United States Environmental Protection Agency

Winter 2006

On January 6, 2006, the Environmental Data Standards Council (EDSC) approved the long awaited Environmental Sampling and Analysis Results (ESAR) data standards. In this issue, learn more about the new ESAR data standards, the new Institutional Controls data standard, and revisions to a number of existing standards.

New ESAR Data Standard

In January of 2003, the EDSC commissioned development of a data standard that would facilitate sharing of laboratory results data, and improve the emergency response capabilities of federal, state and tribal governments. The standard would also facilitate analysis of environmental trends and environmental risks to human health.

As development of the laboratory results data standard proceeded, it became apparent that its scope was insufficient to meet all stakeholder needs. A decision was reached to broaden the scope to span data collection from the field on through to reporting laboratory results.

In early 2004, the EDSC authorized media specific reviews to ensure that data elements met the needs of water, waste, and air related programs. The business processes and practices used by various environmental data collectors were modeled to ensure that the standard would support comprehensive exchange and integration of environmental information for these media. This work was completed early in 2005 and published later that fall in the Federal Register. Comments were received and one additional data standard related to well information was presented for consideration. During this process, ESAR was successfully piloted in a number of media specific data exchanges including STORET, SDWIS, AQS, and RCRA INFO.

This expanded effort culminated in the development of the *Environmental Sampling, Analysis and Results (ESAR) Data Standards*. The ESAR Action Team constructed the standards into re-usable groupings or "blocks" to facilitate their use in schema development, as well as for other (i.e. non-ESAR related) data flows.

At present, the ESAR suite of standards includes an overview document, four primary standards, nine supporting standards, and one pending draft standard. The ESAR Overview sets the context for the use of ESAR. The four primary standards include the ESAR Project Data Standard, the ESAR Monitoring Location Data Standard, the ESAR Field Activity Data Standard, and the ESAR Analysis and Results Data Standard.

The nine approved and one draft supporting standards include:

- Attached Binary Object Data Standard
- Bibliographic Reference Data Standard
- Compositing Data Standard
- Equipment Data Standard
- Measure Data Standard
- Method Data Standard
- Quality Assurance and Quality Control Data Standard
- Representation of Date and Time Data Standard
- Sample Handling Data Standard
- Draft Well Information Data Standard

Because they were designed for re-use, the ESAR standards allow information specialists and system developers to pick and choose elements from this comprehensive base of standardized data elements and data blocks. This innovative design allows for flexibility in implementation. The ESAR standards are another example of EPA/state cooperation toward improving environmental reporting when exchanging information over the National Environmental Information Exchange Network.

Institutional Controls Data Standard

On January 6, 2006, the EDSC adopted a new data standard for the exchange of information related to the controls and mitigation requirements associated with locations that have been subjected to environmental contamination. Institutional controls relate to the conditions and/or use restrictions that become attached to property when contaminated sites are cleaned up or contained. This important standard will facilitate a consistent vocabulary about this important area of environmental management.

Revised Standards

The ESAR data standard development process included the evaluation and revision of existing data standards including Chemical Identification and Latitude/Longitude. In addition, ESAR replaced the Reporting Water Quality Results for the Chemical and Microbiological Analytes Data Standard and replaced the Date data standard. Other standards have had their formatting modified so that the overall look and feel of the collection of standards is consistent.

Standards Available on the Environmental Data Registry (EDR)

All new and revised data standard documents are available on the EDR web site in .pdf format.

Data elements related to the new and revised standards will be available via the EDR by the end of March 2006. Please contact Dawn Banks-Waller or Larry Fitzwater for additional information.

Contact Information

For more information, please refer to the appropriate EPA point of contact:

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