Region 4
U.S. Environmental Protection Agency
Science and Ecosystem Support Division
Athens, Georgia

GUIDANCE

Title: **Environmental Data Submission**

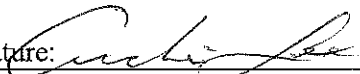| **Effective Date:** December 17, 2010	**Number:** SESDGUID-106-R0

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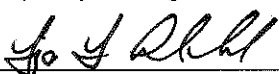### Approvals

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Revision History

This table shows changes to this controlled document over time. The most recent version is presented in the top row of the table. Previous versions of the document are maintained by the SESD Document Control Coordinator.

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SESDPROC-106-R0, *Environmental Data Submission,* Original Issue	December 17, 2010

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1   General Information

1.1   Purpose

This document describes the methods to be used in submitting environmental data electronically to US EPA Region 4.

1.2   Scope/Application

The methods described in this document are to be used by all data providers when preparing and submitting environmental data electronically to Region 4, regardless of the originating program.

EQuIS is the name of the database used by SESD Region 4 for storing environmental data. DART and EQuIS Pro are the interfaces to that database (web and desktop, respectively). EQuIS Pro is available on all EPA workstations, DART is available via the EPA intranet. Both require a valid User ID and password.

This document does not cover the use of EQuIS for creating maps or reports. Extensive documentation on the use of the system can be found at http://help.earthsoft.com/display/Dashboard/EQuIS+Documentation+Dashboard. In addition, the DART Support Website (US EPA intranet only) contains many useful features: http://r4esdcf1.r4esd.epa.gov/cfdocs/dms/index.cfm.

1.3   Documentation/Verification

This procedure was prepared by persons deemed technically competent by SESD management, based on their knowledge, skills and abilities and has been tested in practice and reviewed in print by a subject matter expert. The official copy of this procedure resides on the SESD local area network (LAN). The Document Control Coordinator is responsible for ensuring the most recent version of the procedure is placed on the SESD LAN and for maintaining records of review conducted prior to its issuance.

1.4   Acronyms

ANSETS: Analytical Services Tracking System

CLP: Contract Laboratory Program

COC: Chain-of-Custody

DART: Data Archival and ReTrieval

EDD: Electronic Data Deliverable

EDP: EQuIS Data Processor

LIMS: Laboratory Information Management System

SESD: Science and Ecosystem Support Division

PRP: Potentially Responsible Party

1.5   Definitions

Activity Code (task_type): Descriptive code for the EPA program (Superfund, RCRA, etc.) requiring the investigation. Activity Code values are a controlled vocabulary.

Analytical Data: Data reported by a fixed-base laboratory (analyses performed in a laboratory)

Complex Study: An investigation of multiple waterbodies (or sites) combined into a single lab report. This designation is applicable only to certain SESD led studies.

Controlled Vocabulary: see Valid Values

DART: Web-based interface to the Region 4 EQuIS database

Darter: A collection of software utilities to assist in the creation of EDDs for Region 4. These utilities are designed and supported for EPA lead studies only.

Data Package: A data package is a software archive (.zip format) containing one or more EDDs.

Data Provider: The entity responsible for the electronic submission of environmental data to Region 4. Data providers are identified by a code value that is a controlled vocabulary.

Data Submittal Summary: A summary of the data proposed for submittal by the data provider (non-EPA lead providers only).

Electronic Data Deliverable (EDD): A tab delimited text file containing the environmental data to be submitted.

Element: LIMS system used to report SESD and CLP analytical data.

EPA Laboratories: SESD and CLP laboratories.

EPA Workstation: PC connected to the EPA intranet.

EQuIS Data Processor (EDP): Software that validates EDDs prior to submittal.

EQuIS Pro: EPA workstation software interface to the EQuIS database.

ESRI: is a software development and services company providing Geographic Information System (GIS) software (ArcMap)

FieldResults Data: Field analytical data such as pH, dissolved oxygen, XRF, etc.

Geology Data: Specialized data relating to geology, such as lithology, well construction, etc.

LIMS (Laboratory Information Management System): Software for managing and reporting laboratory analyses.

Media Code (matrix_code): A two letter code designating the sample matrix, i.e., SW is the media code for Surface Water. Media code values are a controlled vocabulary.

Non EPA Laboratories: All laboratories with data being submitted to Region 4 that do not use the Region 4 LIMS (Element).

Project: A project is defined as the data generated for a report.

Project ID (task_code): Unique ID associated with a project. This value is assigned by Project Log (EPA lead investigations), and manually by SESD for all other investigations.

Project Log: Region 4 software for booking lab space in CLP and ASB. This software tracks all Superfund fund lead and SESD lead projects.

Quality Assurance Project Plan (QAPP): The controlling document for proposed field work. The Project ID number assigned to the QAPP will be used in EDDs generated for that project to uniquely identify the data to that investigation.

QA Tracking System: A software subsystem of the Project Tracking System to log QAPPs and track their approval.

Reference Value (.rvf) File: File containing valid values used in Region 4.

Scribe: EPA software for management of data in the field, including chain-of-custody paperwork.

Shapefiles: Map files used by ESRI GIS software.
Site (or Waterbody): The unique site or waterbody in DART for storing project data.

Station ID (sys_loc_code): Unique designation for a sample location.

Valid Values: All allowable values for the field have been pre-determined, and are available as a drop-down pick list. The data provider must select one of the available choices, or request a new valid value be added.

Waterbody (or Site): The unique site or waterbody in DART for storing project data.

Extended Markup Language (.xml) file: File format of the FORMS II Lite and Scribe chain-of-custody EDD.

1.6   References

United States Environmental Protection Agency (US EPA), Region 4 Electronic Data Deliverables Reference Guide (most recent version).

The Region 4 EDD Reference Guide provides detailed information for the creation of the EDD files that are required to be submitted.
http://www.epa.gov/region4/waste/sf/edd/edd.html

United States Environmental Protection Agency (US EPA), Region 4 EQuIS Data Processor Reference Manual (most recent version).

The Region 4 EDP Reference Manual provides the information needed to download, install and maintain the EDP software, as well as how to use the software to proof EDDs and create data packages. http://www.epa.gov/region4/waste/sf/edd/edd.html

2   Introduction

2.1   Data Sources

Data is submitted electronically to Region 4 from two sources: EPA lead environmental projects and PRP (Potentially Responsible Party) lead environmental projects. It should be emphasized that the differences between the two processes for data submittal arise solely from the inherent efficiencies afforded to EPA lead investigations because the work is being done 'in-house'. There is **no** difference in the types of data submitted, or the format of the files being submitted. Regardless of how EDD files are created (or what organization led the investigation), the files must meet the specifications of the Region 4 EDD Reference Guide.

2.2   Overview

The following summary provides a general outline of the process for submitting environmental data to Region 4.

Create the site or waterbody: If the site or waterbody does not exist in DART, it must be created. Creating the site or waterbody is the responsibility of Region 4.

Create the project: Before data can be accepted into DART, a receiving project must be created in Project Log (currently Superfund fund lead and SESD lead only). Creating the project is the responsibility of Region 4.

COC or Data Submittal Summary: A summary of the data must be submitted to provide a check that all data is received. The data provider (or EPA SESD project leader) is responsible for this task.

DART Reports: Automated reports for the specific EDDs required are sent out automatically after the COC information is uploaded to Element (EPA lead investigations). The data provider (or EPA SESD project leader) is responsible for responding to these reports.

Create EDD(s): Create EDDs to match the Data Submittal Summary. The data provider (or EPA SESD project leader) is responsible for this task. See the Region 4 Electronic Data Deliverables Reference Guide for details.

Check EDD(s) with EDP: All EDDs must be checked with EDP prior to submittal to Region 4. The data provider (or EPA SESD project leader) is responsible for this task. See the Region 4 EQuIS Data Processor for details.

Submit EDD(s): PRP lead projects should submit all EDDs to r4dartcoordinator@epa.gov. EPA lead projects should submit all EDDs to

r4dart@epa.gov. Attach the EDD(s) to the requesting email. The data provider (or EPA SESD project leader) is responsible for this task.

Proof and correct reports as needed: It is EPA Region 4's responsibility to provide these reports to the data provider. It is then the responsibility of the data provider (or EPA SESD project leader) to proof the data for accuracy and submit any needed corrections. PRP lead data providers should notify r4dartcoordinator@epa.gov of any needed corrections. EPA lead data providers should notify r4dart@epa.gov of any needed corrections.

The system is designed for data to be submitted once, i.e., sample coordinates for a monitoring well are submitted one time.

The details for successfully completing the above steps can be found below in Section 3 for EPA lead data submittals and Section 4 for Potentially Responsible Party (PRP) lead data submittals.

2.3   EQuIS Data Processor (Standalone)

If you are a data provider to Region 4 and do not have access to an EPA workstation, you will need to download and install the EQuIS Data Processor (EDP) software. There is no charge to the user for this software. If you are a data provider with access to an EPA workstation and need EDP installed, email r4dart@epa.gov.

2.3.1   Obtaining Standalone EDP

Instructions for obtaining, installing, registering, maintaining, and using standalone EDP can be found in the Region 4 EDP Reference Manual.

2.3.2   Using Standalone EDP

EDP can be used to create smaller EDD files, but its primary function is to check EDDs for errors and create data packages for submittal.

The structure of the Region 4 EDD files is determined by the format file. If the format of any of the EDDs must be changed (rarely), it will then be necessary for users of the standalone version of EDP to obtain the updated format file. Instructions for downloading and installing updated format files can be found in the Region 4 EDP Reference Manual.

Likewise, if the valid values used by Region 4 are updated, it will then be necessary for users of the standalone version of EDP to obtain the updated reference value (.rvf) file. This file is updated periodically. The file is available at: http://www.epa.gov/region4/waste/sf/edd/edd.html

Region 4 will notify all data providers currently in the database when it is necessary to update these files, but it is the responsibility of the data provider to ensure that the most current version is being used. See the Region 4 EQuIS Data Processor Reference Manual for details.

2.3.3 Valid Values in EDP

Region 4 valid values can be viewed in EDP by starting EDP then clicking on the Reference Values tab in the lower left corner.

If you need a valid value that is not in the list (rare analyte, new analytical method, etc.), you may request it be added as outlined in the Region 4 Electronic Data Deliverables Reference Guide.

2.3.4 Data Package

A data package is created by EDP when the 'sign and submit' function is used. This creates an archive file (.zip) containing all EDDs that were loaded into EDP. The data package must be properly named and attached to an email request before submittal to Region 4. See the Region 4 EQuIS Data Processor Reference Manual for details.

2.4 Information Required

An Electronic Data Deliverable (EDD) is a tab-delimited text file containing environmental data in the Region 4 format. Detailed information on all EDD formats may be found in the Region 4 EDD Reference Guide. A summary of the more commonly used formats follows:

Location EDDs: These files provide coordinates for sampling locations, along with a simple indication of the quality of the information. Because all other EDDs rely upon this information, the Location EDD is the first EDD that is submitted.

FieldResults EDDs: These EDDs provide the results of field analyses, for example XRF, pH, temperature, turbidity, etc.

Water Level EDDs: Provide groundwater elevation data. If a water level EDD is submitted, a Location EDD with the surface elevation (measured to top of casing for wells) is required. In addition, each Water Level EDD must contain the well top of casing elevation (relative to mean sea level).

Geology EDDs: These EDDs provide information about well construction, lithology, etc.

Analytical Data EDDs: Provide the fixed-base laboratory analytical data. The data is in a three file format.

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2.5 Defining the Data Provider

The data provider in EQuIS is defined as the organization providing the data, not an individual.

For EPA lead studies, data providers are already defined. If an additional data provider must be added, the program office must provide the following information to r4dart@epa.gov:

- Organization name
- E-mail address
- Organization type (choose one):
    - SAMPLER_FEDERAL
    - SAMPLER_STATE
    - SAMPLER_CONT (RACS)
    - SAMPLER_CONT (START)
    - SAMPLER_CONT (ERRS)
    - SAMPLER_CONT (ROC)

For PRP lead studies, data providers must be defined in EQuIS. To define a data provider, the program office must provide the following information to r4dartcoordinator@epa.gov:

- Organization name
- E-mail address
- Organization type:
    - SAMPLER_REG_COMM

EPA will update the .rvf file upon receipt of the above information.

2.6 Common Fields

With few exceptions, the values described below are the first four columns of all Region 4 EDDs. See the Region 4 EDD Reference Guide for details on your specific EDD format.

2.6.1 Data Provider Codes (sampling_company)

Data Provider codes are used to identify the source of the data within DART.

For EPA lead projects, the data provider code is selected within the Project Log as the project is created.

For PRP lead projects, the data provider code is determined by Region 4, and is then provided to the PRP via an updated .rvf file. If a data provider code does not

exist in the system, it will be created upon receipt of the information specified in Section 2.5

2.6.2   Project IDs (task_code)

The Project ID is a unique identifier for all data collected during an investigation. It allows data from a given study to be retrieved by the original report with which it was submitted.

For EPA lead projects, the Project ID is generated by Project Log when the project is created. For PRP lead studies, the Project ID is generated manually by SESD and then provided to data providers.

2.6.3   Program\Activity Codes (task_type)

The Program\Activity code identifies the program requesting the investigation to the DART database.

For EPA lead projects, the Program\Activity code is provided by the person entering project data into the SESD Project Log.

For PRP lead projects, the Program\Activity code is determined by the site manager (RPM, OSC, etc.) and is then provided to the PRP.

2.6.4   Station IDs (sys_loc_code)

A Station ID is the permanent, unique designation for a sample collection point. Once a sampling point has been established, the Station ID designation will be used for all future sampling events <u>regardless</u> of the entity leading the investigation. Note that the sampling point is established for a location, not a sample type.

The Sample ID is the designation given to the sample itself.

A Station ID is <u>not</u> a Sample ID. Sample IDs should be distinct from Station IDs to prevent confusion.

Station ID designations should be simple and easy to remember. Do not use spaces, dashes, or underscore characters. The Station ID should be kept to 8 or fewer characters if possible.

For example, two samples are collected from the same location in Sandy Creek, sample SC-001-SW (a surface water sample) and SC-001-SD (a companion sediment sample). Because they were collected at the same location, both will have the same Station ID, such as SC001.

A soil sample is collected as a part of a monitoring well installation. The subsurface soil sample is designated RF-007C-SB, the groundwater sample is designated MW012-0810 (monitoring well sample, August 2010). The well being installed is being given the designation MW012. Sample RF-007C-SB (and all other samples collected at that well location) will have the Station ID MW012.

It may help to think of the Station ID as the permanent name for a sampling location, while any number of samples (from any media available) may be collected at that given location. A Station ID is a point on a map, and many samples may be collected from that point during an investigation (or series of investigations).

All environmental samples must have a Station ID – Surface water, groundwater, sediment, waste water, surface soil, etc.

Field Blanks (trip blanks, equipment rinse blanks, etc.) do not have coordinates and therefore do not have Station IDs. The logic for this is built into EDP – if you try to enter a Station ID for a sample type (media code) that does not allow it, EDP will display an error. Likewise, if a media code requires a Station ID that is missing, EDP will again display an error.

3   EPA Lead Data Submittals

3.1   EPA Lead Projects

Data from all EPA lead projects (SESD, States and EPA contractor Project Leaders) using EPA laboratory resources (CLP, SESD, ANSETS and special purchase laboratories) must be permanently archived in DART. It is the responsibility of the Project Leader to ensure that the data provider(s) for the investigation properly prepare and submit all EDDs.

All questions about data submittals for EPA lead projects should be directed to: r4dart@epa.gov.

Procedures for projects that are being conducted by Responsible Parties (PRPs) can be found below (Section 4).

Table 3.1 presents the steps for successfully submitting EPA Lead Environmental Data to Region 4 in summary form. Details for each step can be found under 'Further Information'.

Table 3.1: Steps for Submitting EPA Lead Environmental Data

	Further Information
Software Requirements	Section 3.2
Create Site	Section 3.3
Obtain Project ID	Section 3.4
Submit COC	Section 3.5
Correct COC Errors (if any)	Section 3.6
Create Location EDD	Section 3.7, and Region 4 EDD Reference Guide
Error Check Location EDD	Section 3.8, and Region 4 EDP Reference Manual
Submit Location EDD	Section 3.9
Create All Other EDDs	Section 3.7, and Region 4 EDD Reference Guide
Error Check All Other EDDs	Section 3.8, and Region 4 EDP Reference Manual
Submit All Other EDDs	Section 3.9
Proofing and Corrections	Section 3.10

3.2   Software Requirements

The software listed below is required for electronic submittal of data from EPA lead projects in Region 4.

3.2.1   Project Log

Project Log is tracking software developed by Region 4 SESD to create and manage all EPA lead environmental projects within the Region utilizing the

SESD or CLP laboratories. It is used to create projects, report data, and provide basic information to Element.

3.2.2 Chain of Custody Software

Chain of custody software is used in Region 4 to generate EDD files of COC information.

Scribe was recently adopted as the software of choice for EPA investigations. Scribe is available at http://www.ertsupport.org/scribe_home.htm.

In Region 4, Scribe is used in conjunction with a custom template, software and help file to improve compatibility with Element and EQuIS. The template, help file, and software are available at: http://www.epa.gov/region4/sesd/download/dart/scribe.html. The site requires a user name and password. Email r4dart@epa.gov to request the username and password.

The use of chain of custody software is discussed below (Section 3.5).

3.2.3 EQuIS Data Processor (EDP)

EDP is used to check EDDs for errors prior to submission, and to create the data package for submittal. It can also be used to create smaller EDDs. It is available as a free download, if the data provider does not have access to an EPA workstation. See the Region 4 EDP Reference Manual for more information on standalone EDP.

3.3 Create Site or Waterbody

Before data can be submitted, the site must be created in DART. Proper site\waterbody creation is important to success. DART is intended to be a permanent archive for the data generated by these investigations.

For EPA lead projects conducted by SESD, the Project Leader has the responsibility for site or Waterbody creation. For EPA lead projects not conducted by SESD, the Region 4 program office will submit the required information. Site creation requests must be sent to r4dart@epa.gov.

3.3.1 Site Creation

Begin by checking DART to see if the site has been created. Go to the DART Support Website (http://r4esdcf1.r4esd.epa.gov/cfdocs/dms/index.cfm), click DART Lists → Sites\Station IDs. If the site is not listed here, it must be created.

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To create a site in DART, go to the EnviroFacts Multisystem query website http://www.epa.gov/enviro/html/multisystem_query_java.html and search for the site. If the site is found, copy the URL (website address) and paste it into an email to r4dart@epa.gov requesting the site be created.

If the site is not in EnviroFacts, search the SUPRIS database at http://www.epa.gov/superfund/sites/cursites/ and click the button labeled 'Search Superfund Site Information'. If the site is found, copy the URL (website address) and paste it into an email to r4dart@epa.gov requesting the site be created.

If the site is not in these databases, send the following information to r4dart@epa.gov:

Site Name
Address,
City, State, Zip Code
County

3.3.2   Waterbody Creation

First check to see if the waterbody already exists in DART. Go to the DART Support Website (http://r4esdcf1.r4esd.epa.gov/cfdocs/dms/index.cfm), click DART Lists → Sites\Station IDs. If the waterbody is not listed here, it must be created.

To create a waterbody in DART, the project leader must provide the USGS GNIS ID number for the Waterbody. The GNIS ID numbers for all waterbodies in the US can be found at this website: http://geonames.usgs.gov/

- At the website, select 'Search Domestic Names'.
- A new web page opens. Enter the following:
    - Feature Name
    - State
    - County
    - Feature Class
- Click 'Send Query'. A new web page opens
- Select your waterbody. A new web page opens
- Click 'GNIS in Google Map' Confirm your waterbody
- Close Google Map
- Copy the URL for the waterbody and email to r4dart@epa.gov

If the waterbody does not exist in the USGS database, send the best available name to r4dart@epa.gov.

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3.3.3 Criminal and Enforcement Confidential

If the field investigation is <u>criminal</u> or <u>enforcement confidential</u>, extra precaution must be taken to keep the project data confidential.

When requesting the creation of a site or waterbody for Criminal and Enforcement Confidential studies, the subject line of the email must state the site is for <u>criminal</u> or <u>enforcement confidential</u> data.

1. For these investigations, search for the site in DART (Section 3.3). If found, check the Facility Code field. If it does <u>not</u> begin with 'R4SC-', copy the name and Facility Code of the site and forward to r4dart@epa.gov.

2. If the site or waterbody does not exist in DART, find the needed information (Section 3.3) and forward to r4dart@epa.gov.

3. If the site or waterbody cannot be found in the EPA or USGS databases, send the best available information (Section 3.3) to r4dart@epa.gov.

3.4 Project Creation (Project ID)

When an investigation is logged into Project Log, a Project ID is assigned and a project is created. The Project ID is then embedded in the EDDs and is used to tie that data to the original study.

For historical data (as defined in the Region 4 EDD Reference Guide), the project must be created manually.

After the project has been created, but prior to the field investigation, the data provider will receive an email with information required to successfully submit an electronic COC to SESD. Use the information in this report to setup your investigation in the Chain of Custody software.

3.5 Chain of Custody Software

Where possible, EPA lead projects in Region 4 (except those exclusively using ANSETS) must submit an electronic chain-of-custody (.xml format) to SESD. The Region 4 Scribe help file (Section 3.2.2) describes the process.

The process for submitting the COC EDD file is different in one major aspect from all other EDDs submitted from EPA lead projects: the file **is not** submitted to r4dart@epa.gov. These COC EDDs must be submitted to R4SampleCustody@epa.gov. This process is detailed in the Scribe helpfile (Section 3.2.2).

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This submittal does not satisfy the requirement for a signed COC to accompany the samples at all times.

No COC is submitted to SESD for analytical datasets exclusively using ANSETS. The data provider is still responsible for submitting all required data to r4dart@epa.gov (Section 3.6.4).

3.6   DART Reports

After your COC data is received and the samples logged into the SESD LIMS (Element) system, you will receive automated reports if additional information or corrections are required. These emails are sent the night samples are logged into the SESD LIMS (Element) system and each Monday thereafter.

When all needed corrections have been made to Project Log and Element, the project setup in the Project Log is checked to see what additional EDDs (Location, FieldResults, Geology, Water Level, etc.) are required (Section 3.4).

3.6.1   Sample Information Requests

These email alerts are triggered by missing or incorrect information in Project Log or Element that will prevent the lab analytical data from loading to DART once reported. These corrections must be made before the data is reported by the SESD laboratory. If the corrections are not made before the data is reported, it will be necessary for the lab to re-report the data.

These emails contain a due date in the subject line. Corrections and missing data must be submitted prior to the due date.

3.6.1.1 Corrections to Project Log

If the report shows information missing from Project Log, log onto the Project Log (EPA workstation only) and supply the missing information. This portion of the report checks for:

- Valid site or waterbody selected
- Valid Project ID selected
- Valid program\activity selected
- Valid data provider selected

Note: For studies with data providers with no access to the Region 4 Project Tracking System, errors will be corrected by the program office with SESD as backup.

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3.6.1.2 Corrections to Element

Errors within Element are easily corrected. The information presented in this portion of the email shows your sampling information as it currently resides in Element.

Station IDs and Media Codes are checked to ensure compliance with business rules (Section 2.6.4). If you have a missing or incorrect Station ID or Media Code, type the correct value in the appropriate 'Edited' column and forward the email to r4dart@epa.gov.

3.6.2 EDD Requests

These emails contain a due date in the subject line. Requested EDDs must be submitted prior to the due date.

- After any errors in Project Log and Element are corrected, a Location EDD is requested for Station IDs that cannot be matched in DART. A weekly reminder to submit the Location EDD will be sent until the data is received.

- Once the Location EDD has been received, requests for any additional EDDs will be sent based upon the information gathered during the creation of the project (see Section 3.4).

3.6.3 'Overdue' Reports

If corrections and EDDs are not submitted before the analytical data is reported by the lab, 'Overdue' reports will be generated. These reports will be sent each Monday morning until the requested data is received. All overdue reports for EPA Lead projects in Region 4 are tracked on the Project Tracking System.

3.6.4 ANSETS EDDs

Data providers using ANSETS are still responsible for submitting all EDDs. Information on creating EDDs for analytical data can be found in the Region 4 Electronic Data Deliverables Reference Guide. Because these samples are not entered into the SESD LIMS software, tracking is not performed at the sample level prior to analysis. Instead, sample tracking begins after the data has been reported to ANSETS.

Requests for EDDs will be made to the data provider beginning the Monday after the data is released. Because no tracking of individual samples is performed for ANSETS datasets, the requests for EDDs are not specific.

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3.7 Creating EDDs

EDDs can be created in a number of ways. The best method will depend upon the amount of data to be submitted, and how the chain-of-custody was generated.

It should be noted that for small amounts of data, any of the EDD(s) listed below can be created directly in EDP (Region 4 EQuIS Data Processor Reference Manual). Detailed instructions for required formats of the various EDDs can be found in the Region 4 EDD Reference Guide.

3.7.1 Location EDDs

Attached File: Each email request for a Location EDD has a partially completed Location EDD file attached, with the required Station IDs in the correct format. Open the attached file in a spreadsheet or complete in EDP.

Scribe: If you created your COC using Scribe, you can create a Location EDD from FieldResults. In Scribe, select Lists → Advanced → Macro. Check 'FieldResults', then click 'Run Macro(s). More detailed instructions can be found in the Region 4 Scribe help file (Section 3.2.2).

Complex Study: If your investigation is 'complex', your Location EDD must be split. Submit a Location EDD for each stream or waterbody investigated.

3.7.2 FieldResults EDDs

Scribe: If you created your COC using Scribe, you can create a FieldResults EDD from FieldResults. In Scribe, select Lists → Advanced → Macro. Check 'FieldResults', then click 'Run Macro(s). More detailed instructions can be found in the Region 4 Scribe help file (Section 3.2.2).

If you entered your field results values in Scribe, the information will be present in your FieldResults EDD. If this information is missing, the FieldResults EDD can be completed in EDP or a spreadsheet.

Niton XRF files: Field data collected with Niton instruments can be converted to the FieldResults EDD format. Email r4dart@epa.gov for help with this.

YSI Instrument files: Field data collected with YSI instruments can be converted to the FieldResults EDD format using the Darter YSI utility. Email r4dart@epa.gov for help with this.

Other Data Logging Instruments: If you are planning an investigation that will be making field measurements that will be recorded to the instruments data logger, you can request (r4dart@epa.gov) help to make conversion to the FieldResults EDD easier.

3.7.3   Water Level EDDs

Required for all groundwater elevation measurements (top of casing to groundwater, relative to mean sea level), and for all surface water elevation measurements tied to groundwater elevation.

Scribe: If you created your COC using Scribe, you can create a WaterLevels EDD from FieldResults. In Scribe, select Lists → Advanced → Macro. Check 'FieldResults', then click 'Run Macro(s). More detailed instructions can be found in the Region 4 Scribe help file (Section 3.2.2).

3.7.4   Geology EDDs

It is recommended that these EDDs be prepared by professionals with experience with this type of data. Details for the various formats are specified in the Region 4 EDD Reference Guide.

3.7.5   Analytical Data EDDs

Preparation of these files should be performed by individuals with experience in understanding unfiltered laboratory reports. The format is specified in the Region 4 EDD Reference Guide.

Element: Analytical data reported by the Region 4 LIMS (Element) is formatted for EQuIS, and is automatically loaded upon acceptance of the Location EDD.

ANSETS and Small Purchase: This data must be placed in the EQuIS format by the data provider. To help ensure accuracy, the performing laboratory may be requested to report the data in the Region 4 EQuIS format as part of the bid.

3.8   Error Checking with EQuIS Data Processor (EDP)

For information on obtaining, installing, registering, maintaining and using standalone EDP, refer to the Region 4 EDP Reference Manual. If you are using standalone EDP, be sure EDP is up to date before using.

If you are using EDP on an EPA workstation, start EDP by logging in to EQuIS Pro and selecting your site.

Use EDP to check all EDDs for errors before submission. EDP contains a help file to assist with error correction. Let the mouse 'hover' over any cell with a non-white background to view a detailed error message.

Complete instructions for using EDP can be found in the Region 4 EQuIS Data Processor Reference Manual.

If you are unable to correct the problem, email the file causing the problem to r4dart@epa.gov with your contact information, site name and Project ID.

3.9 Submitting EDDs

After correcting any errors in your EDD, save the file from EDP using sign and submit to create the data package. Name the file as specified in the requesting email. Attach the EDD to the email requesting the EDD and forward to r4dart@epa.gov. If the file is named improperly or not attached to the requesting email, it will be returned to the data provider.

Complete instructions for submitting EDDs can be found in the Region 4 EQuIS Data Processor Reference Manual.

3.10 Proofing and Corrections

Notify the DART system administrators of any errors you find in the system. Send corrections to r4dart@epa.gov.

After the data has been successfully loaded, reports will be sent to the data provider. The reports will consist of spreadsheets for field blanks and shapefiles for environmental samples. The data provider is responsible for proofing these files and notifying Region 4 (r4dart@epa.gov) of any errors found.

4   PRP Lead Data Submittals

4.1   PRP Lead Projects

PRP's conducting environmental investigations in Region 4 for the Superfund program must report their data to Region 4 electronically. The types of data typically required to be submitted are outlined in Section 2.4. The PRP is responsible for the information contained in the files submitted by the data provider.

Address all data submittals and questions to r4dartcoordinator@epa.gov.

Procedures for EPA lead projects can be found in Section 3.

Table 4.1 presents the steps for successfully submitting PRP lead Environmental Data to Region 4 in summary form. Details for each step can be found under 'Further Information'.

Table 4.1: Steps for Submitting PRP Lead Environmental Data

	Further Information
Software Requirements	Section 4.2
Create Site	Section 4.3
Obtain Project ID	Section 4.4
Submit Data Summary	Section 4.5, and Region 4 EDD Reference Guide
Correct Data Summary Errors	Section 4.6
Create Location EDD	Section 4.7, and Region 4 EDD Reference Guide
Error Check Location EDD	Section 4.8, and Region 4 EDP Reference Manual
Submit Location EDD	Section 4.9
Create All Other EDDs	Section 4.7, and Region 4 EDD Reference Guide
Error Check All Other EDDs	Section 4.8, and Region 4 EDP Reference Manual
Submit All Other EDDs	Section 4.9
Proofing and Corrections	Section 4.10

4.2   Software Requirements

The software listed below is required for electronic submittal of data from PRP lead projects in Region 4.

4.2.1   EQuIS Data Processor (Standalone)

All data providers are required to use the EQuIS Data Processor (EDP) to check their data files for errors prior to submittal. EDP can also be used to create smaller EDDs.

The EQuIS Data Processor (EDP) is software used to both check all EDDs for errors prior to submittal, and to create properly formatted data packages. The

software is available as a free download. See the Region 4 EQuIS Data Processor Reference Manual for details.

4.3 Site Creation

All National Priorities List (NPL) sites in Region 4 have been created in EQuIS. If, however, a site is found to be missing (or a new site is added to the NPL), it must first be created using information from Envirofacts, EPA's national database (http://www.epa.gov/enviro/html/multisystem_query_java.html). CERCLIS (http://www.epa.gov/superfund/sites/cursites/) is used if the site does not exist in Envirofacts.

To create the site, the Remedial Program Manager or On-Scene Coordinator (OSC) must email the URL for the search results (Envirofacts or CERCLIS) to r4dartcoordinator@epa.gov.

If the site is not in these databases, the Program Manager or OSC must send the following information to r4dart@epa.gov:

Site Name
Address,
City, State, Zip Code
County

4.4 Project Creation (Project ID)

For current data (as defined in the Region 4 EDD Reference Guide), a project is created and assigned a Project ID (tracking number) when the QAPP is logged into the QA Tracking System (a part of the Project Tracking System).

For historical data (as defined in the Region 4 EDD Reference Guide), the project must be created manually (assuming no suitable QAPP is available in the QA Tracking System). Use the SESD Project Tracking system to setup the proposed data submittal, and to get the PRP data provider contact information (email address) in the system.

Whether the data is current or historical, the system will prompt for the required information (data provider, program\activity, etc.).

When the project has been successfully created, an automated report will be sent to the data provider containing all available Station IDs and their coordinates. The data provider must review the report for existing sampling stations. If samples are to be collected at an existing Station, the established Station ID must be used.

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4.5   Data Submittal Summary

After the project is created, US EPA Region 4 will notify the PRP to submit the Data Submittal Summary and email to r4dartcoordinator@epa.gov. When this information has been accepted by the Remedial Project Manager (RPM), the PRP may then submit the data. Information on the Data Submittal Summary format can be found in the Region 4 EDD Reference Guide.

4.6   Submitting EDDs

Note the order for the data submittals below. This order is both dictated by a desire to offer data providers with the opportunity to review each step in the data submittal process, and by the database logic of EQuIS.

4.6.1   Location EDDs

If the Data Submittal Summary contains additional information for an established sampling station, the data provider **MUST** use the Station ID(s) provided.

Because the system will begin requesting the remaining EDDs upon receipt of the first Location EDD file, the data provider may prefer to submit all Station IDs in a single Location EDD file. Multiple Location EDDs may be submitted if needed.

A report containing the submitted Station IDs and coordinates will be sent to the data provider upon the receipt of each Location EDD, to provide an opportunity for proofing and correction.

If the Location EDD is found to contain an error not related to the coordinates, the PRP must send a spreadsheet with a list of the incorrect and corrected information.

For bad coordinates (or if better coordinates become available), the original Location EDD may be edited and re-submitted. Delete the rows in the original Location EDD that do not need to be updated, edit the coordinates for the remaining rows, and re-submit to r4dartcoordinator@epa.gov. The phrase 'Updated coordinates' should be in the subject line.

4.6.2   Other EDDs

The remaining EDDs will be checked against Station IDs as they are received, and rejected if no matching Station ID can be found.

4.7   Creating EDDs

EDDs can be created using spreadsheet software, directly in EDP, or in a word processor such as Notepad. More information about the file format can be found in the Region 4

EDD Reference Guide. The best method for creating EDDs will depend upon the amount of data to be submitted.

It should be noted that for small amounts of data, any of the EDD(s) listed below can be created directly in EDP (Region 4 EDP Reference Manual). Detailed instructions for required formats and valid values of the various EDDs can be found in the Region 4 EDD Reference Guide. Section 2.4 of this Guidance has a brief summary of the most common EDDs; Section 2.6 has a brief discussion of the most common fields.

4.8   Error Checking with EDP

Use EDP to check all EDDs for errors before submission. EDP contains a help file to assist with error correction. Hold the mouse over any cell with a non-white background to view a detailed error message.

If you have errors you are unable to correct, email the file(s) causing the problem to r4dartcoordinator@epa.gov with your contact information. Place the site name and the Project ID in the subject line.

4.9   Submitting EDDs

EDDs must be submitted as detailed in the Region 4 EQuIS Data Processor Reference Manual.

Remember to submit Location EDDs **before** submitting any other EDDs. The database structure requires locations to be loaded prior to all other environmental data.

While EDP permits the submittal of combined EDDs, this feature is not supported in the Region 4 implementation. Submit each EDD separately (**except** for Analytical EDDs which are **always** submitted as a three file set – See the Region 4 Electronic Data Deliverables Reference Guide).
When all errors have been corrected, save the EDD(s) using the 'sign and submit' menu option. Name all files as specified. Improperly named files will be returned to the data provider. The required names can be found in the EDD request reports sent to the data provider.

To submit your prepared data package, attach the data package to the EDD request and forward to r4dartcoordinator@epa.gov. Data packages must be attached to the requesting report. Data packages received without the proper requesting report will be returned to the data provider.

NOTE: .zip files are automatically removed by the EPA email server. Be sure your data package is properly named and has the .edd filename extension.

4.10   Proofing and Corrections

After the data has been successfully loaded, reports will be sent to the data provider. The reports will consist of spreadsheets for field blanks and shapefiles for environmental samples (Region 4 is responsible for sending these files to the data provider). The data provider is responsible for proofing these files and notifying Region 4 (r4dartcoordinator@epa.gov) of any errors found, and submitting corrections.