

## **Electronic Data Capture In Region 4**

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Region 4 has implemented an environmental data archival system for all programs using the Region 4 SESD laboratory and CLP. The system routinely captures data for Superfund, RCRA, Water, and Air programs into an Oracle based system purchased from EarthSoft (EQuIS). The analytical data is provided to EQuIS via the Region 4 LIMS (Element by Promium), while the necessary field data is provided by the field project leaders from EPA, States, and EPA contractors responsible for sample collection.

The legacy data collection and reporting system was inadequate to the needs of the end users of the data. By developing methods for these systems to communicate, Region 4 can now routinely capture all EPA led investigations using the SESD lab or CLP. This system is successful because it can provide feedback to all data providers in a timely fashion on the status of their data.

Sampling information (Station ID, Sample ID, date, time, analyses, media, etc.), are provided to Element via FORMS (.xml file export). This information is compared to EQuIS to determine what data elements may be missing (generally sample coordinates).

If any required data is missing (or if errors are found), an automated email is sent to the responsible party requesting the data or correction. Emails are sent each Monday until the corrections\missing data are provided. At this point, the analytical data can be loaded to EQuIS.

Missing data (such as Location EDD) is attached to the requesting email in the Region 4 EDD format and sent to SESD. These Location EDD files can be created from a partially completed attachment in the requesting email, or can be created from FORMS using a Region 4 utility. If errors are found, the responsible party can correct them in the email and send it back to SESD.

EQuIS is a very powerful tool for analyzing and presenting environmental data. This system forms the basis for a major upgrade in how Region 4 stores and processes environmental data. As with any database, EQuIS requires a support system to deliver high quality data.