

PCB Congener Study Database Data Dictionary

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Table	Field	Data Type	Definition	Valid Entries
1-Study	StudyCode	Number	Unique ID for each study included in the database	
	StudyID	Text	Short study name; generally same as EIM Study_ID (unless data have not been entered into EIM).	
	StudyName	Text	Long study name; generally same as EIM Study_Name (unless data have not been entered into EIM).	
	StudyType	Text	General nature of the study; lookup table. Same as EIM Study_Type (unless data have not been entered into EIM).	
	StudyPurpose	Text	From EIM: summary of the study's purpose, reason(s) for initiating, and goals and expectations. Blank if study is not in EIM.	
	FieldCollectionDateRange	Text	Date range from first to last sample collection date of the study.	MM/DD/YYYY - MM/DD/YYYY
	FieldCollectionDateStart	Date/Time	Date of the first sample collected in the study.	M/D/YYYY
	FieldCollectionDateEnd	Date/Time	Date of the last sample collected in the study.	M/D/YYYY
	EcologyContact	Text	Name of the person at Ecology to contact about this study, if known. Generally from EIM.	
	ResponsibleEntity	Text	Agency or business that sponsored the study, if known. Generally from EIM.	
	SubmittingOrganization	Text	Organization that conducted the study and submitted the data to EIM. Blank if study is not in EIM.	
StudyQAPanningLevel	Text	Level of quality assurance planning for a study (from EIM); allowable values specified.		
StudyComments	Text	Additional comments about the study, if any.		
2-Location	LocationCode	Number	Unique location ID; assigned by Leidos.	
	LocationName	Text	Study-specific location ID.	
	AssociatedStudyCodes	Text	Unique study ID indicating which study the location is associated with; assigned by Leidos.	
	EIMLocationID	Text	Unique location ID as included in the EIM database. Blank if data was not from EIM.	
	EIMLocationName	Text	Location name as included in the EIM database. Blank if data was not from EIM.	
	LocationSetting	Text	General physical setting of a field location.	
	LocationDescription	Text	Short narrative description of field location. In some cases the entry is the same as the LocationName.	'Not available' should be the standard entry when this information is not included with the dataset.
	FacilitySiteID	Long Integer	ID of facility or site where the field location exists; from Ecology's Facility/Site database. Blank if no FSID.	
	CleanupSiteID	Text	A unique identifier assigned by Ecology to cleanup sites, from Ecology's Facility/Site database.	
	FacilityOperator	Text	Operator of the facility.	
StreetAddress	Text	Physical address of field location.		

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	City	Text	City (or closest city) or area where field location exists.	
	County	Text	County where field location exists.	
	ZipCode	Text	Zip code where field location exists.	
	NHDReachCode	Number, double, no decimals	Identifies the waterbody or watercourse on which the field location exists per the National Hydrography Dataset. From EIM.	
	NHDReachMeasure	Number, double	Identifies where on a watercourse the field location exists per the National Hydrography Dataset. Percent distance from reach start. From EIM.	
	FacilityContact	Text	Facility contact name and title, if known.	
	FacilityContactPhone	Text	Phone number for the facility contact, if known.	###-###-#### ###-###-#### ext ###
	NPDESPermitNumber	Text	Facility's NPDES permit number (e.g., WA0029181).	
	LDWOutfallID	Text	Unique identifier assigned by Leidos.	
	RiverMile	Number, double	Number indicating river mile corresponding to sample location, if known, (e.g., 40, 0.1, etc.).	
	SCANumber	Number	The Leidos-assigned Source Control Area Number.	1 - 24
	SourceControlArea	Text	Source Control Area of the location, e.g., RM 0.0-0.1 East (Spokane Street to Ash Grove Cement) or Combined Sewer Area. For samples collected in waterbodies the Source Control Area assigned is generally the corresponding water body segment: East Waterway, West Waterway, LDW Navigation Channel, LDW East (of the navigation channel), LDW West (of the navigation channel), LDW Upstream (for samples within the LDW but upstream of the navigation channel, which ends at RM 4.7), Duwamish Estuary (for samples in RM 5-11), Lower Green River (for samples in RM 11-32), Middle Green River (for samples in RM 32-64), or Upper Green River (for samples in RM 64+).	
	Latitude	Number, double,	Distance north of the equator in decimal degrees. Value should be limited to 5 digits after the decimal point.	
	Longitude	Number, double,	Distance east or west of the Central Meridian (Greenwich, England) in decimal degrees. Value should be limited to 5 digits after the decimal point.	
	StatePlaneX	Number, double	State Plane Coordinate System E-W coordinate (X-axis) of the field location, in feet; generally from EIM.	Valid value range: North Zone: 602,913.0 to 2,673,266.0; South Zone: 575,078.0 to 2,618,128.0
	StatePlaneY	Number, double	State Plane Coordinate System N-S coordinate (Y-axis) of the field location, in feet; generally from EIM.	Valid value range: North Zone: -33,488.0 to 832,967.0; South Zone: 15,935.0 to 901,121.0

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	StatePlaneZone	Text	State Plane Coordinate System zone of the field location; generally from EIM.	N or S
	HorizontalCoordsRepresent	Text	Note indicating what the horizontal coordinates represent.	Discreet monitoring point; Centroid of monitoring area; Stream segment, can include riparian zone; Transect, start point; Transect, center point; Transect, end point; Unknown
	HorizontalDatum	Text	Model used to project the horizontal position of the field location to a map, if known, e.g., NAD83.	
	HorizontalCoordsAccuracy	Text	Best estimate of horizontal coordinate accuracy for a field location; generally from EIM.	± .1 ft (±0.03 m); ± 1 ft (± 0.3 m); ± 3 ft (± 1 m); ± 10 ft (± 3 m); ± 20 ft (± 6 m); ± 40 ft (± 12 m); ± 100 ft (± 30 m); ± 180 ft (± 55 m); ± 250 ft (± 76 m); ± 500 ft (± 152 m); ± 1,000 ft or greater (± 300 m or greater); Unknown
	HorizontalCoordsMethod	Text	Method used to collect the horizontal coordinates for a field location; generally from EIM.	Address matching - unspecified; Survey - conventional; Computer map (GIS-based, including EIM, Google Earth); GPS standard unit or unknown (code phase); GPS high-end consumer unit (DGPS or WAAS enabled); GPS survey-grade unit (carrier phase); GPS real time survey-grade (kinematic); Paper map interpolation; Unknown
	GWell	Text	Indicates that field location is a well.	Yes or No
	WellType	Text	Description of the well type, e.g., in-water peizometer or monitoring well.	In-water peizometer; Monitoring well; Temporary well; Not Available
	ElevationPoint	Text	Point at which the elevation at a field location was measured.	Land Surface; Top of Well Casing; Well Water Level Measuring Point; Sediment Surface
	Elevation	Number, double	The distance of a field location above or below a vertical reference point; in feet or meters.	
	ElevationUnits	Text	Units in which the elevation of a field location is expressed.	FT or M
	ElevationDatum	Text	Vertical reference point from which elevation was measured at a field location; generally from EIM.	NAVD88 - N. American Vertical Datum of 1988; NGVD29 - N. American Geodetic Vertical Datum of 1929; WGS84 - World Geodetic System of 1984; Site Specific; Unknown
	ElevationAccuracy	Text	Best estimate of elevation accuracy at a field location; generally from EIM.	± .1 ft (±0.03 m); ± 1 ft (± 0.3 m); ± 3 ft (± 1 m); ± 10 ft (± 3 m); ± 20 ft (± 6 m); ± 40 ft (± 12 m); ± 100 ft (± 30 m); ± 180 ft (± 55 m); ± 250 ft (± 76 m); ± 500 ft (± 152 m); ± 1,000 ft or greater (± 300 m or greater); Unknown

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	ElevationMethod	Text	The method used to measure elevation at a field location; generally from EIM.	Survey - conventional; GPS standard unit or unknown (code phase); GPS high-end consumer unit (DGPS or WAAS enabled); GPS survey-grade (carrier phase); GPS real time survey-grade (kinematic); Digital elevation model – WA 10 m; LIDAR (airborne laser); Bathymetric sounding; Meter wheel; Paper map interpolation; Unknown
	SedElevationReference	Text	The reference point used to calculate the elevation of a field location OR reference point for the depth (elevation) of a marine or freshwater sediment field location; generally from EIM.	Mean sea level (MSL); Mean high water (MHW); Columbia River datum (CRD); Lake Washington Ship Canal Datum (LWSC); Mean lower low water (MLLW); Minimum Operating Pool (MOP); Standard Vertical Datum; Unknown
3-Sample	SampleCode	Number	Unique sample code; assigned by Leidos.	
	StudyCode	Number	Unique ID for each study included in the database; assigned by Leidos.	
	LocationCode	Number	Unique location ID; assigned by Leidos.	
	SampleID	Text	ID to identify a sample; may be selected by the sampler or assigned by the lab.	
	PCBAalysisType	Text	Identifies whether the sample was analyzed for Aroclors, Congeners (indicated as Full if full suite of congeners), Homologs, or subsets of these types.	Aroclors; Full; Full+Aroclors; Homologs; Homologs+Aroclors; Subset; Subset+Aroclors
	Weather	Text	Indicates if weather was wet or dry when sample was collected.	WW or DW
	Precipitation	Number	Total amount of precipitation on sampling date (in inches).	
	PrecipStation	Text	Precipitation station or gage used to determine amount of precipitation.	
	SampleMatrix	Text	Describes the environmental matrix which was measured or from which a sample was taken.	Air/Gas, Solid/Sediment, Tissue, Water, Other
	SampleCompartment	Text	Environmental compartment as used in the 2017 Leidos/Rodenburg PCB Congener Source Evaluation.	Air Deposition, CSO, Feces, Groundwater, Other, Sediment, Soil, Storm Drains, Surface Water, Tissue
SampleMedium	Text	Describes the environmental medium which was measured or from which a sample was taken.	Air deposition; Animal tissue; Building material; Combined sewer solids; Combined sewer water; Concrete joint material; Groundwater; Other liquids; Other solids; Plant tissue; Sediment - freshwater; Sediment - marine; Soil; Spring or Seep; Storm drain solids; Storm drain water; Surface water; Surface water brackish; Surface water - fresh; Surface water - marine; Suspended solids; Wipe	

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Table	Field	Data Type	Definition	Valid Entries
	SampleDescription	Text	Additional descriptive information about the sample, such as conditions during sample collection.	
	SampleCollectionMethod	Text	Method used to collect the the sample.	e.g., DIRECTPUSH, diver, ECKMAN, TRAWL
	SampleCollectionMethodC	Text	Additional information describing sample collection.	
	SampleNotes	Text	Notes about the sample, if any.	
	SampleType	Text	Type of sample, e.g., EB (equipment blank), FR (field replicate), LR (lab replicate), SA (sample), SB (source blank), or TB (trip blank).	EB, FR, LR, SA, SB, TB
	SampleComposite	Text	Indicates if the sample is a composite.	Yes or No or Unknown
	SampleCollectionStartDate	Date/Time	Date sample collection was started.	M/D/YYYY
	SampleCollectionStartTime	Date/Time	Time sample collection was started.	00:00:00 AM or 00:00:00 PM
	SampleCollectionEndDate	Date/Time	Date sample collection was completed.	M/D/YYYY
	SampleCollectionEndTime	Date/Time	Time sample collection was completed.	00:00:00 AM or 00:00:00 PM
	SampleDepthReference	Text	Indicates reference to which depth refers.	Depth below sediment surface; From water surface; Ground surface; Sediment surface; Water surface; Unknown
	SampleUpperDepth	Number, single	Upper depth interval for sample.	e.g., if sample taken in core depth at 1 to 3 feet below ground surface the entry here would be the 1
	SampleLowerDepth	Number, single	Lower depth interval for sample.	e.g., if sample taken in core depth at 1 to 3 feet below ground surface the entry here would be the 3
	SampleDepthUnits	Text	Unit of measure for the sample depth.	CM, FT, IN, M
	ReplicateType	Text	If a sample is a replicate, this indicates the type of replicate; Field, Lab1 (second or third analysis of a sample by the same lab by the same method - if known), Lab2 (processing replicate - a second analysis of the same sample but using a different processing method), Lab3 (method replicate - sample was analyzed by two different methods either by the same or a different lab), Lab4 (multiple labs - sample was split and analyzed by another lab), or Lab5 (other).	Field, Lab1, Lab2, Lab3, Lab4, Lab5
	RelatedSampleCode	Number	For replicates, splits, and duplicates, this identifies the SampleCode of the associated sample. In cases where there are more than two related samples, the first sample in the group is listed.	
	SampleSubID	Text	Secondary ID to identify a set of field split samples. Mostly used for sediment data.	
	SampleSize	Number, single	Amount of material collected for analysis.	
	SampleSizeUnits	Text	Unit of measure for the sample size.	No. of fish, L, g

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	WaterLevelElevation	Number, double	Elevation of water level in a well (in feet).	
	WaterLevelDepthBGS	Number, double	Water level depth below the ground surface (in feet).	
	WaterLevelAccuracy	Text	Indicates the estimated accuracy of a well water measurement.	Accuracy for feet: +0.01ft, +0.1ft, +1ft, >1ft Accuracy for meters: +0.01m, +0.1m, +1m, >1m
	TaxonName	Text	The full Latin name for the taxonomic level of the Result Taxon.	
	TaxonTSN	Text	The Taxonomic Serial Number (TSN) for the subject taxon. From the Integrated Taxon Identification System (ITIS).	
	OrganismCommonName	Text	Common name of the organism in a tissue sample.	
	TissueType	Text	Type of animal or plant tissue comprising the sample.	Edible meat; Feces; Fillet with skin; Fillet without skin; Gut contents; Gutball; Leaves; Liver or hepatopancreas; Muscle; Roots, whole; Whole organism (animal); Whole organism, not exoskeleton or shell; Whole organism, not stomach contents, not gills
	Air_TotalSampleVolume	Number, double	Total volume of air sampled in milliliters.	
	Air_CollectionPeriod	Number, double	Total time elapsed during sample collection in days.	
	Air_FunnelArea	Number, double	Area of funnel used in sample collection in square meters?	
	PercentLipid	Number, double	Percent lipid composition of a tissue sample.	
	PercentMoisture	Number, double	Percent moisture composition of a solids sample.	
	PercentTOC	Number, double	Percent total organic carbon of a solids sample.	
	TOC-Water	Text	Total organic carbon in a water sample.	
	DOC-Water	Text	Dissolved organic carbon in a water sample.	
	TDS-Water	Text	Total dissolved solids in a water sample.	
	TSS-Water	Text	Total suspended solids in a water sample.	
WaterUnits	Text	Units of TOC-Water, DOC-Water, TDS-Water, or TSS-Water	mg/L	
4-Results	ResultCode	Number	Unique ID for a sample result; assigned by Leidos.	
	StudyCode	Number	Unique ID for each study included in the database; assigned by Leidos.	

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	LocationCode	Number	Unique location ID; assigned by Leidos.	
	SampleCode	Number	Unique sample code; assigned by Leidos.	
	Fraction	Text	Indicates the fraction (total, dissolved, or suspended) of an aqueous sample that was analyzed.	Dissolved, Suspended, Total, or Unknown
	ChemicalCategory	Text	Category of the chemical analyzed (Aroclor, Congener, Homolog, or Totals).	Aroclor, Congener, Homolog, Totals
	ChemicalName	Text	Name of chemical analyzed.	e.g., Aroclor 1016, Aroclor 1016/1042, PCB-001, PCB-004, Total Dichlorobiphenyls
	Result	Number	Value of parameter analyzed.	
	ResultUnits	Text	Units of the result.	mg/kg, ug/kg, ng/kg, ug/100cm2, ug/L, ug/wipe, pg/L, ng/m2/day
	ResultQualifier	Text	Final data qualifier, including data validation qualifiers and laboratory qualifiers (if not updated during data validation).	
	LabQualifier	Text	Data qualifier assigned by the laboratory.	
	ValidationQualifier	Text	Data qualifier assigned during data validation.	
	Detection	Text	Indicates if chemical was detected in the sample.	Yes, No, or blank
	ReportingLimit	Number, double	Minimum concentration at which detection of a parameter is reported. Usually chosen by the laboratory and usually above a parameter's method detection limit. Units are the same as ResultUnits. Note that if the Result and ResultUnits are converted to another unit then this value must also be converted.	
	ReportingLimitType	Text	Client-, regulation-, or organization-defined acronym or statistical methodology that specifies the type of reporting limit used for analysis. Defined as CRQL - Contract-Required Quantitation Limit; EQL - Estimated Quantitation Limit; LabDef - Lab Defined; LOQ - Limit of Quantitation; MRL - Method Reporting Limit; PQL - Practical Quantitation Limit; RDL - Reporting Detection Limit; RL - Reporting Limit; SQL - Sample Quantitation Limit; or Unknown.	CRQL, EQL, LabDef, LOQ, MRL, PQL, RDL, RL, SQL, Unknown
	DetectionLimit	Number, double	The minimum quantity of an analyte that can be distinguished from background. Units are the same as ResultUnits. Note that if the Result and ResultUnits are converted to another unit then this value must also be converted.	

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	DetectionLimitType	Text	Client, regulation, or organization-defined acronym or statistical methodology that specifies the type of detection limit used for analysis. Defined as CRDL - Contract-Required Detection Limit; EDL - Estimated Detection Limit; IDL - Instrument Detection Limit; LMCL - lowest method calibration limits; LOD - Limit of Detection; MDL - Method Detection Limit; SDL - Sample Detection Limit; or Unknown.	CRDL, EDL, IDL, LMCL, LOD, MDL, SDL, Unknown
	MinimumLevel	Number, double	Minimum Level as calculated by Lab.	
	Basis	Text	Physical state in which the analyte concentration was reported - either as the sample was received by the lab (wet weight) or adjusted to remove moisture (dry weight).	DRY or WET
	ValidationLevel	Text	Third-party expert data validation following USEPA guidance and functional guidelines (2009, 2008, 2010 and 2011). QA1 and QA2 procedures are used for some historical data.	EPA1, EPA2A, EPA2B, EPA3, EPA4 Pre-August 2013 data only: QA1, QA2
	ResultComment	Text	Comments about the Result Value.	
	Air_Conc	Text	Measured concentration in air. In some studies, the air concentration is converted to flux for the reported results.	
	Air_ConcUnits	Text	Units for measured concentration in air.	
	FieldFiltered	Text	Indicates if a sample was filtered in the field (not the lab).	Yes, No, Unknown
	ResultAdded	Date/Time	Indicates the date the result was added to this database.	
5-LabQA	ResultCode	Number	Unique ID for a sample result; assigned by Leidos.	
	StudyCode	Number	Unique ID for each study included in the database; assigned by Leidos.	
	LocationCode	Number	Unique location ID; assigned by Leidos.	
	SampleCode	Number	Unique sample code; assigned by Leidos.	
	LabName	Text	Name of laboratory where analysis was conducted.	
	LabAddress	Text	Address of laboratory where analysis was conducted.	
	LabContactName	Text	Contact person at the laboratory where analysis was conducted.	
	LabContactPhone	Text	Phone number for the laboratory where analysis was conducted.	
	LabSampleID	Text	Sample ID assigned by the laboratory.	
	QCCode	Text	Indicates if the sample is an original sample (SA), duplicate (QADU), method blank (MB), spike (OPR), matrix spike (MS), matrix spike duplicate (MSD), or calibration verifications (CCV).	SA, QADU, MB, OPR, MS, MSD, CCV
	SamplePrepMethod	Text	Description of procedure or method used to prepare a sample.	e.g., SEIVE, SW3510C

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	AnalysisMethod	Text	Analytical method used for analysis of the sample (e.g., EPA1668A, SW8082, or Unknown).	
	ExtractionDate	Date/Time	Date sample was extracted.	M/D/YYYY
	ChemicalName	Text	Name of chemical analyzed.	e.g., Aroclor 1016, Aroclor 1016/1042, PCB-001, PCB-004, Total Dichlorobiphenyls
	AnalysisDate	Date/Time	Date sample was analyzed.	M/D/YYYY
	DigestionMethod	Text	Indicates the degree of digestion or breakdown performed on a solid sample prior to analysis; required field for metals in soil and sediment unless Fraction Analyzed is Lab Leachate.	Total - solid sample digested with acid to free up analyte prior to analysis; includes total recoverable; Complete - similar to Total, but completely dissolves solids. Often uses HF acid.
	InitialCalibrationDate	Text	Date the initial calibration was run.	M/D/YYYY
	InstrumentID	Text	ID used to uniquely identify the instrument that was used to measure Result values.	
	GCColumnID	Text	Type of gas chromatograph column or column identification (to be provided by the Laboratory).	
	TestType	Text	Type of test.	Initial, Reextraction, or Reanalysis
	TestBatchType	Text	Lab batch type.	Preparatory, Analysis, or Leach
	BatchID	Text	Batch ID (to be provided by the lab).	
	CalibrationVerificationID	Text	Sample ID associated with the calibration verification sample (instrument run ID to be provided by Laboratory).	
	MethodBlankID	Text	Sample ID associated with the method blank sample (instrument run ID to be provided by Laboratory).	
	LabReplicateID	Text	Additional ID for lab replicate samples with the same primary Sample ID; assigned by the laboratory.	
	DilutionFactor	Text	Numeric Dilution Factor applied to extract.	
	ConcLowerLimit	Text	Used for spikes and calibration verification samples to show limits values are in percent recovery.	
	ConcUpperLimit	Text	Used for spikes and calibration verification samples to show limits values are in percent recovery.	
	IonAbundanceRatio	Text	Ion Abundance Ratio of the analyte (if present).	
	IonAbundanceRatioLowerL	Text	Lower limit of Ion Abundance Ratio of the analyte in the calibration verification associated with the sample.	
	IonAbundanceRatioUpperL	Text	Upper limit of Ion Abundance Ratio of the analyte in the calibration verification associated with the sample.	
	RRT	Text	Relative retention time of the analyte (if present).	
	RRTUpperLimit	Text	Upper limit of Relative Retention Time of the analyte in the calibration verification associated with the sample.	
	RRTL	Text	Lower limit of Relative Retention Time of the analyte in the calibration verification associated with the sample.	