Coating 2005

Session 49
Common Permitting Mistakes and How to Avoid Them

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Topics

- Evaluating need for permit
- Preapplication meeting
- Compiling permit application data
- Preparing and submitting application
- Interaction with the agency staff during application processing
- Draft permit review and submission of comments
- Obtaining permit and setting up permit management system

What Permits Do

- Authorize construction of an air emissions source
- Give permission to operate
- Define emission limits
- Define operating conditions
- Specify recordkeeping and reporting requirements
- State monitoring requirements
- Define emission testing requirements

Evaluate Need for Permit

- Review operational needs and estimate pollutant-specific emissions
- Can emissions/coating usage rates be kept below permitting threshold?
- Balance permit avoidance with long-term business needs
- Define type of permit necessary

Preapplication Meeting

- Business needs and source specifics
- Discuss schedule
- Outline any unique project characteristics
- Identify any special data needs
- Identify the agency permit engineer
- Identify company permit contact

Compiling Application Data

- Understand current and future business needs
- Define operating rates and schedule
- Define representative coatings and compositions
- Translate composition data for application
- Conduct what-if analysis to establish application data limits
- Conduct regulatory review to identify applicable emission limits and standards

Compiling Application Data

- Review Material Safety Data Sheets and Environmental Data Sheets (MSDS/EDS) for compositions and properties
- Percent volatiles, VOC and OC
- As supplied, as applied
- Thinners and cleanup materials
- Review current data sources: coating logs, purchasing and inventory records, line speed, film thickness, etc.

Permit Application Guidelines

- Eliminate confidential information
- Convert P&ID into simple block diagrams
- Use generic names for chemicals
- Describe process in general terms
- Expect all things in the application and the permit to be legally enforceable and public

Preparing and Submitting Application

- Follow technical and procedural submission instructions
- Compile supporting documents (e.g, maps, process flow diagrams, MSDS)
- Document emission calculations and their bases
- Check for consistency with other permit documents and/or emissions reports
- Obtain required signatures
- Enclose permit fee, if required

Interaction During Permit Processing

- Know your permit engineer
- Make initial contact upon submission of the application to gauge the process
- Provide additional data if requested
- Ask to review informal draft
- Face-to-face meeting, if necessary

Review Draft Permit Documents

- Review emissions limits
- Ensure that the operating data are correct
- Review recordkeeping and reporting requirements to ensure that in-house systems are capable of generating the required data
- Review monitoring and emission testing requirements
- Spot any inconsistencies/typographical errors
- Submit formal letter with comments

Permit Contents

- General conditions
- Specific conditions
- Emission limits
- Monitoring requirements
- Recordkeeping and reporting requirements
- Compliance verification requirements

Ensuring Ongoing Compliance

- No substitute for line-by-line analysis of permit requirements
- Know what general requirements exist outside of your permits
- Insure operation can deliver 100% compliance
- Insure monitoring and recordkeeping requirements can be met
- Document your emissions basis

Obtain Permit and Set up Permit Management System

- Conduct line by line review of the final permit and answer “how do I comply?”
- Meet with operational staff and highlight key recordkeeping, monitoring, and reporting requirements
- Set up recordkeeping systems
- Prepare a calendar of key reporting dates
- Set up computer systems

Recordkeeping

- Anticipate what recordkeeping will be required
- Are recordkeeping requirements attainable by operating departments?
- Establish a file retention procedure
- Reinforce with operating departments who is responsible for delivering compliance with recordkeeping requirements.
- Will records be written or electronic?

Reporting

- Quarterly, semi-annual, and annual reports
- Deviations and corrective actions
- Malfunction, breakdown, and special events
- Deadlines
- Agencies receiving reports
- Electronic reporting/hard copy reports

Operating Procedures

- Review permit with operations to insure
  - They can deliver what is required by the permit
  - Operating flexibility is included
- Discuss requirements for
  - Monitoring frequency and parameters
  - Start-up and shutdown
  - System washout and change-over
  - Maintenance periods
  - Equipment malfunctions

(Source: Ohio Permit Guide)

Keys to Successful Permitting

- Plan ahead.
- Meet with your Ohio EPA district office before you submit your applications.
- Talk with the district/local air agency about your time frames for the project.
- File a complete application.
- After submitting your application, talk with your district office or local air agency to monitor the progress of your permit application review.

(Source: Ohio Permit Guide)

Keys to Successful Permitting

- Respond promptly to information requests from the district office or local air agency.
- Try to avoid making significant changes to the application during the permit review process, where possible.
- DO NOT begin any construction activities until you get your permit.
- Once you get it, read and make sure you understand your permit.
- Comply with the terms and conditions of your permit.

Indiana Permit Resource

Ohio Permit Guide

OCAPP
Office of Compliance Assistance and Pollution Prevention

Guide to Environmental Permitting in Ohio

- http://www.epa.state.oh.us/ocapp/sb/publications/permitguide.pdf

Kentucky Permit Resource

Top Ten Mistakes

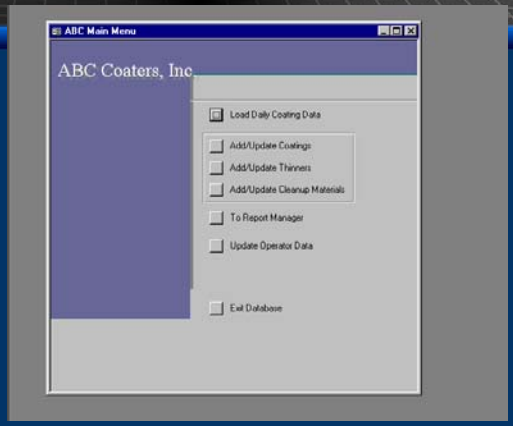
10. Failing to follow technical and procedural submission instructions
9. Including trade names, actual usage/production rates, and actual operating hours
8. Basing the application on limited number of coating materials
7. Lack of interaction with agency staff during the application processing phase

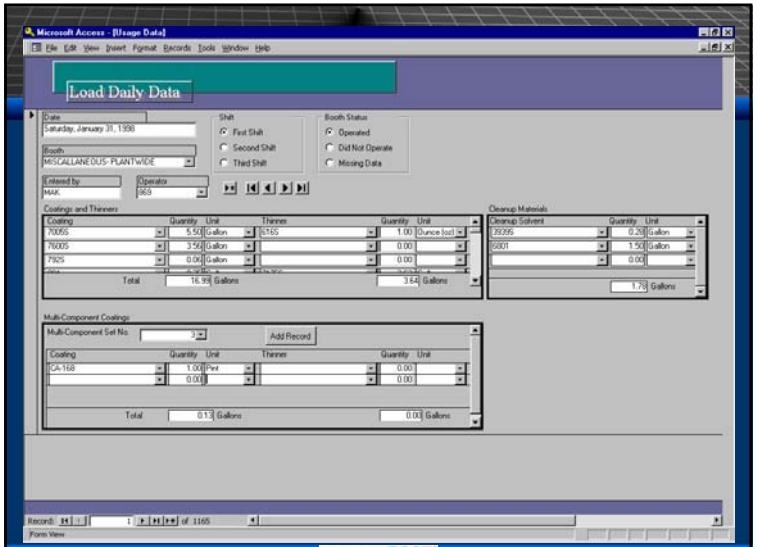
Top Ten Mistakes

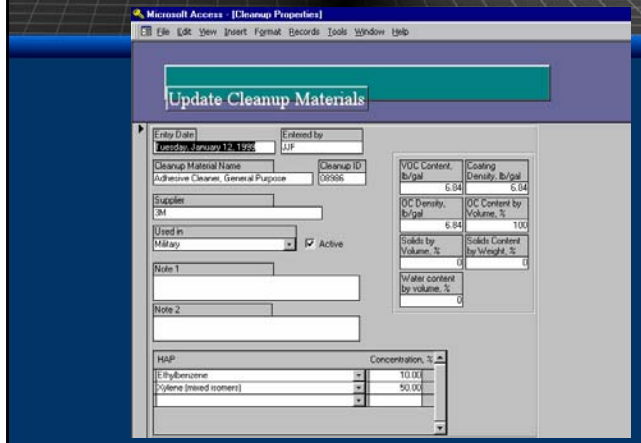
6. Promising optimistic permit schedule to management
5. Not responding to inquiries for additional information by the permit agency staff
4. Failing to carefully review the permit draft
3. Failing to read your final permit and integrating it into your daily operation
2. Starting construction before the permit is issued
1. Not obtaining the permit

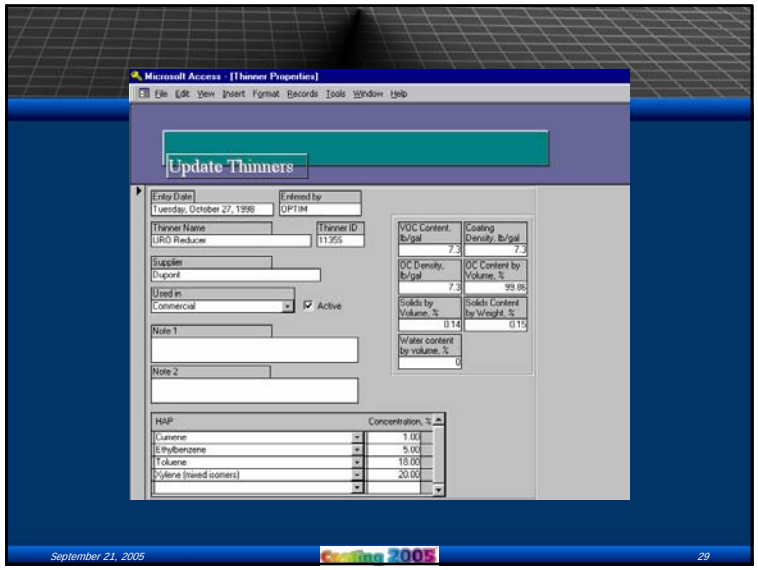
Database Software Tools

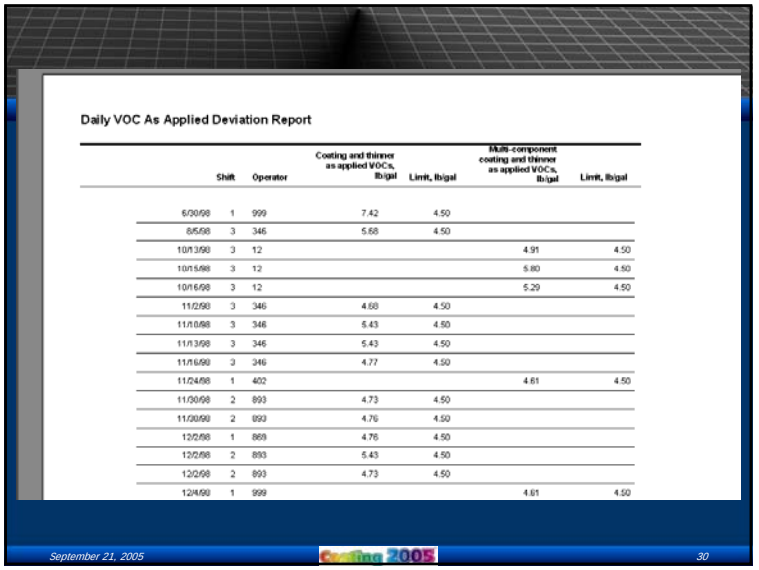
- Microsoft Excel®
  - Extensive calculation capabilities
  - Data management standard
  - Existing data can be brought into a single system
- Microsoft Access®
  - Relational database
  - Extensive data import/export capabilities
  - Macro automation capabilities
- Visual Basic Automation
  - Common platform for Microsoft applications
  - Provides comprehensive automation capabilities





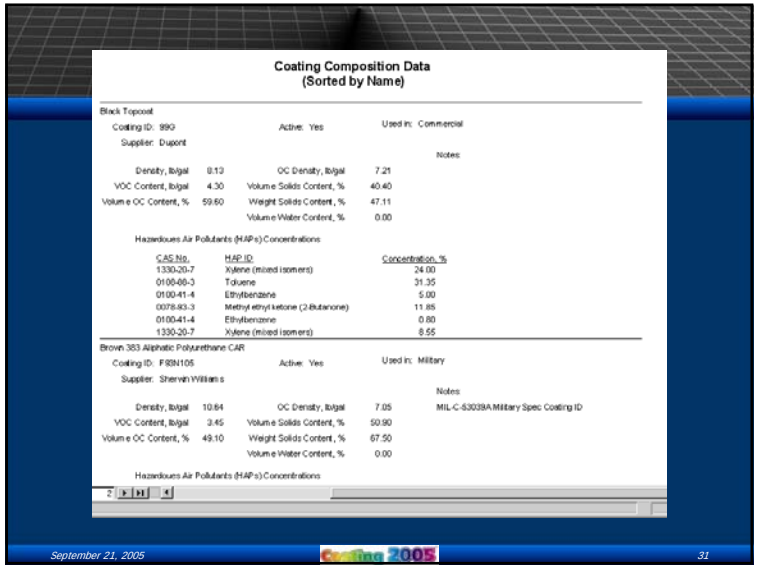






Daily VOC As Applied Deviation Report

	Shift	Operator	Coating and thinner as applied VOCs, lb/gal	Limit, lb/gal	Multi-component coating and thinner as applied VOCs, lb/gal	Limit, lb/gal
6/30/98	1	999	7.42	4.50		
8/5/98	3	346	5.68	4.50		
10/13/98	3	12			4.91	4.50
10/15/98	3	12			5.80	4.50
10/16/98	3	12			5.29	4.50
11/2/98	3	346	4.68	4.50		
11/10/98	3	346	5.43	4.50		
11/13/98	3	346	5.43	4.50		
11/16/98	3	346	4.77	4.50		
11/24/98	1	402			4.61	4.50
11/30/98	2	893	4.73	4.50		
11/30/98	2	893	4.76	4.50		
12/2/98	1	869	4.76	4.50		
12/2/98	2	893	5.43	4.50		
12/2/98	2	893	4.73	4.50		
12/4/98	1	999			4.61	4.50



Coating Composition Data
(Sorted by Name)

Black Topcoat
Coating ID: 99G Active: Yes Used in: Commercial
Supplier: Dupont
Notes:

Density, lb/gal	8.13	OC Density, lb/gal	7.21
VOC Content, lb/gal	4.30	Volume Solids Content, %	40.40
Volume OC Content, %	59.60	Weight Solids Content, %	47.11
		Volume Water Content, %	0.00

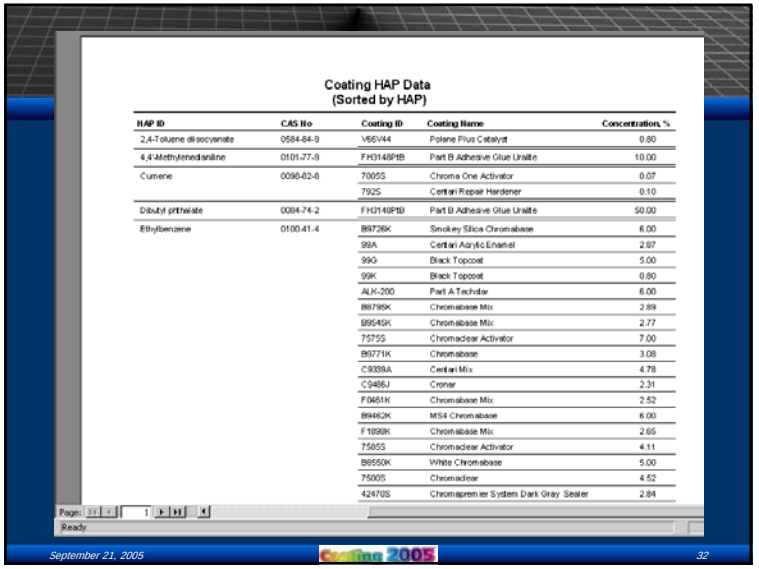
Hazardous Air Pollutants (HAPs) Concentrations

CAS No.	HAP ID	Concentration, %
1330-20-7	Xylene (mixed isomers)	24.00
0108-88-3	Toluene	31.35
0100-41-4	Ethylbenzene	5.00
0078-93-3	Methyl ethyl ketone (2-Butanone)	11.85
0100-41-4	Ethylbenzene	0.80
1330-20-7	Xylene (mixed isomers)	8.55

Brown 383 Aliphatic Polyurethane CAR
Coating ID: F83N105 Active: Yes Used in: Military
Supplier: Sherwin Williams
Notes:

Density, lb/gal	10.64	OC Density, lb/gal	7.05	MIL-C-83038A Military Spec Coating ID
VOC Content, lb/gal	3.45	Volume Solids Content, %	50.90	
Volume OC Content, %	49.10	Weight Solids Content, %	67.50	
		Volume Water Content, %	0.00	

Hazardous Air Pollutants (HAPs) Concentrations



Coating HAP Data
(Sorted by HAP)

HAP ID	CAS No	Coating ID	Coating Name	Concentration, %
2,4-Toluene diisocyanate	0584-84-9	V66V44	Polane Plus Catalyst	0.80
4,4'-Methylenedianiline	0101-77-9	FH3148P1B	Part B Adhesive Glue Unalite	10.00
Cumene	0098-82-8	7005S	Chroma One Activator	0.07
		792S	Centari Repair Hardener	0.10
Dibutyl phthalate	0084-74-2	FH3148P1D	Part D Adhesive Glue Unalite	50.00
Ethylbenzene	0100-41-4	B9726K	Smokey Silica Chromabase	6.00
		99A	Centari Acrylic Enamel	2.87
		99G	Black Topcoat	5.00
		99K	Black Topcoat	0.80
		ALK-200	Part A Techstar	6.00
		B87795K	Chromabase Mix	2.89
		B9549K	Chromabase Mix	2.77
		7575S	Chromaclear Activator	7.00
		B9771K	Chromabase	3.08
		C9338A	Centari Mix	4.78
		C9486J	Cronar	2.31
		F0451K	Chromabase Mix	2.52
		B9462K	MS4 Chromabase	6.00
		F1099K	Chromabase Mix	2.65
		7505S	Chromaclear Activator	4.11
		B9550K	White Chromabase	5.00
		7500S	Chromaclear	4.52
		4247GS	Chromapremier System Dark Gray Sealer	2.84

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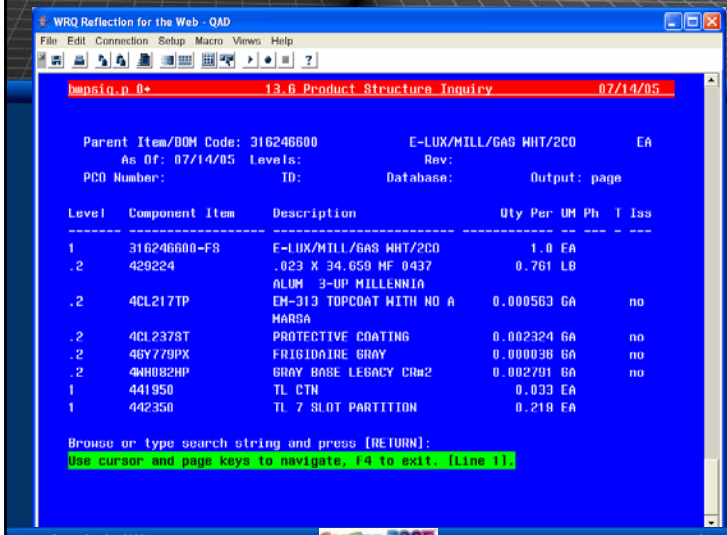
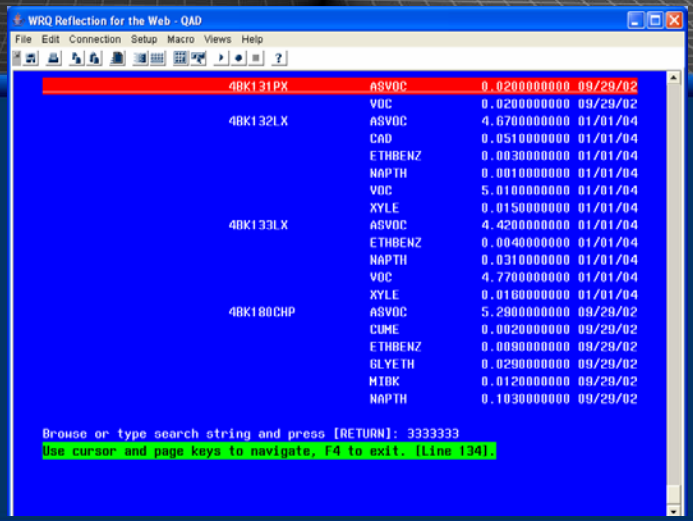
Facility 1998 Hazardous Air Pollutant Summary for the Facility (lbs/yr)

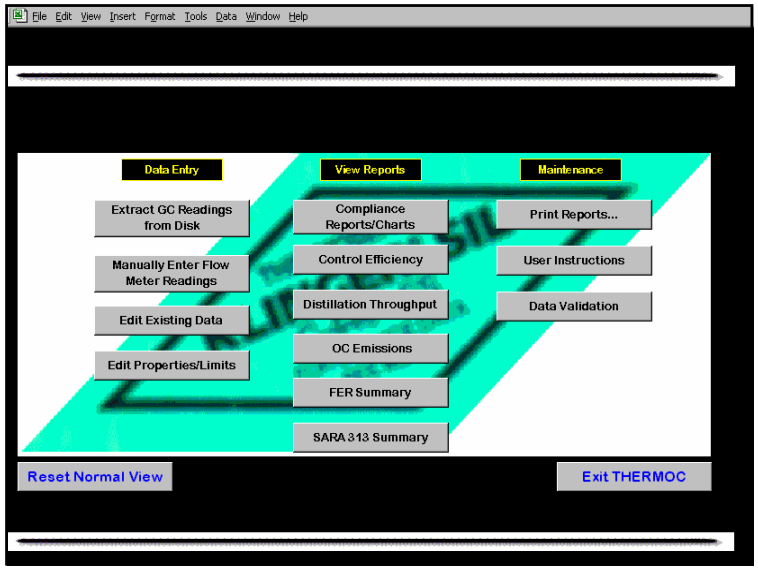
HAP	CAS No.	Coating	Thinner	Cleanup	Multi-component coating	Multi-component thinner	Total
2,4-Toluene diisocyanate	0584-84-9				0.21		0.21
4,4'-Methylenedianiline	0101-77-9				4.98		4.98
Cumene	0098-82-8	0.01	0.03		0.00	0.01	0.05
Dibutyl phthalate	0084-74-2				24.92		24.92
Ethylbenzene	0100-41-4	131.48	3.68	95.31	6.23	0.08	236.78
Glycol ethers	NA	2.37			0.16		2.53
Hexamethylene-1,6-diisocyanate	0822-06-0	47.91			0.00		47.91
Methanol	0067-56-1				1.08		1.08
Methyl ethyl ketone (2-Butanone)	0078-93-3	44.14	49.51	297.55	34.36	0.13	425.71
Methyl isobutyl ketone (Hexone)	0108-10-1	378.27	4.73	124.16	35.39	0.01	542.55
Naphthalene	0091-20-3	14.84			0.02		14.86
Toluene	0108-88-3	374.39	24.75	806.07	23.88	2.32	1231.41
Xylene (mixed isomers)	1330-20-7	906.30	17.39	143.64	28.91	0.31	1096.55
		1899.59	**100.19**	**1466.73**	**160.16**	**2.86**	**3629.43**





Thermoseal Permit Requirements

Parameter	Permit Limit	Record-keeping	Reporting
OC emissions rolling 30-day period	58.3 tons	Daily	Excursion within 45 days
OC emissions rolling 365-day period	180 tons		
Overall OC recovery efficiency rolling 30 day period	90.60%		
Liquid organic material processed through ethanol distillation unit on a rolling 365-day basis	1000 tons		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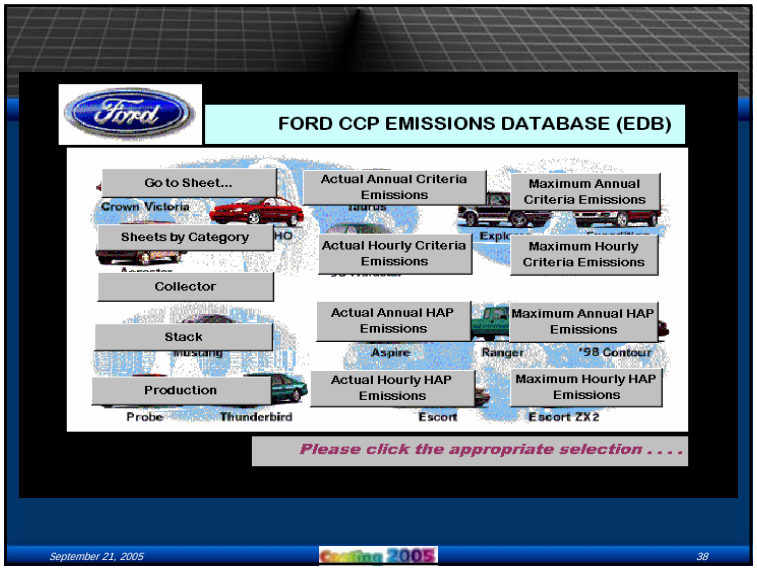
Data Entry
View Reports
Maintenance
Extract GC Readings from Disk
Manually Enter Flow Meter Readings
Edit Existing Data
Edit Properties/Limits
Compliance Reports/Charts
Control Efficiency
Distillation Throughput
OC Emissions
FER Summary
SARA 313 Summary
Print Reports...
User Instructions
Data Validation
Reset Normal View
Exit THERMOC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Sheets by Category
Collector
Stack
Production
Actual Annual Criteria Emissions
Actual Hourly Criteria Emissions
Actual Annual HAP Emissions
Actual Hourly HAP Emissions
Maximum Annual Criteria Emissions
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Maximum Hourly HAP Emissions
Crown Victoria
Mustang
Probe
Thunderbird
Aspire
Ranger
'98 Contour
Escort
Escort ZX2
Please click the appropriate selection . . . .
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