

WebEDR

The Web-based Electronic Data Review (WebEDR) application performs automated data evaluation on Environmental Response Laboratory Network (ERLN) electronic data deliverables (EDDs). WebEDR uses tests derived from the National Functional Guidelines (NFG) for data evaluation and review combined with method-defined limits to measure data. Once a laboratory has verified that their data meets the project's defined quality objectives, the system serves as a review tool for EPA Data Reviewers to see how the data performed during the quality assessment. WebEDR performs a standardized evaluation of the overall quality of the data and provides reviewers with tools to measure the data against different measurement quality objectives (MQOs).

Workspaces

WebEDR provides users with specific workspaces tailored to their specific responsibilities:

Data Reviewer

The Data Reviewer Workspace provides an area to monitor projects and manage Method MQOs. Data Reviewers can do the following:

- Review, sort, download, and filter results of submitted data;
- Establish projects, assign Project Teams, and create User Groups;
- View limits, qualifiers, and defined substance lists for a WebEDR standard method or a user-defined method;
- Download a Method MQO profile; and
- Create a user-defined MQO based on an existing method or edit a user-defined MQO.

Laboratory

The Laboratory Workspace provides a place to review electronic submissions to determine if results properly represent the collected analytical data. Laboratory users can do the following:

- Upload data using an ERLN Type 1, Type 1t, or Type 2 deliverable, upload an XML (using SEDD 5.1 or 5.2), or upload an Interim ERLN EDD file;
- Identify the EPA data customer and verify the submission's method mapping;
- Perform a Self Inspection to check the structure and content of a submission; and
- Review the analytical sequence being reported in a submission.

Data Administrator

The Data Administrator Workspace provides an area for maintaining WebEDR's Method Library. Data Administrators can do the following:

- Modify the standard limit value for a particular Method MQO;
- Make a user-defined Method MQO a standard Method MQO;
- Assemble tests available for use in the system; and
- Manage the availability of WebEDR Method MQOs.

Quality Assurance

One of the major challenges facing the ERLN is to establish a reliable and efficient exchange of laboratory data during an environmental response. EPA is required by order *CIO 2150.0 (formerly 5360.1 A2)* to ensure that data are of known and documented quality. Previously, data were analyzed but difficult to review because there was no standard method for analyzing results. Data Reviewers could view laboratory results but could not verify the data without knowing the criteria used to determine results. WebEDR solves this problem by providing a standard set of measurement quality objectives (MQOs) for a variety of methods to create an automated review process.

Contact Information

Features and Benefits

- WebEDR has 95 tests that enable automated assessment in accordance with MQOs. Sixty percent of these tests are non-method specific and do not require recalculation. These tests were based on the National Functional Guidelines (NFG) and are divided into six types: Preliminary (Self Inspection), Completeness, Sequence, Frequency, Limit, and Correctness (recalculation tests).
- Data can be processed for standardized analytical methods including chemical, radiological, pathogen, and biotoxins; drinking water methods; SW-846 methods; and Contract Laboratory Program (CLP) methods. WebEDR also has standardized results and the ability to customize measurement criteria to reprocess data.
- WebEDR provides reviewers with a standardized result and the ability to customize measurement criteria to reprocess data.
- WebEDR can process XML files based on SEDD 5.2 2b; the ERLN Interim EDD file; and ERLN Type One, Type One Transitional, Type Two, and Type Three.
- Users can initialize projects in WebEDR so Data Reviewers can establish measurement criteria to provide to laboratories before analysis begins.
- WebEDR supports laboratories by providing a Self Inspection mechanism that checks the content and structure of electronic submissions and provides an overview of the analytical sequence being reported prior to submission. Reviewer-defined quality control tests can be performed for performance evaluation, field blanks, and field duplicates.
- Users can perform reviewer-defined quality control tests for performance evaluation, field blanks, and field duplicates.
- WebEDR is regularly updated to facilitate the ERLN's mission of swift and accurate response to environmental incidents.
- The WebEDR Method MQOs are constantly being populated, so there are minimal limitations to analysis parameters.
- Data Reviewers will soon have the ability to assemble project information to assist in developing an electronic Quality Assurance Project Plan.
- Laboratories will be able to receive Method MQOs prior to analysis to assist with their process.
- WebEDR has many features that increase usability. Tables can be sorted by a number of factors, searches can be performed on multiple criteria, and data can be sorted simply by adjusting filters. This enables the user to find data easily and efficiently.
- The WebEDR Web site enables users to access WebEDR from any location where the Internet is available.
- Access to WebEDR is determined by defined user roles. Once approved by a WebEDR User Administrator, new users can edit account information, change passwords, access online help features, and use their workspace.
- WebEDR has a detailed online help function as well as a downloadable user manual and training demonstrations of key functional processes.

WebEDR Workflow

1. Data Reviewer establishes a project, assigns review team, sets Method MQOs, and delivers the project information to the laboratory (future feature).
2. Laboratory reviews the project information and MQOs, analyzes samples, and prepares electronic data deliverable (EDD).
3. Laboratory uploads their EDD:
 - Verifies customer delivery information obtained from deliverable;
 - Verifies Method mapping obtained from deliverable, and;
 - Performs a Self Inspection, which includes:
 - Checking the submission to ensure the data necessary to process is available and in the correct format;
 - If errors are found, the laboratory corrects the deliverable and performs another upload, and;
 - When complete, the laboratory submits their data as a Final Submission.
4. WebEDR processes the submission according to the standardized Method MQOs established during upload and notifies the customer that data has been submitted.
5. Data Reviewer reviews the results processed by WebEDR.
 - If the reviewer would like to compare the data against a different set of standards, the reviewer can map the deliverable to MQOs they create to view a different set of results.
6. Data Reviewer downloads results.

Contact Information