INSTITUTIONAL CONTROL VECTOR PROFILE TECHNICAL SPECIFICATION

ADDENDUM TO THE INSTITUTIONAL CONTROL [EX0000015.1] DATA STANDARD

Technical Specification No.: EX000015.1 Addendum

January 6, 2006

This technical specification has been produced through the Environmental Data Standards Council (EDSC).

The Environmental Data Standards Council (EDSC) is a partnership among US EPA, States and Tribal partners to develop and agree upon data standards for environmental information collection and exchange. More information about the EDSC is available at http://www.envdatastandards.net.

Foreword

This technical specification for geographic vector data has been produced as an interim measure until an Exchange Network Leadership Council (ENLC) standard is promulgated. This technical specification has been published as an addendum to the **Institutional Control [EX000015.1] Data Standard**.

1.0 INTRODUCTION

The Environmental Protection Agency (US EPA) defines institutional controls (IC) as non-engineering measures, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or to protect the integrity of a remedy by limiting land or resource use. Institutional controls are used when contamination is first discovered, when remedies are ongoing, and when residual contamination remains onsite at a level that does not allow for unrestricted use and unlimited exposure after cleanup.

With the current resources available, standards for documentation of geographic information such as the boundaries of an institutional control are limited to a single coordinate and/or text description. The immediate need to record and transmit more complex geographic features in a standard vector format has warranted the creation of this technical specification. This Extensible Markup Language (XML) vector profile may be used to model geographic features as simple points, lines, and polygons using the **Latitude/Longitude [EX000017.2] Data Standard** for the acquisition and documentation of coordinate values.

This technical specification does not identify a standard language for the exchange of coordinates in Universal Transverse Mercator (UTM) nor State Plane format. Exchange of information in these formats is expected to be addressed in a forthcoming American Society for Testing & Materials (ASTM) standard.

1.1 Scope

Though this technical specification may be applicable across many programs, it is intended to support the **Institutional Control [EX000015.1] Data Standard** only.

1.2 Revision History

Date	Version	Description
January 6, 2006	EX000015.1 Addendum	Initial Environmental Data Standards Council Adoption of the Institutional Control Data Standard and Addendum [EX000015.1 Addendum].

1.3 References to Data Standards and Other Documentation

This technical specification relies on data standards to make it complete. As such, users should reference the following normative standards listed below:

- Institutional Control [EX000015.2] Data Standard
- Latitude/Longitude [EX000017.2] Data Standard
- ISO/IEC 2382-17:1999 Information Technology Vocabulary—Part 17: Databases 17.06.05 metadata)

1.4 Terms and Definitions

For the purposes of this document, the terms and definitions below apply.

Term	Definition
Geographic Feature	A simple point, line, or polygon described by one or more geographic feature points.
Geographic Feature Point	A complete set of data elements consisting of at least a Latitude Measure and a Longitude Measure.
Geographic Feature Metadata	Supplementary information for a geographic feature.

1.5 Implementation

Users are encouraged to use the XML registry housed on the Exchange Network Web site to download schema components for the construction of XML schema flows (http://www.exchangenetwork.net).

1.6 Code and Identifier Metadata

Metadata are defined here as “data about data or data elements, possibly including their descriptions” and/or any needed context setting information required to identify the origin, conditions of use, interpretation, or understanding of the information being exchanged or transferred (Adapted from ISO/IEC 2382-17:1999 Information Technology Vocabulary—Part 17: Databases 17.06.05 metadata). Based on the business need, additional metadata may be required to sufficiently describe an identifier or a code. A note regarding this additional metadata is included in the notes column for identifier and code elements. Additional metadata for identifiers may include:

- Identifier Context, which identifies the source or data system that created or defined the identifier

Additional metadata for codes may include:

- Code List Identifier, which is a standardized reference to the context or source of the set of codes
- Code List Version Identifier, which identifies the particular version of the set of codes
- Code List Version Agency Identifier, which identifies the agency responsible for maintaining the set of codes
- Code List Name, which describes the corresponding name that the code represents

2.0 GEOGRAPHIC FEATURE TECHNICAL SPECIFICATION TABLE

1.0 Geographic Feature

Definition: A simple point, line, or polygon described by one or more geographic feature points.

Relationships: None.

Notes: None.

XML Tag: GeographicFeature (Adopted from **Institutional Control [EX000015.1] Data Standard**)

Name	Definition	Notes	Format	XML Tag
1.1 Geographic Feature Identifier	A unique identifier for a geographic feature.	Based on the business need, additional metadata may be required to sufficiently describe an identifier. This additional metadata is described in section 1.6.d.	A	GeographicFeatureIdentifier
1.2 Geographic Feature Point	A complete set of data elements consisting of at least a Latitude Measure and a Longitude Measure.	Refer to the **Latitude/Longitude [EX000017.2] Data Standard**. The following items are expected to define the geographic feature point information needed for group 1.2: • Latitude Measure • Longitude Measure • Vertical Measure A point feature may be expressed by a single geographic feature point. A line feature may be expressed by a sequence of geographic feature points. A polygon feature may be expressed by a sequence of geographic feature points where the first and last points are the same. To describe more complex geometries, use of the Geography Markup Language (GML) tags is recommended.	G	GeographicFeaturePoint

Name	Definition	Notes	Format	XML Tag
1.3 Geographic Feature Metadata	Supplementary information for a geographic feature.	Refer to the **Latitude/Longitude [EX000017.2] Data Standard**. The following items are expected to define the geographic feature metadata information needed for group 1.3: • Source Map Scale Number • Horizontal Accuracy Measure • Horizontal Collection Method Code • Horizontal Collection Method Name • Horizontal Reference Datum Code • Horizontal Reference Datum Name • Geometric Type Code • Geometric Type Name The following items are also expected if vertical measure (elevation) data is included: • Vertical Collection Method Code • Vertical Collection Method Name • Vertical Reference Datum Code • Vertical Reference Datum Name The following items should be reported if available because of their influence on the integrity of the data collected: • Data Collection Date • Geographic Reference Point Code • Geographic Reference Point Name • Location Comments Text • Verification Method Code • Verification Method Name • Coordinate Data Source Code • Coordinate Data Source Name	G	GeographicFeatureMetadata

Appendix A
Institutional Control Vector Profile Technical Specification Structure Diagram