



# SATURN SYSTEMS

"Solving Complex Business Issues through Software Engineering"

## **Enterprise:** Environmental Data Validation

**Overview...** The Minnesota Pollution Control Agency (MPCA) Closed Landfill Program Environmental Data Management System (EDMS) contains 107 facilities representing 52 counties in Minnesota. The EDMS currently contains approximately 2.6 million records. Environmental monitoring data collected by the program since 2001 is found in the EDMS as well as historical data from previous decades. Measurements includes are landfill gas, ground water, surface water, leachate, gas condensate, and treated ground water.



The MPCA uses independent contractors to gather data from field monitoring stations at the landfills and submit it to staff at the MPCA. In the past, MPCA staff had to process the data using a desktop validation program. A cycle of data correction was then initiated between the MPCA and the submitter using email, until the data processed correctly. The manual process resulted in a slow progress and a significant amount of work for MPCA staff.

**The Solution...** Saturn Systems developed a ColdFusion based Web site that duplicated and greatly enhanced the validation process allowing contractors to submit and correct their data independent of MPCA staff. Significant security requirements were needed to protect the MPCA production Oracle database from direct web access. The resulting solution used a local

validation database to perform the necessary tests and a traceable batch submission process for inserting fully validated and secure data to the production database.

**The Result...** MPCA staff is now guaranteed to receive fully validated data requiring no additional work on their part. Contractors can quickly resolve any problems without having to interface with MPCA staff directly.

**Technologies...** The following technologies were used on this project:

- ColdFusion
- Oracle/PL/SQL
- Microsoft Access
- Microsoft Visual Basic
- MySQL
- Linux

**About Saturn Systems...** Saturn Systems is a national provider of software engineering solutions in the areas of device integration and enterprise technologies through our Rural Outsourcing business model.

Since 1990, Saturn Systems has created success through innovative application of technical expertise, a disciplined approach to project management, and a command of emerging technologies. Saturn Systems is a private company headquartered in Duluth MN, USA. For more information, visit our web site at [www.saturnsys.com](http://www.saturnsys.com). *Outsource To America!*