

opsEnvironmental™ Fuels General Motors' Environmental Compliance Engine



The Company

General Motors (GM) is the world's largest automobile manufacturing company, as well as the world's third largest company. GM has manufacturing operations in 32 countries and employs about 325,000 people around the world.

The Challenge

The large size and complexity of processes in GM's operations meant that the environmental staff was faced with massive amounts of data to track and report. It was determined that a system was needed to enable more efficient and effective management of environmental information both for internal environmental reporting and for reporting to stakeholders and external regulatory agencies. The company wanted a solution that would enable the headquarters environmental staff to oversee, manage and report on environmental data across the organization, but which also offered enough detail and flexibility to be suitable for facility-level use. In addition, they needed a solution with a strong enterprise orientation and the potential for possible global adoption.

The Solution

To address these challenges, GM reviewed a variety of software packages against a set of criteria. These included: functionality in compliance tracking and task management; ability to easily manage emissions calculations, emissions factors, etc. across the organization; configurability, transparency and adaptability; customer satisfaction and company track record. On the basis of these criteria, opsEnvironmental was selected as the best fit for GM's needs, and in late 2004, software deployment began across all of GM's North American operations, consisting of approximately 136 facilities.

Project Description

The implementation of opsEnvironmental was led by a team of specialists from Tetra Tech, an environmental consulting firm and ESP implementation partner. The solution was implemented rapidly, with a functional emissions management system and metrics system designed, configured, tested, accepted and deployed in 7 months. To address GM's immediate needs, opsEnvironmental's air module was first deployed across all U.S. sites to manage air emissions from a variety of sources and to meet many different regulatory requirements including Title V and NESHAP compliance. The software was

subsequently configured to track and manage waste metrics information for use in GM's corporate-wide environmental reporting to company shareholders and the general public. The metrics tracking was set up for all facilities in North America. Following this, the software's opsInventory module was deployed for management of U.S. Form R reporting. The project involved a variety of production facilities, including automotive assembly and coating, metal machining and stamping facilities, and foundry and aluminum die casting facilities, as well as testing facilities. The system was integrated with multiple existing data sources and systems, including GM's MSDS system, their materials management system, and others.

In its first year, opsEnvironmental has brought significant benefits to GM, including increased data quality and consistency and increased efficiency in data collection and reporting.

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Centralized System – Efficient, Accurate, Accessible

One of the immediate benefits of the opsEnvironmental implementation was the creation of a centralized, standardized repository for environmental data. "In the old days," says Vickie Mecsey, Staff Environmental Engineer, Chemical Risk Management at GM, "each facility was responsible for its own environmental reporting." In this decentralized framework, most facilities were using individually developed spreadsheets. A few were utilizing a corporate environmental information management system that wasn't designed to accommodate individual plant needs. In both cases, lack of centralized data storage meant that information was not accessible outside the plants. This led to lots of redundancy in data collection and reporting. Furthermore, there was no mechanism in place to ensure consistency in methodologies. "Now," says Mecsey, "we have a centralized, standardized mechanism for data collection across the organization. This gives the headquarters environmental staff access to the information they need, and it also gives us a lot more consistency and a lot less redundancy." Mecsey adds

that opsEnvironmental has also given the corporate environmental department much better access to facility data. "There's a lot more information readily available to us now. For example, we used to have to spend a lot of time tracking down the plant environmental people to get VOC information for our rollup reports. It was difficult and time-consuming to get the data we needed. Now we can just go into the software and do our VOC rollup reports. It's great. The plant people love it because we aren't taking up so much of their time, and we love it because we can get what we need when we need it."

Flexible, Usable Solution

Among the top selection criteria for GM was the flexibility of the software. "We have a lot of diverse operations at GM, and we also have very specific ways of doing things" says Mecsey. "opsEnvironmental gives us the flexibility to accommodate the GM way without having to do a lot of customization or change our business process to fit the software." Mecsey also notes that it was important to GM staff to have a system that was understandable and configurable by ordinary people. "The software cannot be a black box to GM," says Mecsey. "We have to have something that is easy enough to use that we don't have to rely on experts to configure it." Mecsey notes that "with opsEnvironmental, we have a system that is not only super flexible, but also makes sense, and can be understood by people who are not IT experts. We really appreciate that our staff can go in and look at how the models are set up and see how the calculations are being built. This is very important to us." Mecsey explains that the flexibility of the software is especially valuable because it means that the system "will clearly be adaptable to changing regulations as well as our own changing needs. This is important to us because we expect to be managing a lot of different processes and programs with this solution."

Time Savings on Air Emissions Reporting

An immediate benefit of the new system is the ability it has given GM environmental staff to streamline the production of air-related reports, including Title V reporting, Annual Emissions Inventories, and other compliance-related reports. GM's headquarters environmental department oversees the preparation of regulatory reports using data submitted from the facilities. opsEnvironmental's centralized database, standardized data collection and streamlined calculations translated to immediate and very tangible benefits for GM in this area. Though the project is less than a year old, the company has realized a level of effort reduction of 35% on the preparation of air-related compliance reports and a 45% reduction in the level of effort required to prepare the SARA 313 reports for US facilities. Savings are expected to be significantly higher during the second year as GM reaps the benefit of a complete year's use of the software.

Managing Regulatory Change, Managing Risk

Because of the complexity of GM's operations, the company has a massive amount of chemical data to track. To aid with this, opsEnvironmental has been configured to load data pertaining to more than 170,000 materials from GM's MSDS system into the opsEnvironmental materials database. Mecsey points out that having the information in opsEnvironmental makes it much easier for her to access the data she needs. "Every time the government proposes a change in regulations, the people in our organization want to know what impact that would have on GM," says Mecsey. "In the past, I didn't have direct access to all the relevant data, so I could only get a rough idea. Now I can go in and query the database and get not just my MSDS data but also my usage activity. This gives me the exact information I need." This increased access to data allows GM staff to better understand and prepare for the impact of impending regulatory changes.

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Mecsey also notes that one of her organization's responsibilities is the calculation of the potential risk posed by some of the chemicals used in GM's processes. "We have a process risk management report that is necessary under the OSHA 1910.119 Process Safety Management requirement," she says. "This includes a list of 200 chemicals. We need to know when they are used and what amounts they are used in so that we can calculate the potential risk." She explains that "now that we have opsEnvironmental, we can query the system and get all the information needed to calculate this risk."

Global Expansion Potential

While the initial implementation has focused heavily on the United States, the software has already been put to use gathering waste metrics information from GM's Mexican and Canadian operations, with plans for much more extensive use on the way. "One of our next projects is to implement opsEnvironmental to manage NPRI reporting in Canada," says Mecsey. She also notes that the software's adaptability has headquarters environmental staff looking far beyond North America. It is currently being considered for use in reporting global waste metrics for the company's internal corporate environmental metrics tracking program. "opsEnvironmental gives us the flexibility we will need to expand to other areas of our global operations," explains Mecsey.

To learn more about how opsEnvironmental can help your company streamline its environmental data management, please contact ESP.

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