

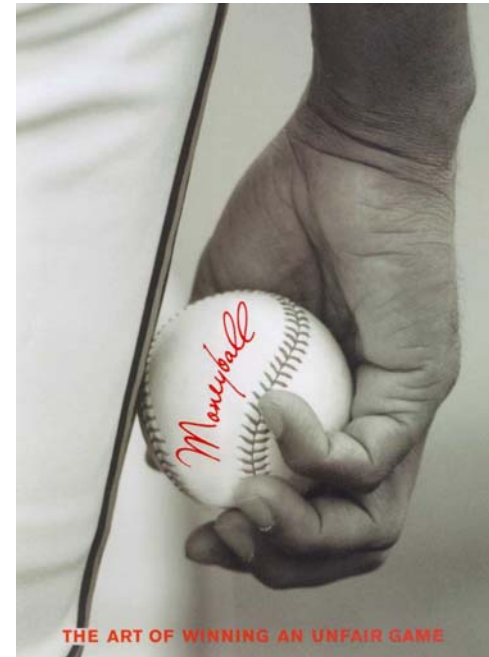


A Formula for Managing Hazardous Materials Information & Compliance

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AWMA
June 23, 2004

- 100 year old player evaluation system
- Does it Work for the Winners?

MONEYBALL



- Two franchises since 1995 in playoffs each year

- New York Yankees



- Atlanta Braves






Oakland A's Results



- 4 straight years in bottom 3rd of payroll...yet...
- 4 straight years in the playoffs
- What was A's secret?

- Oakland A's 
- Most important information?
- Impact analysis

Winning = Not Getting Out

Not getting out = Walks +
Fouls +
Base %



Baseball and HazMat?



- What is the HazMat version of critically important but commonly overlooked data?
- In other words, what is the HazMat version of “not getting out?”
- Good information can give you an advantage
- What is the analysis of your inventory?
- What does the industry analysis look like?



HazMat Formula



Inventory Assessment

+

MSDS Analysis

=

Reduction of Risk and Liability



Inventory Assessment



What we studied:

Analysis of hundreds of companies across major industries in North America...

- 1 Million products
- 300 companies

What did it reveal?

- 1/3 products did not exist / not accounted for
- 12% commonality
- Toxicity of products grossly underestimated
- Average inventory contained 55 known carcinogens



Typical Inventory Findings



- HazMat (Toxics) were more prevalent and more diverse than expected
- Programs (MSDS, HazCom) - insufficient
- Permits (SARA, Business Plans) - insufficient
- Training - misleading / missing crucial info
- Decision making throughout the organization needed improvement (methodology, check lists, etc.)

What we studied:

Pervasive products in North America...

- Two MSDS Sets
 - Chemical Manufacturing
 - Chemical Users
- 17 point "Appendix D" OSHA Completeness Guide
- Technical Accuracy CAS, TLV, PEL, STEL, TWA
- Emergency Response Contact Information

What did it reveal?



Our Preliminary Results



- All MSDS were determined to be current
- Emergency contact information was accurate
- 90% met completeness requirements
- 50% failed technical accuracy

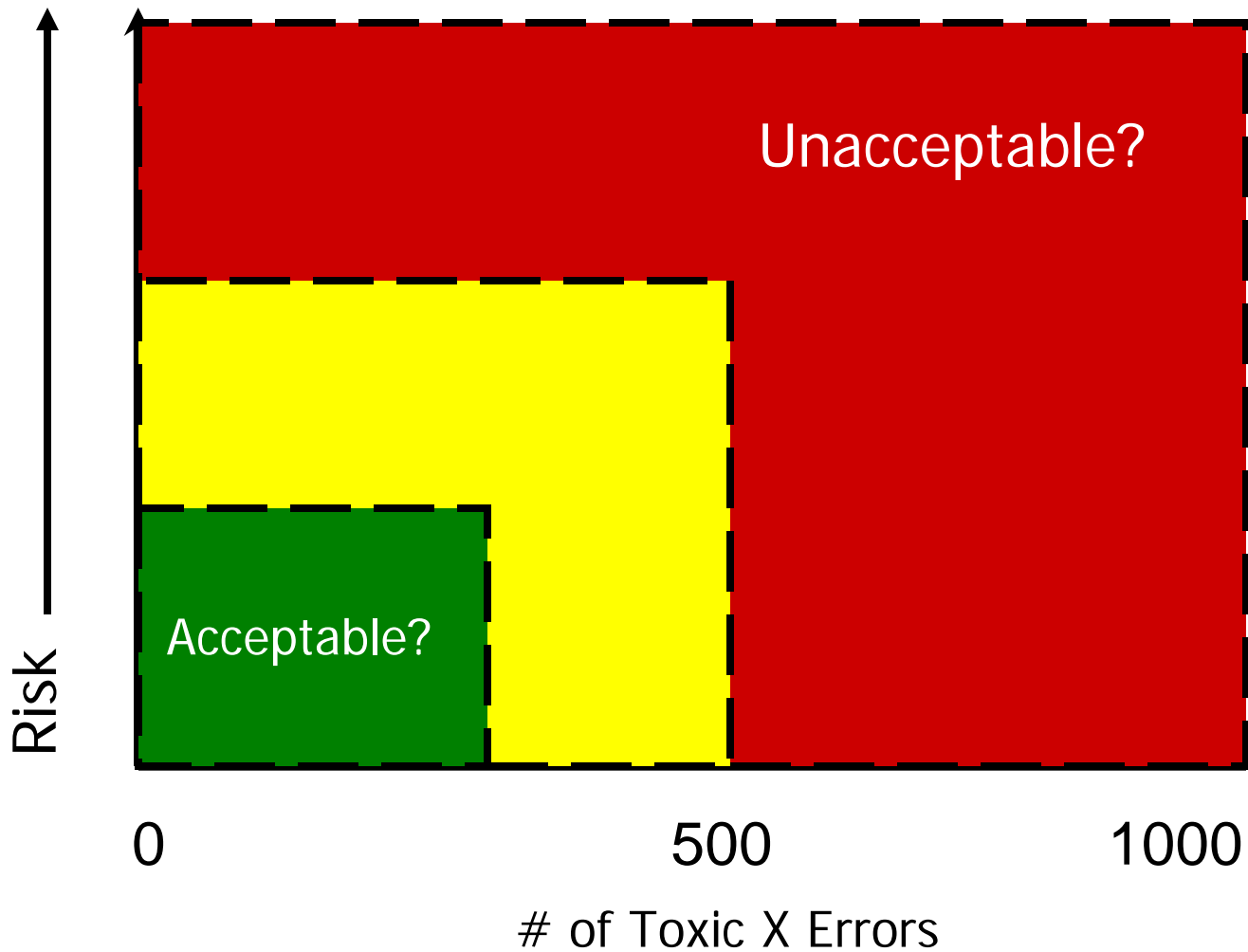


"Synopsis"

- PEL & TLV Order of Magnitude Errors?
 - 5 ppm vs .5 ppm
 - 100 ppm vs 1000 ppm
- PEL, STEL, TLV Omitted
- PEL Listed as TWA



Impairment & Impact Analysis



HazMat Life Cycle



Data Flow

Inventory Management

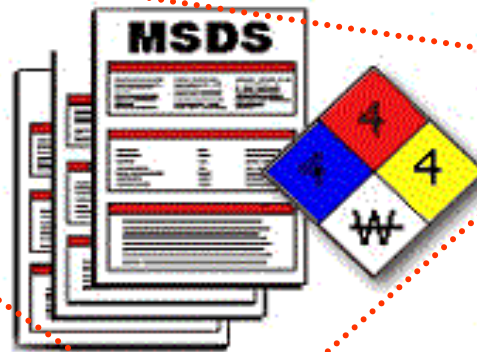
Own the Inventory

Chemical
Manufacturers

Chemical
Distributors

End
Users

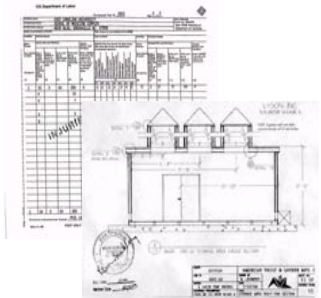
Disposer or
Recycler



MATERIAL SAFETY DATA SHEET	
DEODORANT BAR	
<p>1 - IDENTIFICATION</p> <p>2 - HAZARD IDENTIFICATION</p> <p>3 - COMPOSITION AND INFORMATION</p> <p>4 - FIRST AID MEASURES</p> <p>5 - FIRE FIGHTING MEASURES</p> <p>6 - ACCIDENT AND SPILL RESPONSE</p> <p>7 - HANDLING AND STORAGE</p> <p>8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION</p> <p>9 - PHYSICAL AND CHEMICAL PROPERTIES</p> <p>10 - STABILITY AND REACTIVITY</p> <p>11 - TOXICOLOGICAL INFORMATION</p> <p>12 - ECOTOXICOLOGICAL INFORMATION</p> <p>13 - DISPOSAL CONSIDERATIONS</p> <p>14 - TRANSPORT INFORMATION</p> <p>15 - REGULATORY INFORMATION</p> <p>16 - OTHER INFORMATION</p>	

Recurring Compliance Programs

Permits
Forms
Submittals



Programs
Record Keeping
Processes



Training
Education
Consulting



3E Training



Inventory is the Foundation



Safe
Employee &
Customer

HazCom
Dangerous Goods

MSDS – Usage
Disposal -
Discharge

SARA – Fire Dept - AQMD

Inventory

Communication

Education

Programs



Start with accurate inventory and build program

- MSDS Inventory Management
- Training
- Spill Response, Poison & Exposure, Emergency Response
- Haz Waste Management
- Transportation
- Compliance Reporting



Assessment with Inventory



- Compare the as is
- Compare to historical data
- Know what you are dealing with
- Manage the inventory vs. the inventory managing you
- Product elimination may be the quickest route to compliance



If even 10% of your inventory is inaccurate

- MSDS will not be available when needed
- Acquire and maintain MSDS unnecessarily
- Exposure archive could include phantom chemicals

Or if you assume all sites are the same

- Site specific MSDS are not available
- Unable to provide proper support documents to ER
- Level of compliance with HazCom is not optimal
- Top 10 OSHA citations

If even 10% of your inventory is inaccurate

- Employees are not aware of all chemicals
- All hazards are not properly evaluated
- No MSDS for guidance
- Not meeting Federal TSCA requirements

Or if you assume all sites are the same

- Inadequate training
- Over training
- Chemical specific training will be missed

- Lead 29 CFR 1910.1025
- Vinyl Chloride 29 CFR 1910.1017
- Asbestos 29 CFR 1910.1001
- Benzene 29 CFR 1910.1028
- Mercury OSHA Directive (CPL 2-2.6)





Spill / Poison / Exposure



If even 10% of your inventory is inaccurate

- MSDS will not be available when needed
- Med / Tox data not available or incorrect
- Exposure data will not be available or incorrect
- PPE will not be available or incorrect



If even 10% of your inventory is inaccurate

- Waste profiles may be incorrect
- Manifests improperly prepared
- DOT descriptions wrong

If even 10% of your inventory is inaccurate

- Improper classification or shipping labels
- Load weights calculated incorrectly
- Spills may be under reported

Or if you assume all sites are the same

- Inadequate training of shipping personnel
- Unqualified drivers
- Top 5 FAA citations



Compliance Reporting



If even 10% of your inventory is inaccurate

- Sensitive chemicals (EHS) may be excluded
- Reporting thresholds will be improperly calculated
- Air toxics reporting will be incorrect

Or if you assume all sites are the same

- Some chemicals will be reported unnecessarily
- Chemicals specific to a site will go unreported



Information Delivery Vehicles



HazMat Life Cycle



Data Flow

Inventory Management

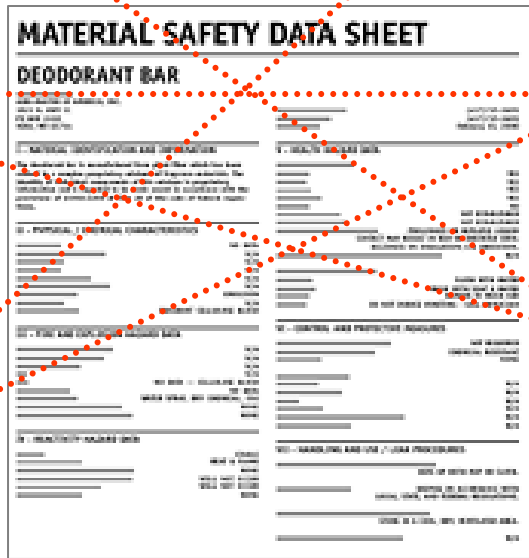
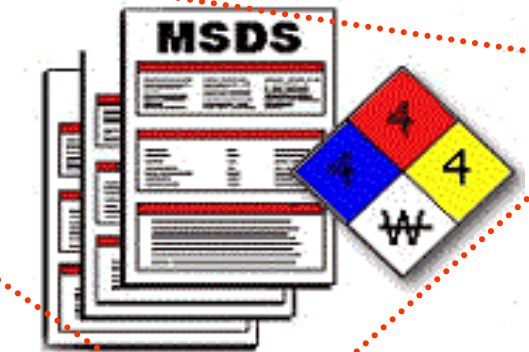
Own the Inventory

Chemical Manufacturers

Chemical Distributors

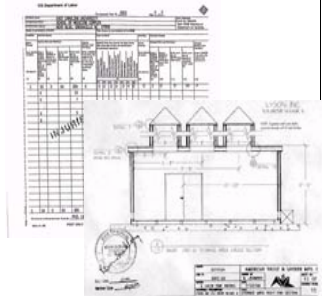
End Users

Disposer or Recycler



Recurring Compliance Programs

Permits
Forms
Submittals



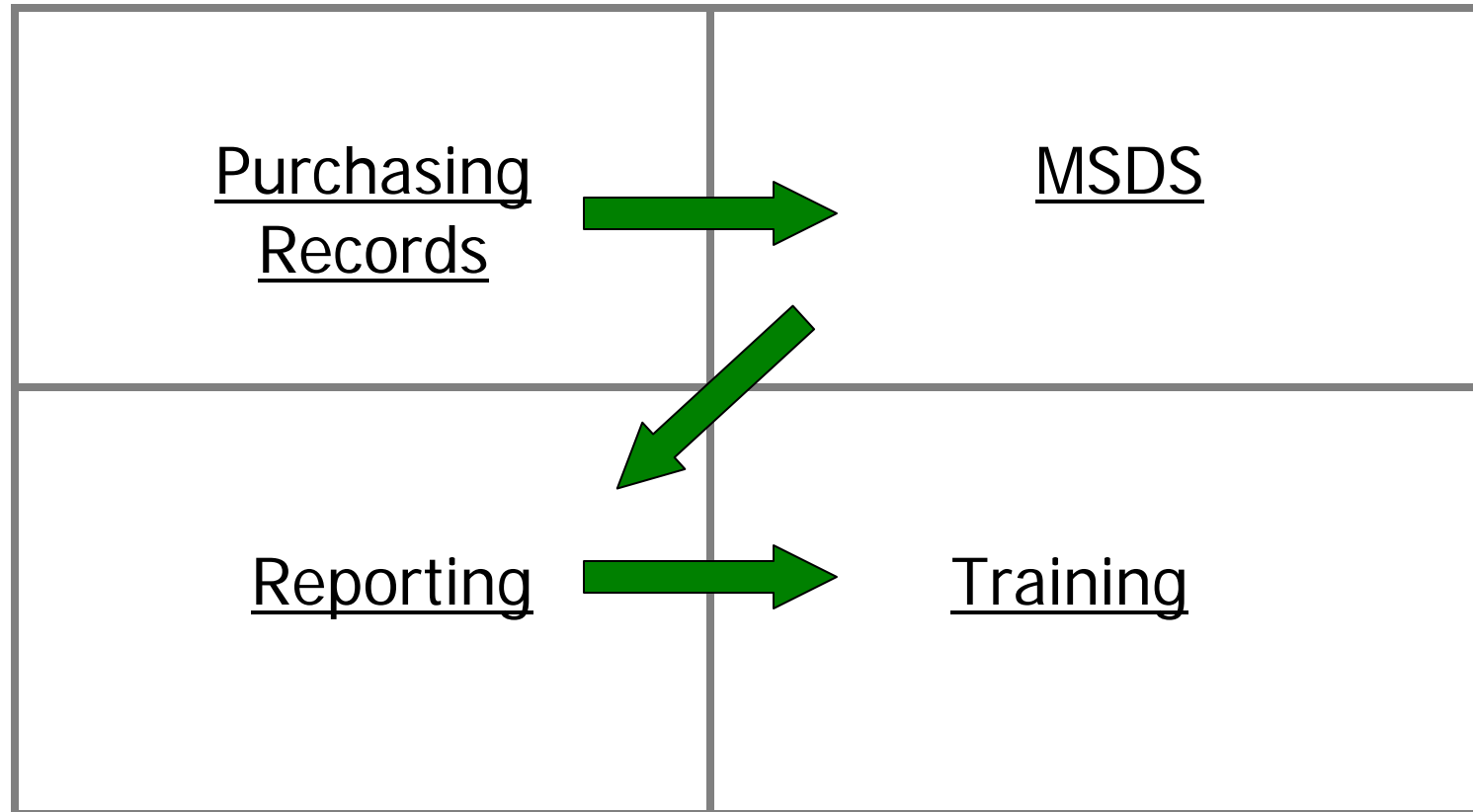
Programs
Record Keeping
Processes

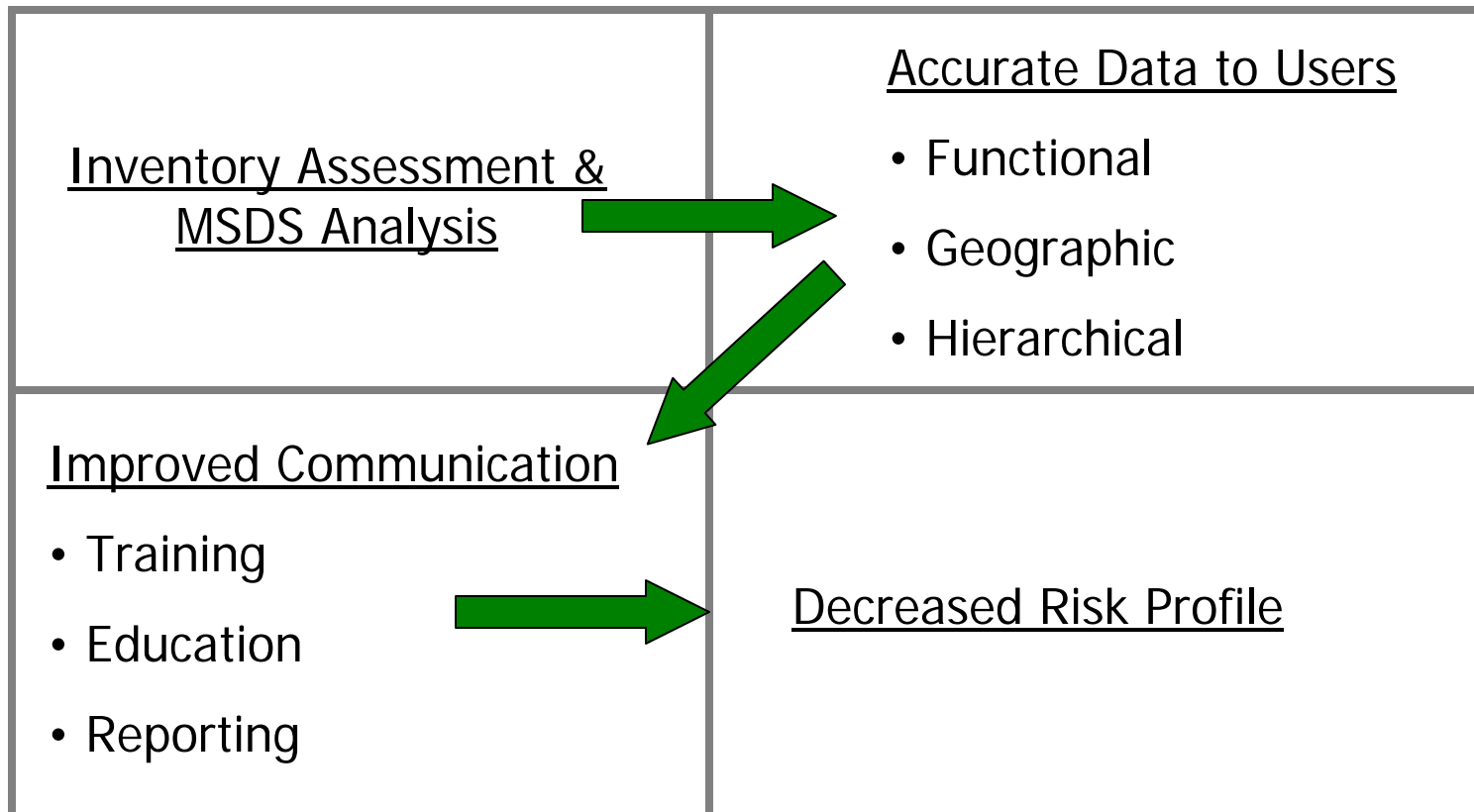


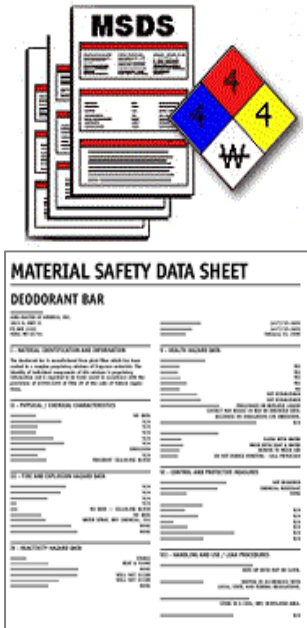
Training
Education
Consulting



3E Training

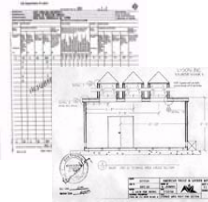






Correct
Inventory
& MSDS
Data

Permits
Forms
Submittals



Programs
Record Keeping
Processes



Training
Education
Consulting

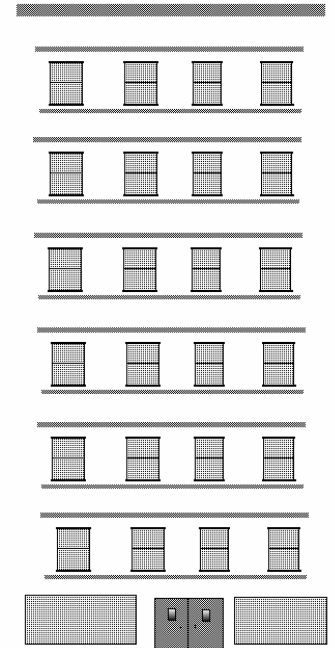


Compliant Programs
(Reduced Risk)

Safe Users

Customers

Employees



Good Decisions

= Formula for Success!

- You can get to the playoffs for less
- Correct inventory will reduce your cost and risk
- Centralize the inventory and data sheet
- Not knowing the whole picture can hurt you
- Expect the unexpected