

## **Lean Government Case Study: Michigan Department of Environmental Quality**

### **Background:**

Industries in Michigan considered the state's air permitting program to be cumbersome, slow, and unresponsive. In response to feedback from regulated businesses, citizens, and state government, Michigan's Department of Environmental Quality (DEQ) began looking for ways to improve their air "permit to install" (PTI) application process.

In April 2004, General Motors and other companies met with DEQ to improve the PTI process using lean methods. Participants included staff of the Michigan DEQ Air Quality Division (AQD), General Motors, DaimlerChrysler, and Michigan's Department of Labor and Economic Growth. A General Motors lean facilitator led the event. Together, team members used lean's value stream mapping (VSM) technique to better understand the process, the root causes of problems, and to develop a plan for improvement.

The value stream map helped the Air Quality Division make a number of improvements, including:

- Standardizing application information requirements;
- Holding brief, up-front permit scoping "huddle" meetings;
- Creating "just in time" fast track permitting for specific types of applications;
- Creating a simple process for clearer communication between the applicant and the AQD;
- Establishing intermediate checkpoints in the process to help both the applicant and AQD staff see and manage the progress of permits; and
- Installing a simple, easy to use permit tracking system using off-the-shelf software.

### **Results:**

The new process makes it easier and faster for permit applicants to provide more complete submittals. This in turn has allowed the AQD to perform technical analyses more quickly and efficiently by eliminating rework and waiting. The goal was to have all applications reviewed and acted upon in less than six calendar months.

Within one year of conducting the VSM event, the following results were achieved:

- Application process time for major permits reduced from 422 to 98 days (77% faster);
- Application process time for minor permits reduced from 143 to 50 days (65% faster);
- Completeness of information on applications rose from 82 percent to 95 percent (16% better);
- ADQ staff time was more effectively allocated to other "mission critical" work;
- Improved relationships and better communication with industry applicants;
- A significant increase in staff morale.

For more information on this project:

Michigan DEQ Overview of PTI Application Process Improvement:

<http://www.deq.state.mi.us/aps/miparp.shtml>

*Working Smart for Environmental Protection: Improving State Agency Processes with Lean and Six Sigma*, U.S. EPA, September 2006, p.39-40.

### **To Learn More About Lean Government:**

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