

THE SYNERGIST

SEPTEMBER 2004
volume 15 number 9

The Essential Connection for OEHS Professionals

***Are Your
Compliance Programs
Striking Out?***

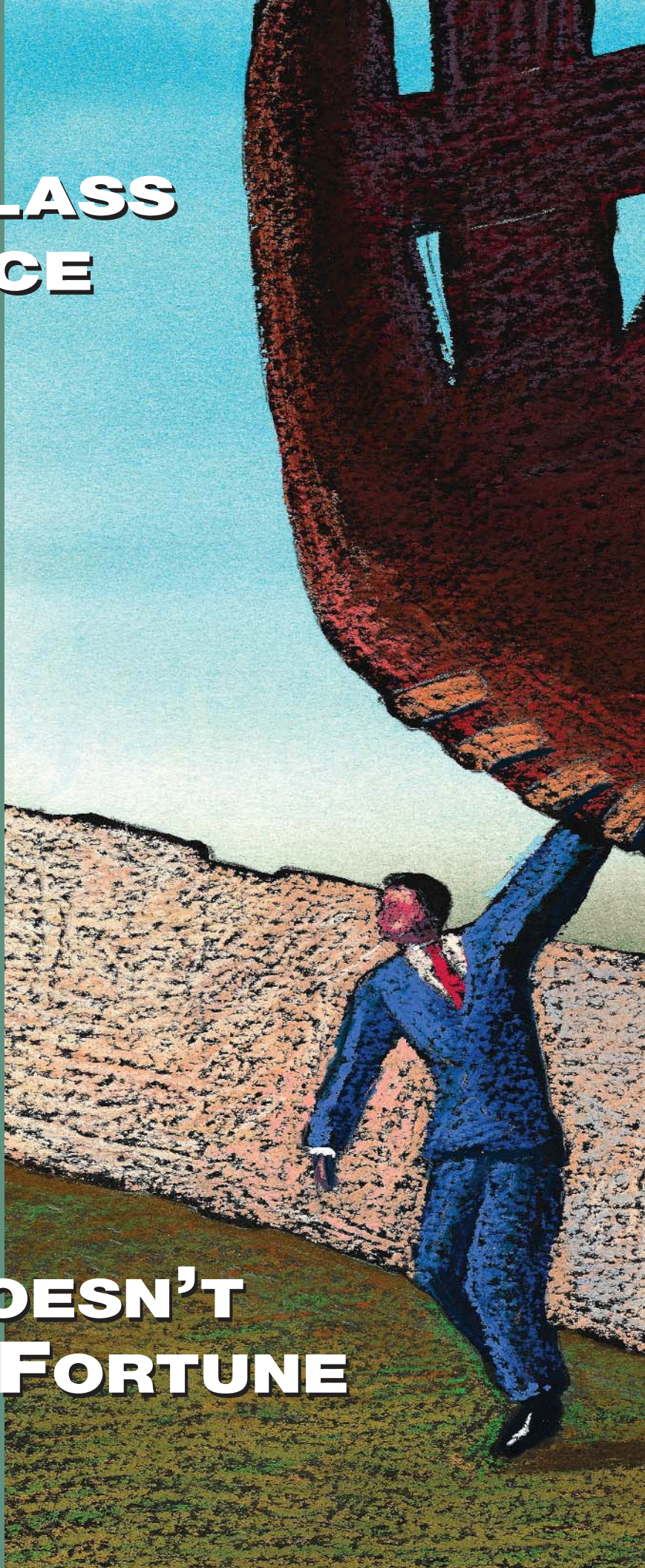


WORLD-CLASS COMPLIANCE

By Jess Kraus

The Oakland Athletics are on to something. Despite having one of the lowest payrolls in major-league baseball, the A's have qualified for the playoffs in each of the last four years. The only other teams to accomplish that feat are the New York Yankees and Atlanta Braves, who have spent an average of 63 percent more on player salaries in that same time period than Oakland. In 2003 alone, the Yankees spent \$100 million more on player salaries than the A's, yet won only five more games—that's \$20 million for each additional win. Which team gathered the better information about players and made the wisest decisions?

THAT DOESN'T COST A FORTUNE





Now, apply this scenario to your company and how you are managing hazardous materials. Are you the Yankees or the A's? Unless you have a multimillion-dollar budget and work in an organization with a cultural commitment to safety and risk management, you likely manage HazMat like Oakland manages ballplayers. You play for more "wins" every year with less budget, resources and organizational commitment than the year before.

Like the A's, however, you can increase your winning percentage and help drive down the cost of hazardous material management. It requires a new framework for managing compliance, beginning with an accurate inventory of your hazardous materials. Then, layer on the data specific to how they are being used, transported, stored and disposed. Make the data relevant across locations, roles and titles. Use the knowledge to make better decisions and increase the value of your organization, to its shareholders, its customers and its employees.

THE OLD FRAMEWORK

Evaluating the talent level of a baseball player has followed the same formula for 100 years. Player scouts and team general managers rate players on their "five tools": hitting for average, hitting for power, arm strength, running speed and defensive ability. Players are drafted on promise and promoted through the minor leagues on performance with the hope of fielding a major-league team with two to three stars and a solid supporting cast. The playing field tilts in favor of the big budget, big market, big revenue teams like the Yankees and the Braves, when star players become free agents. As free agents, players can choose to play for the team of their choice—and they usually choose the team that offers them the most money. Instead of a small number of stars, big market teams can acquire players through free agency and have stars at all positions. Sometimes players who would be stars with other teams are sitting on the bench in New York and Atlanta. With all that talent, the big market teams win lots of games, which helps them acquire players who want to play for a winner, and draw more fans to their games, which puts money in the bank for next year's free agents. It's a cycle that the small market teams cannot break into.

In the HazMat world, a similar polarization has occurred. It starts with a sophisticated purchasing or procurement system, usually with a module that allows EH&S staff review and approval of incoming hazardous items. Nothing arrives into a big company unnoticed. Next, the chemical or product is tracked through some type of bar coded or RF ID tagged inventory management system, and data on its location-specific usage is recorded. Material safety data

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sheets are acquired and tracked, using a sophisticated document and data management system that is tied into procurement and chemical tracking. At the end of all this, compliance reports required by the EPA and local agencies are generated and submitted, usually electronically. Then management plans are made or modified, staff are trained or retrained and the company moves forward safely until the next monthly review period.

This utopian view of compliance management has been practiced for so long in so many high-profile companies that it has become the de facto process for managing compliance. In the world most EHS managers live in, however, the tools and resources just described do not exist. Like the Oakland A's, most are forced to manage HazMat with limited budgets, staff, tools and systems. How have the A's done it?

Oakland created a new framework for building their major-league team. They were looking for consistency. They found it in an unusual place, in a statistic ignored by most teams: the walk. When a player is thrown four pitches outside the strike zone, he is allowed to advance to first base with no penalty. There is no official record of their time at-bat. It is a nothing event.

But the A's found that players who drew more walks, and were better at not getting out, scored more runs. Teams that scored more runs won more games. While this may sound like common sense, it goes against 100 years of baseball wisdom that says a player's value is based on their ability to drive in runs, not to be the person scoring the runs. The A's have walked their way to four straight playoff appearances.

Like the A's, you need to create a new framework that takes into account

the whole picture of HazMat compliance and its effect on your organization. Just as the A's have focused on the walk and not getting out, you need to focus your resources on a key area—an accurate HazMat inventory.

A NEW GAME PLAN

The whole picture begins with an accurate, up-to-date inventory of the pure chemicals, mixtures and products within your organization. The inventory becomes the foundation for managing other critical data and turning that data into knowledge on the hazards present in your facilities. This knowledge, when applied on a geographical, functional and hierarchical level within your organization, helps you make better business decisions. This increases the value of your organization by reducing risk, cost and liability. A good HazMat inventory helps your bottom line, and the basics are easy to understand and implement.

THE INVENTORY

How Often. The frequency with which you review your inventory will depend on the size of your business and number of locations/departments that contain HazMat, the sophistication of purchasing and approval processes and the expected turnover of chemicals and other hazardous materials. In an ideal world, a master inventory should be taken at least annually by the person responsible for the inventory in a specific location/departments. Each new purchase or disposal should be tracked and the inventory modified throughout the year. EHS supervisors at each facility should have prepurchase review and approval rights for any new product or chemical. Inventories from separate locations within an organization

should be rolled into a corporate level inventory for analysis and to ensure consistency in process and purchasing.

At the other end of the spectrum, if you do not have an inventory program in place, you start by conducting a full inventory at the beginning of your fiscal year. This single step will improve the quality of your EHS programs and drive down costs with higher compliance. Also, at a minimum, do a refresher inventory at the beginning of the next fiscal year to validate your assumptions on chemical usage and turnover. This refresher should include one full inventory from a "bellwether" site within your organization and a "what's new" report from all other locations. If there is more than a 20 percent change from the previous year, either in number of hazardous chemicals and products or in total pounds of HazMat, conduct another full inventory at every site.

What to Look For. Ideally, staff conducting an inventory of hazardous materials will be trained EHS professionals who can easily identify the products and chemicals that should be captured. If those types of people are scarce in your organization, non-EHS staff can easily identify 90 percent of required items by referring to the list in Table 1 or by simply looking for a warning label or items in a particular storage area. A short training can bring most employees up to speed on what to look for in your environment.

What Data to Record. At a minimum, for each product or chemical, you should record the location of the material, the container size and quantity on hand of the material, the name of the product or chemical, the name of the company that made the product or chemical and any part number or description assigned by the manufacturer. This basic data will allow you to match the item to an MSDS, which can provide data needed for reporting and exposures.

Problems. The staff conducting the inventory may come across unlabeled containers or containers with illegible and secondary labels. Record these items in a separate discrepancy document, with their specific location and description, then physically flag the

Table 1: Basic Items to Inventory

Industrial Chemicals	Water treatment products, industrial gases or reagent chemicals
Welding Products	Fluxes, solders, welding wire and welding rods
Janitorial Products	Cleaners, disinfectants, floor waxes and shines, air fresheners and soaps
Personal Care Products	Hand soap and first aid supplies
Office Supplies	Printer toner cartridges, dry erase markers and correction fluid
Lubricants/Oils	Motor/hydraulic oils, spray lubricants and brake fluid
Sealants/Adhesives	Roofing, flooring and structure products
Paints	Aerosol, latex and enamel
Batteries	Gel-cell, lead-acid and lithium

items themselves, with stickers, labels or string that is easily visible. Review the discrepancy document at the completion of the inventory process to determine appropriate actions such as re-identifying products with appropriate labels and/or removing products from the facility.

COMPLETING THE PICTURE

Once you have the inventory, you can begin to add value to each record by associating other data, documents or records with each inventory item and supporting this information with on-site EHS staff or outside resources to assist employees in use and interpretation. This is an important step in seeing the "whole picture."

MSDS. Associate each item in your inventory with a manufacturer-specific MSDS and keep the inventory list and MSDS available for easy access by employees. The MSDS provides vital information for exposures and the specific characteristics of the chemicals in a product or mixture. Many companies keep the inventory list and corresponding MSDS on file (hard copy or electronic) forever, to meet OSHA's exposure record-keeping requirements. As your products change, or your MSDS becomes outdated, you will also need a process for acquiring new or updated MSDSs.

Classification. Assign each item in your inventory a National Fire Protection Agency and Hazardous Materials Identification System Rating and classify the item for common modes of transport. NFPA is a system for identifying the hazards of a chemical that was developed with the needs of fire protection agencies in mind. Your local fire department may require you to provide this information along with your chemical inventory. The HMIS rating is a labeling system developed by the National Paint and Coatings Association to help quickly identify the hazards associated with a certain material. Inventory items should also receive a classification based on how the item is shipped, whether by ground, air or vessel. Each mode requires a different classification based on the size and quantity of the chemicals being transported.

Shipping. Each item that you put on a truck, boat, rail car or plane will need to have several

pieces of data associated with it. When you offer hazardous materials or dangerous goods for transport, you must appropriately classify, package, mark, label, placard and provide appropriate documentation for these materials. Classification involves identifying the transportation hazards associated with your inventory in accordance with 49 CFR HMR, IATA and IMDG Code requirements. Further instructions will also be needed on how to properly package different types of HazMat, what marking and labels go on the package, which placards go on the vehicle, how to complete the required shipping documentation and who to call in a transport emergency.

SUPPORTING DATA

Why is the inventory so important? Because with so many companies doing it so poorly, a company that does it right gains a significant strategic advantage. When analyzed, the size and diversity of hazardous products within an organization is almost always a surprise. EHS staff and managers have not seen the whole picture and the result is misguided programs, misleading reporting, insufficient training and poor decision making. The prevalence of inventory misunderstanding was revealed in 2003, when our colleagues at the 3E Co. analyzed the HazMat inventories of more than 300 companies. In total, more than 1 million products and 10,000 separate site inventories were reviewed. The average facility had an inventory of 3,500 hazardous items, including pure chemicals, mixtures and finished goods. Some of the key points include:

Phantom Products. On the average, 33 percent of the products that were listed on the inventory did not exist in the actual workplace. The products or chemicals had been used

or disposed, and the inventory had not been updated. Some chemicals that have a short lifespan, are on site for only a few days as a trial or are provided in small quantities and used quickly. While this is certainly better than not having all the hazardous products listed and tracked on the inventory, it also means that the average company is incurring one-third more cost than necessary.

The Fifty-Fifty Rule. In the average HazMat inventory, 50 percent of the items listed have no associated supporting data, such as MSDSs, quantities, storage locations and containers data. Of the items that have supporting information, 50 percent of the information is out of date. In essence, the average company is making decisions related to the use, storage, disposal and reporting of chemical and other hazardous materials with only 25 percent of the information they need.

Nothing in Common. 3E also compared inventories from different locations, sites or departments within the same organization. Only 12 percent of the items listed on the inventories were the same from site to site, inventory to inventory. This reinforces the notion that HazMat is site specific, and the use of a "master" inventory will lead to inaccurate reporting and decision making.

Change is the Only Constant. Of the inventories reviewed, 90 percent of them changed at least monthly. Products were used or disposed. New materials were ordered. Product shifted from one site to another. All of which affects site-specific usage numbers and the related reporting.

Most Wanted List. Sixty percent of the inventories contained at least one of the following carcinogens: aflatoxins, arsenic compounds (inorganic), asbestos, benzene, beryllium and beryllium compounds, coal tar and coal tar pitches, coke oven emissions,

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Table 2: Sample Inventories

	000071-43-2	000075-01-4	001332-21-4	007487-94-7	007439-92-1
	Benzene	Vinyl Chloride	Asbestos	Mercury	Lead
A	333	9	0	3	657
B	2278	19	139	0	5696
C	170	4	3	0	247
D	165	9	25	2	375

ethylene oxide, vinyl chloride, wood dust, lead and mercury.

Across Industry. The four sample inventories shown in Table 2 (p. 33) represent four distinct industries and company sizes. All have significant carcinogens.

HOW THIS AFFECTS YOUR COMPANY

The accuracy of your inventory has cascading effects within an organization, from specific EHS responsibilities to employee well-being, management decision making and corporate responsibility. If even 10 percent of your inventory is inaccurate, the following issues may arise:

MSDS Compliance. MSDSs will not be available when needed or, when reviewed, may contain outdated information. You may spend time and resources acquiring and maintaining MSDSs for products that are not really used or stored on site. At the same time, if you use your MSDS files as your 30-year exposure record, you could be including chemicals and products that were not actually used, thus increasing your potential liability.

Chemical Exposures. On-site data may not be available for the chemicals to which an employee is exposed. If the data is provided, it may refer to a previous or generic version of the product, increasing the likelihood of improper treatment.

Transporting HazMat. Products may be improperly classified for shipment due to outdated information. This directly impacts the safety of the product in transit and the safety of the transporting vehicle (air, ground, vessel), its driver/crew and passengers. If an in-transit incident occurs, emergency crews will be ill prepared to respond if working with incomplete or misleading information.

Disposal of Hazardous Waste. The budget you have designated for disposal costs may be inadequate if there are items being used and disposed/recycled that you are unaware of. Contingency planning for ER will be incomplete.

Regulatory Reporting. Sensitive chemicals (such as those that appear on the SARA 302 Extremely Hazardous Substances List) may be

excluded from required reporting. Items listed on the inventory but not actually used or stored on site could trigger higher reporting thresholds and unnecessarily lead to higher fees related to the amount reported.

Training and Preparedness. An incomplete inventory can hamper employee awareness of the chemicals in their workplace. This significantly increases the risk of exposure or injury and the related cost of treatment. Lack of related inventory data, such as MSDS and storage quantities, can also mean that all hazards are not properly evaluated.

Similarly, if you assume the inventories at all sites or departments within your organization are the same, the following issues may arise:

MSDS Compliance. Site-specific MSDSs are not immediately available, in another building or office or are completely unavailable. In a true emergency, such as ingestion, inhalation or exposure, treatment information contained on the MSDS will not be accessible by responding personnel. You will be out of compliance with the hazard communication standard, which requires access to MSDSs for employees with no barriers. This exposes you to the most commonly cited OSHA violations. You may be underestimating the cost to truly become HazCom compliant.

Chemical Exposures. If you are unaware of the specific hazards at a given site or within a department, you may not be prepared to respond to employee exposure or injury. In addition, you may not have proper personal protective equipment, eye-wash stations or containment tools in place for the specific chemicals used or stored at a site.

Transporting HazMat. Shipping personnel may be inadequately trained on the types of chemicals and products they are shipping. This can delay shipments or cause them to go out improperly labeled, packed and placarded. If shipping by ground, the drivers may not be qualified to transport the HazMat you are shipping. Potential fines for noncompliance, from the DOT and FAA, are large and can be assessed to individual executives with responsibility for HazMat transport.

Disposal of Hazardous Waste.

Established processes for handling specific waste streams may not be adequate. This could lead to waste on site for longer than necessary and related risks and costs. Uncertainty about what exactly is in your waste stream may result in using waste contractors who do not have proper training, certification, tools and insurance to handle your needs. This applies to your staff as well, who may not have the training and tools to manage the waste you are generating.

Regulatory Reporting. Using a “master” report based on one location as representative of all locations may cause some chemicals to be reported unnecessarily. This could also trigger additional local or state reporting and their associated costs. The reverse is also true—a “master” report could leave some chemicals unreported, increasing your risk and opening the way to fines for not reporting the true chemicals on site.

Training and Preparedness. Without an understanding of the exact nature of the hazards at a specific location, proper training will not be possible. Locations where you have underestimated the hazards will not have enough training. This is amplified in situations where substances that require unique handling procedures, such as lead and mercury, are found on site. Over-training can also occur, which unnecessarily increases your training costs.

WINNING THE GAME

Simply starting with an accurate inventory can put many more wins under your belt. By focusing your efforts on gathering and analyzing the right information, you can impact the cost for your organization to acquire, track, store, ship and dispose of hazardous materials and improve the HazMat understanding among the people in your organization. EHS departments are winning every day because they are looking at the right data and making good decisions. You can be one of them. 

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