



# Using Software and IT Tools for Environmental Compliance

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# More Tasks With Less Resources

In a competitive and highly regulated industry, these are just a few tasks Environmental Professionals are facing today, while resources become fewer:

- Budgeting
- Monitoring
- Reporting
- Record keeping
- Regulation updates
- Planning
- Permitting
- Maintenance
- New construction
- Training
- Audits
- Review proposals
- Testing/Sampling
- Inspection

# Electronic Data Versus **H**ardcopies



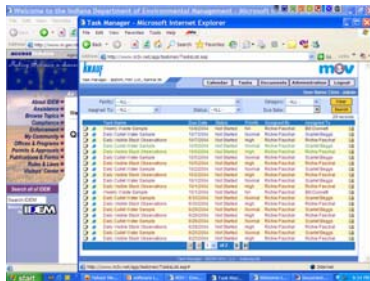
## Hardcopies Advantages:

- Easy to read
- Feel in control
- Maintenance perceived to be less costly

# Electronic Data Versus Hardcopies

## Electronic Data Management Advantages:

- Reduces workload
- Allows real time monitoring
- Displays compliance instantly
- It is fast and accurate
- Un-clutters desks
- Can be used anytime/anywhere
- Shows “big picture” to corporate office
- Creates an efficient, centralized system
- Changes “reactive” to “proactive”
- Reduces risk of noncompliance



# Software Solutions

- Chemical Tracking and Reporting (Emission Inventory, Form R, Sara Title III, - 302, 304, 311, 312)
- MACT Emission Compliance demonstration
- Applicability Auditor
- ISO 14000 Auditor
- Tasks Management for multiple facilities and multiple management levels
- OSHA Accident Investigation
- Track Waste Inventory (accumulation drums)
- MSDS Database and Tracking

# Software Applications

- Tracking emission allowances
- 30 days running averages on criteria pollutants
- Data migration from old to new software
- Integration with LIMS, purchasing and production
- Automatic prompts (e.g. email ticklers when the pressure drop from paint booth falls)
- Lab results interpretation

# Why Use Software for MACT Compliance Calculations?

Reason #1: Do you like working with these formulas every day ?

$$\text{HAP Limit} = \left[ 46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG}) \right] \quad (\text{Eq. 1})$$

$$\text{HAP emissions} = \left[ (PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG}) \right] \quad (\text{Eq. 1})$$

$$\text{Weighted-Average HAP Content (\%)} = \frac{\sum_{i=1}^n (M_i \text{ HAP}_i)}{\sum_{i=1}^n (M_i)} \quad (\text{Eq. 1})$$

$$PV_{OP} = \frac{\sum_{i=1}^n (M_i PV_i)}{\sum_{i=1}^n (M_i)} \quad (\text{Eq. 2})$$

# Why Use Software for MACT Compliance Calculations?

Reason #2: Do you know these definitions by heart?

Where:

HAP Limit= total allowable organic HAP that can be emitted from the open molding operations, kilograms.

$M_R$  = mass of production resin used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

$M_{PG}$  = mass of pigmented gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

$M_{CG}$  = mass of clear gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

$M_{TR}$  = mass of tooling resin used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

$M_{TG}$  = mass of tooling gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

# Steps Before Deciding on Software

1. Define what you need – organize data
2. Perform a system analysis
3. Decide custom vs. shelf
4. Anticipate future needs (e.g. new equipment, new plant)
5. Test before using real data
6. Pilot project

# Issues of Concern

- One size really fits all? (check organizational structure)
- Beware of hidden charges (software integration and customization, license for users, intranet, services, maintenance, hosting, cleanup old data before migration, updates, ...)
- IT department approval and cooperation
- Compatibility with existing system
- Security
- Data migration issues
- Testing, testing..
- Training

# Testimonials

- Emission inventory time- from weeks to hours
- Form R reporting - from months to days
- The same job that took 2 persons 20 hours per week takes now one person 4-5 hours per week

About costly do-it-all software:

- “It’s a monster! We spent millions and it is useless”
- Can you turn off some of the features?

# Conclusion

- The focus of environmental departments will continue to broaden
- Good data management is now an increasing need
- Software is the tool of the future for an efficient environmental management



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