

FINAL PROJECT REPORT

FOR

Application Number- MS-25
Agreement Number - G1000539

Automated Data Validation Software For NPDES Permit Holders

City of Seattle

Total Cost of Project: \$97,622
Grant or Loan Amount: \$97,693

Project Start Date: December 1st, 2009
End Date: June 30th, 201



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Date

I. OVERVIEW DESCRIPTION OF PROJECT:

The NPDES Phase I Municipal Stormwater Permit, Special Condition 8, stipulates the reporting requirement to submit analytical results “and a comprehensive data and QA/QC report for each component of the monitoring program.” An essential, yet often overlooked component of QA/QC involves proper evaluation of analytical data and other sampling attributes commonly included on chain of custody forms. Typically, local jurisdictions do not have an automated way to perform this level of quality assurance, and if it is done, it is often done manually or sent out for expensive third-party validation. The Automated Data Validation Software was envisioned to provide a more efficient and cost-effective method for performing all the steps of verifying and qualifying sample data, as expected by Ecology. In addition, this tool will improve data validation integrity, quality and uniformity, making explicit the quality of the data collected by Permittees and increasing confidence that appropriate data are being used to perform analyses for technical or policy-making questions.

II. OUTCOME:

A Microsoft Access application was developed that consists of an error checking tool and a validation program to evaluate each sample result against associated quality control results. The application was delivered on a CD that includes a user’s manual and two version of the application, one for distribution to laboratories and one for permit holders to establish validation libraries and acceptance criteria. This application also provides an export that places the data in the appropriate fields in the Ecology’s EIM import file. Project outcomes:

1. A standardized Electronic Data Deliverable (EDD) format that can be used by any laboratory and is specific to the chemistry data requirements in the Phase I Municipal Stormwater NPDES Permit.
2. An EDD Checking tool that the laboratories will use to verify completeness and conformance relative to the EDD specifications.
3. A software routine that evaluates each sample result against associated quality control results, holding times, and project specific criteria and then apply standardized qualifiers to those results.
4. Training was presented with the following Permittees in attendance: City of Seattle, Pierce County, City of Tacoma, Clark County, King County and the Port of Tacoma.
5. Acquired chemistry data can exported in the an Ecology Information Management (EIM) database format.

III. EVALUATION:

This project was successful and the application was delivered as specified, providing the required functionality to improve data validation integrity, quality and uniformity for the NPDES Stormwater data collection effort. In addition, the added functionality of the EIM export provides a tool to reduce transcription errors and creates a less costly and more timely data transfer to Ecology.

IV. FOLLOW-UP:

The project is complete; however, Seattle Public Utilities (SPU) may continue to make modifications and enhancements to the software without grant funding in order to increase functionality. SPU will share with Phase 1 permit holders any new versions of the software that are developed for SPU. SPU will work with the Ecology SOP QA/QC Group to include items for potential upgrades and enhancements.

V. GENERAL COMMENTS:

None

