

Solutions for Successful Chemical Inventory Management

*By Marc E. Dillon, P.G., Chemical
Management Products Manager, ESS*



Agenda

- Components of Chemical Inventory Management
- Benefits
- Types of Systems
- Internal and External Due Diligence
- Lessons Learned



Components of Inventory Management

Chemical inventory management essentially consists of the following components:

- Chemical purchases and receipts
- Chemical inventory transactions (storage and use)
- Stock level Management
- Record keeping
- Reporting



Benefits of Efficient Chemical Inventory Management Systems

- Accurate data for EH&S, material distribution and management departments
- More efficient use of material and time
- Consolidation of chemical inventories and lower chemical purchase costs
- Reduced chemical usage
- Waste minimization



Benefits Cont.

- Pollution prevention
- Ability to perform “first in, first out” (FIFO) or “just in time” (JIT) inventory control
- Internal and external customer satisfaction
- Concentration on core business
- Enhanced relationship with regulatory agencies



“One Can’t Manage What One Does Not Measure”

- Type, location, storage and usage of chemicals
- Occurrence, distribution and movement



Types of Chemical Inventory Software

Chemical inventory management software products typically fall into three basic categories

- Chemical distribution inventory tracking.
- Stand-alone, transaction-based chemical inventory tracking with integrated access to regulatory requirements and report generation capabilities.
- Enterprise level, transaction-based chemical inventory tracking with integration to other environmental monitoring systems such as waste, water, or air.



Software Types Cont.

- The first category of products is concerned only with data related to the occurrence and distribution (location) of chemicals and is generally stored in a spreadsheet or database.



Transaction-based Software

- Transaction-based chemical inventory tracking provides tracking of batches or individual chemical containers. The transactions track the occurrence, distribution and movement of each chemical container or batch of containers.



Enterprise Software

- Enterprise software includes all the features of transaction-based systems, but includes integration with other key environmental management functions at an enterprise level within an organization. This means that other EH&S systems, such as waste management, air emissions tracking, compliance management, storm water, wastewater, industrial hygiene, and occupational health & safety can be integrated with chemical tracking.



Finding the Right Fit: Internal Due Diligence

- Organizational goals and culture
- Size of operation and organization
- Quantity and complexity of operational processes
- Quantity and type of regulatory requirements



Internal Due Diligence Cont.

- What are the specific goals and objectives for using such a system?
- What are the “must have” and “nice to have” features and functionality of the selected system?
- What is the specific, expected output of the system?
- Is a stand-alone chemical inventory system or multi-module (air, water, waste, etc.) system needed?
- Is integration needed with external systems (ERP or other)? If so, what other systems and why?
- Will sufficient internal expertise and resources be available to implement all or part of the system or will one rely on the software vendor or a third-party implementation partner?



External Due Diligence

- Does the firm have an understanding of your industry and your specific facility?
- How many systems have they implemented in the past year or two?
- Do they have a quality assurance, quality control policy and plan?
- What is the depth and availability of technical support?
- How many experienced project managers, developers and programmers are on staff? What are their qualifications and backgrounds?



External Due Diligence Cont.

- What is the company's financial history?
- Is the vendor willing to provide references of companies who recently purchased or implemented their software, and give potential clients the right to solicit feedback from them?
- What is the vendor's experience with the applicable regulations and management practices concerning your operation?
- What types of databases does their software support?



Lessons Learned

- Ensure that all stakeholders are involved in the process of gathering and developing system requirements. Otherwise, actual and expected system functionality will not match and implementation difficulty (and cost) will escalate.
- Ensure that there is both an IT and business (EHS) stakeholder involved at the minimum.
- Collect system hardware and software requirements from the potential vendors before making a decision to ensure that there are no hidden costs and that compatibility will not be an issue.



Lessons Learned Cont.

- Collect references from the vendor for other customers, get permission to contact them and follow up (without the vendor) for feedback.
- Arrange for system demonstrations with the vendor and ensure that product managers and technical staff, in addition to sales staff, are present for questions.
- If data is to be migrated into the new system, review the data to ensure completeness and quality. Be able to give specifics on the data source (database type and version, etc.) If integration is needed with outside systems (like ERP system), coordinate with those stakeholders to provide system specifics to the chosen vendor and/or implementation partner.



Lessons Learned Cont.

- If processes, workflow or dataflow are scheduled for change or need to be changed, ensure that these are well documented and reviewed prior to software selection and implementation planning.
- Develop a plan to calculate and evaluate the business value and return on investment (ROI) expected. This may include baseline values for chemical purchases, etc. at a given production level before and after system implementation and use.



Lessons Learned Cont.

- Selecting and implementing the appropriate type and size of solution is critical and dependent on the goals and size of the operation and the quantity of its requirements.
- Properly selecting the right system can provide value and save a company time and money far in excess of a solution's purchase and implementation costs.



Questions

