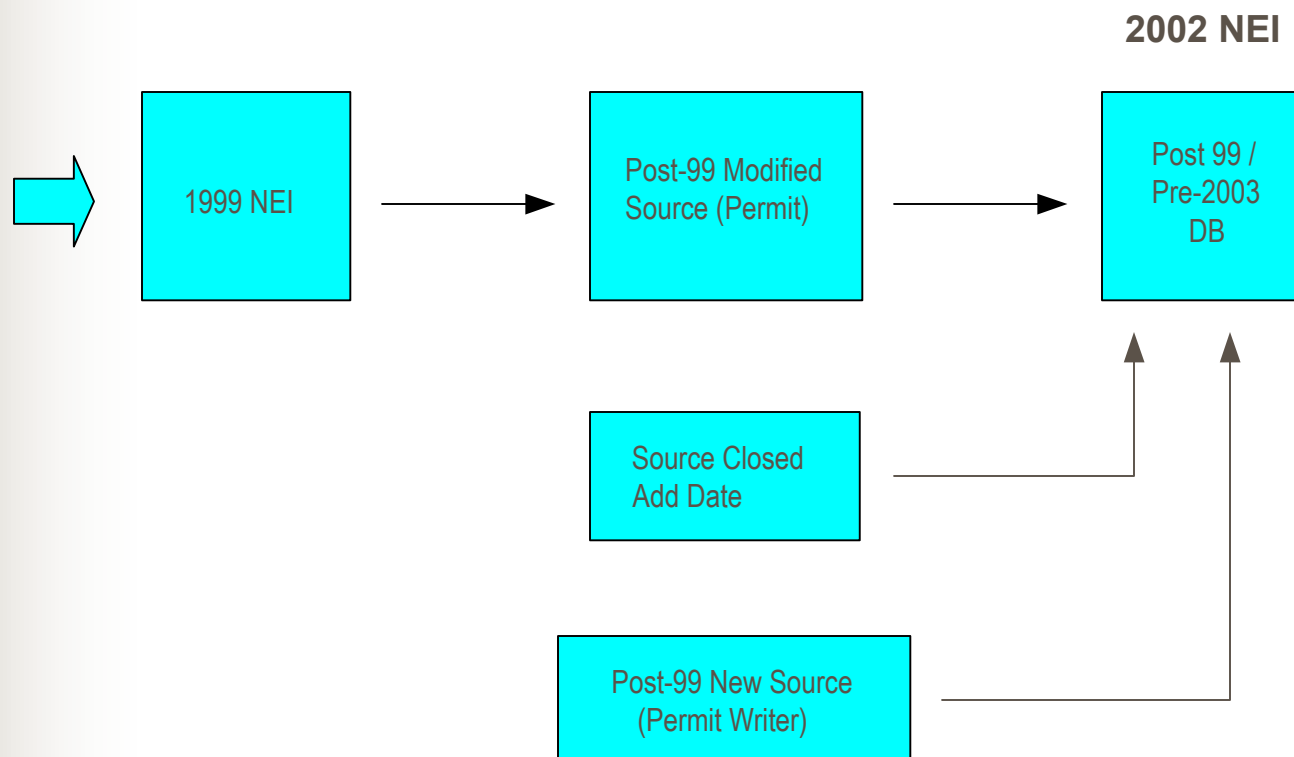


Updating Next Three Year Inventory- 2002 ???

2002 Emission Inventory



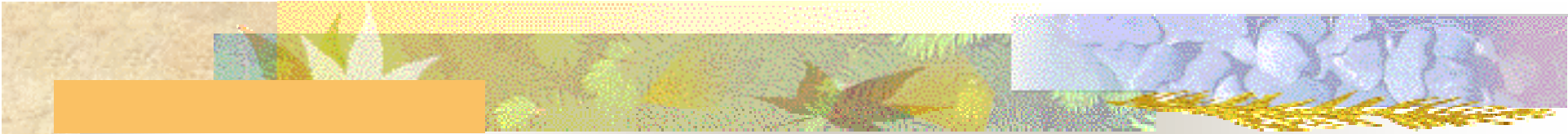
2002 Emission Inventory





CONCLUSIONS

- **Managing state's emission database by using the TEDMS**
 - Reduce a large effort due to the consistence and complexity of different data sources.
- **An improvement of unified emission inventory**
 - Easily update and maintain the state's emission inventory
 - Meet requirements under CERR for the three-year update.
- **Establish a stable, reliable, and secure inventory for a long term.**



THE END

THANK YOU

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