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Network

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COMMUNICATING ENVIRONMENTAL AND ENGINEERING ISSUES TO INDUSTRY

SAVING MONEY

“Hidden” Methods of Cost Reduction

Companies are constantly looking for ways to reduce costs while maintaining quality, efficiency and compliance. In a time when downsizing, mergers, acquisitions, and increased customer demands are the norm, it's no wonder companies are seeking ways to decrease the amount of money that leaves their bank accounts.

Some areas of your business lend themselves well to fixed cost reduction, while others do not. For example, EH&S programs rarely offer the opportunity to reduce fixed costs. According to RMT Sr. Consultant Jim Myers, “In EH&S, 85-90% of savings come from cost avoidance.” So, how do you tap into these “hidden” methods of cost reduction?

Directly Impacting the Bottom Line

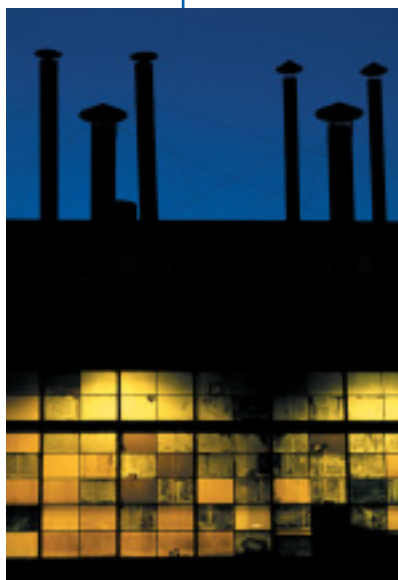
Let's start with a quick review. Fixed costs are those inherent to the operation of a facility. They can be thoroughly assessed and decreased or eliminated. One of the most quantifiable means of cost reduction is to lower fixed costs. For example, implementing a new, innovative wastewater treatment system at your facility will not only keep you in compliance, it will also cut your annual treatment costs. The end results . . . less money out of your pocket and a positive effect on your bottom line.

Backdoor Approach

Cost avoidance is the ability to alleviate certain costs through proactive management, systems and programs. Savings from cost avoidance are harder to define and don't show up directly on your balance sheet. Instead, cost avoidance calculations compare current expenditures to a baseline, with the difference tallied as savings. Baselines can be drawn from internal (e.g., averages of previous year costs) or external (e.g., average costs in a given industry) sources.

This issue of Network features four articles describing proven ways our clients have successfully avoided costs:

- Outsourcing—Rexnord outsources work to maximize resources and do more with less.
- Partnering—BP develops an alliance partnership that enables them to do things smarter and save money on projects over time.
- Process Improvements—A chemical company learns the hard way that fully assessing a problem before implementing a solution saves money.
- Needs Analysis—Toyota Motor Manufacturing, North America, Inc. experiences the importance of finding the right tool for their environmental management system job.



The best way to reduce costs is to develop a culture where everyone thinks strategically about cost avoidance.



SAVING MONEY

“Hidden” Methods of Cost Reduction cont'd. from page 1

Finding ways to avoid costs is a team effort that generally requires careful analysis of operations, advanced planning, ongoing project management and employee training. Even though the impact may not be obvious, effectively avoiding costs can have a major impact on your bottom line.

According to “Environment: Value to Business” (Global Environmental Management Initiative, 1998), more and more companies are relying on the benefits of cost avoidance to justify the direct costs of EH&S activities. Improving the efficiency and effectiveness of compliance activities, as well as reducing fines, penalties and cleanup costs, all save resources, time and overhead expenses, while producing significant long-term cost savings. For example, 3M Corporation reports that their ‘Pollution Prevention Pays’ program has saved the company over \$790 million since its inception in 1975.

So how do you realize these kinds of savings? Myers sums it up well, “The best way to avoid costs is to develop a culture where every employee takes responsibility and thinks strategically about cost avoidance.” ♦

CONVENTIONAL COST AVOIDANCE ACTIVITIES

- *Implementing compliance assurance programs to prevent regulatory fines.*
- *Expediting permit reviews to avoid lost market opportunity costs.*
- *Training employees on effective operational practices to minimize downtime.*
- *Encouraging health and safety awareness to avoid injuries and worker compensation issues.*
- *Outsourcing to expand staff capabilities and maximize resources.*

INCREASING CAPABILITIES

Outsourcing Rises to the Challenge

Rexnord, a power transmission and conveying components manufacturer, is no stranger to the realities of staff reductions and increased responsibilities. Until about four years ago, the company had a dedicated Safety/Environmental Manager. When he retired, Rexnord chose not to rehire for the position; instead, they divided the EH&S duties between Human Resources Director Rick Sereno and Plant Engineer Walt Wilms. EH&S couldn’t be their primary focus, so they turned to outsourcing to avoid costs and do more with less.

At the time, Rexnord had been outsourcing work to RMT for about four years, so it seemed obvious to rely on that relationship to remain compliant. According to Sereno, “We were already working with RMT. When our Safety/ Environmental Manager left, they took an even more active role in our environmental projects.” RMT essentially became an extension of the Rexnord staff.

Reaping the Rewards

Rexnord outsources the company’s annual environmental reports (Hazardous Waste, SARA Tier II, Air Emissions, SARA 313 Form R), alleviating a lot of headaches. Joe Liello, RMT Project Manager, explained, “We’ve developed efficiencies over time because we routinely perform some of the same tasks for Rexnord. It’s become very cost-effective. There’s consistency across their reports over the years; disparity amongst data has nearly disappeared.”

Beyond quality environmental reports, Rexnord experiences numerous other benefits from outsourcing. “One of the real advantages,” said Sereno, “is that our company isn’t large enough to demand a full-time Safety/Environmental Manager. RMT does that for us—they provide the services and expertise of a professional without us actually having them on our staff.”

With a long-term relationship, there’s also an element of trust and comfort, along with an understanding about the history of the company. This has provided Rexnord with a resource that they can count on for other project work. Such projects have spanned several facilities and include MSDS management, hazard communications, and storm water sampling and process discharges. Liello added, “They can call on us for general services and questions that aren’t necessarily related to the other projects we’re working on.”

Outsourcing allows companies like Rexnord to take advantage of their “valleys” and avoid costs by bringing in skilled specialists on an as-needed basis. They get the environmental expertise they need when they need it. And for Rexnord, it’s four years later, and they still haven’t had to hire a Safety/Environmental Manager. ♦



Alliance Brings Value to BP

When BP's Chocolate Bayou dredge spoils area in Alvin, Texas, reached capacity a couple years ago, the company was faced with a remediation project that threatened to be as costly as it was complicated. Some 40,000 cubic yards of wastewater material from a polishing pond was deposited in a dredge spoils area and would have to be dug up and moved off-site to allow room for future placement of dredge spoils, at a cost of approximately \$3 million.

A Call to Action

Certain that there had to be a better way, BP turned to one of its alliance partners, RMT. Together, the companies put into action their year-old alliance partnership, which is designed specifically for remediation projects such as this one.

"What's nice about the alliance partnership is that it allows us to do things smarter," says John P. Bennington, Vice President of ARMS, the BP organization that manages the company's cleanup efforts. "RMT works with us to come up with project strategies, and because they bring to us a whole cache of experience with other industries, they greatly expand our knowledge base."

"The alliance partnership . . . allows us to do things smarter."

Initially, the ARMS/RMT team of engineers, project managers, and environmental experts suggested segregating the materials in the dredge spoils area and removing only

the polishing pond sludges, saving nearly \$2 million in the process. Ultimately, RMT's Project Manager Bob Paules and the team developed an even better plan that enabled BP to close the site with the spoils intact while achieving compliance with all state and federal regulations. The \$3 million Chocolate Bayou Dredge Spoils Project ended up costing BP just over \$200,000.

"It's been a very valuable relationship for BP and ARMS," says Bob Schneider, BP Senior Sourcing Specialist, of his company's alliance partnership with RMT. "It brought real value in terms of earlier closure at Chocolate Bayou."

Making the Alliance Work

Schneider and Bennington were on the 1997 task force that set the priorities BP uses to form strategic partnerships. In 1998, this group selected RMT as one of the company's alliance partners. "We haven't just put these partnerships together," says Bennington. "We've also put together metrics to measure their performance." RMT, they say, is measuring up very, very well.

Alison Lee, RMT Client Service Manager, says that there are many reasons why RMT's alliance partnerships work. "We have so much to offer our partners," she explains, "because we take advantage of learning from other partners, and because we manage teams made up of diverse members: inside and outside counsel, technical services, plant personnel, and more. We know how to draw on the expertise from both sides of the alliance, which enables us to take an innovative approach across the board."

The structure of RMT's alliance partnerships is uniquely designed for maximum efficiency and effectiveness. The parties all sit at the table equally. RMT manages and implements project goals, which frees up BP's time to focus on the big picture.

The parties all sit at the table equally.

Bennington says that this has allowed his employees to leverage their time and has made it possible for him to take on broader issues. "My responsibilities have become those of a business manager," he says, "instead of a field manager."

Partnering creates a unique and focused culture. "RMT's team members are committed to bringing the partnership concept to every project," Lee explains. "They buy into the goals of the alliance partnership." Bennington says that the culture enhances the partnership. "RMT understands our internal requirements, how we do a job," he says. This understanding enables RMT to readily implement project plan tactics, and helps ARMS move through projects faster. "We have a safety culture, for example, which RMT has picked up on readily. The alliance provides a synergy that benefits both companies."

Now that Schneider and Bennington have seen the alliance partnership in action, they're pleased. "The relationship has matured and developed over the last three years," says Schneider. "I think it's been very beneficial and very successful." ♦



STREAMLINING SYSTEMS

Process Improvement: Hedging Your Bets

Process improvement—companies love it when it works and hate it when it fails. Virtually every company has implemented some kind of process improvement project with varying levels of success. What determines the success or failure of a process improvement? The answers to this are many and varied.

“The ideal assessor is someone who has seen, fixed, broken, blown-up, and put back together a lot of things.”

Let’s start with the basics. A process improvement project is usually triggered by one of two things: an emergency situation or a chronic problem. Once triggered, expectations for the improvement are one or more of the following:

- Cost reduction
- Quality improvement
- Lead time reduction
- On-time delivery improvement

Getting the Job Done

While every step in the process is important, the step that really defines your success or failure is the assessment; and the success of the assessment hinges on the abilities of the assessor.

According to RMT Senior Consultant John Sudnick, “The ideal assessor is someone who has seen, fixed, broken, blown-up, and put back together a lot

of things. These people look at the problem differently—they know what questions to ask and who to ask. They also have a broad-based understanding of the manufacturing process and regulatory environment in which you operate. When you have an individual with this kind of background handling your assessment, your odds of success increase exponentially.”

Learning the Hard Way

Paul Hite, a former project manager for a chemical company, talks about his experiences with process improvement . . .

“One of the more memorable projects involved trying to save money by ‘doing it in-house’. We decided that we knew what the problem was and how we could fix it. Based on this assumption, we purchased a \$200,000 piece of

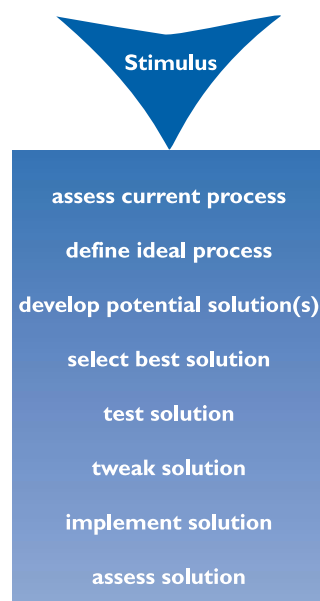
equipment that turned out to be not only the wrong piece of equipment for the job, but also the wrong size. We spent another \$200,000 on modifications trying to make it work. Needless to say, we were penny-wise and pound-foolish. By skimping on our initial assessment, our costs in time and resources spent mushroomed.”

“Had we brought a consultant in from the beginning, we would have saved money, and a great deal of time and effort.”

Hite continued, “Eventually, we brought Sudnick and RMT in to conduct a complete assessment, and to design and implement an appropriate fix for the problem. By hiring qualified experts, we not only solved our initial problem, our relations with the involved state agencies improved. Had we brought them in from the beginning, we would have saved money, and a great deal of time and effort.”

The Bottom Line

According to Sudnick, “No matter the process, the end result should be the same—meet the expectations of the regulation, streamline the process and exceed the goal for the project.” ♦



“No matter the process, the end result should be the same . . .”

Finding the Right Tool for the Job

EH&S managers are always looking for ways to streamline and integrate their activities, reduce costs, and increase compliance. The recent economic situation has made doing more with less even more critical. Is there a magic formula that can turn a set of loosely coupled tasks into an effective environmental management system?

It's easy to be enticed by high-tech software solutions.

According to Bob Ernest, Specialist in the Environmental Affairs Department at Toyota Motor Manufacturing, North America, Inc.,

"We wanted to implement software solutions to get an instant fix for what we were currently doing. This just created awareness that we hadn't really solved the problem at all. It's like trying to hit a moving target if you continue to think about short-term solutions rather than thinking into the future." No matter how "cool" a piece of software is, it doesn't do much good if it doesn't add value.

"It's like trying to hit a moving target if you continue to think about short-term solutions rather than thinking into the future."

Implementing an EH&S system is a lot like building a home. You need both an architect and a builder. You wouldn't start building without consulting an architect first. The architects (EH&S consultants) are the people who help identify what the real needs are and design a solution that meets those needs. They make sure any tools developed help solve the problem rather than reshaping

the problem to fit an existing tool. The builders (the project implementers) then use the tools to build the right solution—be it a bungalow or a

skyscraper—based on what the architect decides is best.

How do you determine which tool is right for your challenge? Ernest says, "Finding a solution to our data management issue was an endless process. We realized that you have to look at the 'why' as you develop the 'what', or else you'll come up with a momentary solution rather than getting to the heart of the problem."

Start by asking yourself the questions that any good consultant would ask (see sidebar).

Continued on page 7

DEFINING THE NEED

EH&S SOLUTIONS

Asking yourself key questions will help you determine the best EH&S solution. Here are some that you can use to drive the problem-solving process:

Problem/Scope/Needs Assessment

- *What is the specific problem you are trying to solve?*
- *What results will the ideal solution provide?*
- *How does the solution need to fit with other activities within your company/group?*

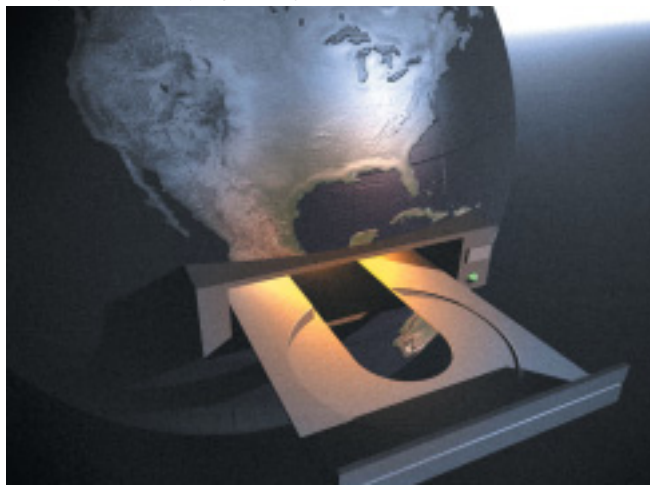
Operational Information

- *What current processes are being used to achieve the minimally acceptable results?*
- *How are EH&S issues communicated between facilities and team members?*
- *How do you track and manage EH&S issues?*
- *What information systems do your employees and stakeholders have access to (e.g., company network, Intranet, Internet)?*

Staffing Capabilities

- *Which employees need to be involved in the resolution initiative (e.g., plant managers, operations managers, IT department)?*
- *How much time and effort can your staff contribute to implementing the solution?*
- *How will the new process or system be maintained?*

It's easy to be enticed by high-tech software solutions.





SURVEY RESULTS

Network Readers Hit the Net

In the last issue of Network, we asked our readers to complete a survey on how they are using the Internet to facilitate environmental management. Over 250 of you, from diverse industries and occupations, responded. We learned that you have embraced the Web as a tool for enhancing company performance and that you look to it for ideas on how to optimize your systems.

"6 Top Uses of the Net"



"The Internet is still primarily being used for research and as a reference tool."

Current Internet Use

Nearly all of the respondents (98%) have access to Web resources at work and use them primarily as research and reference tools. 70% of respondents report

using online resources daily, with an additional 29% accessing the Web one to five times per week.

Where are we headed?

What does the future hold for environmental management and the Internet? Our results clearly point to unmet demand for additional Web services. For example, 91% of survey respondents indicate that they would like to track the status of their environmental projects online, yet only 35% are currently doing so.

In addition, survey respondents noted that they are interested in being able to do the following online:

- Access laboratory results (90%)
- View project financials (82%)
- Issue RFPs (69%)
- Approve work authorizations (74%)
- Provide compliance training (74%)
- Maintain online environmental calendars (76%)

As Web tools become more widely used over the next few years, they will have a greater impact on how projects and environmental programs are managed. ♦

announcements

Joe Hossley—DEE Certification

Joseph P. Hossley, RMT Project Manager in the Austin, Texas office, has become board-certified as a Diplomate Environmental Engineer (DEE). The American Academy of Environmental Engineers awards this title to qualified Professional Engineers who have demonstrated expertise in one or more areas of environmental specialization. Hossley provides assistance with RCRA permitting, hazardous waste remediation, NPDES permitting (wastewater and storm water), SPCC and OPA spill response plans, environmental management systems, and compliance auditing.

Brad Stokes—ATOFINA Project Manager of the Year

Brad Stokes, of RMT's Corpus Christi, Texas office, was recently named one of ATOFINA's top consultants for the year 2000. Each year, ATOFINA's petrochemicals group recognizes four of their consultants as being the best of the best. Stokes received this high honor for some of his more recent work in conducting environmental investigations and developing workplans.

WACE Award—Baraboo River Sediment Remediation Project

RMT recently received a 2001 Engineering Excellence Award from the Wisconsin Association of Consulting Engineers (WACE) for the Alliant Energy Baraboo River Sediment Remediation project.

In 1998, the Wisconsin Department of Natural Resources (WDNR) found coal tar in the sediment behind the Oak Street Dam on the Baraboo River. Under the WDNR's River Restoration Program, Alliant Energy, who owned the adjacent property that was responsible for the contamination, was required to remove the affected soil. Alliant contracted with RMT to conduct a fast-track investigation. The project team used the Vibracore[®] sampling method to investigate, then developed design plans and specifications and provided oversight for the removal of the coal tar-contaminated soil.

The innovative strategy prevented downstream migration of the affected sediment and protected the environment. The project was completed within an accelerated time schedule and with significant cost savings.



TECHNICAL RESOURCES

The resources listed below are available by contacting Jodi Burmester in Corporate Marketing at jodi.burmester@rmtinc.com or by faxing your request to 608/831-3334.

Technical Papers

A Foundry Ventilation Approach Whose Time Has Come, Joseph C. Liello and Robert C. Scholz, P.E., CIH, RMT

A Measurement Method to Pinpoint and Assess High Air Contaminant Zones within Foundries, Joseph C. Liello and Robert C. Scholz, P.E., CIH, RMT

Characterization of Natural Attenuation of a Solvent Plume in a Carbonate Rock Aquifer, Bernd W. Rehm, P.G., RMT

Environmental Issues Affecting Deepwater Gulf of Mexico Development, Chris L. Clodfelter, RMT

Environmental Management Plans Required for Financing International E&P Projects: From Development to Implementation, Brad L. Snow, P.E., P.G. and Chris L. Clodfelter, RMT

Aluminum Second MACT: An Innovative Approach, John J. Sudnick, P.E.; J. Michael Henson, Ph.D; David L. Kirby, E.I.T.; Robert P. Stevens, P.E., DEE; RMT

Pilot Studies & Startups, Sam C. White, Ph.D., RMT

Regulatory Updates

RCRA Corrective Action Reforms

RCRA Corrective Action Reforms II

Iron & Steel Foundry MACT Bulletin

NSR Enforcement Initiative

Metal Products & Machinery Point Source Category

ENVIRONMENTAL MANAGEMENT SYSTEMS

Finding the Right Tool for the Job

Define your needs, identify the “ideal” solution, and determine what resources you have available.

Just as important, you need an “architect” who will stay focused on solving the problem. According to RMT Director of EH&S Management Services Michael Bacon, “Strategic

consultants keep the vision of the solution in mind. They avoid the temptation to force-fit an existing tool that won’t produce the ultimate result.”

You might find that a computer-based application is the best solution for your problem, or you might

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discover that another tool or a different type of reporting structure would add more value. Regardless of what the final solution is, getting a view of the situation from someone who sees the bigger picture will help make sure you get things right the first time. ♦

For more information about the articles that appear in this issue of NETWORK, contact the following people or RMT Corporate Marketing at 608/831-4444.

Hidden Methods of Cost Reduction
Jim Myers, Austin, 512/327-9840

Outsourcing Rises to the Challenge
Joe Liello, Milwaukee, 262/879-1212

Alliance Brings Value to BP
Alison Lee, Greenville, 864/281-0030

Process Improvement: Hedging Your Bets
John Sudnick, Greenville, 864/281-0030

Finding the Right Tool for the Job
Michael Bacon, Ann Arbor, 734/971-7080

Growing to Meet Your Needs
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Environmental law is a complex, rapidly changing area and requires attention to overlapping and sometimes conflicting laws at the federal, state, and local levels. This newsletter is intended to provide readers with accurate and authoritative information regarding the subjects covered. It should not be construed as legal advice or opinion on specific facts or on the interpretation of the particular regulations and laws discussed.

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LAKE ENGINEERING & RMT

Growing to Meet Your Needs

We are pleased to announce that Lake Engineering, Inc., an environmental engineering consulting firm located in Atlanta, Georgia, has become a part of RMT, Inc.

Lake Engineering has a nearly 20-year reputation for providing outstanding customer service to industrial clients. Their 30-person staff of multi-disciplined engineers provides services ranging from regulatory analysis and air permitting to site assessment and cost-effective remediation.

Lake has a strong background in the metals industry, air quality services and corrective



action services that will complement RMT's existing capabilities and strengthen our Atlanta operation.

Russell Kemp, former Lake Engineering President,

commented, "Lake Engineering and RMT are a good fit. We share business philosophies and client strategies. Our new relationship brings us opportunities to create additional value for our clients by offering expanded resources and services."

To better accommodate this growth, we have moved our Atlanta operations into a new office. Our new contact information is as follows:

RMT, Inc.
8607 Roberts Drive
Atlanta, GA 30350
770/641-9756 voice
770/642-0257 fax ♦

RMT Adds Key Staff

Frank Burbach	<i>Sr. Environmental Engineer</i>	<i>Atlanta</i>
Les Clark	<i>Sr. Client Executive</i>	<i>Atlanta</i>
Russell Kemp	<i>Sr. Client Service Manager</i>	<i>Atlanta</i>
Tim Kinsley	<i>Sr. Environmental Engineer</i>	<i>Atlanta</i>
Clayton Orwig	<i>Sr. Civil Engineer</i>	<i>Atlanta</i>
Nils Thompson	<i>Sr. Hydrogeologist</i>	<i>Atlanta</i>
Jack Bynum	<i>Sr. Environmental Scientist</i>	<i>Chicago</i>
Jay Holtman	<i>Sr. Consultant</i>	<i>Houston</i>
Janette Ketcham	<i>Sr. Consultant</i>	<i>Houston</i>
Dennis Hatfield	<i>Sr. Client Service Manager</i>	<i>Madison</i>
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