**Submission Format for Childhood Blood Lead Surveillance (CBLS) Data Files**

Form Approved

OMB No. 0920-0931

Exp. Date 05/31/2021

**Updated July 10, 2019**

This document contains a list of variables that Recipients submit to CDC National Center for Environmental Health (NCEH) by the final business day of the following quarter (e.g., data collected during the first quarter is due on the final business day of the second quarter). Data submitted in text files are processed and maintained in the CDC Childhood Blood Lead Surveillance database. NCEH uses its processing software to perform data checks for required formatting on Recipient text files. Data files are parsed into separate linkable data tables (e.g., Child, Address, Lab Results, and Investigation).

|  |  |  |
| --- | --- | --- |
| **Table No.** | **Record Type** | **File ID** |
| 1 | Child | CHI |
| 2 | Address | ADD |
| 3 | Lab Results  | LAB |
| 4 | Investigation | INV |
| 5 | Child-to-Address Link (optional) | LNK |

Processing reports are generated and sent to Recipients, to indicate how many records were properly parsed and entered into the database and how many records were not loaded with an explanation of the rejection. Corrected records from Recipients are returned in subsequent quarterly data submissions. Therefore, NCEH has a one (1) to two (2) quarter lag with on-time data delivery. Annual Blood Lead Surveillance Reports are based on the calendar year and are published on the CDC Childhood Lead Program website.

The Recipients input data reported to their state or local jurisdiction(s) into a blood lead surveillance reporting system chosen by Recipient. Recipients are required to de-identify the data prior to delivery to NCEH. Personally identifiable information (PII), such as names and addresses of children are removed; only Child ID and Address ID are submitted to NCEH.

This information is collected under the authority of the Public Health Service Act [Section 301 (42 U.S.C. Section 241 and Section 247b-1 and 247b-3)]. CDC estimates the average public reporting burden for this collection of information as 4 hours per response, including the time for reviewing instructions, searching existing data/information sources, gathering and maintaining the data/information needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB Control Number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Information Collection Review Office, 1600 Clifton Road NE, MS D-74, Atlanta, Georgia 30333; ATTN: PRA (0920-0931).

**OVERVIEW OF DATA PROCESSING OF RECIPIENT RECORDS INTO CBLS RELATIONAL TABLE FORMATS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Each record contains a file identifier (FILEID), a program identifier (PGMID), and record-specific information to create a unique record identifier.FILEID + PGMID + Record-specific informationCHI + PGMID + CHILD\_IDADD + PGMID + ADDR\_IDLAB + PGMID + CHILD\_ID + SAMP\_DATEINV + PGMID + ADDR\_ID + DATE\_REFLNK + PGMID + CHILD\_ID + ADDR\_ID + FIRST\_OCC |  | **BASIC FORMAT** |  | **Basic Format** is used to create tables:* **Table 1** – Child;
* **Table 2** – Address;
* **Table 3** – Lab Results;
* **Table 4** – Investigation; and
* **Table 5** – Child-to-Address Link (*optional*)
 |
|  | FILEID … PGMID |  |
|  | CHILD\_ID |  |
|  | ADDR\_ID |  |
|  | TABLE-SPECIFIC FIELDS(see below) |  |
|  |  |  |  |  |
| **CHILD\_ID ONLY TABLE**  |  | **CHILD\_ID & ADDRESS\_ID TABLES** |  | **ADDRESS\_ID ONLY TABLES** |
|  |  |  |  |  |
| **Table 1: CHILD** |  | **Table 3: LAB RESULTS** |  | **Table 2: ADDRESS** |
| CHI … PGMIDPositions 1-12 |  | LAB … PGMIDPositions 1-12 |  | ADD … PGMIDPositions 1-12 |
| CHILD\_IDPositions 13-20 |  | CHILD\_IDPositions 13-20 |  | ADDR\_IDPositions 13-20 |
| CHILD FIELDSPositions 21-49 |  | ADDR\_IDPositions 29-36 |  | ADDRESS FIELDSPositions 21-73 |
|  |  | LAB RESULTS FIELDSPositions 21-144 |  |  |
| Data must be submitted by Programs in ASCII fixed field length (non-delimited), variable record length. Each record must have a unique numeric identifier determined by the values in the FILEID field and the unique identifier for each record (described above). Each record submitted is validated for correct formatting and coding. Within each submission to NCEH, there should be no duplicate records. Duplicate records are not loaded into the database and non-duplicate record validation, ensures:* One unique CHI record
* One unique LAB record per child per sample date

(see Appendix for more details) |  |  |  |  |
|  | **Table 5: CHILD-TO-ADDRESS LINK** |  | **Table 4: INVESTIGATION** |
|  | LNK … PGMIDPositions 1-12 |  | INV … PGMIDPositions 1-12 |
| CHILD\_IDPositions 13-20 |  | ADDR\_IDPositions 13-20 |
| ADDR\_IDPositions 21-28 | INVESTIGATION FIELDSPositions 21-127 |
| LINK FIELDSPositions 29-45 |  |

**CHILDHOOD BLOOD LEAD SURVEILLANCE (CBLS) RECORD AND TABLE FORMATS**

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| **Record Type: Basic Format** |
| **Position** | **Field Name** | **Valid Values - Description** |
| 1-3 | FILEID | File identifier for record type. **REQUIRED**CHI - ChildADD - AddressLAB - LabINV - InvestigationLNK – Child-to-address link |
| 4 | ACTION | Database action code. **REQUIRED**A - Add record C - Change/replace D - Delete |
| 5 | QTR | Reporting quarter. All annual submissions should be “4" for fourth quarter. **REQUIRED**1 - First quarter (1/01/yy - 3/31/yy) 2 - Second quarter (4/01/yy - 6/30/yy)3 - Third quarter (7/01/yy - 9/30/yy)4 - Fourth quarter (10/01/yy - 12/31/yy) |
| 6-7 | RPT\_YR | Reporting year.  **REQUIRED**Last two digits of the reporting year.Must be numeric. |
| 8-12 | PGMID | Program identifier.  **REQUIRED**A unique identifier for the Recipient submitting the data, or for each lead reporting database within the Recipient jurisdiction.The first two positions must contain the state FIPS (Federal Information Processing Standard) code. The next three positions are assigned for uniqueness for each lead database within a state. Program ID is obtained from the CDC’s Lead Surveillance Team. |
| 13-20 | CHILD\_ID | Child identifier. **REQUIRED**A unique identifier for a child; must be numeric and zero-filled. This would generally be a system-assigned sequential number within a database. The identifier is used in relational databases to eliminate redundant data. The child information exists only once, in one physical record, and is linked to related records by the child identifier.When records from two or more databases are combined, the combination of PGMID and CHILD\_ID form a unique identifier within the combined database. |
| 13-20 | ADDR\_ID | Address identifier. **REQUIRED**A unique identifier for an address; must be numeric and zero-filled. This would generally be a system-assigned sequential number within a database. The identifier is used in relational databases to eliminate redundant data. The address information exists only once, in one physical record, and is linked to related records by the identifier.When records from two or more databases are combined, the combination of PGMID and ADDR\_ID form a unique identifier within the combined database. |
| 21-249 | --- | Table-specific variable format area based on required reporting. The contents and format depend on the value in the field FILEID. See Tables 1-5 to follow. |

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| **Table: 1****Record Type: Child****FILEID: CHI** |
| **Position** | **Field Name** | **Valid Values - Description** |
| 1-3 | FILEID | CHI – Child. **REQUIRED**File identifier for record type. |
| 4 | ACTION | Database action code. **REQUIRED**A - Add record C - Change/replace D - Delete |
| 5 | QTR | Reporting quarter. All annual submissions should be “4" for fourth quarter. **REQUIRED**1 - First quarter (1/01/yy - 3/31/yy) 2 - Second quarter (4/01/yy - 6/30/yy)3 - Third quarter (7/01/yy - 9/30/yy)4 - Fourth quarter (10/01/yy - 12/31/yy) |
| 6-7 | RPT\_YR | Reporting year.  **REQUIRED**Last two digits of the reporting year.Must be numeric. |
| 8-12 | PGMID | Program identifier.  **REQUIRED**A unique identifier for the Recipient submitting the data, or for each lead reporting database within the Recipient jurisdiction. |
| 13-20 | CHILD\_ID | Child identifier. **REQUIRED**A unique identifier for a child; must be numeric and zero-filled.  |
| 21-28 | DOB | Child's date of birth. (CCYYMMDD) **REQUIRED**  Birth date cannot be after the end of the reporting year. Child may not be older than 16 years at the start of the reporting year. |
| 29 | SEX | Sex. **REQUIRED**1 – Male2 – Female9 – Unknown |
| 30 | ETHNIC | Ethnicity (Select only one). **REQUIRED**1 – Hispanic or Latino 2 – Not Hispanic or Latino 9 – Unknown |
| 31 | -- | BLANK |
| 32 | CHELATED | Chelation therapy administered. **REQUIRED**1 – Yes 2 – No 9 – Unknown |
| 33 | CHEL\_TYPE | Type of chelation. **REQUIRED**1 – Inpatient 2 – Outpatient 3 – Both9 – UnknownCannot be blank if CHELATED =1. Cannot be 1, 2, or 3 if CHELATED =2 or 9. |
| 34 | CHEL\_FUND | Source of funding for the chelation therapy. **REQUIRED**1 – Public, includes Medicaid 2 – Private insurance 3 – Parent self-pay8 – Other9 – UnknownCannot be blank if CHELATED = 1. |

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| **Table: 1 (continued)****Record Type: Child** **FILEID: CHI** |
| **Position** | **Field Name** | **Valid Values - Description** |
|  35 | NPLSZ | Non-paint lead source - other. **REQUIRED** 1 – Yes2 – No9 – Unknown |
| 36 | NPLSM | Non-paint lead source - traditional medicines. **REQUIRED**1 – Yes2 – No9 – Unknown |
| 37 | NPLSO | Non-paint lead source – occupation of household member. **REQUIRED**1 – Yes2 – No9 – Unknown |
| 38 | NPLSH | Non-paint lead source - hobby of household member. **REQUIRED**1 – Yes2 – No9 – Unknown |
| 39 | NPLSP | Non-paint lead source - pottery, imported or improperly fired. **REQUIRED**1 – Yes2 – No9 – Unknown |
| 40 | NPLSC | Non-paint lead source - child occupation. **REQUIRED**1 – Yes2 – No9 – Unknown |
| 41 | BIRTH  | Country of birth.1 – U.S.2 – Other3 – Unknown  |
| 42 to 49 | RACE |  Race (Select all that apply) **REQUIRED** |
| 42 | RACE\_AIAN | Race: American Indian Alaska Native **REQUIRED**1 – Yes, 2 – No |
| 43 | RACE\_ASIAN | Race: Asian **REQUIRED**1 – Yes, 2 – No |
| 44 | RACE\_BLACK | Race: Black or African American **REQUIRED**1 – Yes, 2 – No |
| 45 | RACE\_NHOPI | Race: Native Hawaiian or Other Pacific Islander **REQUIRED**1 – Yes, 2 – No |
| 46 | RACE\_WHITE | Race: White **REQUIRED**1 – Yes, 2 – No |
| 47 | RACE\_OTHER | Race: Other **REQUIRED**1 – Yes, 2 – No |
| 48 | RACE\_RTA | Race: Refuse to Answer **REQUIRED**1 – Yes, 2 – No |
| 49 | RACE\_UNK | Race: Unknown **REQUIRED**1 – Yes, 2 – No |

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| **Table: 2****Record Type: Address****FILEID: ADD** |
| **Position** | **Field Name** | **Valid Values - Description** |
| 1-3 | FILEID | ADD – Address. **REQUIRED**File identifier for record type. |
| 4 | ACTION | Database action code. **REQUIRED**A - Add record C - Change/replace D - Delete |
| 5 | QTR | Reporting quarter. All annual submissions should be “4" for fourth quarter. **REQUIRED**1 - First quarter (1/01/yy - 3/31/yy) 2 - Second quarter (4/01/yy - 6/30/yy)3 - Third quarter (7/01/yy - 9/30/yy)4 - Fourth quarter (10/01/yy - 12/31/yy) |
| 6-7 | RPT\_YR | Reporting year.  **REQUIRED**Last two digits of the reporting year.Must be numeric. |
| 8-12 | PGMID | Program identifier.  **REQUIRED**A unique identifier for the Recipient submitting the data, or for each lead reporting database within the Recipient jurisdiction. |
| 13-20 | ADDR\_ID | Address identifier. **REQUIRED** |
| 21-35 | CITY | City name. |
| 36-38 | CNTY\_FIPS | County FIPS code.  **REQUIRED**Numeric, zero-filled. A list of counties their associated FIPS codes is available from HHLPPP. |
| 39-47 | ZIP | Zip code (5+4 format, no dash).Left justified, blank-fill or zero-fill. |
| 48-49 | STATE | State abbreviation (two-letter alphabetic code). |
| 50-56 | CENSUS | Census tract. Left justified, blank-fill. |
| 57 | RENOVATED | Residence renovated. **REQUIRED**1 - Yes, once2 - No3 - Yes, more than once9 - Unknown |
| 58-65 | START\_REN | Date first renovation begun. (CCYYMMDD) Date must be present when RENOVATED is coded 1 or 3. Date must be blank when RENOVATED is coded 2 or 9. |
| 66-73 | COMP\_REN | Date latest renovation completed. (CCYYMMDD)Cannot be earlier than START\_REN. Leave blank if renovation is ongoing as of the end of the reporting year. |

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| **Table: 3****Record Type: Lab Results****FILEID: LAB** |
| **Position** | **Field Name** | **Valid Values - Description** |
| 1-3 | FILEID | LAB – Lab Results. **REQUIRED**File identifier for record type. |
| 4 | ACTION | Database action code. **REQUIRED**A - Add record C - Change/replace D - Delete |
| 5 | QTR | Reporting quarter. All annual submissions should be “4" for fourth quarter. **REQUIRED**1 - First quarter (1/01/yy - 3/31/yy) 2 - Second quarter (4/01/yy - 6/30/yy)3 - Third quarter (7/01/yy - 9/30/yy)4 - Fourth quarter (10/01/yy - 12/31/yy) |
| 6-7 | RPT\_YR | Reporting year.  **REQUIRED**Last two digits of the reporting year.Must be numeric. |
| 8-12 | PGMID | Program identifier.  **REQUIRED**A unique identifier for the Recipient submitting the data, or for each lead reporting database within the Recipient jurisdiction. |
| 13-20 | CHILD\_ID | Child identifier. **REQUIRED** |
| 21-28 | SAMP\_DATE | Date sample was drawn. (CCYYMMDD)  **REQUIRED**. May not be prior to child DOB. |
| 29-36 | ADDR\_ID | Address identifier. (Unique identifier of child's primary address on the date sample was drawn)Zero-fill if unknown. |
| 37 | PREGNANT | Pregnant at time of blood lead test.1 – Yes2 – No3 – N/A9 – Unknown |
| 38-39 | -- | BLANK  |
| 40 | LAB\_FUND | Source of funding for the laboratory test. **REQUIRED**1 – Public, includes Medicaid 2 – Private insurance 3 – Parent self-pay8 – Other9 – Unknown |
| 41 | SAMP\_TYPE | Sample type. **REQUIRED**1 – Venous, blood lead2 – Capillary, blood lead9 – Unknown |
| 42 | TEST\_RSN | Test reason. **REQUIRED** 1 – Screening (asymptomatic child without previous elevated level)2 – Clinical suspicion of lead poisoning (child symptomatic)3 – Confirmatory test following elevated value by fingerstick4 – Follow-up, child with confirmed elevated level5 – EP, not for lead-screening 9 – Unknown/other |

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| **Table: 3 (continued)****Record Type: Lab Results****FILEID: LAB** |
| **Position** | **Field Name** | **Valid Values - Description** |
| 43 | LAB\_TYPE | Type of laboratory processing sample. **REQUIRED** 1 – Public health laboratory2 – Commercial laboratory3 – Clinical setting (i.e., lead screening)9 – Unknown |
| 44 | SCRN\_SITE | Type of provider ordering test, or screening site. **REQUIRED**1 – CLPPP fixed-site specific to lead2 – Door to door program3 – Other fixed-site screening program, e.g. WIC4 – Private health care provider5 – Referred for confirmation, no screening information9 – Unknown/other |
| 45 | METH\_ANAZ | Laboratory method used to analyze sample. **REQUIRED**1 – Inductively coupled plasma mass spectrometry (ICP-MS)2 – Graphite furnace atomic absorption spectroscopy (GFAAS) (also known as Electrothermal Atomic Absorption Spectroscopy (ETAAS))3 – Anodic Stripping Voltammetry (ASV) (e.g., LeadCare®)9 – Unknown |
| 46-51 | METH\_LOD | Limit of detection of METH\_ANAZ. (000.00)See Note below. |
| 52-59 | SAMP\_ANAZ\_DT | Date sample analyzed by lab. (CCYYMMDD) May not be prior to SAMP\_DATE. |
| 60-67 | RSLT\_RPT\_DT | Date results reported to/received by health department. (CCYYMMDD) May not be prior to SAMP\_DATE. |
| 68-73 | RESULT | Sample result measured in µg/dL. (000.00) **REQUIRED**See Note below. |
| 74 | RST\_INTPCODE | Numeric result comparator (result interpretation code). **REQUIRED**1 – Equal2 – Less Than3 – Greater Than |
| 75-80 | LAB\_LOD | Limit of detection of the lab that performed the results. (000.00)Only needed for “No Result” test. See Note below. |
| 81-123 | LAB\_NAME | Name of Laboratory that reported result |
| 124-134 | LAB\_ID | Clinical Laboratory Improvement Amendment (CLIA) Number of laboratory |
| 135-144 | NPI | **National Provider** Identifier or NPI is a unique 10-digit identification number issued to health care **providers** in the United States by the Centers for Medicare and Medicaid Services (CMS). |

**Note**: Laboratory sample results and limits of detection (LODs) should all be shown right-justified, zero-filled on the left, and formatted with two decimal positions. If no decimal value, format with decimal and zero (000.00).

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| Table: 4**Record Type: Investigation****FILEID: INV** |
| **Position** | **Field Name** | **Valid Values - Description** |
| 1-3 | FILEID | INV – Investigation. **REQUIRED**File identifier for record type. |
| 4 | ACTION | Database action code. **REQUIRED**A - Add record C - Change/replace D - Delete |
| 5 | QTR | Reporting quarter. All annual submissions should be “4" for fourth quarter. **REQUIRED**1 - First quarter (1/01/yy - 3/31/yy) 2 - Second quarter (4/01/yy - 6/30/yy)3 - Third quarter (7/01/yy - 9/30/yy)4 - Fourth quarter (10/01/yy - 12/31/yy) |
| 6-7 | RPT\_YR | Reporting year.  **REQUIRED**Last two digits of the reporting year.Must be numeric. |
| 8-12 | PGMID | Program identifier.  **REQUIRED**A unique identifier for the Recipient submitting the data, or for each lead reporting database within the Recipient jurisdiction. |
| 13-20 | ADDR\_ID | Address identifier. **REQUIRED** |
| 21-28 | DATE\_REF | Date address referred for investigation. (CCYYMMDD) **REQUIRED**  |
| 29-36 | INSP\_COMP | Date address investigation inspection completed. (CCYYMMDD)May not be prior to DATE\_REF. |
| 37-44 | ABAT\_COMP | Date address hazard remediation or abatement completed. (CCYYMMDD) May not be prior to INSP\_COMP. |
| 45-48 | YEAR | Year the dwelling was constructed. (YYYY)Blank if unknown.May not be after reporting year. |
| 49 | OWNERSHIP | Residential ownership status. **REQUIRED**1 – Private, owner-occupied 2 – Rental, privately owned 3 – Rental, publicly owned4 – Rental, Section 89 – Unknown |
| 50 | DWELL\_TYPE | Type of dwelling. **REQUIRED**1 – Attached, single family 2 – Day care center 3 – Detached, single family 4 – Multi-unit5 – School8 – Other9 – Unknown |
| 51 | PAINT\_HAZ | Dwelling with peeling, chipping, or flaking paint. **REQUIRED**1 – Yes, interior 2 – Yes, exterior 3 – Yes, both 4 – No 9 – Not inspected Must be 9 if INSP\_COMP is blank.  |

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| Table: 4 (continued)**Record Type: Investigation****FILEID: INV** |
| **Position** | **Field Name** | **Valid Values - Description** |
| 52-56 | XRF | Highest XRF reading in mg/cm2. (000.0) See Note below. |
| 57-64 | DUST\_FLOOR | Highest floor dust sample reading. (000000.0) See Note below. |
| 65 | FLOOR\_MSR | Unit of measure. U – μg/ft2 P – ppmCannot be blank if DUST\_FLOOR > 0. |
| 66-73 | DUST\_SILL | Highest window sill dust sample reading. (000000.0) See Note below. |
| 74 | SILL\_MSR | Unit of measure. U – μg/ft2 P – ppmCannot be blank if DUST\_SILL > 0. |
| 75-82 | DUST\_WELL | Highest window well dust sample reading. (000000.0) See Note below. |
| 83 | WELL\_MSR | Unit of measure. U – μg/ft2 P – ppmCannot be blank if DUST\_WELL > 0. |
| 84-91 | PAINT | Highest paint chip sample reading. (000000.0) See Note below. |
| 92 | PAINT\_MSR | Unit of measure. U – μg/ft2 P – ppmM – mg/cm2Cannot be blank if PAINT > 0. |
| 93-100 | SOIL | Highest soil sample reading in ppm. (000000.0) See Note below. |
| 101-108 | WATER | Highest water sample reading in ppb. (000000.0) See Note below. |
| 109 | INDHAZ | Industrial hazard near dwelling. 1 – Yes2 – No9 – Unknown |
| 110-117 | DATE\_DUE | Date remediation due. (CCYYMMDD)  |

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| Table: 4 (continued)**Record Type: Investigation****FILEID: INV** |
| **Position** | **Field Name** | **Valid Values - Description** |
| 118 | INV\_CLOS\_RES | Investigation closure reason.A – Administratively closedB – Batch closedC – Remediation completeD – Unit demolishedF – Insufficient fundsI – Permanent injunctionM – Family movedN – No hazard foundR – Inspection refusedU – No longer rental unit |
| 119-126 | CLEAR\_DATE | Date clearance testing completed. (CCYYMMDD)  |
| 127 | CLEAR\_RSLT | Clearance Testing Results1 – Passed2 – Failed9 – Unknown  |

**Note**: Environmental sample results should all be shown right-justified, zero-filled on the left, and formatted with one decimal position. If no decimal value, format with decimal and zero (000000.0).

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| **Table: 5****Record Type: Child-to-address link (Optional)****FILEID: LNK** |
| **Position** | **Field Name** | **Valid Values - Description** |
| 1-3 | FILEID | LNK – Child-to-Address Link. **REQUIRED**File identifier for record type. |
| 4 | ACTION | Database action code. **REQUIRED**A - Add record C - Change/replace D - Delete |
| 5 | QTR | Reporting quarter. All annual submissions should be “4" for fourth quarter. **REQUIRED**1 - First quarter (1/01/yy - 3/31/yy) 2 - Second quarter (4/01/yy - 6/30/yy)3 - Third quarter (7/01/yy - 9/30/yy)4 - Fourth quarter (10/01/yy - 12/31/yy) |
| 6-7 | RPT\_YR | Reporting year.  **REQUIRED**Last two digits of the reporting year.Must be numeric. |
| 8-12 | PGMID | Program identifier.  **REQUIRED**A unique identifier for the Recipient submitting the data, or for each lead reporting database within the Recipient jurisdiction. |
| 13-20 | CHILD\_ID | Child identifier. **REQUIRED** |
| 21-28 | ADDR\_ID | Address identifier. **REQUIRED** |
| 29 | TYPE\_ADDR | Type of Address. **REQUIRED** 1 – Primary address2 – Relocation address3 – Alternative4 – Supplemental9 – Unknown |
| 30-37 | FIRST\_OCC | Date the child first occupied or began spending time at address. (CCYYMMDD) **REQUIRED**May not be after the end of the reporting period. |
| 38-45 | LAST\_OCC | Date the child moved from or ceased spending time at address. (CCYYMMDD)May not be prior to FIRST\_OCC. |

**NOTE:** There should be only one "open" link record per child (LAST\_OCC is blank) where address type code is **1** or **2**.

A relocation address is considered a primary address to which a child has been permanently moved to remove them from a hazardous environment.

 **APPENDIX. Childhood Blood Lead Surveillance (CBLS) Submission Format**

**1. General Requirements**

Data must be in ASCII fixed field length (non-delimited), variable record length. The first three positions of each record will contain a file identifier (FILEID) which governs the record format and length.

**2. Formatting and Coding**

Each record submitted will be validated for correct formatting and coding. Action codes (Position 4 in each record) will be used to determine the record processing when loading to the master database.

**3. CHI Processing**

An ACTION code of “C” (change) will

* Replace an existing record on the CDC database if the unique identifiers match *unless* it is a CHI record with a changed DOB (date of birth).
* Add “C” transactions to the database when there is no match.

If a CHI (child) change transaction is received, and the DOB is changed, the existing CHI record, the related LNK, and related LAB records will be deleted. The new transactions for this child will then be added. This is effectively the same as submitting a CHI “delete” transaction and CHI (and any related LAB and LNK) “add” transactions.

This means if you submit a CHI *change* transaction with a changed date of birth, you must include all the related information/tests for the child. LAB records already in our database will be removed because we cannot determine if they are valid for the “new” child.

**4. DUPLICATE KEY Processing**

Records with ACTION code “A” will

* Be added to the database if there is no match.
* If there IS a match (DUPLICATE KEY=match on unique identifiers, see item 5 below), and

|  |  |
| --- | --- |
| **The record type is …** | **The transaction is …** |
| LAB, INV, or LNK | is rejected. |
| CHI and the DOB is different | and all related LAB and LNK transactions in the submitted file are rejected. |
| ADD and both CITY and ZIP are different | and all related LAB, LNK and INV transactions in the submitted file are rejected. |

For CHI and ADD transactions where those data fields (DOB or both city and zip code) are not changed, the transactions will update the master files and related transactions will be processed.

Records with ACTION code “D” are processed first. When a CHI delete transaction is processed, all related LNK and LAB records are also deleted. When an ADD (address) delete transaction is processed, all related LNK and INV records are also deleted. LAB records containing that address ID are modified to clear the ID to all zeroes.

CHI and ADD record types are processed first. When other record types are loaded, the related CHI and ADD records must exist in the master file or they are rejected.

 Within each submission to CDC there should be NO duplicate records. For instance, while there may be any number of lab results for a given child, there must be only one occurrence of the child record. Additionally, there may only be one LAB record per child per sample date. Duplicates are determined by the values in the FILEID field and the unique identifier for each record.

Each record contains a file identifier (FILEID), a program identifier (PGMID), and record-specific information to create a unique record identifier, as follows:

FILEID + PGMID + Record-specific information

CHI + PGMID + CHILD\_ID

ADD + PGMID + ADDR\_ID

LAB + PGMID + CHILD\_ID + SAMP\_DATE

INV + PGMID + ADDR\_ID + DATE\_REF

LNK + PGMID + CHILD\_ID + ADDR\_ID + FIRST\_OCC

Duplicates found within the same file are rejected, since we cannot determine which is the correct transaction.

 “Duplicate” lab records (more than one test per child **on the same day**) should be resolved according to these guidelines.

**If samples are all venous, take the highest test result.**

 **If samples are mixed capillary and venous, take the (highest) venous.**

 **If the samples are all capillary, take the lowest test result.**

5. **Record Formats**

Record formats are illustrated in the tables and follow a basic record format. The first 12 positions are consistent in every record format. Positions 13-20 contain an 8-digit numeric identifier, either for child or address, depending on the record type. The rest of the layout is dependent upon the record type or FILEID value. Tables 1 through 5 illustrate the format variations for the five specific tables.

The field names used in the tables are CBLS field labels or derivatives. All alpha characters are in upper case. All numeric fields are right justified and zero-filled unless otherwise stated. Alpha-numeric fields are left justified and padded on the right with blanks as needed.

Values are **required** in all fields in positions 1-20. Fields which have number codes must contain a valid number value. Dates which are not applicable or unknown may be blank unless the table indicates REQUIRED.

6. **UNIQUE IDENTIFIERS**

Each child and address must have a unique numeric identifier. This identifier will be our only way to identify the record, as we cannot use personal identifiers such as name or street address. These identifiers must remain the same from one submission to the next.

 County

As noted in the following specifications, surveillance data submitted to CDC must use the county FIPS code rather than the county name. We have a file of these codes for all states and will be happy to provide you with a file for your state. To obtain a copy of the FIPS file for your state, email the CDC’s Lead Surveillance Team (leadsurv@cdc.gov).

 Program ID

The program ID is a number assigned by CDC to recipients submitting surveillance data. This identifier must be present in each submitted record. When used in combination with the child ID or the address ID, the program ID will assure data submitted to the national system remains unique.

A different program ID will be assigned to each location submitting data to the state system. When the program ID is combined with the "unique" record identifier assigned by the location, it will create a "true" unique identifier for each record in the state system in the CDC Childhood Blood Lead Surveillance database.

If a state is using a system which is deployed to more than one location, and each location assigns a "unique" identifier to each child and/or each address, conflicts may arise when combining data into a single database. Each location may generate identifiers using the same approach, e.g., each location may assign the number "00000001" to the first child or address entered into the system. Therefore, the necessity for generating "unique" program identifiers per location for both child and address records within the CDC Childhood Blood Lead Surveillance database is critical.

CDC’s Lead Surveillance Team assigns and maintains the program IDs. Each recipient receives at least one unique program ID to be utilize when submitting data. If your state collects data from several related sites and requires additional program IDs, please write or email to Lead Surveillance support [leadsurv@cdc.gov] with a list of valid jurisdiction names and locations, and we will assign a program ID number for each location.