

## **Appendix A**

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## **Information for Viewing Appendix A**

### ARI TOC Files

The ARI TOC Files include the laboratory reports and raw data files for total organic carbon and total solids analyses obtained from Analytical Resources, Inc. Adobe Reader is required for viewing the reports; data files can be imported into any database or spreadsheet software program.

### Axys DioxinFuran Files

The Axys DioxinFuran Files include the laboratory reports and raw data files for dioxin/furan analyses obtained from Axys Analytical Ltd. Adobe Reader is required for viewing the reports; data files can be imported into any database or spreadsheet software program.

The analytical results from Axys include dioxin/furan congener and homologue group data in addition to concentrations for each congener after multiplying by its appropriate TEF (Ecology 2007). The TEF-modified concentrations are listed with the congener name followed by either “(TEQ ND=0)” or “(TEQ ND=1/2DL).” When a congener was not detected, the TEF-modified concentration was assumed to be a value of zero (TEQ ND=0) or a value equal to one-half of the MDL (TEQ ND=1/2DL). The sum of TEF-modified concentrations, or TEQ, is provided as DX TOTAL (ND=0) and DX TOTAL (ND=1/2DL), depending on how nondetect congeners were treated. Note that when a congener was qualified by the laboratory as EMPC, the congener was not assumed to be not-detected.

In addition to results for investigative samples, the Axys data files also include results of quality assurance and quality control samples, including laboratory duplicate samples, radio-labeled carbon results, lab blank samples, spiked samples, and multiple column analysis results for 2,3,7,8-TCDF. The data files also include results for field-collected replicate samples.

Additional information for the analytical results can be obtained from the laboratory report files.

### Data Validation Files

The Data Validation Files include the database with all analytical results and validator-assigned qualifiers from EcoChem Inc. and the data validation report. Adobe Reader is required for viewing the report; the database file can be imported into any database or spreadsheet software program.

The data validator assigned the qualifier “U” to all EMPC-qualified results. The “U” qualifier indicates that the EMPC-congener results were not detected at the reported concentration. In addition, the results of initial 2,3,7,8-TCDF analyses are qualified as “DNR” to indicate that the results should be replaced with the confirmatory or second-column results.

Again, results of field and laboratory quality assurance and quality control samples are included in the database. No changes were made to TEQ calculations.

***Rayonier Mill Off-Property Soil Dioxin Study  
Final Data Summary Technical Memorandum***

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Final Study Database

The Final Study Database folder contains a spreadsheet file that includes only investigative sample results. This file was used to generate the summary tables and the line, scatter, and histogram plots for the Data Summary Technical Memorandum and is considered the final “working database.”

The spreadsheet is based on the data validator’s final database and incorporates the following changes:

1. Only relevant fields from the analytical database are included: sample identification number, CAS number, analyte, result, data qualifier, units, method detection limit, practical quantitation limit, and TOC. Additional fields were added by E & E to facilitate data visualization: sample type (grid, forested, etc.), distance in feet from the former Rayonier hog fuel boiler, direction by degrees from the former Rayonier hog fuel boiler, and direction by compass sector.
2. All field replicate sample results have been removed.
3. All laboratory quality assurance/quality control samples have been removed.
4. All results qualified as DNR by the data validation contractor have been removed.
5. TEF-modified results for all nondetect (including EMPC-flagged) results were recalculated when ND=0.5 DL. Instead of using the MDL for EMPC-qualified values, the revised value reflects a concentration equal to one-half of the SDL. A value equal to one-half of the MDL was used for U-qualified values.
6. DX TOTAL results were recalculated based on results of revisions made under #5, above.
7. Sample W112SS was incorrectly labeled in the field and subsequently reported in the laboratory and data validation contractors’ spreadsheets as W112SS. This sample should have been labeled as E112SS to reflect that it was collected in Zone E1 rather than Zone W1. The “working database” has been revised to replace all listings of sample W112SS with E112SS.