**README**

**(Updated June 9 2023)**

# Data Dictionary for DPR’s Pesticide Air Monitoring Results Database

**SAMPLE\_YEAR**: A four-digit number representing the year when the air sample was collected.

**DATA\_TYPE:** The type of result data, either a Published or Preliminary. ‘Published’ refers to results that have been thoroughly reviewed, verified, and have been included in a publication. ‘Preliminary’ refers to newer results that have gone through a preliminary review and verification process, but may be subject to change after further verification and have yet to be included in a publication.

**STUDY\_TYPE:** The type of monitoring study conducted, either a Short-term or Long-term. Long-Term means a study length greater than 11 months while Short-term refers to any study length of less than 11 months.

**SAMPLING\_AGENCY**: A text code representing the agency who conducted the air monitoring sampling.

**STUDY\_NUMBER**: A unique numerical code assigned to a study by DPR.

**SITE\_STATUS**: The status of the air monitoring site (Active or Inactive).

**SITE\_CODE**: A unique code given to a monitoring site composed of the study number and a location code unique to that study. The same monitoring station may be use for multiple studies (ie: Site code 999-E and 257-E. This site “Watsonville” was used in the Toxic Air Contaminant monitoring study and then adopted into the Air Monitoring Network study.

**SITE\_NAME**: A name assigned by DPR for a monitoring site.

**LATITUDE\_WGS4**: The latitude coordinate of an air monitoring station represented in decimal degrees and using the reference datum of WGS84.

**LONGITUDE\_WGS84**: The longitude coordinate of an air monitoring station represented in decimal degrees and using the reference datum of WGS84.

**SAMPLE\_ID**: A code comprised of the study number and a sample number, unique to a type of analysis. **START\_DATE**: The date when the sample began collecting and formatted as MM/DD/YYYY. **RUNTIME\_MIN**: The sampling duration time in minutes, where 1440 is equivalent to 24 hours.

**FLOW\_CCM**: The average flow rate calculated or reported in units of cubic centimeters per minute.

**CONCENTRATION\_PPB**: A numerical value representing the calculated concentration in parts per billion (ppb) for all quantifiable detections (above LOQ). Concentrations of all non-VOC’s assume a conversion factor of 24.45 and molecular mass of chemicals listed in the chemical table for conversions from µg/sample to ppb.

**CONCENTRATION\_NG/M3:** A numerical value representing the calculated concentration in nanograms per meter cubed (ng/m3) for all quantifiable detections (above LOQ).

**CHEMICAL\_NAME**: The unique chemical name in which results are presented for.

**LOQ\_PPB**: A numerical value representing the Limit of Quantification (LOQ) in ppb. LOQ is the highest detectable limit in which a sample can be reliably detected. The LOQ is specific to the time of analysis, for each chemical,

analytical lab and lab method. Generally, the LOQ is set to 5-10 times higher than the Method Detection Limit (MDL). For VOC samples, the LOQ and MDL are equal.

**LOQ\_NG/M3**: A numerical value representing the Limit of Quantification (LOQ) in ng/m3. LOQ is the highest detectable limit in which a sample can be reliably detected. The LOQ is specific to the time of analysis, for each chemical, analytical lab and lab method. Generally, the LOQ is set to 5-10 times higher than the Method Detection Limit (MDL). For VOC samples, the LOQ and MDL are equal.

**MDL\_PPB**: The Minimum Level of Detection that can reliably be detected in units of ppb. The MDL is specific to the time of analysis, for each chemical, analytical lab and lab method. For VOC samples, the LOQ and MDL are equal. Results below the MDL are reported as “ND” for Non Detects.

**MDL\_NG/M3**: Minimum Level of Detection that can reliably be detected in units of ng/m3. The MDL is specific to the time of analysis, for each chemical, analytical lab and lab method. For VOC samples, the LOQ and MDL are equal. Results below the MDL are reported as “ND” for Non Detects.

**LAB\_CODE**: A unique code assigned to the laboratory who conducted the sample analysis.

## Reference Look up Tables

### Study types

|  |  |
| --- | --- |
| **STUDY\_TYPE** | **STUDY\_TYPE DESCRIPTION** |
| Short-Term | Typically, a seasonal study lasts only a couple weeks to a few months. These studies generally target one or a few chemicals during their high use period in a high use region. Sampling frequency is more intensive and during the study. |
| Long-Term | Typically, a study where monitoring occurs for at least once a week for at least a year. |

### Study Numbers

|  |  |
| --- | --- |
| **STUDY\_NUMBER** | **STUDY\_NAME** |
| 257 | Air Monitoring Network |
| 309 | Monitoring of 1,3-D in Merced and Fresno Counties |
| 311 | Methyl Isothiocyanate (MITC) Seasonal Monitoring in Kern County, 2017 |
| 987 | Organophosphate Monitoring in Kern County 2018 |
| 989 | Seasonal Organophosphate Monitoring in Fresno and Tulare Counties 2018 |
| 990 | 2017 Seasonal Ambient Monitoring for the Pesticide Active Ingredients Methyl Bromide and Chloropicrin in Siskiyou County |
| 991 | Winter/Spring 2017 Seasonal Ambient Monitoring for Methyl Isothiocyanate (MITC)  in Fresno County |
| 992 | Chloropicrin Seasonal Monitoring in Santa Barbara County |
| 993 | Organophosphate Seasonal Monitoring in Imperial County 2018 |
| 999 | Toxic Air Contaminant Monitoring |

### Lab Codes

|  |  |
| --- | --- |
| **LAB\_CODE** | **LAB\_NAME** |
| ARB | Air Resources Board: Northern Organics Laboratory Section |
| CDFA | California Department of Food and Agriculture: Center for Analytical Chemistry Laboratory |

### Sampling Agencies

|  |  |
| --- | --- |
| **SAMPLING\_AGENCY** | **AGENCY\_NAME** |
| ARB | California Air Resources Board |
| DPR | California Department of Pesticide Regulation |
| SBCAC | Santa Barbara County Agriculture Commissioner |
| VCAC | Ventura County Agriculture Commissioner |

### Chemical

|  |  |
| --- | --- |
| **CHEMICAL\_NAME** | **MOLAR\_MASS (g/mol)** |
| 1,3-dichloropropene | 110.970 |
| Acephate | 183.162 |
| Bensulide | 397.503 |
| Captan | 300.590 |
| Chloropicrin | 164.366 |
| Chlorothalonil | 265.910 |
| Chlorpyrifos | 350.575 |
| Chlorpyrifos oa | 334.514 |
| Cypermethrin | 416.298 |
| Dacthal | 331.954 |
| DDVP | 220.970 |
| DEF | 314.501 |
| Diazinon | 304.345 |
| Diazinon oa | 288.284 |
| Dimethoate | 229.249 |
| Dimethoate oa | 213.188 |
| Diuron | 233.092 |
| Endolsulfan | 406.904 |
| Endosulfan Sulfate | 422.903 |
| EPTC | 189.317 |
| Fenpyroximate | 421.490 |
| Iprodione | 330.165 |
| Malathion | 330.350 |
| Malathion oa | 314.289 |
| Methidathion | 302.318 |
| Methomyl | 162.200 |
| Methyl Bromide | 94.939 |
| Metolachlor (S-Metolachlor) | 283.796 |
| MITC | 73.120 |
| Norflurazon | 330.669 |
| Oryzalin | 346.358 |
| Oxydemeton Methyl | 246.276 |
| Oxyfluorfen | 361.701 |
| Pendimethalin | 281.310 |
| Permethrin | 391.288 |
| Phosphet | 317.314 |
| pp-dicofol | 370.475 |
| Propargite | 350.473 |
| Simazine | 201.657 |
| Trifluralin | 335.283 |

### Flagged Samples

|  |  |
| --- | --- |
| **FLAG\_CD** | **FLAG\_DESC** |
| 0 | Missing initial flow measurement |
| 1 | Flow out of range-low |
| 2 | Flow out of range-high |
| 3 | Canister pressure out of range-low |
| 4 | Canister pressure out of range-high |
| 5 | Sample duration larger than 25 hours (24±1 hours) |
| 6 | Sample duration less than 23 hours (24±1 hours) |
| 7 | Lab equipment issue |
| 8 | Missing final flow measurement |
| 9 | Missing initial and final flow measurements |
| 10 | Lab spike recovery-low |
| 11 | Lab spike recovery-high |
| 12 | Lab analysis outside the 30-day holding limit |

For questions about accessing DPR’s Pesticide Air Monitoring Results Database [Air.Monitoring@cdpr.ca.gov.](mailto:Air.Monitoring@cdpr.ca.gov)