

LATITUDE/LONGITUDE DATA STANDARD

Standard No.: EX000017.2

January 6, 2006

Approved on January 6, 2006 by the
Exchange Network Leadership Council
for use on the Environmental
Information Exchange Network

Approved on January 6, 2006 by the
Chief Information Officer of the
U. S. Environmental Protection Agency
for use within U.S. EPA

This consensus standard was developed in collaboration by State, Tribal, and U. S. EPA representatives under the guidance of the Exchange Network Leadership Council and its predecessor organization, the Environmental Data Standards Council.

Foreword

The Environmental Data Standards Council (EDSC) identifies, prioritizes, and pursues the creation of data standards for those areas where information exchange standards will provide the most value in achieving environmental results. The Council involves Tribes and Tribal Nations, state and federal agencies in the development of the standards and then provides the draft materials for general review. Business groups, non-governmental organizations, and other interested parties may then provide input and comment for Council consideration and standard finalization. Standards are available at <http://www.epa.gov/datastandards>.

1.0 INTRODUCTION

The Latitude/Longitude Data Standard is a set of data elements that can be used for recording horizontal and vertical coordinates and associated metadata that define a point on the earth. The latitude/longitude data standard establishes the requirements for documenting latitude and longitude coordinates and related method, accuracy, and description data for all places used in data exchange transaction. Places include facilities, sites, monitoring stations, observation points, and other regulated or tracked features.

1.1 Scope

The purpose of the standard is to provide a common set of data elements to specify a point by latitude/longitude. This standard describes data elements and data groupings that are used to exchange Latitude/Longitude data and information.

1.2 Revision History

Date	Version	Description
May 31, 2001	19939:1	Initial Adoption by the Environmental Data Standards Council
January 6, 2006	EX000017.2	Environmental Data Standards Council adoption of the revised standard, format and content changes, added examples values, and renumbered the standard.

1.3 References to other data standards

This standard relies on two other standards to make it complete and provide the necessary support. As such, users should reference the normative standards listed below and consider them integral to the Latitude/Longitude Standard. These include:

- Representation of Date and Time [EX000013.1] Data Standard
- Measure [EX000010.1] Data Standard

1.4 Terms and Definitions

None

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 Document Structure

The structure of this document is briefly described below:

- a. Section 2.0 Latitude/Longitude Data Structure Diagram illustrates the hierarchical classification of the Latitude/Longitude data standard. This diagram enables business and technical users of this standard to quickly understand its general content and complexity.
- b. Section 3.0 Latitude/Longitude Data Standard Table provides information on the high level, intermediate and elemental Latitude/Longitude data groupings. Where applicable, for each level of this data standard a definition, XML tag, note(s), example list of values and format are provided. The format column may include the number of characters for the associated data element, where “A” specifies alphanumeric, “N” designates numeric, and “G” and “D” are used for grouping and date/time respectively.
- c. Data Element Numbering: For purposes of clarity and to enhance understanding of data standard hierarchy and relationships, each data group is numerically classified from the primary to the data element level.
- d. Code and Identifier Metadata: Metadata, defined here as data about data or data elements, includes their descriptions and/or any needed context setting information required to identify the origin, conditions of use, interpretation, or understanding 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 for which the code represents
- e. Appendix A, lists the references for Lat/Long Data Standard. Appendices “B” through “I” provide example lists of values for the designated data elements. The tables present code and name (General or Specific where applicable) plus value meaning for each listed value.

2.0 LATITUDE/LONGITUDE DATA STRUCTURE DIAGRAM

Latitude/Longitude Data Standard

1.0 Mandatory Latitude/Longitude Data 1.1
Latitude Measure 1.2 Longitude Measure 1.3
Source Map Scale Numeric 1.4 Horizontal
Accuracy Measure 1.5 Horizontal Collection
Method Code 1.6 Horizontal Collection
Method Name 1.7 Geographic Reference
Point Code 1.8 Geographic Reference Point
Name
1.9 Horizontal Coordinate Reference System
Datum Code
1.10 Horizontal Coordinate Reference System
Datum Name

2.0 Optional Latitude/Longitude Data 2.1
Data Collection Date 2.2 Location
Comments Text 2.3 Vertical Measure 2.4
Vertical Collection Method Code 2.5
Vertical Collection Method Name
2.6 Vertical Coordinate Reference System
Datum Code
2.7 Vertical Coordinate Reference System
Datum Name
2.8 Verification Method Code 2.9
Verification Method Name 2.10
Coordinate Data Source Code 2.11
Coordinate Data Source Name 2.12
Geometric Type Code 2.13 Geometric
Type Name

Definition: Mandatory Information needed for recording coordinates of a location on the earth
Relationship: None Identified.
Notes: XML None.
Tag: MandatoryLatitudeLongitude

3.0 LATITUDE/LOGITUDE DATA STANDARDS TABLE 1.0

Mandatory Latitude/Longitude

Name	Definition	Notes	Format	XML tags
1.1 Latitude Measure	The measure of the angular distance on a meridian north or south of the equator.		N	LatitudeMeasure
1.2 Longitude Measure	The measure of the angular distance on a meridian east or west of the prime meridian.		N	LongitudeMeasure
1.3 Source Map Scale Numeric	The number that represents the proportional distance on the ground for one unit of measure on the map or photo.	Typically expressed as a proportional ratio, i.e. 1:24,000	A	SourceMapScaleNumeric
1.4 Horizontal Accuracy Measure	The horizontal measure, in meters, of the relative accuracy of the latitude and longitude coordinates.	Refer to the Measure [EX000010.1] Data Standard. The following items are needed: Measure Value, Measure Unit Code, Measure QA/QC,	G	HorizontalAccuracyMeasure

Name	Definition	Notes	Format	XML tags
1.5 Horizontal Collection Method Code	The code that represents the method used to determine the latitude and longitude coordinates for a point on the earth.	<p>Example List of Values: [See appendix B]</p> <p><i>Note:</i> Based on the business need, additional metadata may be required to sufficiently describe a code. This additional metadata is listed in the Introduction 1.6.d.</p>	N	HorizontalCollectionMethodCode
1.6 Horizontal Collection Method Name	The name that identifies the method used to determine the latitude and longitude coordinates for a point on the earth.	<p>Example List of Values: [See appendix B]</p>	A	HorizontalCollectionMethodName
1.7 Geographic Reference Point Code	The code that represents the place for which geographic coordinates were established.	<p>Example List of Values: [See appendix C]</p> <p><i>Note:</i> Based on the business need, additional metadata may be required to sufficiently describe a code. This additional metadata is listed in the Introduction section1.6.d.</p>	N	GeographicReferencePointCode
1.8 Geographic Reference Point Name	The name that identifies the place for which geographic coordinates were established.	<p>Example List of Values: [See appendix C]</p>	A	GeographicReferencePointName

Name	Definition	Notes	Format	XML tags
1.9 Horizontal Coordinate Reference System Datum Code	The code that represents the reference datum used in determining latitude and longitude coordinates.	<p>Example List of Values: [See appendix D]</p> <p><i>Note:</i> Based on the business need, additional metadata may be required to sufficiently describe a code. This additional metadata is listed in the Introduction section 1.6.d.</p>	N	HorizontalCoordinateReferenceSystemDatumCode
1.10 Horizontal Coordinate Reference System Datum Name	The name that describes the reference datum used in determining latitude and longitude coordinates.	<p>Example List of Values: [See appendix D]</p>	A	HorizontalCoordinateReferenceSystemDatumName

Name	Definition	Notes	Format	XML tags
2.1 Data Collection Date	The calendar date when data were collected.	Refer to the Representation of Date and Time [EX000013.1] Data Standard.	D	DataCollectionDate
2.2 Location Comments Text	The text that provides additional information about the geographic coordinates.		A	LocationCommentsText
2.3 Vertical Measure	The measure of elevation (i.e., the altitude), above or below a reference datum.	Refer to the Measure [Draft] Data Standard. The following items are needed: Measure Value, Measure Unit Code, Measure QA/QC.	G	VerticalMeasure

2.0 Optional Latitude/Longitude

Definition: Optional data needed to address coordinates of a location on the earth

Relationship: None Identified.

Notes: XML None.

Tag: OptionalLatitudeLongitude

2.4 Vertical Collection Method Code	The code that represents the process used to verify the latitude and longitude coordinates.	Example List of Values: [See appendix E] <i>Note:</i> Based on the business need, additional metadata may be required to sufficiently describe a code. This additional metadata is listed in the Introduction section 1.6.d.	N	VerticalCollectionMethodCode
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2.5 Vertical Collection Method Name	The name that identifies the method used to collect the vertical measure (i.e., the altitude) of a reference point.	Example List of Values: [See appendix E]	A	VerticalCollection MethodName
2.6 Vertical Coordinate Reference System Datum Code	The code that represents the reference datum used to determine the vertical measure (i.e., the altitude).	Example List of Values: [See appendix F] <i>Note:</i> Based on the business need, additional metadata may be required to sufficiently describe a code. This additional metadata is listed in the Introduction section 1.6.d.	N	VerticalCoordinateReferenceSystemDatumCode
2.7 Vertical Coordinate Reference System Datum Name	The name of the reference datum used to determine the vertical measure (i.e., the altitude).	Example List of Values: [See appendix F]	A	VerticalCoordinateReferenceSystemDatumName
2.8 Verification Method Code	The code that represents the process used to verify the latitude and longitude coordinates.	Example List of Values: [See appendix G] <i>Note:</i> Based on the business need, additional metadata may be required to sufficiently describe a code. This additional metadata is listed in the Introduction section 1.6.d.	N	VerificationMethodCode
2.9 Verification Method Name	The name that describes the process used to verify the latitude and longitude coordinates.	Example List of Values: [See appendix G]	A	VerificationMethodName
2.10 Coordinate Data Source Code	The code that represents the party responsible for providing the latitude and longitude coordinates.	Example List of Values: [See appendix H] <i>Note:</i> Based on the business need, additional metadata may be required to sufficiently describe a code. This additional metadata is listed in the Introduction section 1.6.d.	N	CoordinateDataSourceCode

2.11 Coordinate Data Source Name	The name of the party responsible for providing the latitude and longitude coordinates.	Example List of Values: [See appendix H]	A	CoordinateDataS ourceName
2.12 Geometric Type Code	The code that represents the geometric entity represented by one point or a sequence of latitude and longitude points.	Example List of Values: [See appendix I] <i>Note:</i> Based on the business need, additional metadata may be required to sufficiently describe a code. This additional metadata is listed in the Introduction section 1.6.d.	N	GeometricTypeC ode
2.13 Geometric Type Name	The name that identifies the geometric entity represented by one point or a sequence of latitude and longitude points.	Example List of Values: [See appendix I]	A	GeometricTypeN ame

Appendix A References

1. *ISO/IEC 2382-17:1999 Information Technology Vocabulary—Part 17: Databases 17.06.*
2. *FGDC Spatial Data Transfer Standard (SDTS), Part 6: Point Profile, FGDC-STD-002.6.*
3. *ISO DIS 6709, Standard Representation of Geographic Point Location by Coordinates.*

Appendix B [Normative]

Horizontal Collection Method Code and Horizontal Collection Method Name - Example List of Values

See the [U.S. Environmental Protection Agency Environmental Data Registry](#) for the most current list.

General Code	Specific Code	General Name	Specific Name	Value Meaning
101		Address Matching		The geographic coordinate determination method based on address matching.
	001		Address Matching-House Number	The geographic coordinate determination method based on address matching-house number.
	002		Address Matching-Block Face	The geographic coordinate determination method based on address matching-block face.
	003		Address Matching-Street Centerline	The geographic coordinate determination method based on address matching-street centerline.
	004		Address Matching-Nearest Intersection	The geographic coordinate determination method based on address matching-nearest intersection
	005		Address Matching-Primary Name	The geographic coordinate determination method based on address matching-primary name.
	006		Address Matching-Digitized	The geographic coordinate determination method based on address matching-digitized.
	007		Address Matching-Other	The geographic coordinate determination method based on address matching-other.
102		Census Block		US Bureau of Census Block established for year noted.
	008		Census Block-1990-Centroid	The geographic coordinate determination method based on census block-1990-centroid.
	009		Census Block/Group-1990-Centroid	The geographic coordinate determination method based on census/group-1990-centroid.
	010		Census Block/Tract-1990-Centroid	The geographic coordinate determination method based on census/tract-1990-centroid.
	011		Census-Other	The geographic coordinate determination method based on census other.
103			GPS	The geographic coordinate determination method based on GPS.
	012		GPS Carrier Phase Static Relative Position	The geographic coordinate determination method based on GPS carrier phase static relative positioning technique.
	013		GPS Carrier Phase Kinematic Relative Position	The geographic coordinate determination method based on GPS carrier phase kinematic relative positioning technique.

General Code	Specific Code	General Name	Specific Name	Value Meaning
	014		GPS Code (Pseudo Range) Differential	The geographic coordinate determination method based on GPS code measurements (pseudo range) differential (DGPS).
	015		GPS Code (Pseudo Range) Precise Position	The geographic coordinate determination method based on GPS code measurements (pseudo range) precise positioning service.
	016		GPS Code (Pseudo Range) Standard Position (Selective Availability Off)	The geographic coordinate determination method based on GPS code measurements (pseudo range) standard positioning service (SA Off).
	017		GPS Code (Pseudo Range) Standard Position (Selective Availability On)	The geographic coordinate determination method based on GPS code measurements (pseudo range) standard positioning service (SA On).
	028		GPS-Unspecified	Global Positioning Method, with unspecified parameters.
	029		GPS, with Canadian Active Control System	GPS Code Measurements (pseudo range) Standard Positioning Service Corrected using Canadian Active Control System.
104		Interpolation		The geographic coordinate determination method based on interpolation.
	018		Interpolation-Map	The geographic coordinate determination method based on interpolation-map.
	019		Interpolation-Photo	The geographic coordinate determination method based on interpolation-photo.
	030		Interpolation - Digital Map Source (TIGER)	The geographic coordinate determination method is based on a digital map source (TIGER).
	031		Interpolation-SPOT	The geographic coordinate determination method uses SPOT (Systeme Probatoire d'Observation de la Terre), a French-owned satellite launched in 1984.
	032		Interpolation-MSS	The geographic coordinate determination method is based on the use of a Multi-Spectral Scanner (MSS).
	033		Interpolation-TM	The geographic coordinate determination method is based on the use of a Thematic Mapper (TM).
	020		Interpolation-Satellite	The geographic coordinate determination method based on interpolation-satellite.
	021		Interpolation-Other	The geographic coordinate determination method based on interpolation-other.
105		Loran C		The geographic coordinate determination method based on Loran C.
	022		Loran C	The geographic coordinate determination method based on Loran C.
106		Public Land Survey		The geographic coordinate determination method based on public land survey.
	023		Public Land Survey-Quarter Section	The geographic coordinate determination method based on public

General Code	Specific Code	General Name	Specific Name	Value Meaning
				land survey quarter of a section.
	034		Public Land Survey-Eighth Section	The geographic coordinate determination method is based on a public land survey, an eighth of a section.
	035		Public Land Survey-Sixteenth Section	The geographic coordinate determination method is based on a public land survey, a sixteenth of a section.
	036		Public Land Survey-Footing	The geographic coordinate determination method is based on a public land survey footing.
107		Classical Surveying Techniques		The geographic coordinate determination method is based on classical surveying techniques.
	025		Classical Surveying Techniques	The geographic coordinate determination method based on classical surveying techniques.
108		Zip Code		The geographic coordinate determination method based on zipcode.
	026		ZIP Code-Centroid	The geographic coordinate determination method based on zipcode-centroid.
	037		ZIP+4 Centroid	The center of an area defined by the 5-digit ZIP code and its 4-digit geographic segment extension.
	038		ZIP+2 Centroid	The center of an area defined by the 5-digit ZIP code and its 2-digit geographic segment extension.
109		Unknown		The information is not known.
	027		Unknown	The information is not known.
	028		GPS-Unspecified	Global Positioning Method, with unspecified parameters.

Appendix C [Normative]

Reference Point Code and Reference Point Name - Example List of Values

See the U.S. Environmental Protection Agency Environmental Data Registry for the most current list

General Code	Specific Code	General Name	Specific Name	Value Meaning
101		Facility/Station Location		Entrance Point of a Facility, System, or Station
	002		Plant Entrance (general)	
	004		Plant Entrance (personnel)	
	005		Plant Entrance (freight)	
	015		Loading Facility	
	019		Administrative Building	
102		Facility Center/Centroid		Center of a Facility/System
	016		Loading Area Centroid	
	020		Geographic Centroid of the Facility	
	025		Center of Production Facility	
103		Facility Boundary		Boundary point for a facility or System (Facility boundary points can be singular, or part of a series of boundary points)
	021		NE Corner of Parcel	
	022		NW Corner of Parcel	
	023		SE Corner of Parcel	
	024		SW Corner of Parcel	
104		Intake Point		Point where water or other substance could be drawn from environment for delivery to a facility or distribution system (substance destination could range from a single residence to a large facility)
	030		Intake pipe	
	032		Water Well	
	033		Spring	
	037		Well Head	
	043		Oil Well	
	044		Sulfur Well	
	045		Gas Well	
	105		Treatment/storage Point	
008			Storage Tank	
010			Lagoon or Settling Pond	
011			Liquid Waste Treatment Unit	
017			Process Unit	

General Code	Specific Code	General Name	Specific Name	Value Meaning
	018		Process Unit Centroid	
106		Release Point		Point where substance is released (point where substance is directly released into the environment)
	006		Air Release Stack	
	007		Air Release Vent	
	009		Water Release Pipe	
	012		Atmospheric Emission	
	013		Solid Waste Treatment and Disposal	
	014		Solid Waste Storage Area	
	035		Potential Contaminant Source	
	038		End of Pipe	
	046		Underground Injection Well	
107		Monitoring Point		Point where substance is monitored or sampled
	028		Water Monitoring Station	
	029		Air Monitoring Station	
	039		Grid Origin	
	040		Point of Record	
	041		Sampling Point	
	042		Transect Origin	
108		Points not represented by 101-107, 109		Points not represented by general codes 101-107, 109 or their specific codes
	001		Unknown	
	003		Other	
109		Point of Transfer		The point where one discharge point goes directly into an intake point
	043		Point of Transfer	

Appendix D [Normative] Horizontal Reference Datum Code and Horizontal Reference Datum Name - Example List of Values

See the U.S. Environmental Protection Agency Environmental Data Registry for the most current list

Code	Name	Value Meaning
001	NAD27	North American Datum of 1927
002	NAD83	North American Datum of 1983
003	WGS84	World Geodetic System of 1984

Appendix E [Normative]

Vertical Collection Method Code and Vertical Collection Method Name - Example List of Values

See the U.S. Environmental Protection Agency Environmental Data Registry [www.epa.gov/EDR] for the most current list

Code	Name	Value Meaning
001	GPS Carrier Phase Static Relative Position	The geographic coordinate determination method based on GPS carrier phase static relative positioning technique.
002	GPS Carrier Phase Kinematic Relative Position	The geographic coordinate determination method based on GPS carrier phase kinematic relative positioning technique.
003	GPS Code (Pseudo Range) Differential	The geographic coordinate determination method based on GPS code measurements (pseudo range) differential (DGPS).
004	GPS Code (Pseudo Range) Precise Position	The geographic coordinate determination method based on GPS code measurements (pseudo range) precise positioning service.
005	GPS Code (Pseudo Range) Standard Position (SA Off)	The geographic coordinate determination method based on GPS code measurements (pseudo range) standard positioning service (SA Off).
006	GPS Code (Pseudo Range) Standard Position (SA On)	The geographic coordinate determination method based on GPS code measurements (pseudo range) standard positioning service (SA On).
007	Classical Surveying Techniques	The geographic coordinate determination method based on classical surveying techniques.
008	Other	Other, unspecified.
009	Altimetry	A method used to determine vertical components based on altimetry.
010	Precise Leveling-Bench mark	Precise leveling from a bench mark.
011	Leveling-Non Bench Mark Control Points	Leveling between non bench mark control points.
012	Trigonometric Leveling	Trigonometric leveling.
013	Photogrammetric	Photogrammetric.
014	Topographic Map Interpolation	Topographic map interpolation.

Appendix F [Normative]

Vertical Reference Datum Code and Vertical Reference Datum Name - Example List of Values

See the U.S. Environmental Protection Agency Environmental Data Registry [www.epa.gov/EDR] for the most current list

Code	Name	Value Meaning
001	NAVD88	North American Vertical Datum of 1988.
002	NGVD29	National Geodetic Vertical Datum of 1929.
003	Mean Sea-Level	The level of the surface of the sea at its position midway between mean high and low water.
004	Local Tidal Datum	A known tidal measurement characteristic of a particular place.

Appendix G [Normative]

Verification Method Code and Verification Method Name - Example List of Values

See the U.S. Environmental Protection Agency Environmental Data Registry [www.epa.gov/EDR] for the most current list

Code	Name	Value Meaning
004	Point in Polygon (Other)	The coordinates are a point within an undefined polygon.
005	Point in Polygon (County)	The coordinates are a point within the county.
006	Point in Polygon (ZIP)	The coordinates are a point within the ZIP Code area.
002	Proximity to Alternative Facility Coordinates	The coordinates are proximate to alternative coordinates for the facility.
003	Proximity to Polygon Centroid (Other)	The coordinates are proximate to the centroid of another polygon.
001	Proximity to Polygon Centroid (County)	The coordinates are proximate to the centroid of the county.
012	Proximity to Polygon Centroid (ZIP Code)	The coordinates are proximate to the centroid of the ZIP Code.
010	Verified, Unknown Method	The coordinates are verified by an unknown method.
008	Verified Relative to Map (1:100K or TIGER)	The coordinates are verified relative to map features (1:100K or TIGER).
007	Verified Relative to Map Features (1:24K)	The coordinates are verified relative to map features (1:24K).
009	Verified Relative to Map Features (Other)	The coordinates are verified relative to other map features.
011	Ground Truth Conducted	The coordinates were determined by ground truth.
014	Point in Bounding Box (County)	The coordinates were verified as a point in the county bounding box.
013	Point in Bounding Box (ZIP)	The coordinates were verified as a point in the ZIP Code bounding box.

Appendix H [Normative]

Coordinate Data Source Code and Coordinate Data Source Name - Example List of Values

See the U.S. Environmental Protection Agency Environmental Data Registry [www.epa.gov/EDR] for the most current list

Code	Name	Value Meaning
001	Alabama	The state of Alabama.
002	Alaska	The state of Alaska.
004	Arizona	The state of Arizona.
005	Arkansas	The state of Arkansas.
006	California	The state of California.
008	Colorado	The state of Colorado.
009	Connecticut	The state of Connecticut.
010	Delaware	The state of Delaware.
011	District of Columbia	The state of District of Columbia.
012	Florida	The state of Florida.
013	Georgia	The state of Georgia.
015	Hawaii	The state of Hawaii.
016	Idaho	The state of Idaho.
017	Illinois	The state of Illinois.
018	Indiana	The state of Indiana.
019	Iowa	The state of Iowa.
020	Kansas	The state of Kansas.
021	Kentucky	The state of Kentucky.
022	Louisiana	The state of Louisiana.
023	Maine	The state of Maine.
024	Maryland	The state of Maryland.
025	Massachusetts	The state of Massachusetts.
026	Michigan	The state of Michigan.
027	Minnesota	The state of Minnesota.
028	Mississippi	The state of Mississippi.
029	Missouri	The state of Missouri.
030	Montana	The state of Montana.
031	Nebraska	The state of Nebraska.
032	Nevada	The state of Nevada.
033	New Hampshire	The state of New Hampshire.
034	New Jersey	The state of New Jersey.
035	New Mexico	The state of New Mexico.
036	New York	The state of New York.
037	North Carolina	The state of North Carolina.
038	North Dakota	The state of North Dakota.

Code	Name	Value Meaning
039	Ohio	The state of Ohio.
040	Oklahoma	The state of Oklahoma.
041	Oregon	The state of Oregon.
042	Pennsylvania	The state of Pennsylvania.
044	Rhode Island	The state of Rhode Island.
045	South Carolina	The state of South Carolina.
046	South Dakota	The state of South Dakota.
047	Tennessee	The state of Tennessee.
048	Texas	The state of Texas.
049	Utah	The state of Utah.
050	Vermont	The state of Vermont.
051	Virginia	The Commonwealth of Virginia.
053	Washington	The state of Washington.
054	West Virginia	The state of West Virginia.
055	Wisconsin	The state of Wisconsin.
056	Wyoming	The state of Wyoming.
060	American Samoa	The territory of American Samoa.
064	Federated States of Micronesia	The federated states of Micronesia.
066	Guam	The territory of Guam.
068	Marshall Islands	The republic of the Marshall Islands.
069	Northern Mariana Islands	The territory of Northern Mariana Islands.
070	Palau	The republic of Palau.
072	Puerto Rico	The territory of Puerto Rico.
074	U.S. Minor Outlying Islands	The territory of U.S. Minor Outlying Islands.
078	Virgin Islands of the United States	The territory of the Virgin Islands of the United States.
080	Contractor	An organization or individual that contracts to perform work.
081	Dun & Bradstreet	Dun & Bradstreet.
082	EPA Headquarters	EPA headquarters.
083	Other	Other, unspecified.
084	Other Federal Agency	An agency of the federal government other than EPA.
085	Private	Belonging to or concerning an individual person, company, or interest.
086	Tribe	A group of Native Americans or Native Alaskans having jurisdiction over an area and population.
087	Unknown	The information is not known.
088	US EPA Region 1	The US EPA Region that includes the U.S. states of CT, ME, MA, NH, RI, VT.
089	US EPA Region 10	The US EPA Region that includes the U.S. states of WA, OR, ID, AK.
090	US EPA Region 2	The US EPA Region that includes the U.S. states of NJ, NY, PR, VI.
091	US EPA Region 3	The US EPA Region that includes the U.S. states of PA, DE, DC, MD, VA, WV.
092	US EPA Region 4	The US EPA Region that includes the U.S. states of KY, TN, NC, SC, MS, AL, GA, FL.
093	US EPA Region 5	The US EPA Region that includes the U.S. states of MN, WI, IL, MI, IN, OH.
094	US EPA Region 6	The US EPA Region that includes the U.S. states of NM, TX, OK, AR, LA.
095	US EPA Region 7	The US EPA Region that includes the U.S. states of NE, KS, IA, MO.

Code	Name	Value Meaning
096	US EPA Region 8	The US EPA Region that includes the U.S. states of MT, ND, WY, SD, UT, CO.
097	US EPA Region 9	The US EPA Region that includes the U.S. states of CA, NV, AZ, HI, AS, GU.
098	Regulated Entity	The establishment or organization subject to a law or governmental order.

Appendix I [Normative] Geometric Type Code and Geometric Type Name - Example List of Values

See the U.S. Environmental Protection Agency Environmental Data Registry [www.epa.gov/EDR] for the most current list

Code	Name	Value Meaning
001	Point	The point referenced by geographic coordinates.
002	Line	The line referenced by geographic coordinates.
003	Area	The area referenced by geographic coordinates.
004	Region	The geometric entity, described by locational coordinates, that includes two or more related areas is a region.
005	Route	The geometric entity, described by locational coordinates, that form a contiguous network is a route.