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Ishmael Cooper, Project Manager, Tesoro Corporation

## AT A GLANCE

### Summary

When Tesoro Corporation needed an effective, efficient way to monitor emissions output and comply with governmental regulations, it chose the SAP® xApp™ Emissions Management (SAP xEM) packaged composite application.

### Web Site

[www.tsocorp.com](http://www.tsocorp.com)

### Key Challenges

- Increase efficiency
- Cut costs
- Reduce the risk of noncompliance

### Project Objectives

- Track and manage thousands of compliance requirements
- Responsibly delegate compliance to multiple tiers of operations personnel
- Provide a common user access point for all users
- Implement solution within a short time

### Solutions and Services

- SAP xEM, a part of the SAP xApps™ portfolio of packaged composite applications
- SAP NetWeaver™ platform: SAP Enterprise Portal component

### Why SAP Solution

- Robust task management and work-flow capabilities
- Support for strategic vision
- High level of integration
- Ability to link tasks to drivers: permit conditions, citations, limits, regulations, internal regulatory interpretations, policies, and so on

- Portal capabilities: Internet and intranet information access, reporting, and notifications

### Implementation Highlights

- First SAP xApps packaged composite application at the company
- Fast, successful implementation in only 16 weeks

### Key Benefits

- Reduction in compliance risk and costs
- Improved compliance performance visibility and measurement
- Ability to devolve compliance accountability to operations with no added risk
- Streamlined data flow
- Secure and auditable compliance records
- Easy-to-use data roll-up and reporting capabilities
- Optimized, standardized business processes and work flows
- Instantaneous exception reporting and work flow for quickly rectifying problems

### Implementation Partner

TechniData

### Existing Environment

Legacy software

### Database

Oracle 9.2.0.6

### Hardware

HP Compaq

### Operating System

Microsoft Windows 2003

## TESORO CORPORATION

### A Leading Oil Company Stays in Compliance with SAP® xApp™ Emissions Management

Tesoro Corporation is one of the largest independent refiners and marketers of petroleum products in the United States. Producing nearly 560,000 barrels per day from its six refineries located in some of the most ecologically sensitive areas of the western United States, Tesoro considers compliance with regulations such as Title V of the U.S. Clean Air Act a top corporate priority. At the same time, Tesoro is firmly committed to improving operational efficiency in order to increase company value. To balance these commitments, Tesoro set out to find an emissions management solution that would meet its unique set of criteria. The solution that Tesoro ultimately settled on was the SAP® xApp™ Emissions Management (SAP xEM) packaged composite application.

Before implementing the SAP solution, Tesoro was using legacy software. Alan Savage, environmental manager at Tesoro's Golden Eagle refinery located in the San Francisco Bay area, explains: “Our process for compliance management developed organically. Data collection was a manual process that extended across several facilities and a multitude of systems. We knew that with automation, better visibility into our data, and a clearly defined process for managing compliance, the company would be able to increase efficiency, cut costs, and reduce the risk of noncompliance.”

### **Market Evaluation: Software Selection Criteria**

In order to define solution requirements, Tesoro had to first tackle some fundamental issues, such as where the software and data would reside. “Early on, we considered using a Web-hosted solution for an environmental management application,” says Janet Zipperer, director of IT at Tesoro. “From a logistical standpoint, the idea was attractive. We could essentially outsource responsibility for a complex process and free ourselves up to focus on core competencies.”

In the end, however, Tesoro decided against the outsourcing option. “Ultimately,” Zipperer says, “compliance and environmental responsibility is a central component of our business and goes deep into the heart of our revenue stream. We want to be absolutely sure that we’re adhering both to the letter and spirit of the law. To outsource emissions management would mean relinquishing control over a core aspect of what we do as a company.”

Having decided to keep the environmental compliance management solution in-house, Tesoro’s next decision centered on the issue of scope. For example, if the new solution had to be installed on a site-by-site basis, each facility would require additional hardware, software, and IT personnel – a prospect the company wanted to avoid. If at all possible, Tesoro would opt for a portal-based solution that offered a centralized server housed at corporate headquarters and allowed secure access for all users at remote locations via a Web browser.

Another important capability Tesoro put near the top of its list was exception management – a clear, effective way to deal with excess emissions output on an incidental basis. “Such incidents are known as deviations,” Savage explains. “For each deviation, regulators have cause for reasonable inquiry. If they find fault, the corporation can be held criminally liable. What Tesoro needed, then, was a solution that would help it respond to any deviation and quickly rectify the problem.”

The company was also concerned about solutions from vendors that claimed their software could “do everything.” For example, Tesoro reasoned that complex number-crunching tasks, such as those required for real-time emissions estimations, were better

suited for the plant data historian. Rather than overload the software, Tesoro thought the ultimate solution should be able to link to the plant historian and access the required data for roll up as needed. In a similar vein, Tesoro wanted to manage its 10,000 pages of regulatory documents through a dedicated document manage-

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Mark Evans, CIO, Tesoro Corporation

ment system – complete with full version-control capabilities – rather than within the software solution itself. Additional concerns included integrating with existing report-writing tools and using a separate incident management system to track and store information that would be fully auditable.

### **A Perfect Fit**

The SAP solution fit the bill perfectly. “What we liked about SAP xEM was that it was a composite application,” says Ishmael Cooper, project manager at Tesoro. “Our problem was a lack of visibility and integration. SAP xEM gave us a quick, cost-effective way to tie it all together.”

SAP xEM is part of a family of SAP solutions known as SAP xApps™ packaged composite applications. These solutions can snap onto a company’s legacy IT environment and leverage existing capabilities and data for new business purposes. For companies like Tesoro, their appeal lies in the ability to deliver “targeted integration” to overcome the problems of inaccessible data silos, disaggregated systems, and inefficient business processes.

This isn't to say that SAP xEM lacks its own functionality. Take the task management and work-flow capabilities for example. "Other applications offer a simplified task concept," says Savage. "SAP xEM offers multiple layers that are set up in ways that correspond almost precisely to how things are done in the field. And if things are off a bit, we have the flexibility to make changes." From gathering data and crunching numbers to approving submissions and handing them off for review, SAP xEM gives Tesoro the power to create work flows in the system that mimic exactly what needs to be done.

The solution also allows Tesoro to manage by exception, a decisive factor for the company in choosing SAP xEM. Tesoro's Title V permit gives it the option of reporting on a line-by-line basis or by exception. The company, in other words, can either go through the entire report – nearly 600 pages – and record the values for each item requested, or it can report only on those items for which the company exceeds preestablished limits. "The line-by-line option would have required us to hire at least two additional employees," explains Savage. "We very much wanted to pursue management by exception. But doing so required that we have the proper systems in place. That's what SAP xEM gave us."

### **Moving Forward with Help from TechniData**

TechniData, which is SAP's expertise partner in the environmental compliance arena, helped Tesoro with its SAP xEM implementation. Thorsten Scholz, director at TechniData, explains: "Essentially, we worked with Tesoro to manage the implementation from cradle to grave. We had two consultants working on and off with Tesoro's internal team throughout the course of the six-month project. Clearly, I would call the implementation of SAP xEM slick and straightforward."

One of TechniData's most significant responsibilities was to reengineer processes to optimize performance and process efficiency. Part of this involved deploying the permit management capabilities of SAP xEM, so that regulations stored in a separate document management system would link to regulations in SAP xEM, where the meaning is clearly defined and all users can readily understand the applicability.

Working with TechniData, Tesoro turned on its newly implemented SAP xEM solution in December. While the current implementation is dedicated exclusively to Tesoro's most complex refinery facility located in the San Francisco Bay area, the company plans to roll out the solution across all of its facilities in the near future.

### **Benefits of SAP xEM**

"Very pleased" is how Mark Evans, CIO of Tesoro, puts it when asked his opinion of the implementation. "With SAP xEM in place," he says, "we're able to respond more quickly than ever before to problem situations and generate a clear audit trail that more than meets the requirements of the regulatory authorities. This reduces Tesoro's risk, builds valuable trust with the regulating agencies, and reduces the cost of compliance through improved efficiencies."

Another significant benefit cited by Tesoro is the portal-based nature of the solution. In the past, Tesoro's emissions management processes were manual, inefficient, error-prone, and difficult to track. Today, Tesoro manages everything through SAP Enterprise Portal, a component of the SAP NetWeaver™ platform, which comes packaged with SAP xEM. This centralized portal is used as a single point of access for all of Tesoro's environmental management tasks. Through it, users can access lists of equipment, view emissions output values, and quickly determine the applicable regulation. In addition, any urgent notification regarding deviations can be delivered directly to the end user's workstation. This minimizes the risk of oversights and helps ensure timely completion of required tasks.

For Tesoro, however, the ultimate benefit of SAP xEM is that it makes emissions management more accurate and a whole lot easier. Required information is routed to the responsible people as needed. The entire history of the company's emissions output is stored within the software for rapid analysis and proof of compliance. Reports can also be generated in the required format and submitted to the proper authorities in virtually no time at all. As Zipperer puts it: "This makes us more productive, helps reduce the costs of compliance, and, quite frankly, puts us that much further ahead of our competitors who are still struggling to do things the old way."

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