Long Term 2 Enhanced Surface Water Treatment Rule (LT2 Rule) Data Collection and Tracking System (LT2 DCTS)

Users' Manual for the Long Term 2 Enhanced Surface Water Treatment Rule (LT2 Rule) Data Collection and Tracking System

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Disclaimer

This Users' Manual is pending review by the Standards and Risk Management Division (SRMD) within the USEPA OGWDW. Mention of company names, trade names, or commercial products in this report does not constitute endorsement or recommendation for use.

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Section 1. Introduction

Welcome to the Users' Manual for the Long Term 2 Enhanced Surface Water Treatment Rule (LT2 Rule) Data Collection and Tracking System. This document is intended to provide guidance to laboratories, public water systems (PWSs), and state and United States Environmental Protection Agency (USEPA) officials on the various functions of the LT2 Data Collection and Tracking System (DCTS), which has been developed to support data reporting under the LT2 Rule monitoring program.

The LT2 Rule requires PWSs that use surface water or ground water under the direct influence of surface water to monitor their source water (influent water prior to treatment) for *Cryptosporidium*, *Escherichia coli* (*E. coli*), and turbidity. In support of the monitoring requirements specified by this rule, three documents have been developed to provide guidance to the affected PWSs and the laboratories that support them:

- *Source Water Monitoring Guidance Manual for Public Water Systems for the Long Term 2 Enhanced Surface Water Treatment Rule* [EPA-815-R-06-005]. This guidance manual for PWSs affected by the rule provides information on laboratory contracting, sample collection procedures, and data evaluation and interpretation.
- *Microbial Laboratory Guidance Manual for the Long Term 2 Enhanced Surface Water Treatment Rule* [EPA-815-R-06-006]. The goal of this manual is to provide *Cryptosporidium* and *E. coli* laboratories analyzing samples in support of the LT2 Rule, with guidance and detailed procedures for all aspects of microbial analyses under the rule to maximize data quality and consistency.
- *Users' Manual for the Long Term 2 Enhanced Surface Water Treatment Rule (LT2 Rule) Data Collection and Tracking System* [EPA-No.-TBD] (this document). This manual provides PWSs and laboratories with instructions on the entry, review, and approval of electronic data using the LT2 DCTS, and provides USEPA and states with instructions on viewing system-generated reports.

These manuals, as well as additional information and updates on the LT2 Rule, are available on the Web at: http://www.epa.gov/safewater/lt2/.

If you have additional questions not addressed by this manual, please email LT2 Technical Support, at stage2mdbp@epa.gov, or contact the LT2/Stage 2 Data Collection and Tracking System user support at 1-888-LT2-0020 (1-888-582-0020).

1.1 Organization of Manual

This manual provides guidance on the following aspects of the LT2 DCTS:

- **Section 1** - Provides an overview of the LT2 Rule and manual organization. It also provides background information on the LT2 DCTS, the use of the data in the LT2 DCTS, the analytical method specifications in the LT2 Rule, and the various user roles.
- **Section 2** - Provides details on the LT2 DCTS requirements, the process for connecting to the LT2 DCTS, the Administrative User's role, the login process, new user registration, how to request help, and the logout procedure.
- **Section 3** - Provides Lab User details.
- **Section 4** - Provides PWS User details.
- **Section 5** - Provides EPA and State User details.
- **Section 6** - Describes the XML data submission process.
- **Section 7** - Provides legal and security information.
- **Appendices** - Provides detailed technical information for data entry and validation.

1.2 About the LT2 Data Collection System

Under the LT2 Rule, filtered PWSs that serve more than 10,000 people (i.e., large filtered systems), and that use surface water or ground water under the direct influence of surface water as their drinking water source, will be required to sample for *Cryptosporidium*, *E. coli*, and turbidity.

The USEPA developed the LT2 DCTS to support the activities required under the LT2 Rule. PWSs collect water samples to be analyzed for three specific measures of water quality: the presence of *Cryptosporidium*, *E. coli*, and turbidity. The samples are analyzed (by either the PWS on-site laboratory or an off-site laboratory) in compliance with the LT2 monitoring program. The data generated from the analysis is entered into the LT2 DCTS either by manually entering the data in data collection forms, or by uploading the data in XML format. The DCTS acts as a repository for these data, and provides analytical support by calculating sample results. PWSs use the LT2 DCTS to review sample data prior to submission to USEPA and/or state officials. A summary of the data flow through the LT2 DCTS is provided in Figure 1-1. Details on the different user roles are provided in Section 1.5, User Roles.

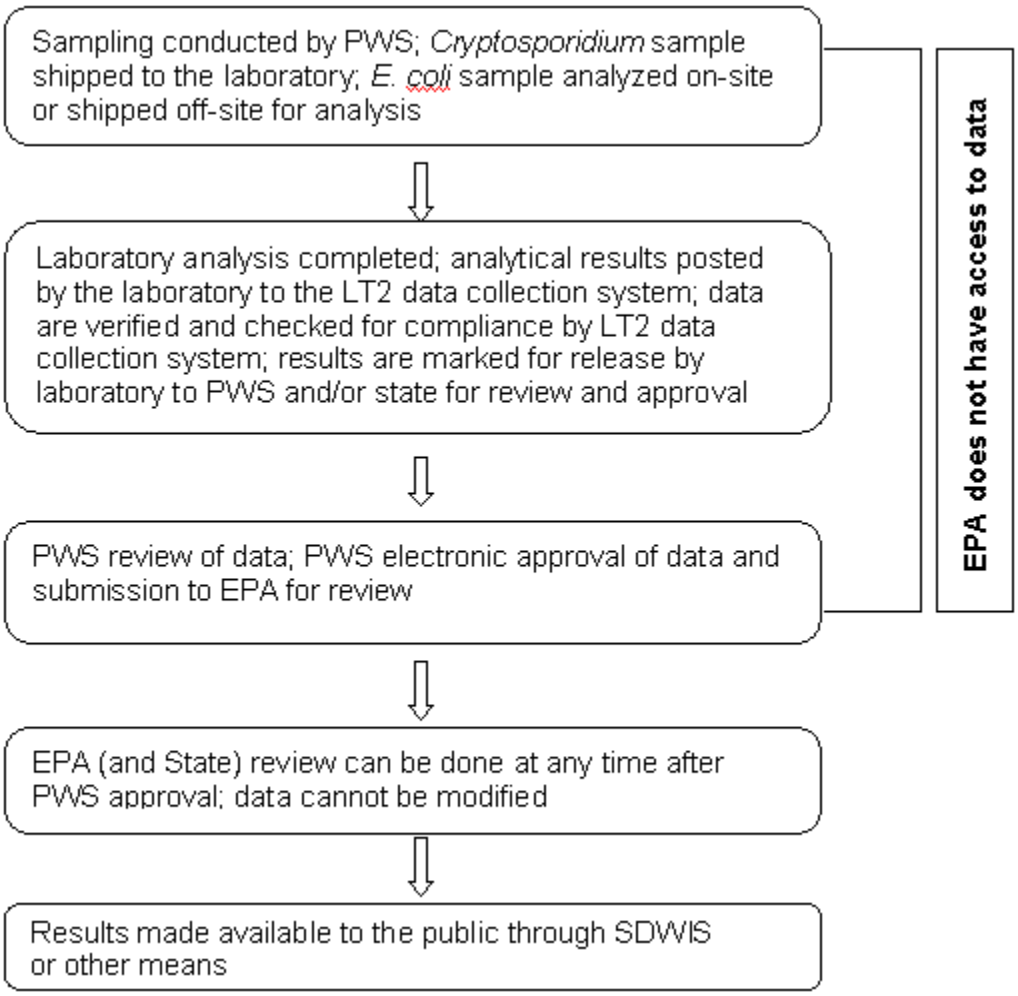

Figure 1-1. LT2 DCTS Data Entry/Upload, Review, and Approval Process

1.3 Data Use

The data collected for compliance with the LT2 Rule will be used to determine whether improved treatment for the control of microbial pathogens will be needed in the future for individual PWSs. The data will be used for the following purposes:

- **Assessment of mean *Cryptosporidium* concentration for individual plants** - to assess the need for additional treatment by classifying each plant by treatment requirements. (This requires reliable *Cryptosporidium* data from field samples.)
- **Evaluation of the relationship between *Cryptosporidium* occurrence, *E. coli*, and turbidity** - reassessment of the microbial index to determine how *E. coli* and turbidity monitoring can be used to assess the need to monitor for *Cryptosporidium* at small systems. (This requires reliable *Cryptosporidium*, *E. coli,* and turbidity data from field samples.)
- **Evaluation of *Cryptosporidiu*m method performance in source waters** - to verify the assumptions upon which the Federal Advisory Committee Act Agreement in Principle was based. (This requires reliable *Cryptosporidium* data from matrix spike samples.)

More detailed information on the uses of each of these types of data is provided in the *Microbial Laboratory Guidance Manual for the Long Term 2 Enhanced Surface Water Treatment Rule* [EPA-815-R-06-006] and the *Source Water Monitoring Guidance Manual for Public Water Systems for the Long Term 2 Enhanced Surface Water Treatment Rule* [EPA-815-R-06-005].

1.4 Analytical Methods

All analytical data entered into the LT2 DCTS must be generated using methods approved for use under the LT2 Rule and in accordance with defined quality assurance (QA) procedures. Details on approved *Cryptosporidium* and *E. coli* methods and QA procedures are provided in the *Microbial Laboratory Guidance Manual for the Long Term 2 Enhanced Surface Water Treatment Rule* [EPA-815-R-06-006].

Public water systems measuring turbidity during sample collection under the LT2 Rule must use turbidity methods approved for use under the rule. Detailed information on turbidity measurements and methods is provided in the *Source Water Monitoring Guidance Manual for Public Water Systems for the Long Term 2 Enhanced Surface Water Treatment Rule* [EPA-815-R-06-005].

1.5 User Roles

Five different user roles will access the LT2 DCTS:

- **Lab User** - enters and edits the data via web entry forms or XML file submission.
- **Lab Approver User** - authorizes submission of sample results to the PWS by checking and approving the associated data. The Lab Approver User may also enter and edit data via web entry forms or XML file submission. For *Cryptosporidium* laboratories, the data approver is the laboratory's Principal Analyst under the Laboratory QA Program.
- **PWS User**- reviews sample results submitted by the Lab Approver User. The PWS User may release the results to USEPA and the state in which the facility is located as approved or contested results, or may return the sample to the laboratory for error correction.
- **State User** - reviews the results that have been approved by the PWSs within its jurisdiction (generally within their state). The State User only sees samples that have been approved or contested by the PWS, as well as samples that have not been reviewed by the PWS within the designated time frame. They do not see samples that have been flagged or returned to the lab.
- **EPA User** - reviews the results that have been released by all PWSs. The EPA User sees only samples that have been approved or contested by the PWS, as well as samples that have not been

reviewed by the PWS within the designated time frame. They do not see samples that have been flagged or returned to the lab.

For each user role, there is also an "Administrative User." This is a user that belongs to one of the five roles that is able to perform all the functions of that user role, as well as being able to update users and change their status within their organization (e.g. change a "Pending" user to a "Lab Approver User"). A matrix of the LT2 DCTS user roles and actions is provided in Figure 1-2. The registration procedure for each user role is discussed in Section 2 of this manual.

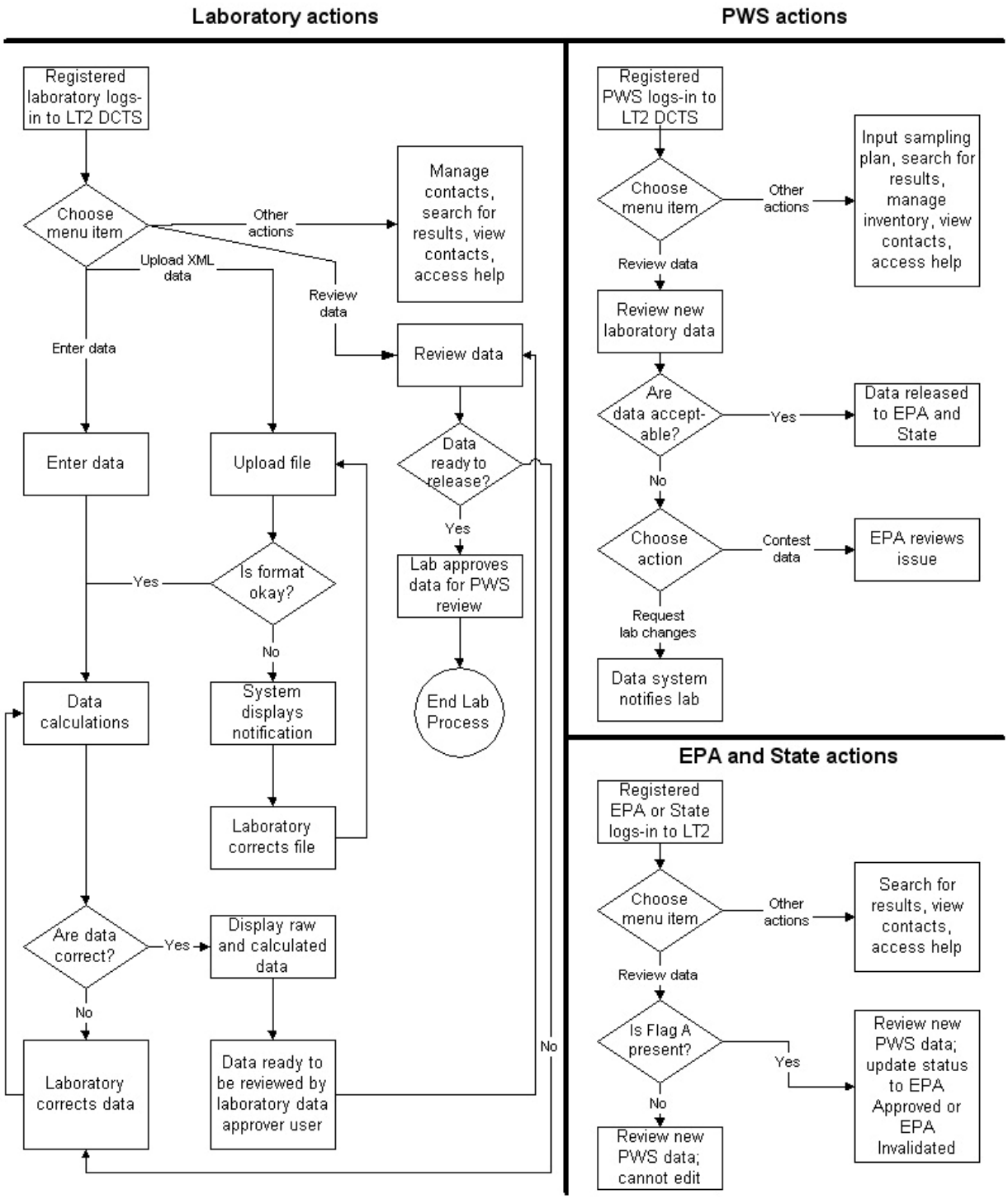

Figure 1-2. Overview of the LT2 DCTS User Roles