AirNow-I AQCSV Format Specifications Document Version 3.0

As part of the AirNow-International (AirNow-I) project, Sonoma Technology, Inc. (STI) developed a simple, compact data exchange format to transfer data between AirNow-I and other data management systems (DMS). This format is flexible to accommodate the monitoring, laboratory sampling, data analysis, and user communities. Much of the information is based on the extensive parameter libraries provided by the U.S. Environmental Protection Agency's (EPA) Air Quality System (AQS). This format is versatile enough to replace the OBS file format currently used in AirNow and to be the ingest format for the AirNow-I DMS, as well as the output and data exchange format for the AirNow-I system. This document and the supporting tables will be revised as needed to conform to the AQS database and provide the most up-to-date and compatible information.

The format is a simple text record with comma delimiters (,) between each field. Each record contains one data value for a given site, time, and parameter. Other supporting fields in the record describe the time zone, units, location, and other information for that data value. Additional details about the data format are contained in this document.

Contact Information

If you have questions about the AirNow-I project or about the DMS, please contact John White of the U.S. Environmental Protection Agency (white.johne@epa.gov) or AirNow Data Management Center at Sonoma Technology, Inc. (airnowinfo@sonomatech.com, 707-665-9900).

File Name Format Specifications

YYYYMMDDhhmm are the creation date and time of the file and *CCC.AAAAAAAAAA* are the origination country and agency of the data. Other acceptable formats are shown below.

- **Recommended file name format:** *YYYYMMDDhhmm_CCC.AAAAAAAAAA*
- **Additional acceptable formats:** *data.dat*, *data.csv*, *airdata.csv*, or something generic

Table 1. Details for each component of the file name.

Component of File Name	Description	Ranges	Example
YYYY	Four-digit year		2011
MM	Two-digit month	01–12	10
DD	Two-digit day	01–31	09
hh	Two-digit hour in 24-hr time	00–23	15
mm	Two-digit minute	00–59	45
CCC	Three-digit ISO country code	See **Table 4**: ISO country codes.	840
AAAAAAAAAA	Ten-character agency identification	See **Table 9**: Agency codes, but allow for agency abbreviations up to 10 characters.	CA8 or SCAQMD

Data Record Format Specifications

Each record contains the following fields:

site,data_status,action_code,datetime,parameter,duration,frequency,value,unit,qc,poc, lat,lon,GISdatum,elev,method_code,mpc,mpc_value,uncertainty,qualifiers

All fields are needed for the bulk load feature on most database systems; include the extra commas even if the fields are blank. For each record, the following apply:

- **The field delimiter:** , (a comma, which is ASCI character 44)
- **Data and field definitions and specifications:** See **Table 3:** AQCSV import/export format field specifications.
- **Report units:** Various. See **Table 6:** Parameter codes and associated standard units.

There are three submittal types:

1. a complete submittal with all field data;
2. a first-time submittal with specific data required; and
3. a second and subsequent submittal (after the first submittal).

Table 2. Data record definitions and some sample records.

Record Type	Definitions and Examples
Complete submittal type: a record with all field data	
Definition	*site,data_status,action_code,datetime,parameter,duration,frequency,value, unit,qc,poc,lat,lon,GISdatum,elev,method_code,mpc,mpc_value,uncertainty, qualifiers*
Example	124000050801,0,,20081004T1200,44201,60,,15,008,0,1,45.2532, -100.3612,WGS84,1525,091,1,5,2,RC K L
First-time submittals of new sites and mobile monitors	
Required definition	*site,data_status,,datetime[1],parameter,duration,,value,unit,qc,poc,lat[1],lon[1],,,,,,,*
Example 1: specifies the GMT offset	124000050801,0,,20081004T1200-0600,44201,60,,15,008,0,1,,,,,,,,,
Example 2: specifies GMT and a latitude and longitude	124000050801,0,,20081004T1800,44201,60,,15,008,0,1,45.2532, -100.3612,,,,,,,
After first-time submittal, only the required field data are necessary	
Minimum required definition	site,data_status,,datetime,parameter,duration,,value,unit,qc,poc,,,,,,,,,
Example 1: uses Greenwich Mean Time (GMT)	124000050801,0,,20081004T1800,44201,60,,15,008,0,1,,,,,,,,,
Example 2: uses local standard time (in this example, Eastern Standard Time; TZD is 600)	124000050801,0,,20081004T1200-0600,44201,60,,15,008,0,1,,,,,,,,,

[1] First-time submittals require that either (1) the *datetime* field specifies a GMT offset, or (2) if GMT is specified, the *lat* and *lon* fields must be completed. The GMT offset is necessary to create the site location on the fly. If neither of these options is specified, an email will be sent requiring more information about the site; the GMT offset data will not be stored until the site information has been updated. For mobile monitor data, *lat* and *lon* must be included with all data records.

Table 3. AQCSV import/export format field specifications.

Field Name	Type	Required	Description	Example
site	nvarchar(12)	yes	Twelve-character code based on the three-digit ISO country codes and the nine-digit monitor location code.[a] For example, 123456789123 = 123 (country code) + 456789123 (nine-digit monitor location code) 123MM6789123 = 123 (country code) + MM6789123 (nine-digit mobile monitor location code)	123456789123
data_status	integer(1)	yes	Status of the data. 0 = Preliminary 1 = Final Data are denoted as final after the agency collecting and reporting the data certifies that they meet quality assurance requirements and are true and correct in AQS. This is only required for criteria pollutants reported from state agencies.	0
action_code	integer(1)	no	Action code for data ingest: 0 or Null = default behavior of the ingesting service 1 = Insert only with automatic quality control 2 = Update/insert with automatic quality control 3 = Insert without automatic quality control 4 = Update/insert without automatic quality control 5 = Delete	0
datetime	nvarchar(20)	yes	Date and time of the data value, given in the following format without spaces: YYYYMMDDThhmmTZD. Four-digit year (YYYY), two-digit month (MM), two-digit day (DD), capital letter T (time), two-digit hour (hh, in 24-hr time only), two-digit minutes (mm), and the time zone designation, TZD.[b] TZD is +hhmm/-hhmm. The time corresponds to the begin time of the sampling period.	20081008T1200 Or for LST 20081008T1800-0600
parameter	integer(5)	yes	Five-digit number used to identify the parameters being monitored.[c]	44201
duration	integer	yes	Measurement period in minutes.	60
frequency	integer	no	How often the measurement is repeated (minutes). If measurements are taken multiple times per day (i.e., hourly), leave blank; otherwise, enter minutes equivalent (e.g., every day = 1440, and every other day = 2880).	
value	numeric(10,5)	yes	Data value of the specified parameter.	38.2
unit	integer(3)	yes	Three-digit code used to describe the units in the measurement of the specified parameter.[d]	008
qc	integer	yes	An integer code used to link to the quality control codes that describe the validity, invalidity, or questionable status of the measurement.[e]	1

Field Name	Type	Required	Description	Example
poc	integer	yes	Parameter occurrence code (POC).[f]	2
lat	numeric(10,6)	no	Latitude in decimal degrees of the monitor. Latitudes north of the Equator are positive and latitudes south of the Equator are negative; for example, 45.2532 N = 45.2532 and 45.2532 S = -45.2532.	45.2532
lon	numeric(10,6)	no	Longitude in decimal degrees of the monitor. Longitudes west of the Prime Meridian are negative and longitudes east of the Prime Meridian are positive; for example, 100.3612 W = -100.3612 and 100.3612 E = 100.2536.	-100.3612
GISdatum	nvarchar(10)	no	The datum associated with the latitude and longitude measurements used to plot the data in geographic information systems (GIS). Acceptable datums are NAD27, NAD83, WGS84*, CLARK66, and GRS80*. * Datums of this type are the most common.	WGS84
elev	integer	no	Elevation of the monitor in meters above mean sea level (MSL).	1525
method_code	ncharvar(3)	no	Three-digit numerical code that identifies the method used to perform the measurement.[g]	091
mpc	integer	no	Measurement Performance Characteristic (MPC) is a performance measurement for the measurement taken. There are many values and methods for determining the performance of a monitor.[h]	1
mpc_value	numeric(10,5)	no	Value of the MPC needs to be in the same units as the specified parameter being measured.	5
uncertainty	numeric(10,5)	no	Uncertainty needs to be in the same units as the specified parameter and is given using the 95% confidence level.[i]	2
qualifiers	nvarchar(255)	no	The text field in which each qualifier is separated by a space. Qualifiers indicate whether the data have been flagged by the submitter and the reason the sample was so flagged.[j]	RC K L

[a] Nine-digit monitor location code was based on current AQS codes. It consists of a two-digit state code, a three-digit county code, and a four-digit location code without spaces between the individual codes. The one exception is mobile monitors, specified by MM. The MM takes the place of the two-digit state code. Each international community needs to specify its own codes. For example, a country may choose to use a code based on a two-digit province, three-digit city, and four-digit site location code. ISO country codes are listed in Table 4. Current AirNow agency codes can be found in **Table 9**.

[b] The date-time field is the ISO 8601 Basic. The format must contain the "T" and must not include am/pm. TZD is either in GMT or the offset from GMT (+hhmm/-hhmm). If a first submittal of a new site and TZD is in GMT, the latitude and longitude fields are required; otherwise, TZD needs to be the offset from GMT (+hhmm/-hhmm).

[c] The five-digit code is based on the existing codes in the AQS database. These parameter codes are listed in **Table 5**, Parameter codes and associated standard units.

[d] The three-digit code is based on the existing codes in the AQS database. These unit identification codes are listed in **Table 6**, Unit identification codes.

[e] The qc_code is an integer linked to a table that describes the validity, invalidity, or questionable status of the measurement. These integer codes are based on the existing AirNow database. The AirNow quality control codes are defined in **Table 7**, AirNow quality control codes.

[f] Parameter occurrence code is assigned by the organization responsible for the data. The POC is used to specify if more than one monitor is measuring the same parameter at the same site. For example, if there are two ozone monitors at a site, one would be given a value of 1 and the other a value of 2. The distinction uniquely identifies when collocated measurements are available.

[g] Method_code is parameter specific. The method_code can either be entered via the information table in the DMS or sent with data transmission. The method code is not a required field for every data submission, but is highly recommended. The method_code is based on the three-digit code from the AQS database. The method code is required to transmit data to AQS.

[h] MPC is instrument specific. The MPC is the method used to determine the performance of the instrument. See **Table 8**, Measurement performance characteristics, for a list of available options and the associated integer code for each. If an integer code is entered, an MPC_VALUE must be supplied. The MPC_VALUE must be given in the same units as the measured parameter.

[i] Uncertainty is usually given in an absolute sense as a range of potential error using the 95% confidence interval. Example above is +/- 2 ppb, i.e., a measurement of 60 ppb could be 58 or 62 ppb.

[j] Qualifiers takes into account the data qualifier, which is based on the current AQS qualifiers. The field is a text field in which each qualifier is separated by a space; there is no limit on the number of qualifiers. The database will accept any qualifiers, but will only maintain an up-to-date table for exporting data based on the AQS Qualifiers. See **Table 10**, Qualifiers, for a complete description of the qualifiers and the events associated with each qualifier, as of February 9, 2009.

Table 4. ISO country codes.

Numerical Code	Country or Area Name	ISO ALPHA-3 Code
004	Afghanistan	AFG
248	Åland Islands	ALA
008	Albania	ALB
012	Algeria	DZA
016	American Samoa	ASM
020	Andorra	AND
024	Angola	AGO
660	Anguilla	AIA
028	Antigua and Barbuda	ATG
032	Argentina	ARG
051	Armenia	ARM
533	Aruba	ABW
036	Australia	AUS
040	Austria	AUT
031	Azerbaijan	AZE
044	Bahamas	BHS
048	Bahrain	BHR
050	Bangladesh	BGD
052	Barbados	BRB
112	Belarus	BLR
056	Belgium	BEL
084	Belize	BLZ
204	Benin	BEN
060	Bermuda	BMU
064	Bhutan	BTN
068	Bolivia	BOL
070	Bosnia and Herzegovina	BIH
072	Botswana	BWA
076	Brazil	BRA
092	British Virgin Islands	VGB
096	Brunei Darussalam	BRN
100	Bulgaria	BGR
854	Burkina Faso	BFA
108	Burundi	BDI

Numerical Code	Country or Area Name	ISO ALPHA-3 Code
116	Cambodia	KHM
120	Cameroon	CMR
124	Canada	CAN
132	Cape Verde	CPV
136	Cayman Islands	CYM
140	Central African Republic	CAF
148	Chad	TCD
830	Channel Islands	
152	Chile	CHL
156	China	CHN
344	Hong Kong Special Administrative Region of China	HKG
446	Macao Special Administrative Region of China	MAC
170	Colombia	COL
174	Comoros	COM
178	Congo	COG
184	Cook Islands	COK
188	Costa Rica	CRI
384	Côte d'Ivoire	CIV
191	Croatia	HRV
192	Cuba	CUB
196	Cyprus	CYP
203	Czech Republic	CZE
408	Democratic People's Republic of Korea	PRK
180	Democratic Republic of the Congo	COD
208	Denmark	DNK
262	Djibouti	DJI
212	Dominica	DMA
214	Dominican Republic	DOM
218	Ecuador	ECU
818	Egypt	EGY

Numerical Code	Country or Area Name	ISO ALPHA-3 Code
222	El Salvador	SLV
226	Equatorial Guinea	GNQ
232	Eritrea	ERI
233	Estonia	EST
231	Ethiopia	ETH
234	Faeroe Islands	FRO
238	Falkland Islands (Malvinas)	FLK
242	Fiji	FJI
246	Finland	FIN
250	France	FRA
254	French Guiana	GUF
258	French Polynesia	PYF
266	Gabon	GAB
270	Gambia	GMB
268	Georgia	GEO
276	Germany	DEU
288	Ghana	GHA
292	Gibraltar	GIB
300	Greece	GRC
304	Greenland	GRL
308	Grenada	GRD
312	Guadeloupe	GLP
316	Guam	GUM
320	Guatemala	GTM
831	Guernsey	GGY
324	Guinea	GIN
624	Guinea-Bissau	GNB
328	Guyana	GUY
332	Haiti	HTI
336	Holy See	VAT
340	Honduras	HND
348	Hungary	HUN
352	Iceland	ISL
356	India	IND
360	Indonesia	IDN
364	Iran, Islamic Republic of	IRN
368	Iraq	IRQ

Numerical Code	Country or Area Name	ISO ALPHA-3 Code
372	Ireland	IRL
833	Isle of Man	IMN
376	Israel	ISR
380	Italy	ITA
388	Jamaica	JAM
392	Japan	JPN
832	Jersey	JEY
400	Jordan	JOR
398	Kazakhstan	KAZ
404	Kenya	KEN
296	Kiribati	KIR
414	Kuwait	KWT
417	Kyrgyzstan	KGZ
418	Lao People's Democratic Republic	LAO
428	Latvia	LVA
422	Lebanon	LBN
426	Lesotho	LSO
430	Liberia	LBR
434	Libyan Arab Jamahiriya	LBY
438	Liechtenstein	LIE
440	Lithuania	LTU
442	Luxembourg	LUX
450	Madagascar	MDG
454	Malawi	MWI
458	Malaysia	MYS
462	Maldives	MDV
466	Mali	MLI
470	Malta	MLT
584	Marshall Islands	MHL
474	Martinique	MTQ
478	Mauritania	MRT
480	Mauritius	MUS
175	Mayotte	MYT
484	Mexico	MEX
583	Micronesia, Federated States of	FSM

Numerical Code	Country or Area Name	ISO ALPHA-3 Code
492	Monaco	MCO
496	Mongolia	MNG
499	Montenegro	MNE
500	Montserrat	MSR
504	Morocco	MAR
508	Mozambique	MOZ
104	Myanmar	MMR
516	Namibia	NAM
520	Nauru	NRU
524	Nepal	NPL
528	Netherlands	NLD
530	Netherlands Antilles	ANT
540	New Caledonia	NCL
554	New Zealand	NZL
558	Nicaragua	NIC
562	Niger	NER
566	Nigeria	NGA
570	Niue	NIU
574	Norfolk Island	NFK
580	Northern Mariana Islands	MNP
578	Norway	NOR
275	Occupied Palestinian Territory	PSE
512	Oman	OMN
586	Pakistan	PAK
585	Palau	PLW
591	Panama	PAN
598	Papua New Guinea	PNG
600	Paraguay	PRY
604	Peru	PER
608	Philippines	PHL
612	Pitcairn	PCN
616	Poland	POL
620	Portugal	PRT
630	Puerto Rico	PRI
634	Qatar	QAT
410	Republic of Korea	KOR

Numerical Code	Country or Area Name	ISO ALPHA-3 Code
498	Republic of Moldova	MDA
638	Réunion	REU
642	Romania	ROU
643	Russian Federation	RUS
646	Rwanda	RWA
652	Saint-Barthélemy	BLM
654	Saint Helena	SHN
659	Saint Kitts and Nevis	KNA
662	Saint Lucia	LCA
663	Saint-Martin (French part)	MAF
666	Saint Pierre and Miquelon	SPM
670	Saint Vincent and the Grenadines	VCT
882	Samoa	WSM
674	San Marino	SMR
678	Sao Tome and Principe	STP
682	Saudi Arabia	SAU
686	Senegal	SEN
688	Serbia	SRB
690	Seychelles	SYC
694	Sierra Leone	SLE
702	Singapore	SGP
703	Slovakia	SVK
705	Slovenia	SVN
090	Solomon Islands	SLB
706	Somalia	SOM
710	South Africa	ZAF
724	Spain	ESP
144	Sri Lanka	LKA
736	Sudan	SDN
740	Suriname	SUR
744	Svalbard and Jan Mayen Islands	SJM
748	Swaziland	SWZ
752	Sweden	SWE

Numerical Code	Country or Area Name	ISO ALPHA-3 Code
756	Switzerland	CHE
760	Syrian Arab Republic	SYR
762	Tajikistan	TJK
764	Thailand	THA
807	The former Yugoslav Republic of Macedonia	MKD
626	Timor-Leste	TLS
768	Togo	TGO
772	Tokelau	TKL
776	Tonga	TON
780	Trinidad and Tobago	TTO
788	Tunisia	TUN
792	Turkey	TUR
795	Turkmenistan	TKM
796	Turks and Caicos Islands	TCA
798	Tuvalu	TUV
800	Uganda	UGA
804	Ukraine	UKR

Numerical Code	Country or Area Name	ISO ALPHA-3 Code
784	United Arab Emirates	ARE
826	United Kingdom of Great Britain and Northern Ireland	GBR
834	United Republic of Tanzania	TZA
840	United States of America	USA
850	United States Virgin Islands	VIR
858	Uruguay	URY
860	Uzbekistan	UZB
548	Vanuatu	VUT
862	Venezuela (Bolivarian Republic of)	VEN
704	Viet Nam	VNM
876	Wallis and Futuna Islands	WLF
732	Western Sahara	ESH
887	Yemen	YEM
894	Zambia	ZMB
716	Zimbabwe	ZWE

Table 5. Parameter codes and associated standard units (see Table 6 for a list of the unit codes and descriptions). For more information on parameter codes, please visit http://www.epa.gov/aqs/aqs-code-list.

Parameter	Description	Standard _Unit
11101	Suspended particulate (TSP)	001
11103	Benzene soluble organics(TSP)	001
11104	Total polynuclear hydrocarbons	001
11114	Windblown particulate	054
11121	Crystalline quartz	030
11122	Cristabalite	030
11123	Asbestos > 5um	120
11124	Asbestos > 0.5um	120
11125	Total Non-Asbestos Fibers	120
11201	Soil index (COH)	009
11202	Soil index (RUD)	010
11203	Light scatter	027
11204	Smoke	001
11205	Soil index (µg/m3)	001
11206	Light scatter (µg/m3)	001
11207	Light scatter (miles visibility)	024
11208	Deciview	123
11301	Alpha radiation (TSP)	030
11302	Beta radiation (TSP)	030
11343	Antimony - 121 (TSP)	001
11344	Arsenic - 75 (TSP)	001
11345	Chromium - 50 (TSP)	001
11346	Chromium - 52 (TSP)	001
11347	Chromium - 53 (TSP)	001
11348	Cobalt - 59 (TSP)	001
11349	Copper - 63 (TSP)	001
11350	Iron - 56 (TSP)	001
11351	Lead - 208 (TSP)	001
11352	Manganese - 55 (TSP)	001
11353	Molybdenum - 98 (TSP)	001
11354	Nickel - 60 (TSP)	001
11355	Strontium - 88 (TSP)	001

Parameter	Description	Standard _Unit
11356	Tin - 117 (TSP)	001
11357	Zinc - 66 (TSP)	001
11358	Iron - 57 (TSP)	001
11359	Nickel - 58 (TSP)	001
11360	Zinc - 64 (TSP)	001
11361	Tin - 120 (TSP)	001
11362	Vanadium (TSP)	001
12101	Aluminum (TSP)	001
12102	Antimony (TSP)	001
12103	Arsenic (TSP)	001
12105	Beryllium (TSP)	003
12106	Bismuth (TSP)	001
12107	Barium (TSP)	001
12109	Bromine (TSP)	001
12110	Cadmium (TSP)	001
12111	Calcium (TSP)	001
12112	Chromium (TSP)	001
12113	Cobalt (TSP)	001
12114	Copper (TSP)	001
12115	Chromium VI(TSP)	001
12117	Cerium (TSP)	001
12118	Cesium (TSP)	001
12121	Europium (TSP)	001
12124	Gallium (TSP)	001
12125	Germanium (TSP)	001
12126	Iron (TSP)	001
12127	Hafnium (TSP)	001
12128	Lead (TSP)	001
12129	Lead-210 (TSP)	001
12131	Indium (TSP)	001
12132	Manganese (TSP)	001
12133	Iridium (TSP)	001
12134	Molybdenum (TSP)	001
12136	Nickel (TSP)	001
12138	Thorium-230 (TSP)	030
12139	Thorium-232 (TSP)	030

Parameter	Description	Standard _Unit
12140	Magnesium (TSP)	001
12142	Mercury (TSP)	001
12143	Gold (TSP)	001
12146	Lanthanum (TSP)	001
12147	Niobium (TSP)	001
12150	Platinum (TSP)	001
12151	Palladium	001
12152	Phosphorus (TSP)	001
12153	Polonium-210 (TSP)	030
12154	Selenium (TSP)	001
12160	Tin (TSP)	001
12161	Titanium (TSP)	001
12162	Samarium (TSP)	001
12163	Scandium (TSP)	001
12164	Vanadium (TSP)	001
12165	Silicon (TSP)	001
12166	Silver (TSP)	001
12167	Zinc (TSP)	001
12168	Strontium (TSP)	001
12169	Sulfur (TSP)	001
12170	Tantalum (TSP)	001
12171	Tellurium and compounds as Te (TSP)	001
12172	Terbium (TSP)	001
12173	Thallium (TSP)	001
12176	Rubidium (TSP)	001
12178	Tungsten (TSP)	001
12179	Uranium (TSP)	001
12180	Potassium (TSP)	001
12183	Yttrium (TSP)	001
12184	Sodium (TSP)	001
12185	Zirconium (TSP)	001
12187	Radium-226 (TSP)	030
12188	Radium-228 (TSP)	030
12190	Boron (TSP)	001
12191	Chlorine (TSP)	001
12201	Bromide(TSP)	001
12202	Fluoride(TSP)	001
12203	Chloride(TSP)	001

Parameter	Description	Standard _Unit
12204	Iodide(TSP)	001
12208	Fluoride (vegation)	007
12209	Fluoride (paper samplers)	097
12301	Ammonium (TSP)	001
12306	Nitrate (TSP)	001
12309	Nitrite (TSP)	001
12345	Phosphate (TSP)	001
12402	Sulfuric acid (TSP)	061
12403	Sulfate (TSP)	001
12602	Hydrogen ion conc (TSP)	061
12803	Asbestos amphibole (TSP)	001
13115	Chlorine(TSP)	001
16111	Carbon Black (TSP)	001
16115	Paraffins (alkanes)	001
16210	n-Hexadecane	001
16212	4-Phenylcyclohexene	001
16320	Cellulose (TSP)	001
16521	Methyl isoamyl ketone	078
16722	N-Nitrosodimethylamine	003
16724	1,2,4,5-Tetrachlorobenzene	003
16725	1,2,4-Trichlorobenzene	003
16726	1,2-Dichlorobenzene	003
16727	1,3-Dichlorobenzene	003
16728	1,3-Dinitrobenzene	003
16729	1,4-Dichlorobenzene	003
16730	1,4-Naphthoquinone	003
16731	1-Naphthylamine	003
16732	2,3,4,6-Tetrachlorophenol	003
16733	2,4,5-Trichlorophenol	003
16734	2,4,6-Trichlorophenol	003
16735	2,4-Dichlorophenol	003
16736	2,4-Dimethylphenol	003
16737	2,4-Dinitrophenol	003
16738	2,4-Dinitrotoluene	003
16739	2,6-Dichlorophenol	003

Parameter	Description	Standard _Unit
16740	2,6-Dinitrotoluene	003
16741	2-Acetylaminofluorene	003
16742	2-Chloronaphthalene	003
16743	2-Chlorophenol	003
16744	2-Naphthylamine	003
16745	2-Nitroaniline	003
16746	2-Nitrophenol	003
16747	2-Picoline	003
16748	3,3'-Dimethoxybenzidine	003
16749	3-Methylcholanthrene	003
16750	3-Nitroaniline	003
16751	4,6-Dinitro-2-methylphenol	003
16752	4-Aminobiphenyl	003
16753	4-Bromophenyl phenyl ether	003
16754	4-Chloro-3-methylphenol	003
16755	4-Chloroaniline	003
16756	4-Chlorophenyl-phenyl ether	003
16757	4-Dimethylaminoazobenzene	003
16758	4-Nitroaniline	003
16759	4-Nitrophenol	003
16760	5-Nitro-o-toluidine	003
16761	7,12-Dimethylbenz[a] anthracene	003
16762	Acetophenone	003
16763	Aniline	003
16764	Azobenzene	003
16765	Benzidine	003
16766	Benzyl alcohol	003
16767	bis (2-Chloroethyl)ether	003
16768	bis(2-Chloroethoxy)methane	003
16769	bis(2-Chloroisopropyl)ether	003
16770	bis(2-Ethylhexyl)phthalate	003

Parameter	Description	Standard _Unit
16771	Butyl benzyl phthalate	003
16772	Carbazole	003
16773	Chlorobenzilate	003
16774	Diallate	003
16775	Diethyl phthalate	003
16776	Dimethyl phthalate	003
16777	Di-n-butyl phthalate	003
16778	Di-n-octyl phthalate	003
16779	Dinoseb	003
16780	Diphenylamine	003
16781	Ethyl methanesulfonate	003
16782	Hexachlorobutadiene	003
16783	Hexachloropropene	003
16784	Isodrin	003
16785	Isosafrole	003
16786	m and p-Cresol	003
16787	Methyl methanesulfonate	003
16788	Nitrobenzene	003
16789	N-Nitrosodibutylamine	003
16790	N-Nitrosodiethylamine	003
16791	N-Nitrosodipropylamine	003
16792	N-Nitrosomethylethylamine	003
16793	N-Nitrosopiperidine	003
16794	N-Nitrosopyrrolidine	003
16795	Pentachloroethane	003
16796	Phenacetin	003
16797	Phenol	003
16798	Pronamide	003
16799	Pyridine	003
16801	Safrole	003
16807	Hexachloroethane	003
16826	Hexachlorocyclopentadiene	003
16906	1,4-Dioxin	
16914	Isophorone	003
16915	2-Methylnaphthalene	003
16917	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	074

Parameter	Description	Standard _Unit
16918	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	074
16919	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	074
16920	1,2,3,7,8-Pentachlorodibenzofuran	074
16921	2,3,4,7,8-Pentachlorodibenzofuran	074
16922	1,2,3,4,7,8-Hexachlorodibenzofuran	074
16923	1,2,3,6,7,8-Hexachlorodibenzofuran	074
16924	2,3,4,6,7,8-Hexachlorodibenzofuran	074
16925	1,2,3,7,8,9-Hexachlorodibenzofuran	074
16926	1,2,3,4,6,7,8-Heptachlorodibenzofuran	074
16927	1,2,3,4,7,8,9-Heptachlorodibenzofuran	074
16938	1-Methylnapthalene	003
17131	C2 Alkylbenzenes	030
17141	Naphthalene	003
17142	2,6-dimethylnaphthalene (TSP)	003
17143	1,7-dimethylnaphthalene (TSP)	003
17144	1,6-dimethylnaphthalene (TSP)	003
17145	2,3-dimethylnaphthalene (TSP)	003
17146	1,2-dimethylnaphthalene (TSP)	003
17147	Acenaphthene	003
17148	Acenaphthylene	003
17149	Fluorene	003
17150	Phenanthrene	003
17151	Anthracene	003
17152	1,3-dinitropyrene	003

Parameter	Description	Standard _Unit
17153	1-nitropyrene	003
17155	3-nitrofluoranthene	003
17156	2-methylphenanthrene (TSP)	003
17157	1-methylphenanthrene (TSP)	003
17158	Retene	003
17159	9-fluorenone	003
17160	Cyclopenta[cd]pyrene	003
17199	Polycyclic organic matter	001
17201	Fluoranthene	003
17202	Polynuclear aromatic hydrocarbons (TSP)	003
17204	Pyrene	003
17208	Chrysene	003
17210	Anthanthrene (TSP)	003
17211	Coronene	003
17212	Perylene	003
17215	Benzo[a]anthracene	003
17220	Benzo[b]fluoranthene	003
17223	Benzo[k]fluoranthene	003
17224	Benzo[e]pyrene	003
17225	Benzo[b,k]fluoranthene (TSP)	003
17231	Dibenzo[a,h]anthracene	003
17237	Benzo[g,h,i]perylene	003
17242	Benzo[a]pyrene	003
17243	Indeno[1,2,3-cd]pyrene	003
17301	o-Cresol	003
17302	m-Cresol	003
17303	p-Cresol	003
17502	Benzanthrone (TSP)	003
17710	o-Toluidine	003
17716	3,3'-Dichlorobenzidene	001
17725	Pentachloronitrobenzene	003
17801	Trichlorobenzene	003
17802	Tetrachlorobenzene	003
17803	Pentachlorobenzene	003
17804	Hexachlorobenzene	003

Parameter	Description	Standard _Unit
17805	Dichlorophenol	003
17806	Trichlorophenol	003
17807	Tetrachlorophenol	003
17808	Pentachlorophenol	003
17809	1,1-Biphenyl, chloro	074
17810	Dichlorobiphenyl	074
17811	Trichlorobiphenyl	074
17812	Tetrachlorobiphenyl	074
17813	Pentachlorobiphenyl	074
17814	Hexachlorobiphenyl	074
17815	Heptachlorobiphenyl	074
17816	Octachlorobiphenyl	074
17817	Nonachlorobiphenyl	074
17818	Decachlorobiphenyl	074
17820	Total tetachlorodibenzo-p-dioxin	074
17821	Total pentachlorodibenzo-p-dioxin	074
17822	Total hexachlorodibenzo-p-dioxin	074
17823	Total heptachlorodibenzo-p-dioxin	074
17824	Total octachlorodibenzo-p-dioxin	074
17825	2,3,7,8-Tetrachlorodibenzofuran	074
17826	Total tetrachlorodibenzofuran	074
17827	Total pentachlorodibenzofuran	074
17828	Total hexachlorodibenzofuran	074
17829	Total heptachlorodibenzofuran	074
17830	Total octachlorodibenzofuran	074
17835	alpha-Terpinene	003
17902	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro	074

Parameter	Description	Standard _Unit
17907	D-limonene	078
18202	Dibenzofuran	003
21101	Total dustfall (SP)	093
21102	Organic Fraction(SP)	093
21103	Benzene Sol Org (SP)	093
21113	Inorganic Fractn(SP)	093
21114	Water Sol Weight(SP)	093
21115	Water Insol Wt (SP)	093
21116	Total Weight Ash(SP)	093
21117	Water Sol Ash (SP)	093
21118	Water Inso Ash (SP)	093
22102	Antimony (SP)	093
22103	Arsenic (SP)	093
22110	Cadmium (SP)	093
22111	Calcium (SP)	093
22112	Chromium (SP)	093
22114	Copper (SP)	093
22126	Iron (SP)	093
22128	Lead (SP)	093
22132	Manganese (SP)	093
22136	Nickel (SP)	093
22142	Mercury (SP)	093
22166	Silver (SP)	093
22167	Zinc (SP)	093
22203	Chloride(SP)	093
22301	Ammonium (SP)	093
22306	Nitrate (SP)	093
22403	Sulfate (SP)	093
22602	pH (Dustfall)	061
22604	Ammonia (SP)	001
25101	Dustfall Combustible (SP)	093
25303	Conductance (SP)	069
31101	Respirable part	001
42101	Carbon monoxide	007
42102	Carbon dioxide	007
42153	Carbon disulfide	078
42215	Chlorine	007
42242	Mercury (vapor)	003
42269	Total sulfur	007

Parameter	Description	Standard _Unit
42301	Hydrobromic acid	001
42302	Hydrochloric acid	001
42303	Hydrofluoric acid	001
42304	Hydronium ion	001
42305	Nitric acid	001
42306	Sulfuric acid	001
42307	Phosphoric acid	001
42308	Nitrous acid	001
42401	Sulfur dioxide	007
42402	Hydrogen sulfide	007
42406	SO2 max 5-min avg	007
42410	Sulfation rate	080
42513	Fluoride ion	008
42600	Reactive oxides of nitrogen	007
42601	Nitric oxide	007
42602	Nitrogen dioxide	007
42603	Oxides of Nitrogen	007
42604	Ammonia	007
42607	Hydrogen cyanide	007
42609	Nitrite	001
43000	Sum of PAMS target compounds	078
43101	Total hydrocarbons	078
43102	Total NMOC	078
43104	Volatile organic compounds	078
43111	Isomers of dodecane	078
43121	Isomers of pentene	078
43126	Ethylene and acetylene	078
43127	Isobutene and 1-butene	078
43130	n-Octane and trans-1,3-dichloropropylene	078
43131	Unidentified VOC	078
43134	1,1-Bis(4-chlorophenyl)-2,2-dichloroethane	003
43136	2,4-Dichlorophenoxyacetic acid methyl ester	003
43137	Lindane	003

Parameter	Description	Standard _Unit
43138	1,2,3,4,5,6-Hexachlorocyclohexane	003
43139	1,2,3,4,5,6-Hexachlolocyclohexane, .beta.-	003
43140	1,2,3,4,5,6-Hexachlorocyclohexane, .delta.-	003
43141	n-Dodecane	078
43142	Tridecene	078
43143	n-Tridecane	078
43144	Propyne	078
43145	1-Octene	078
43148	cis/trans-2-Butene	078
43149	cis/trans-2-Hexene	078
43150	cis/trans-2-Pentene	078
43151	Heptachlor epoxide	003
43152	Endrin ketone	003
43153	Methoxychlor	003
43154	Guthion	003
43155	Atrazine	003
43156	Dacthal	003
43157	Endosulfan	003
43158	Dursban	003
43159	Aldrin	003
43160	Methyl Parathion	003
43161	Endrin aldehyde	003
43162	1,1,1- Trichloro-2,2-bis (p-chlorophenyl) ethane	003
43163	Endosulfan 2	003
43164	Endrin	003
43165	Dieldrin	003
43166	1,1-Dichloroethenylidene bis(4-Chlorobenzene)	003
43167	Phosphorotrithioic acid,S,S,S-tributylester	003
43168	Endosulfan sulfate	003
43169	Malathion	003
43170	Heptachlor	003
43171	Cyclopentane and 2,3-dimethylbutane	078

Parameter	Description	Standard _Unit
43172	2-Methylheptane and 3-Methylheptane	078
43173	1-Hexene and 2-Methyl-1-pentene	101
43174	2,3-Dimethylbutane and 2-Methylpentane	078
43175	Endosulfan 1 (alpha)	003
43188	Pinene and p-ethytoluene	078
43189	beta.Pinene and 1,2,3-trimethylbenzene	078
43201	Methane	078
43202	Ethane	078
43203	Ethylene	078
43204	Propane	078
43205	Propylene	078
43206	Acetylene	078
43207	Freon 113	078
43208	Freon 114	078
43209	Ethyl acetate	078
43212	n-Butane	078
43214	Isobutane	078
43216	trans-2-Butene	078
43217	cis-2-Butene	078
43218	1,3-Butadiene	078
43220	n-Pentane	078
43221	Isopentane	078
43222	2,2-Dimethylpropane	078
43223	1,2-Butadiene	078
43224	1-Pentene	078
43225	2-Methyl-1-butene	078
43226	trans-2-Pentene	078
43227	cis-2-Pentene	078
43228	2-Methyl-2-butene	078
43229	1,3-Hexadiene	078
43230	3-Methylpentane	078
43231	n-Hexane	078
43232	n-Heptane	078
43233	n-Octane	078
43234	4-Methyl-1-pentene	078
43235	n-Nonane	078

Parameter	Description	Standard _Unit
43236	2-Ethyl-1-butene	078
43237	2-Methyl-2-pentene	078
43238	n-Decane	078
43241	2,3-Dimethyl-2-pentene	078
43242	Cyclopentane	078
43243	Isoprene	078
43244	2,2-Dimethylbutane	078
43245	1-Hexene	078
43246	2-Methyl-1-pentene	078
43247	2,4-Dimethylpentane	078
43248	Cyclohexane	078
43249	3-Methylhexane	078
43250	2,2,4-Trimethylpentane	078
43251	Cyclopropane	078
43252	2,3,4-Trimethylpentane	078
43253	3-Methylheptane	078
43254	cis-3-Hexene	078
43255	Limonene	078
43256	alpha.-Pinene	078
43257	beta.-Pinene	078
43259	n-Tetradecane	078
43260	n-Pentadecane	078
43261	Methylcyclohexane	078
43262	Methylcyclopentane	078
43263	2-Methylhexane	078
43264	Heptane	078
43269	Cyclohexene	078
43270	Isobutene	078
43274	2,4,4-Trimethyl-1-pentene	078
43275	2,4,4-Trimethyl-2-pentene	078
43279	1-Nonene	078
43280	1-Butene	078
43282	3-Methyl-1-butene	078
43283	Cyclopentene	078
43284	2,3-Dimethylbutane	078
43285	2-Methylpentane	078
43286	cis-4-Methyl-2-pentene	078
43289	trans-2-Hexene	078

Parameter	Description	Standard _Unit
43290	cis-2-Hexene	078
43291	2,3-Dimethylpentane	078
43292	2-2-3-Trimethylpentane	078
43293	2,4-Dimethylhexane	078
43294	2,3-Dimethylhexane	078
43295	3-Ethylhexane	078
43296	Ethylcyclohexane	078
43298	1-Decene	078
43299	1-Undecene	078
43301	Methanol	078
43302	Ethyl alcohol	078
43303	n-Propyl alcohol	078
43305	n-Butyl alcohol	078
43307	n-Amyl alcohol	078
43312	2-Proponol	078
43323	n-Pinene and benzaldehyde	078
43328	1-Heptene	078
43329	Butyraldehyde and isobutyraldehyde	078
43330	Dodecene	078
43331	2-Chloropentane	078
43335	3-Chloropropene	078
43339	Butryl-aldehyde & methyl ethyl ketone	078
43340	Ethyne and isobutane	078
43341	Isopentane and cyclopentane	078
43342	3-Methyl-1-butene and cyclopentene	078
43343	2-Methyl-2-butene and 1-pentene	078
43344	1-Hexanol	078
43346	Methylcyclopentane and 2,4-dimethylpentane	078
43347	2-Methylhexane and cyclohexane	078
43348	n-Decane and 1,2,4-trimethylbenzene	078
43349	cis-2-Pentene and 2-methylpentane	078

Parameter	Description	Standard _Unit
43352	Dichloroethyl ether	078
43356	Diethylene glycol	078
43359	Chlorodifluoromethane	078
43362	2-Methylhexane and 2,3-dimethylpentane	078
43363	1,2,4-Trimethylbenzene and sec-butylbenzene	078
43364	1,2,4-Trimethylbenzene and .beta.-pinene	078
43372	Methyl tert-butyl ether	078
43373	Tert-amyl methyl ether	078
43375	2,2-Dimethylheptane	078
43376	2,2,4-Trimethylhexane	078
43378	1-Methylcyclohexene	078
43379	m(and p)-Ethyltoluene	078
43391	4-Methylpentene and 3-methylpentene	078
43392	2,2,3-Trimethylbutane	078
43393	cis-1,2-Dimethylcyclopentane	078
43394	trans-1,3-Dimethylcyclopentane	078
43395	4-Methylheptane	078
43396	tert-Butyl ethyl ether	078
43434	n-Propyl acetate	078
43438	Ethyl acrylate	078
43440	n-Butyl acrylate	078
43441	Methyl methacrylate	078
43447	Vinyl acetate	078
43501	Aldehydes	078
43502	Formaldehyde	078
43503	Acetaldehyde	078
43504	Propionaldehyde	078
43505	Acrolein	078
43510	Butyraldehyde	078
43512	Isobutyraldehyde	078
43513	Isovaleraldehyde	078
43514	Butyl acetate	078
43515	Methacrolein	078
43516	Trans-Crotonaldehyde	078
43517	Hexanaldehyde	078

Parameter	Description	Standard _Unit
43518	Valeraldehyde	078
43520	cis-Crotonaldehyde	078
43521	Decanal	078
43522	Dodecanal	078
43523	Tetradecanal	078
43524	Nonanal	078
43525	Octanal	078
43526	Tridecanal	078
43527	Undecanal	078
43528	Crotonaldehyde	078
43549	Methyl ethyl ketone and methacrolein	078
43551	Acetone	078
43552	Methyl ethyl ketone	078
43553	3-Pentanone	078
43557	3-Hexanone	078
43558	Methyl Vinyl Ketone	078
43559	Methyl Butyl Ketone	078
43560	Methyl isobutyl ketone	078
43562	2-Pentanone	078
43563	3-Heptanone	078
43564	2-Methyl-3-hexanone	078
43599	Ethane and acetylene	078
43601	Ethylene oxide	078
43602	Propylene oxide	078
43702	Acetonitrile	078
43704	Acrylonitrile	078
43756	2-Nitropropane	078
43776	Radon	130
43800	Total chlorinated hydrocarbons	078
43801	Chloromethane	078
43802	Dichloromethane	078
43803	Chloroform	078
43804	Carbon tetrachloride	078
43805	Dibromomethane	078
43806	Bromoform	078
43808	Methyl Iodide	078
43811	Trichlorofluoromethane	078
43812	Chloroethane	078

Parameter	Description	Standard _Unit
43813	1,1-Dichloroethane	078
43814	Methyl chloroform	078
43815	Ethylene dichloride	078
43817	Tetrachloroethylene	078
43818	1,1,2,2-Tetrachloroethane	078
43819	Bromomethane	078
43820	1,1,2-Trichloroethane	078
43821	1,1,2-Trichloro-1,2,2-trifluoroethane	078
43823	Dichlorodifluoromethane	078
43824	Trichloroethylene	078
43825	2,2-Dichloro-1,1,1-trifluoroethane	078
43826	1,1-Dichloroethylene	078
43828	Bromodichloromethane	078
43829	1,2-Dichloropropane	078
43830	trans-1,3-Dichloropropylene	078
43831	cis-1,3-Dichloropropylene	078
43832	Dibromochloromethane	078
43833	2-Chloroethyl vinyl ether	078
43835	Chloroprene	078
43836	Bromochloromethane	078
43837	1,1,1,2-Tetrachloroethane	078
43838	trans-1,2-Dichlororthylene	078
43839	cis-1,2-Dichloroethene	078
43840	1,2-Dichloroethene(total)	078
43841	1,3-Dichloropropene(total)	078
43843	Ethylene dibromide	078
43844	Hexachlorobutadiene	078
43847	1,4-Dichlorobutane	078
43848	Halocarbon 134a	078
43849	Freon 23	078
43851	Trichlorotrifluoroethane	078

Parameter	Description	Standard _Unit
43852	Dichlorotetrafluoroethane	078
43860	Vinyl chloride	078
43861	Vinyl bromide	078
43862	Ethyl bromide	078
43863	3-Bromopropene	078
43901	Methyl mercaptan	078
43911	Total reduced sulfur	007
43950	Heptanal	078
43952	Indan	078
43954	n-Undecane	078
43955	2,5-Dimethylhexane	078
43960	2-Methylheptane	078
44101	Total Oxidants	007
44201	Ozone	007
44301	Peroxyactyl nitrate	008
45102	Xylene(s)	078
45104	Isomers of ethyltoluene	078
45109	m/p Xylene	078
45110	Styrene and o-xylene	078
45111	m(and p)-Xylene and bromoform	078
45112	o-Xylene and 1,1,2,2-tetrachloroethane	078
45115	Benzene and 1,2-dichloroethane	078
45116	m/p Ethyltoluene	078
45140	O-xylene & N-nonane	078
45201	Benzene	078
45202	Toluene	078
45203	Ethylbenzene	078
45204	o-Xylene	078
45205	m-Xylene	078
45206	p-Xylene	078
45207	1,3,5-Trimethylbenzene	078
45208	1,2,4-Trimethylbenzene	078
45209	n-Propylbenzene	078
45210	Isopropylbenzene	078
45211	o-Ethyltoluene	078
45212	m-Ethyltoluene	078

Parameter	Description	Standard _Unit
45213	p-Ethyltoluene	078
45216	sec-Butylbenzene	078
45217	o-Diethylbenzene	078
45218	m-Diethylbenzene	078
45219	p-Diethylbenzene	078
45220	Styrene	078
45221	Benzene,(1-methylethenyl)-	078
45225	1,2,3-Trimethylbenzene	078
45228	Benzene, 1-ethenyl-4-mehtyl	078
45230	p-tert-butyl toluene	078
45231	1,2,4,5-Tetramethylbenzene	078
45232	Butylbenzene	078
45233	Butyl benzene	078
45234	n-Hexylbenzene	078
45300	Phenol	078
45301	Biphenyl	003
45501	Benzaldehyde	078
45503	2,5-Dimethylbenzaldehyde	078
45504	Tolualdehydes	078
45505	o-Tolualdehyde	078
45506	m(and p)-Tolualdehyde	078
45507	p-Tolualdehyde	078
45508	m-Tolualdehyde	078
45705	Nitrobenzene	078
45801	Chlorobenzene	078
45805	1,2-Dichlorobenzene	078
45806	1,3-Dichlorobenzene	078
45807	1,4-Dichlorobenzene	078
45808	Bromofluorobenzene	078
45809	Benzyl chloride	078
45810	1,2,4-Trichlorobenzene	078
45815	Benzene, 1,2,3-trichloro-	078
45820	4-Chloro-3-methylphenol	
46201	1,4-Dioxane	078
46401	Furan, tetrahydro-	078

Parameter	Description	Standard _Unit
61101	Wind speed	013
61102	Wind Direction	014
61103	Resultant Speed	013
61104	Resultant Direction	014
61105	Peak Wind Gust	013
61106	Std Dev Hz Wind Direction	014
61107	Std Dev Vt Wind Direction	014
61109	Vertical Wind Speed	013
61110	Std Dev Vt Wind Speed	013
61111	Std Dev Hz Wind Speed	013
61112	Vert Wind Direction	014
61120	Atmospheric Stability	085
61202	Lapse Rate	028
61301	Mixing Height	058
61302	Mixing Speed	011
62101	Outdoor Temperature	015
62102	Virtual Temperature	015
62103	Dew Point	015
62104	Temperature 24-Hr Max	015
62105	Temperature 24-Hr Min	015
62106	Temperature Difference	015
62107	Indoor Temperature	015
62108	Soil Temperature	015
62201	Relative Humidity	019
62202	Relative Humidity Factor	019
62604	Ammonia (precip)	062
63101	VISIBILITY	024
63102	Light Absorption Coeffiecient	122
63301	Solar radiation	025
63302	Ultraviolet radiation	025
63303	Infrared Radiation	025
63304	Ultraviolet radiation (type B)	079
63305	Net radiation	025
64101	Barometric pressure	016

Parameter	Description	Standard _Unit
65101	Rain 24hr total	021
65102	Rain/melt precipitation	021
65105	Beryllium (precip)	062
65107	Barium (precip)	062
65112	Chromium (Precip)	062
65113	Cobalt (precip)	062
65134	Molybdenum (precip)	062
65152	Phosphorus (precip)	062
65164	Vanadium (precip)	062
65166	Silver (precip)	062
65173	Thallium (precip)	062
65190	Boron (precip)	062
65301	Volume (precipitation)	029
65302	PH (precip)	061
65303	Conductivity (precip)	069
65305	Radioactivity rainfall	030
65306	Strong Acids (precip)	062
65311	Sodium (precip)	062
65312	Potassium (precip)	062
65313	Magnesium (precip)	062
65314	Calcium (precip)	062
65315	Fluoride (precip)	062
65316	Chloride (precip)	062
65318	Ammonium (precip)	062
65321	Nitrate (precip)	062
65322	Sulfate (precip)	062
65329	Mercury (precip)	115
65330	Acidity (precip)	112
65331	Alkalinity (precip)	067
65332	Cadmium (precip)	096
65333	Copper(precip)	062
65334	Iron (precip)	062
65335	Manganese (precip)	062
65336	Nickel (precip)	062
65337	Lead (precip)	096
65338	Zinc (precip)	096
65339	Arsenic (precip)	096
65342	Aluminum (precip)	062
65343	Nitrite (precip)	062

Parameter	Description	Standard _Unit
65344	Antimony (precip)	062
65401	Dry deposition	100
65429	Mercury (deposition)	004
65551	Silica (precip)	062
66101	Cloud cover	039
68101	Sample Flow Rate- CV	107
68102	Sample Volume	065
68103	Ambient Min Temperature	017
68104	Ambient Max Temperature	017
68105	Ambient Avg Temperature	017
68106	Sample Min Baro Pressure	059
68107	Sample Max Baro Pressure	059
68108	Sample Avg Baro Pressure	059
68109	Elapsed Sample Time	106
68110	Relative Humidity	019
72101	Silver tarnishing	051
72201	Steel corrosion	056
72301	Dyed fabric #1	055
72302	Dyed fabric #2	055
72303	Dyed fabric #3	055
72304	Dyed fabric #4	055
72305	Dyed fabric #5	055
72306	Dyed fabric #6	055
72307	Dyed fabric #7	055
72308	Dyed fabric #8	055
72309	Dyed fabric #9	055
72401	Rubber cracking	052
72501	Nylon deterioration	053
81101	Size fractionated particulate	001
81102	PM10 Total 0-10um STP	001
81103	PM 10-2.5 STP	001
81104	PM2.5 STP	001
82101	Aluminum PM10 STP	001
82102	Antimony PM10 STP	001

Parameter	Description	Standard _Unit
82103	Arsenic PM10 STP	001
82105	Beryllium PM10 STP	001
82107	Barium PM10 STP	001
82109	Bromide PM10 STP	001
82110	Cadmium PM10 STP	001
82111	Calcium PM10 STP	001
82112	Chromium PM10 STP	001
82113	Cobalt PM10 STP	001
82114	Copper PM10 STP	001
82115	Chlorine PM10 STP	001
82116	Total Carbon PM10 STP	001
82119	Chromium VI PM10 STP	001
82124	Gallium PM10 STP	001
82126	Iron PM10 STP	001
82127	Palladium PM10 STP	001
82128	Lead PM10 STP	001
82131	Indium PM10 STP	001
82132	Manganese PM10 STP	001
82134	Molybdenum PM10 STP	001
82136	Nickel PM10 STP	001
82140	Magnesium PM10 STP	001
82142	Mercury PM10 STP	001
82146	Lanthanum PM10 STP	001
82151	Dibenz(A-H)Anthracene PM10 STP	001
82152	Phosphorus PM10 STP	001
82154	Selenium PM10 STP	001
82160	Tin PM10 STP	001
82161	Titanium PM10 STP	001
82164	Vanadium PM10 STP	001
82165	Silicon PM10 STP	001
82166	Silver PM10 STP	001
82167	Zinc PM10 STP	001
82168	Strontium PM10 STP	001
82169	Sulfur PM10 STP	001
82173	Thallium PM10 STP	001
82176	Rubidium PM10 STP	001

Parameter	Description	Standard _Unit
82179	Uranium PM10 STP	001
82180	Potassium PM10 STP	001
82183	Yttrium PM10 STP	001
82184	Sodium PM10 STP	001
82185	Zirconium PM10 STP	001
82190	Boron PM10 STP	001
82202	Fluoride PM10 STP	001
82203	Chloride PM10 STP	001
82220	Benzo(b)Fluranthene PM10 STP	001
82223	Benzo(k)Fluoranthene PM10 STP	001
82237	Benzo(g,h,i)Perylene PM10 STP	001
82242	Benzo(a)Pyrene PM10 STP	001
82243	Indeno[1,2,3-cd] pyrene PM10 STP	001
82301	Ammonium PM10 STP	001
82305	Organic carbon PM10 STP	001
82306	Nitrate PM10 STP	001
82307	Elemental Carbon PM10 STP	001
82403	Sulfate PM10 STP	001
82453	Sulfate PM2.5 STP	001
82551	Silica PM10 STP	001
83101	Aluminum PM10-2.5 STP	001
83102	Antimony PM10-2.5 STP	001
83103	Arsenic PM10-2.5 STP	001
83107	Barium PM10-2.5 STP	001
83109	Bromine (PM10-2.5 STP	001
83110	Cadmium PM10-2.5 STP	001
83111	Calcium PM10-2.5 STP)	001
83112	Chromium PM10-2.5 STP	001
83113	Cobalt PM10-2.5 STP	001
83114	Copper PM10-2.5 STP	001

Parameter	Description	Standard _Unit
83115	Chlorine PM10-2.5 STP	001
83126	Iron PM10-2.5 STP	001
83128	Lead PM10-2.5 STP	001
83132	Manganese PM10-2.5 STP	001
83134	Molybdenum PM10-2.5 STP	001
83136	Nickel PM10-2.5 STP	001
83142	Mercury PM10-2.5 STP	001
83152	Phosphorus PM10-2.5 STP	001
83154	Selenium PM10-2.5 STP	001
83160	Tin PM10-2.5 STP	001
83161	Titanium PM10-2.5 STP	001
83164	Vanadium PM10-2.5 STP	001
83165	Silicon PM10-2.5 STP	001
83167	Zinc PM10-2.5 STP	001
83168	Strontium PM10-2.5 STP	001
83169	Sulfur PM10-2.5 STP	001
83176	Rubidium PM10-2.5 STP	001
83179	Uranium PM10-2.5 STP	001
83180	Potassium PM10-2.5 STP	001
83183	Yttrium PM10-2.5 STP	001
83185	Zirconium PM10-2.5 STP	001
84101	Aluminum PM2.5 STP	001
84102	Antimony PM2.5 STP	001
84103	Arsenic PM2.5 STP	001
84107	Barium PM2.5 STP	001
84109	Bromine PM2.5 STP	001
84110	Cadmium PM2.5 STP	001
84111	Calcium PM2.5 STP	001
84112	Chromium PM2.5 STP	001
84113	Cobalt PM2.5 STP	001
84114	Copper PM2.5 STP	001

Parameter	Description	Standard _Unit
84115	Chlorine PM2.5 STP	001
84126	Iron PM2.5 STP	001
84128	Lead PM2.5 STP	001
84132	Manganese PM2.5 STP	001
84134	Molybdenum PM2.5 STP	001
84136	Nickel PM2.5 STP	001
84140	Magnesium PM2.5 STP	001
84142	Mercury PM2.5 STP	001
84152	Phosphorus PM2.5 STP	001
84154	Selenium PM2.5 STP	001
84160	Tin PM2.5 STP	001
84161	Titanium PM2.5 STP	001
84164	Vanadium PM2.5 STP	001
84165	Silicon PM2.5 STP	001
84167	Zinc PM2.5 STP	001
84168	Strontium PM2.5 STP	001
84169	Sulfur PM2.5 STP	001
84176	Rubidium PM2.5 STP	001
84179	Uranium PM2.5 STP	001
84180	Potassium PM2.5 STP	001
84183	Yttrium PM2.5 STP	001
84184	Sodium PM2.5 STP	001
84185	Zirconium PM2.5 STP	001
84203	Chloride PM2.5 STP	001
84306	Nitrate PM2.5 STP	001
84313	Black carbon PM2.5 STP	001
84314	UV Carbon PM2.5 STP	001
84403	Sulfate PM2.5 STP	001
85101	PM10 - LC	105
85102	Antimony PM10 LC	105
85103	Arsenic PM10 LC	105
85104	Aluminum PM10 LC	105
85105	Beryllium PM10 LC	105
85107	Barium PM10 LC	105
85109	Bromine PM10 LC	105
85110	Cadmium PM10 LC	105

Parameter	Description	Standard _Unit
85111	Calcium PM10 LC	105
85112	Chromium PM10 LC	105
85113	Cobalt PM10 LC	105
85114	Copper PM10 LC	105
85115	Chlorine PM10 LC	105
85119	Chromium VI PM10 LC	105
85126	Iron PM10 LC	105
85128	Lead PM10 LC	105
85132	Manganese PM10 LC	105
85134	Molybdenum PM10 LC	105
85136	Nickel PM10 LC	105
85140	Magnesium PM10 LC	105
85142	Mercury PM10 LC	105
85152	Phosphorus PM10 LC	105
85154	Selenium PM10 LC	105
85160	Tin PM10 LC	105
85161	Titanium PM10 LC	105
85164	Vanadium PM10 LC	105
85165	Silicon PM10 LC	105
85166	Silver PM10 LC	105
85167	Zinc PM10 LC	105
85168	Strontium PM10 LC	105
85169	Sulfur PM10 LC	105
85173	Thallium PM10 LC	105
85176	Rubidium PM10 LC	105
85179	Uranium PM10 LC	105
85180	Potassium PM10 LC	105
85183	Yttrium PM10 LC	105
85184	Sodium PM10 LC	105
85185	Zirconium PM10 LC	105
85551	Silica PM10 LC	105
86101	PM10-2.5 - Local Conditions	105
86502	Acceptable PM10-2.5 - Local Conditions	105
88101	PM2.5 - Local Conditions	105
88102	Antimony PM2.5 LC	105
88103	Arsenic PM2.5 LC	105
88104	Aluminum PM2.5 LC	105

Parameter	Description	Standard _Unit
88105	Beryllium PM2.5 LC	105
88107	Barium PM2.5 LC	105
88109	Bromine PM2.5 LC	105
88110	Cadmium PM2.5 LC	105
88111	Calcium PM2.5 LC	105
88112	Chromium PM2.5 LC	105
88113	Cobalt PM2.5 LC	105
88114	Copper PM2.5 LC	105
88115	Chlorine PM2.5 LC	105
88117	Cerium PM2.5 LC	105
88118	Cesium PM2.5 LC	105
88119	Chromium VI PM2.5 LC	105
88121	Europium PM2.5 LC	105
88124	Gallium PM2.5 LC	105
88126	Iron PM2.5 LC	105
88127	Hafnium PM2.5 LC	105
88128	Lead PM2.5 LC	105
88131	Indium PM2.5 LC	105
88132	Manganese PM2.5 LC	105
88133	Iridium PM2.5 LC	105
88134	Molybdenum PM2.5 LC	105
88136	Nickel PM2.5 LC	105
88140	Magnesium PM2.5 LC	105
88142	Mercury PM2.5 LC	105
88143	Gold PM2.5 LC	105
88146	Lanthanum PM2.5 LC	105
88147	Niobium PM2.5 LC	105
88152	Phosphorus PM2.5 LC	105
88154	Selenium PM2.5 LC	105
88160	Tin PM2.5 LC	105
88161	Titanium PM2.5 LC	105
88162	Samarium PM2.5 LC	105
88163	Scandium PM2.5 LC	105
88164	Vanadium PM2.5 LC	105
88165	Silicon PM2.5 LC	105
88166	Silver PM2.5 LC	105
88167	Zinc PM2.5 LC	105
88168	Strontium PM2.5 LC	105
88169	Sulfur PM2.5 LC	105

Parameter	Description	Standard _Unit
88170	Tantalum PM2.5 LC	105
88172	Terbium PM2.5 LC	105
88173	Thallium PM2.5 LC	105
88176	Rubidium PM2.5 LC	105
88179	Uranium PM2.5 LC	105
88180	Potassium PM2.5 LC	105
88183	Yttrium PM2.5 LC	105
88184	Sodium PM2.5 LC	105
88185	Zirconium PM2.5 LC	105
88186	Tungsten PM2.5 LC	105
88203	Chloride PM2.5 LC	105
88301	Ammonium Ion PM2.5 LC	105
88302	Sodium Ion Pm2.5 LC	105
88303	Potassium Ion PM2.5 LC	105
88304	OCX Carbon PM2.5 LC	105
88305	OC CSN Unadjusted PM2.5 LC TOT	105
88306	Total Nitrate PM2.5 LC	105
88307	EC CSN PM2.5 LC TOT	105
88308	Carbonate Carbon CSN PM2.5 LC TOT	105
88309	Volatile Nitrate PM2.5 LC	105
88310	Non-volatile Nitrate PM2.5 LC	105
88311	OCX2 Carbon PM2.5 LC	105
88312	Total Carbon PM2.5 LC	105
88313	Black Carbon PM2.5 LC	105
88314	UV Carbon PM2.5 LC	105
88320	OC PM2.5 LC TOR	105
88321	EC PM2.5 LC TOR	105
88322	OCH PM2.5 LC TOT	105
88323	EH IMPROVE PM2.5 LC	105
88324	OC1 PM2.5 LC	105
88325	OC2 PM2.5 LC	105
88326	OC3 PM2.5 LC	105

Parameter	Description	Standard _Unit
88327	OC4 PM2.5 LC	105
88328	OP PM2.5 LC TOR	105
88329	EC1 PM2.5 LC	105
88330	EC2 PM2.5 LC	105
88331	EC3 PM2.5 LC	105
88332	OC1 CSN Unadjusted PM2.5 LC TOT	105
88333	OC2 CSN Unadjusted PM2.5 LC TOT	105
88334	OC3 CSN Unadjusted PM2.5 LC TOT	105
88335	OC4 CSN Unadjusted PM2.5 LC TOT	105
88336	OP CSN PM2.5 LC TOT	105
88337	Hydrogen PM2.5 LC	105
88338	Nitrite PM2.5 LC	105
88339	Ammonium Sulfate PM2.5 LC	105
88340	Ammonium Sulfate Extinction PM2.5 LC	124
88341	Aerosol Extinction PM2.5 LC	124
88342	Coarse Mass Extinction PM2.5 LC	124
88343	Elemental Carbon Extinction PM2.5 LC	124
88344	Ammonium Nitrate PM2.5 LC	105
88345	Ammonium Nitrate Extinction PM2.5 LC	124
88346	Organic Carbon Extinction PM2.5 LC	124
88347	Particle Light Scatter	124
88348	Soil PM2.5 LC	105
88349	Soil Extinction PM2.5 LC	124
88350	Organic Carbon Mass PM2.5 LC	105
88355	OC CSN_Rev Unadjusted PM2.5 LC TOT	105
88357	EC CSN_Rev Unadjusted PM2.5 LC TOT	105

Parameter	Description	Standard _Unit
88370	OC CSN_Rev Unadjusted PM2.5 LC TOR	105
88374	OC1 CSN_Rev Unadjusted PM2.5 LC	105
88375	OC2 CSN_Rev Unadjusted PM2.5 LC	105
88376	OC3 CSN_Rev Unadjusted PM2.5 LC	105
88377	OC4 CSN_Rev Unadjusted PM2.5 LC	105
88378	OP CSN_Rev Unadjusted PM2.5 LC TOR	105
88379	OP PM2.5 LC TOT	105
88380	EC CSN_Rev Unadjusted PM2.5 LC TOR	105
88381	EC PM2.5 LC TOT	105
88382	OC PM2.5 LC TOT	105
88383	EC1 CSN_Rev Unadjusted PM2.5 LC	105
88384	EC2 CSN_Rev Unadjusted PM2.5 LC	105
88385	EC3 CSN_Rev Unadjusted PM2.5 LC	105
88388	OP CSN_Rev Unadjusted PM2.5 LC TOT	105
88390	Levoglucosan PM2.5 LC	105
88391	Mannosan PM2.5 LC	105
88392	Galactosan PM2.5 LC	105
88401	Reconstructed Mass PM2.5 LC	105
88403	Sulfate PM2.5 LC	105
88500	PM2.5 Total Atmospheric	105
88501	PM2.5 Raw Data	105
88502	Acceptable PM2.5 AQI & Speciation Mass	105
88503	PM2.5 Volatile Channel	105
92142	Mercury compounds	003

Table 6. Unit identification codes.

Unit	Description
001	Micrograms/cubic meter (25°C)
002	Micrograms/cubic meter (0°C)
003	Nanograms/cubic meter (25°C)
004	Nanograms/cubic meter (0°C)
005	Milligrams/cubic meter (25°C)
006	Milligrams/cubic meter (0°C)
007	Parts per million
008	Parts per billion
009	COHS/1,000 linear feet
010	RUDS/10,000 linear feet
011	Meters/second
012	Miles/hour
013	Knots
014	Degrees Compass
015	Degrees Fahrenheit
016	Millibars
017	Degrees Centigrade
018	Langleys
019	Percent relative humidity
020	Microns
021	Inches (rainfall)
022	Inches (mercury)
023	Mcal/sq cm/min
024	Miles (visibility)
025	Langleys/minute
026	Degrees Rankine
027	Beta Scatter
028	Degrees Centigrade/100m
029	Millimeters (rainfall)
030	Picocuries/cubic meter
031	Microcuries/cubic meter
032	Picocuries/sq meter
033	Microcuries/square meter
034	Picocuries/cubic centimeter
035	Microcuries/cubic centimeter
036	Calories/sq centimeter/hour
037	Degrees Kelvin
038	10,000 Fibers/cubic meter
039	Tenths of sky cover

Unit	Description
040	Parts per 100 million
041	MG S03/100 sq cm/month
043	RUS/1,000 linear ft
044	µg/sq mile/month
045	Tons/sq mile/day
046	Grams/sq meter/day
047	µg/sq meter/day
048	1000 Particles/sq inch
049	100 Particles/sq inch
050	Number threshold levels
051	% Loss in reflectance/ month
052	Microns/week
053	# Defects/7.7 sq inches/month
054	Particles/sq millimeter/week
055	NBS color difference units
056	Microns/year
057	Condensation nuclei/cu centimeter
058	Meters
059	Millimeters (mercury)
060	Kilometers/hour
061	pH Units
062	Milligrams/liter
063	Micrograms/liter
064	Micrograms/milliliter
065	Cubic meter
066	Millisiemens/meter
067	Microequivalence/liter
068	Millisiemens/centimeter
069	Microsiemens/centimeter
070	Mg F/100 sq cm/day
071	µg F/100 sq cm/day
072	Cubic feet/minute
073	liters/minute STP
074	Pg/cubic meter(25 C)
075	Micromoles/liter
076	Liters
077	Micrograms
078	Parts per billion Carbon
079	Watts/sq meter

Unit	Description
080	Mg S03/100 sq cm/day
081	µg S02/sq cm/day
082	µg S02/sq meter/day
083	Cubic meters/minute STP
084	Micrograms/gram
085	Pasquill-Gifford stability class
086	Kilometers (visibility
087	Parts per ten million
088	Ccal/sq cm/minute
089	Mg/sq meter/hour
090	Tons/sq mile/month
091	Mg/sq cm/month
092	µg/sq meter/month
093	Grams/sq meter/month

Unit	Description
094	Pounds/sq mile/month
095	Mg/sq meter/week
096	µg/sq meter/hour
097	µg/sq cm/30 days
098	Mg S04/sq cm/30 days
099	Mg/sq cm/30 days
100	Percent hours with precip
101	Parts per million Carbon
102	Parts per billion - Mole
103	Parts per ten million Carbon
104	Parts per 100 million Carbon
105	Micrograms/cubic meter (LC)
106	Minutes
107	Percent

Table 7. AirNow quality control (QC) codes.

QC Code	Definition
0	Valid
1	Adjusted
2	Averaged
3	Interpolated
4	Estimated
5	Suspect
6	Suspect (audit failure)
7	Insufficient data
8	Missing
9	Invalid

Table 8. Measurement performance characteristics (MPC).

MPC	Abreviation	Definition	Description
1	MDL	Method Detection Limit	EPA defines the method detection limit as "the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte."
2	XC	Critical Value	Threshold above which a measurement result is unlikely to result from a true value of zero
3	XD	Minimum Detectable Value	The measure of inherent detection capability of a measurement process.
4	XQ	Minimum Quantifiable Value	The measure of the quantification capability of a measurement process. This value indicates the level at which the measurement process has a relative standard deviation of 0.1.

Table 9. Agency codes. International codes have not yet been added.

Code	Name
AL1	Alabama Department of Environmental Management
AL2	Jefferson County Department of Health
CA1	Sacramento Metro. AQMD
CT1	Connecticut Dept. of Environmental Protection
DC1	District of Columbia - Department of the Environment
DC2	Metropolitan Washington COG
DMC	Data Management Center
DE1	Delaware Dept. of Natural Resources and Environment
ESC	ESC Dataloggers
FL1	Florida Dept. of Environmental Protection
FL2	Broward County Air Quality Division
FL3	City of Jacksonville - Environmental Quality Division
FL4	Hillsborough County - Tampa
FL5	Pinellas County
IA1	Iowa DNR
IA2	Polk Co. Air Quality Division
IA3	Linn Co. Public Health
IL1	Illinois EPA
IN1	Indiana Dept. of Environmental Management
IN2	Indianapolis OES
KS1	Kansas Dept. of Health and Environment
KY1	Kentucky DEP
KY2	Louisville Metro Air Pollution Control District
LA1	Louisiana Department of Environmental Quality
MA1	Massachusetts Dept. of Environmental Protection
MD1	Maryland Department of Environment
ME1	Maine Dept. of Environmental Protection
MI1	Michigan DEQ
MN1	Minnesota Pollution Control Agency
MO1	Missouri Department of Natural Resources
MS1	Mississippi DEQ
NC1	North Carolina DENR - Division of Air Quality
NC2	Mecklenburg County Air Quality
NC3	Forsyth County Environmental Affairs Dept.
NC4	West North Carolina Regional Air Pollution Agency
NH1	New Hampshire Dept. of Environmental Services
NJ1	New Jersey Dept. of Environmental Protection
NY1	New York Dept. of Environmental Conservation
OH1	Ohio EPA-DAPC

Code	Name
PA1	Pennsylvania Dept. of Environmental Protection
PA2	Philadelphia Air Management Services
PA3	Allegheny County
RI1	Rhode Island Dept. of Environmental Management
SC1	South Carolina DHEC
TN1	Tennessee Air Pollution Control Division
TN2	Davidson County PCD
TN4	Knox County Dept. of Air Quality Management
AL3	Tennessee Valley Authority RSOE
TX1	Texas Commission on Environmental Quality
VA1	Virginia Dept. of Environmental Quality
VT1	Vermont Air Pollution Control Division
WI1	Wisconsin Dept. of Natural Resources
WV1	West Virginia Division of Air Quality
AR1	Arkansas Dept. of Environmental Quality
WA1	Washington Department of Ecology
CN1	Environment Canada
NL1	Newfoundland & Labrador DEC
PE1	Canada-Prince Edward Island1
NS1	Canada-Nova Scotia1
NB1	Canada-New Brunswick1
QC2	Canada-Quebec2
US1	United States1
QC1	Canada-Quebec1
QC3	Canada-Quebec3
AZ3	Pima County Department of Environmental Quality
NV1	Clark County Department of Air Quality Management
TN5	Chattanooga-Hamilton County Air Pollution Control Bureau
OK1	Oklahoma Department of Environmental Quality
TN3	Memphis and Shelby County Health Department
OR1	Oregon Dept. of Environmental Quality
CK1	Cherokee Nation
HI1	Hawaii State Dept. of Health
GA1	Georgia Department of Natural Resources
CA5	Ventura County APCD
CA3	South Coast AQMD
AZ2	Maricopa County Air Quality Department
NV2	Washoe County District Health Dept. - Reno
CA2	San Francisco Bay Area AQMD
NP1	National Park Service
ID1	Idaho Department of Environmental Quality

Code	Name
NM1	New Mexico Air Quality Bureau
CA6	San Joaquin Valley Unified APCD
CA4	San Diego APCD
CA7	Mojave Desert AQMD
CO1	Colorado Department of Public Health and Environment
NM2	Albuquerque Environmental Health Department
BC2	Greater Vancouver Regional District
UT1	Utah Department of Environmental Quality
LA2	Louisiana DEQ - New Orleans
LA3	Louisiana DEQ - Shreveport
OR2	Lane Region Air Pollution Authority
CA8	California Air Resources Board
CA9	Santa Barbara County Air Pollution Control District
AZ1	Arizona Department of Environmental Quality
WV2	West Virginia Division of Air Quality - Wheeling
BC1	British Columbia Ministry of Environment
ON1	Ontario Ministry of the Environment
CN2	Canadian Air and Precipitation Monitoring Network
NP2	National Park Service 2
AL4	Huntsville Natural Resources and Environmental Management
WA4	Northwest Air Pollution Authority
AB1	Environment Canada - Alberta
WT1	Wampanoag Tribe
QT1	Quapaw Tribe
ND1	North Dakota Department of Health
PT1	Ponca Tribe Office of Environmental Management
AC1	Alabama-Coushatta Tribe of Texas
MT1	Montana DEQ
NP3	National Park Service 3
SD1	South Dakota Department of Environmental and Natural Resources
NE1	Nebraska Department of Environmental Quality
FS1	Forest Service
EP1	EPA Region 1
NE2	Douglas County Health Department (Omaha)
AIR	AIRSIS
MM1	Aroostook Band of Micmacs
AK1	State of Alaska DEC
ST1	Sonoma Technology
CN3	Manitoba Conservation Air Quality Section
JP1	Pueblo of Jemez - Department of Resource Protection
FL6	Miami-Dade County Department of Environmental Resources Management

Code	Name
FL7	Orange County Environmental Protection Division
FL8	Palm Beach County Health Department Division of Environmental Science and Engineering
MO2	St. Louis Metropolitan Area (American Lung Association)
MO3	Mid-America Regional Council
OH6	Hamilton County Environmental Services
OH2	Northeast Ohio Areawide Coordinating Agency
OH3	MORPC
GST	Guest
CA0	Imperial County Air Pollution Control District
FL0	City of Lakeland
OAQ	EPA Office of Air Quality Planning and Standards
EBM	Ebams Project
ORD	EPA Office of Research and Development
PLA	Placer County APCD
NOA	NOAA
AMU	Appalachian Mountain Club
WA2	Olympic Region Clean Air Agency
OH4	Regional Air Pollution Control Agency – Dayton
NU1	Northeast States for Coordinated Air Use Management
MAR	Mid-Atlantic Regional Air Management Association
NAS	NASA-EPA
ER9	EPA Region 9 Emergency Responder
LAD	LADCO
WON	Weather or Not, Inc
NY2	New York Dept. of Environmental Conservation – PM2.5
MU1	Millersville University - Department of Meteorology
WA3	Spokane Regional Clean Air Agency
FL9	Sarasota County Environmental Services - Air and Water Quality Protection
OH5	Eastgate Regional Council of Governments
EP2	EPA Region 2
EP3	EPA Region 3
EP4	EPA Region 4
EP5	EPA Region 5
EP6	EPA Region 6
EP7	EPA Region 7
EP8	EPA Region 8
EP9	EPA Region 9
E10	EPA Region 10
EPA	USEPA-RTP
OTH	Other Agency

Code	Name
MX1	Baja California
KY3	Lexington Area Metropolitan Planning Organization
WA5	Puget Sound Clean Air Agency
MDS	MADIS
NOR	New Orleans EBAMS - Weston Solutions
IN3	Evansville EPA - Vanderburgh County Health Dept.
MAH	Massachusetts Department of Public Health
WV3	Eastern Panhandle Clean Air Connection
NY3	New York State Department of Health
DHS	Department of Homeland Security
LNL	Los Alamos National Laboratory
MTC	MACTEC
UTX	University of Texas
SMT	St. Regis Mohawk Tribe
YDP	Ysleta Del Sur Pueblo Tribe
TUL	Tulane University
PDS	Paladin Data Systems
OAP	EPA Office of Atmospheric Programs
UMC	University of Mississippi Medical Center
NGD	National Guard
USC	University of Southern California - Keck School of Medicine
VIC	City of Victoria, Texas
SFN	Sac and Fox Nation
SK1	Saskatchewan Environment
IN4	Indiana Dept. of Environmental Management 2
OH7	Cleveland Division of Air Quality
TRX	Tribal Environmental Exchange Network
DN1	Delaware Nation
SR1	Salt River Pima-Maricopa Indian Community
URI	University of Rhode Island - Center for Atmospheric Chemistry Studies
DU1	Dalhousie University
NGC	Northrop Grumman
CDC	Centers for Disease Control and Prevention
BAT	Battelle
OTC	Ozone Transport Commission
JCE	UMBC - Joint Center for Earth Systems Technology
MO4	Springfield Air Quality Control
MI2	West Michigan Shoreline Regional Development Commission
SM1	Montana/Idaho Airshed Group - SMU
EAC	City of Ottawa - Environmental Advisory Committee
RUT	Rutgers University - Department of Environmental Sciences

Code	Name
KC1	Kern County Air Pollution Contol District
WY1	Wyoming Department of Environmental Quality
OH8	City of Akron
JSU	Jackson State University
UDO	US Department of Agriculture - Portland, OR
CO2	Denver Department of Environmental Health
YS1	Yolo-Solano AQMD
UCD	University of California - Davis
PSU	Plymouth State University
TP1	Taos Pueblo Environmental Office
OHU	Ohio University
PNL	Pacific Northwest National Laboratory
UMD	University of Maryland
CR1	Confederated Tribes of Colville Reservation
NPT	Nez Perce Tribe
WSU	Washington State University
SSA	Science Systems and Applications, Inc.
MAT	Mescalero Apache Tribe
DUK	Children's Environmental Health Initiative - Duke University
SHD	Salt lake City Health Department
PAU	Penn State University Meteorology
AZ4	Pinal County Air Quality Control District
UMA	University of Massachusetts Medical School
UAH	University of Alabama in Huntsville
ASU	Arizona State University - Geographical Sciences
LLL	Lawrence Livermore National Laboratory
NP4	National Park Service 4
LBL	Lawrence Berkeley National Laboratory
NMR	New Media Research Institute
FOR	Foreca Weather
MSU	Michigan State University - Department of Geography
NCR	National Center for Atmospheric Research
GMU	George Mason University - Eastfire Lab
MTO	MeteoCity
PIN	Penobscot Indian Nation
FPA	Fort Peck Assiniboine & Sioux Tribes
YT1	Yurok Tribe
CDA	Coeur d'Alene Tribe
CNC	State Climate Office of North Carolina
CCW	Carson City Weather
UAE	United Arab Emirates University

Code	Name
TPM	T Plus Medical
NAU	Northern Arizona University - Institute for Tribal Environmental Professionals
MIT	Massachusetts Institute of Technology
NAI	NetAlerts Inc.
DPH	California Department of Public Health
WSI	WSI Corporation
GSS	Global Security Services
FMY	Fort McDowell Yavapai Nation
MDA	MDA Federal Inc
TN6	Ozone Action Partnership - NE Tennessee
TN7	Clean Air Partnership of Middle TN
EFT	EnviroFlash Test
NRL	Naval Research Laboratory
CKU	Clarkson University
EEA	European Environment Agency
ARA	Atmospheric Research and Analysis
BUT	Butte County Air Quality Management District
EVT	East Valley Tribune
ELD	El Dorado County AQMD
MEN	Mendocino County AQMD
NCA	North Coast Unified Air Quality Management District
HTB	The Herald-Times Bloomington IN
LAG	City of La Grande
THM	Tahama County Air Pollution Control District
GLC	Glenn County Air Pollution Control District
FRA	Feather River Air Quality Management District
BAM	Baron Advanced Meteorological Systems
SHA	Shasta County Air Quality Management District
NOS	Northern Sierra AQMD
GRO	Grove City, OH
MON	Monterey Bay Unified APCD
IHS	Indian Health Service
SIS	Siskiyou County APCD
MOO	Mooretown Rancheria
GAT	Georgia Tech - School of Earth and Atmospheric Sciences
WA6	Southwest Clean Air Agency
PAS	Pascua Yaqui Tribe
OEI	EPA Office of Environmental Information
TOR	Torres-Martinez Tribe
UWA	University of Washington

Table 10. Qualifiers.

Qualifier Code	Qualifier Description	Qualifier Type	Qualifier Type Description
RC	Chem. spills & indust. accidents	EE	Exceptional Event
RD	Cleanup after a major disaster	EE	Exceptional Event
RE	Demolition	EE	Exceptional Event
RH	Fireworks	EE	Exceptional Event
RK	Infrequent large gatherings	EE	Exceptional Event
RL	Other	EE	Exceptional Event
RM	Prescribed fire	EE	Exceptional Event
RP	Structural fire	EE	Exceptional Event
RQ	Terrorist act	EE	Exceptional Event
RR	Unique traffic disruption	EE	Exceptional Event
IA	African dust	IO	Informational Only
IB	Asian dust	IO	Informational Only
IC	Chem. spills & industrial accidents	IO	Informational Only
ID	Cleanup after a major disaster	IO	Informational Only
IE	Demolition	IO	Informational Only
IF	Fire - Canadian	IO	Informational Only
IG	Fire - Mexico/Central America	IO	Informational Only
IH	Fireworks	IO	Informational Only
II	High pollen count	IO	Informational Only
IJ	High winds	IO	Informational Only
IK	Infrequent large gatherings	IO	Informational Only
IL	Other	IO	Informational Only
IM	Prescribed fire	IO	Informational Only
IN	Seismic activity	IO	Informational Only
IO	Stratospheric ozone intrusion	IO	Informational Only
IP	Structural fire	IO	Informational Only
IQ	Terrorist act	IO	Informational Only
IR	Unique traffic disruption	IO	Informational Only
IS	Volcanic eruptions	IO	Informational Only
IT	Wildfire-U.S.	IO	Informational Only
IU	Wildland fire use fire-U.S.	IO	Informational Only
J	Construction/demolition	IO	Informational Only
K	Agricultural tilling	IO	Informational Only
L	Highway construction	IO	Informational Only
P	Roofing operations	IO	Informational Only
RA	African dust	NE	Natural Event
RB	Asian dust	NE	Natural Event
RF	Fire - Canadian	NE	Natural Event
RG	Fire - Mexico/Central America	NE	Natural Event

Qualifier Code	Qualifier Description	Qualifier Type	Qualifier Type Description
RI	High pollen count	NE	Natural Event
RJ	High winds	NE	Natural Event
RN	Seismic activity	NE	Natural Event
RO	Stratospheric ozone intrusion	NE	Natural Event
RS	Volcanic eruptions	NE	Natural Event
RT	Wildfire-U.S.	NE	Natural Event
RU	Wildland fire use fire-U.S.	NE	Natural Event
AA	Sample pressure out of limits	ND	Null Data
AB	Technician unavailable	ND	Null Data
AC	Construction/repairs in area	ND	Null Data
AD	Shelter storm damage	ND	Null Data
AE	Shelter temperature outside limits	ND	Null Data
AF	Scheduled but not collected	ND	Null Data
AG	Sample time out of limits	ND	Null Data
AH	Sample flow rate out of limits	ND	Null Data
AI	Insufficient data (cannot calculate)	ND	Null Data
AJ	Filter damage	ND	Null Data
AK	Filter leak	ND	Null Data
AL	Voided by operator	ND	Null Data
AM	Miscellaneous void	ND	Null Data
AN	Machine malfunction	ND	Null Data
AO	Bad weather	ND	Null Data
AP	Vandalism	ND	Null Data
AQ	Collection error	ND	Null Data
AR	Lab error	ND	Null Data
AS	Poor quality assurance results	ND	Null Data
AT	Calibration	ND	Null Data
AU	Monitoring Waived	ND	Null Data
AV	Power failure	ND	Null Data
AW	Wildlife damage	ND	Null Data
AX	Precision check	ND	Null Data
AY	QC control points (zero/span)	ND	Null Data
AZ	QC audit	ND	Null Data
BA	Maintenance/routine repairs	ND	Null Data
BB	Unable to reach site	ND	Null Data
BC	Multi-point calibration	ND	Null Data
BD	Auto calibration	ND	Null Data
BE	Building/site repair	ND	Null Data
BF	Precision/zero/span	ND	Null Data

Qualifier Code	Qualifier Description	Qualifier Type	Qualifier Type Description
BG	Missing ozone data not likely to exceed level of standard	ND	Null Data
BH	Interference/co-elution/misidentification	ND	Null Data
BI	Lost or damaged in transit	ND	Null Data
BJ	Operator error	ND	Null Data
BK	Site computer/data logger down	ND	Null Data
BL	QA audit	ND	Null Data
BM	Accuracy check	ND	Null Data
CS	Laboratory calibration standard	ND	Null Data
DA	Aberrant data (corrupt files, aberrant chromatography, spikes, shifts)	ND	Null Data
FI	Filter inspection flag	ND	Null Data
MB	Method blank (analytical)	ND	Null Data
MC	Module end cap missing	ND	Null Data
SA	Storm approaching	ND	Null Data
ST	Calibration verification standard	ND	Null Data
TC	Component check & retention time standard	ND	Null Data
TS	Holding time or transport temperature is out of specs.	ND	Null Data
XX	Experimental data	ND	Null Data
1	Deviation from a CFR/critical criteria requirement	QA	Quality Assurance
2	Operational deviation	QA	Quality Assurance
3	Field issue	QA	Quality Assurance
4	Lab issue	QA	Quality Assurance
5	Outlier	QA	Quality Assurance
6	QAPP issue	QA	Quality Assurance
7	Below lowest calibration level	QA	Quality Assurance
9	Negative value detected - zero reported	QA	Quality Assurance
CC	Clean canister residue	QA	Quality Assurance
EH	Estimated; exceeds upper range	QA	Quality Assurance
FB	Field blank value above acceptable limit	QA	Quality Assurance
HT	Sample pick-up hold time exceeded; data questionable	QA	Quality Assurance
LB	Lab blank value above acceptable limit	QA	Quality Assurance
LJ	Identification of analyte is acceptable; reported value is an estimate	QA	Quality Assurance
LK	Analyte identified; reported value may be biased high	QA	Quality Assurance
LL	Analyte identified; reported value may be biased low	QA	Quality Assurance
MD	Value between MDL and IDL	QA	Quality Assurance
ND	No value detected	QA	Quality Assurance

Qualifier Code	Qualifier Description	Qualifier Type	Qualifier Type Description
SQ	Values between SQL and MDL	QA	Quality Assurance
TB	Trip blank value above acceptable limit	QA	Quality Assurance
V	Validated value	QA	Quality Assurance
VB	Value below normal; no reason to invalidate	QA	Quality Assurance
W	Flow rate average out of spec.	QA	Quality Assurance
X	Filter temperature difference out of spec.	QA	Quality Assurance
Y	Elapsed sample time out of spec.	QA	Quality Assurance