

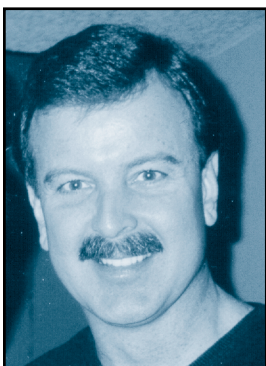
Industry Insights on Commercial, Integrated EH&S Software

Increasingly, industry is looking to commercial software solutions to improve environment, health, and safety (EH&S) performance. Companies that have deployed commercial, integrated EH&S software systems recognize the need to fully understand EH&S business processes, have a clear vision and focus, and have realistic expectations. Companies that detect and conquer cultural and information technology (IT) barriers can gain the most value from their systems. As a follow-up to my June 2004 column, I interviewed two senior EH&S professionals to offer industry perspectives on integrated software solutions. Read on to benefit from what others have learned.

What are some of the factors that drive the need for EH&S systems?



Jack Sahl, Ph.D., Director, Corporate Environment, Health, and Safety, Southern California Edison (www.sce.com): The biggest need relates to the consistency and structure that you need to manage the wide-ranging spread of EH&S issues. There is a need for consistency to help drive performance and a need to add structure to existing processes.



Don Cuffel, Principal Environmental Engineer, Valero Refining Company, California (www.valero.com): Title V of the U.S. Clean Air Act was the primary justification for a system because the rules require monitoring and the demonstration of continuous compliance. The company's commitment to compliance with all environmental regulations could also be supported. In addition to

monitoring and managing compliance, information systems can help drive improvement through data-driven goal setting and performance monitoring.

How will implementing an integrated EH&S system benefit corporations?

Sahl: It helps me in four ways: (1) It helps track EH&S requirements—a core function of a corporate EH&S department like mine. I am responsible for knowing all requirements; (2) it provides a structure or common workspace that allows people to respond to these requirements and to meet performance specifications, driving consistency; (3) it provides a way of maintaining the formal part of my processes and procedures—and helps avoid the drift in processes and procedures; and (4) it allows me to have corporate oversight and positive assurance that we are meeting performance requirements.

Cuffel: The immediate benefits include raising the awareness of the workforce, from field technicians to executives, that many day-to-day activities have environmental attributes and consequences. Environmental considerations become integrated into decision-making, as do safety considerations. Longer-term benefits include improved and sustained performance and reduced permit violations, resulting in improved public perception. The bottom line is that a facility that is run safely is better positioned to be a reliable and compliant operation.

What other solutions (besides integrated commercial software) did you consider and reject, and why?

Sahl: There are three other ways that we could go: (1) continue as we are; (2) use the existing suite of Microsoft Office tools that are very effective (the problem is that it is extremely hard to keep them integrated); or (3) build our own systems. The main reason to move away from the status quo is the need to focus on corporate oversight. For the company to make the next step in performance, we have to make fundamental changes.

Cuffel: We know from experience that building a system in-house can be very costly. Our initial design basis was to have a single repository for environmental compliance data. Any solution that was confined to a single regulatory area was a non-starter. There were also modular systems that have not evolved together, so those were ruled out. The system we selected had to have site-specific flexibility. The solution needed to adapt to the work practice, rather than the other way around. Frequently, I found the system functionality was too restrictive, and we would end up with “homeless data” that we were obligated to maintain, but had no place to keep it.

What specific goals do you have for your systems initiative, and what metrics do you use to measure success?

Sahl: The most important thing for me is the buy-in and use by all segments of the corporation. To me, success will be integrated into the way that we do our work.

Cuffel: Improved stability in plant operations was an overarching goal. Another goal was user acceptance and ease of use was a key element of user acceptance. A third goal was to be able to efficiently and effectively convert data into information to drive improved compliance and performance.

During the initiative, did you identify business processes that could be improved? If so, how did this impact the project's schedule and budget?

Sahl: We could have identified improvements, but did not. We have to improve business processes independent of the system. The business processes have to work, even if you have nothing but cardboard boxes to put files in and a chalkboard to check things off. It is a continuous activity to strengthen your processes.

Cuffel: As you retire older systems and consolidate information into the commercial system, underlying processes get a

“cold eyes” review and can be improved. All of the schedule delays for our project were external (i.e., agency changes to permits). One must understand, however, that you are never really done and managing information will be an ongoing process because regulations and facilities change.

Who will ultimately be accountable for the system (corporate EH&S, operations, other)?

Sahl: Corporate EH&S will be accountable for the system. The different processes identify different owners. A variety of people will be accountable for the individual components; some processes are entirely corporate, some are entirely in the domain of individual business units.

Cuffel: Accountability for environmental compliance cannot be delegated or centralized; it lies with individuals. As far as maintaining the system and keeping it “evergreen,” the responsibility lies with the environmental staff. The corporate IT department does not play a role in this case, since the vendor hosts the software.

What are the greatest barriers to implementing an integrated EH&S system? What are some of the pitfalls that you encountered, and how did you work around them?

Sahl: I think the biggest barriers are: (1) legacy systems. Everybody has a way of doing things, and a lot invested in them; at some point, these systems add a lot of value and you must integrate them; (2) an overly optimistic sense that the system will change things. If you are overly optimistic, you will end up far short of where you want to be; (3) trying to do too much, too soon with these systems. You need to have a staged and managed approach and you need to be able to draw the line; and (4) Training. The more quickly you are adding value, the sooner the systems will be used, and any barriers between the old and new ways must be overcome.

Cuffel: Barriers include corporate culture, perception that this is an IT project when it's an EH&S business-driven project, and possible user resistance to “yet one more system.” Solutions include crafting the justification for the new system based on business drivers like improved performance, not IT cost avoidance; involving users early in the process; and ensuring senior management understands the true costs of the entire effort and possible consequences of failure. Pitfalls: The implementation process takes longer than you think.

What advice do you have for someone considering a new management information system?

Sahl: If you don't already know how to manage your specific EH&S function, don't get a system to do it. You will run into a lot of opportunities to fail if you go into an automated system too quickly.

Cuffel: People start at the wrong end of the puzzle: data. Work backward through your data and your work practices. If you can define your requirements and you can define the corresponding tasks that are required to comply, then you are half-way there. Start off small, and bite off one initiative at a time. Stay focused on the initial population and rollout before you address other issues—taking on too much, too quickly is a recipe for failure. Prove some success before continuing. And hurry up. If you are just now starting to think about this, you are two years late.

ACKNOWLEDGMENTS

Thanks to Jack Sahl and Don Cuffel for granting the interviews. Sahl has been in the EH&S field for nearly 25 years. He is currently responsible for Southern California Edison's corporate EH&S programs. He previously owned a consulting firm, where he assisted the World Health Organization in managing public health issues and also assisted companies

with strategic EH&S management. Earlier in his career, he worked for the Minnesota Department of Health Services and the U.S. Environmental Protection Agency (EPA). Cuffel has been in the refining industry for more than 25 years. He is currently responsible for directing the deployment of environmental and security regulatory program data into the refinery's EH&S management information system, in addition to his normal Title V compliance assurance duties. Cuffel's past responsibilities included process design, project management, and operations maintenance. He holds a B.S. in mechanical engineering and a master's degree in business administration. ☺

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