

# ENVIRONMENTAL GLOSSARY

**Fourth Edition**

**Edited by**

**G. William Frick and Thomas F. P. Sullivan**

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## PUBLISHER'S NOTE

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## PREFACE

The 1970's produced many new Federal statutes controlling pollution in the United States. Those statutes, in turn, have given rise to an even greater growth in regulations promulgated by the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA) implementing those statutes. As of July 1985, the part of the Code of Federal Regulations containing EPA's regulations is 7,180 pages; OSHA's regulations cover 1,316 pages.

Because violations of regulations expose companies to fines and other penalties, clear and precise guidance on the scope of these requirements is crucial and places great emphasis on the numerous definitions used in the regulations and statutes.

While many regulations created new terminology to implement the statutory and regulatory provisions, many common terms and previously-used definitions assumed new meanings. The Glossary collects these definitions and abbreviations in one convenient book. Definitions have been gathered from EPA and OSHA regulations and from Federal statutes.

Users of this Glossary should be aware of what it is not. It is not a collection of absolute definitions but a resource to identify basic regulatory concepts. There can be other meanings for many of the terms but the definition included in the Glossary reflects use of the term in a specific regulatory or statutory context. Finally, the definitions are not static; use may vary and even the governmental interpretation may change.

Because the definitions are primarily drafted by the government, there may be disagreement about the validity of a particular interpretation of a term included in the Glossary. Moreover, some definitions may only make sense within a particular framework. Explanatory statements have been added in brackets in an attempt to clarify the particular scope of the definition. Each definition also has a code letter indicating the source from which it came.

A glossary is necessarily a document that must be updated continuously. This is our fourth attempt at a compilation of the basic terms used in environmental regulations with which persons active in the field must be familiar. We hope that it will provide a useful tool to begin a person's search through the regulatory framework as it now exists.

**The Editors**

**G. William Frick**

**Thomas F. P. Sullivan**

## HOW TO USE THIS GLOSSARY

We have used key official sources for the definitions contained in this Glossary, namely the statutes and the Code of Federal Regulations. The definitions have been compiled with editorial notes where needed.

Generally, at the end of each definition is a capital letter. This capital letter is a code (as shown) to designate the source.

<u>Code</u>	<u>Source Material</u>
<u>A</u>	Code of Federal Regulations, Title 40, Protection of Environment
<u>B</u>	Clean Air Act
<u>C</u>	Federal Insecticide, Fungicide, and Rodenticide Act
<u>D</u>	Federal Water Pollution Control Act (Clean Water Act)
<u>E</u>	Marine Protection, Research and Sanctuaries Act
<u>F</u>	National Environmental Policy Act
<u>G</u>	Noise Control Act
<u>H</u>	Occupational Health and Safety Act
<u>I</u>	Resource Conservation and Recovery Act
<u>J</u>	Safe Drinking Water Act
<u>K</u>	Toxic Substances Control Act
<u>L</u>	Comprehensive Environmental Response, Compensation, and Liability Act (Superfund or CERCLA)

<u>Code</u>	<u>Source Material</u>
<u>M</u>	Official U.S. Environmental Protection Agency Documents
<u>O</u>	Code of Federal Regulations, Title 29, OSHA-Labor

The Code of Federal Regulations (CFR) is actually published approximately seven months after the edition date. For this Fourth Edition, we have used the most current CFR available as of 1986, and that is the revision dated July 1, 1985, for changes and additions to the prior CFR's.

Uncoded terms are those developed from unpublished EPA documents and the work of the GI research staff. Acronyms and abbreviations also are included; an acronym being the first letter of a series of words, while an abbreviation is a shortened version of a word or phrase by leaving out or substituting letters.

The terms are alphabetized word-by-word, so the first word of a compound term is considered in the alphabetical order. In the cases of hyphenated words, the words are alphabetized as if they were one word, e.g., water table, waterborne ink systems, water-cooled wall, watershed.

## ABOUT THE EDITORS

G. William Frick is a specialist in the areas of environment, natural resources and energy law. He is a graduate of the University of Kansas where he received B.A. and J.D. degrees. After practicing with a Kansas City law firm, he joined the Office of General Counsel of EPA as an attorney in the Air Quality Division. During the period 1973-1976, he served as Associate General Counsel and then as Deputy General Counsel. He attained the prestigious position of General Counsel for all of EPA which he held from 1976 until August of 1977 when he resigned to enter private practice. He represented corporate clients on a wide range of environmental issues at the Federal and State levels while practicing in Washington, D.C. and Kansas City for nine years. He is now the Vice President and General Counsel of the American Petroleum Institute in Washington, D.C.

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## ABOUT THE PUBLISHER

Government Institutes, Inc., is a commercial publishing and continuing education corporation based in Rockville, Maryland, focusing primarily on environmental and energy topics. GI produces quality books, seminars, courses and conferences helping professionals interpret and implement the maze of government regulations.

For additional information on Government Institutes' current books, conferences and seminars, please contact us at 966 Hungerford Drive, #24, Rockville, MD 20850 (301/251-9250).



# A

**a.**

Abbreviation for ampere. A

**AAQS**

Ambient air quality standard.

**abandoned well**

A well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be used for its intended purpose or for observation purposes. A

**abatement**

The reduction in degree or intensity of pollution. M

**aboveground storage facility**

A tank or other container, the bottom of which is on a plane not more than 6 inches below the surrounding surface. A

**abrasion**

The wearing away of surface material, such as refractories in an incinerator or parts of solid waste handling equipment, by the

scouring action of moving solids, liquids, or gases.

**abrasive wheel**

A cutting tool consisting of abrasive grains held together by organic or inorganic bonds. Diamond and reinforced wheels are included. O

**abs.**

Abbreviation for absolute. A

**absolute pressure (p.s.i.a.)**

The sum of the atmospheric pressure and gauge pressure (p.s.i.g.) O

**absorbed dose**

The energy imparted to a unit mass of matter by ionizing radiation. The unit of absorbed dose is the rad. One rad equals 100 ergs per gram.

**absorption**

The penetration of one substance into or through another. M

**ABS/SAN**

Acrylonitrile - butadiene - styrene and styrene-acrylonitrile resin copolymers. A

**academic year**

An academic year or its equivalent, as determined by the Administrator. A

**accel.**

Abbreviation for acceleration. A

**accelerated erosion**

The erosion of soil at a faster than natural rate. This occurs when vegetal cover is destroyed or is affected by some human activity.

**accelerator**

A device for increasing the kinetic energy of charged elementary particles, for example, electrons or protons, through the application of electrical and/or magnetic forces.

**acceptable quality level (AQL)**

The maximum percentage of failings [regulated product] that, for purposes of sampling inspection, can be considered satisfactory as a process average. A

**acceptance of a batch**

The number of noncomplying vehicles in the batch sample is less than or equal to the acceptance number as determined by the appropriate sampling plan. A [ed. Part of certification procedures used to determine compliance with Federal emission limitations on new motor vehicles.]

**acceptance of a batch sequence**

The number of rejected batches in

the sequence is less than or equal to the sequence acceptance number as determined by the appropriate sampling plan. A [ed. Part of vehicle test certification procedures.]

**acceptance of a compressor**

The measured noise emissions of the compressor, when measured in accordance with the applicable procedure, conforms to the applicable standard. A [ed. Part of noise standard certification procedures under Noise Control Act.]

**acceptance of a vehicle**

The measured emissions of a vehicle when measured in accordance with the applicable procedure, conforms to the applicable standard. A [ed. Part of vehicle test verification procedures.]

**accepted**

An installation that has been inspected and found by a nationally recognized testing laboratory to conform to specified plans or to procedures of applicable codes. O

**accessible**

(As applied to wiring methods.) Capable of being removed or exposed without damaging the building structure or finish, or not permanently closed in by the structure or finish of the building. (See "concealed.") O

**accident**

An unexpected, undesirable event, caused by the use or presence of a pesticide, that adversely affects

man or the environment. A [ ed. As used in connection with FIFRA. ]

### **acclimation**

The physiological and behavioral adjustments of an organism to changes in the environment. M

### **acclimatization**

The adaption over several generations of a species to a marked change in the environment. M

### **accuracy**

The degree of agreement between a measured value and the true value; usually expressed at  $\pm$  percent of full scale. A

### **accuracy (relative)**

The degree of correctness with which the measurement system yields the value of gas concentration of a sample relative to the value given by a defined reference method. This accuracy is expressed in terms of error which is the difference between paired concentration measurements expressed as a percentage of the mean reference value. A

### **acetaldehyde ( $\text{CH}_3\text{CHO}$ )**

A liquid sometimes found as an aerosol formed from gases in the photochemical process; can be further oxidized to acetic acid.

### **acfm.**

Actual cubic feet per minute. O

### **acid or ferruginous mine drainage**

Mine drainage which before any treatment either has a pH of less than 6.0 or a total iron concentration equal to or more than 10 mg/l. A

### **acidity**

The quantitative capacity of aqueous solutions to react with hydroxyl ions. It is measured by titration with a standard solution of a base to a specified end point. Usually expressed as milligrams per liter of calcium carbonate.

### **acidizing**

Injection of acid through the borehole or "well" into a "formation" to increase permeability and porosity by dissolving the acid-soluble portion of the rock constituents. A

### **acoustic descriptor**

The numeric, symbolic, or narrative information describing a product's acoustic properties as they are determined according to the test methodology that the Agency prescribes. A

### **acquisition cost of purchased non-expendable personal property**

The net invoice unit price of the property including the cost of modifications, attachments, accessories, or auxiliary apparatus necessary to make the property usable for the purpose for which it was acquired. Other charges such as the cost of installation, transportation, taxes, duty, or protective in-transit insurance, shall be included or excluded from the unit acquisition cost in accordance with the grantee's regular accounting practices. A

### **acrylic fiber**

A manufactured synthetic fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 85

percent by weight of acrylonitrile units. A

**act.**

Abbreviation for actual. A

**Act**

The general term describing the legislative enactment which provides the authority for a particular regulatory action e.g., the Clean Air Act, the Clean Water Act.

**act of God**

An unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight. A, L

**actinomycetes**

A group of moldlike bacteria that give off an odor characteristic of rich earth and are the significant organisms in the stabilization of organic solid waste by composting.

**activated carbon**

A highly adsorbent form of carbon used to remove odors and toxic substances from gaseous emissions or to remove dissolved organic matter from waste water. M

**activated sludge**

Sludge that has been aerated and subjected to bacterial action; used to speed breakdown of organic matter in raw sewage during secondary waste treatment. M

**active grant**

A project for which grant funds

have been awarded, and the project period has not lapsed.

**active ingredient**

(1) In the case of a pesticide other than a plant regulator, defoliant, or desiccant, an ingredient which will prevent, destroy, repel, or mitigate any pest; (2) In the case of a plant regulator, an ingredient which, through physiological action, will accelerate or retard the rate of growth or rate of maturation or otherwise alter the behavior of ornamental or crop plants or the product thereof; (3) In the case of a defoliant, an ingredient which will cause the leaves or foliage to drop from a plant; and (4) In the case of a desiccant, an ingredient which will artificially accelerate the drying of plant tissue. C

**active mining area**

(1) A place where work or other activity related to the extraction, removal, or recovery of metal ore is being conducted, except, with respect to surface mines, any area of land on or in which grading has been completed to return the earth to desired contour and reclamation work has begun. (2) Areas, on and beneath land, used or disturbed in activity related to the extraction, removal, or recovery of coal from its natural deposits. This term excludes coal preparation plants, coal preparation plant associated areas and post-mining areas. A

**active waste disposal site**

Any disposal site other than an inactive site. A

**actual emissions**

The actual rate of emissions of a pollutant from an emissions unit as determined in accordance with EPA regulations. In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operation. The Administrator (reviewing authority) shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period. The Administrator (reviewing authority) may presume that source specific allowable emissions for the unit are equivalent to the actual emissions of the unit. For any emissions unit which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date. A

**actually be removed**

The separation and isolation of discharged hazardous substances from the waters by chemical, physical, or biological means. A [ed. Used to determine application of requirements of § 311 of FWPCA which hinge on the actual removability of the substance.]

**ACUS**

Administrative Conference of the United States.

**acute**

Occurring over a short period of time; used to describe brief exposures and effects which appear promptly after exposure.

**acute dermal LD<sub>50</sub>**

A single dermal dose of a substance, expressed as milligrams per kilogram of body weight, that is lethal to 50 percent of the test population of animals under specified test conditions. A

**acute LC<sub>50</sub>**

A concentration of a substance, expressed as parts per million parts of medium, that is lethal to 50 percent of the test population of animals under specified test conditions. A [ed. Tests on live animals are used to determine degree of hazard as well as determine compliance with pollution control requirements.]

**acute oral LD<sub>50</sub>**

A single orally administered dose of a substance, expressed as milligrams per kilogram of body weight, that is lethal to 50 percent of the test population of animals under specified test conditions. A

**acute respiratory disease**

Respiratory infection, characterized by rapid onset and short duration.

**acute toxicity**

Any poisonous effect produced within a short period of time following exposure, usually up to 24-96 hours, resulting in severe biological harm and often death.

**adaptation**

A change in structure or habit of an organism that produces a better adjustment to its surroundings. M

**additions and alterations**

The act of undertaking construction of any facility. A [ed. This type of physical change in a pollution source will often constitute a "modification" that will result in application of new source performance standards and certain new source review procedures under CAA and FWPCA.]

**additive**

Any substance, other than one composed solely of carbon and/or hydrogen, that is intentionally added to a fuel named in the designation (including any added to a motor vehicle's fuel system) and that is not intentionally removed prior to sale or use. [ed. Used for § 211 of CAA.]

**additive manufacturer**

Any person who produces or manufactures an additive for use as an additive and/or sells an additive under his own name. [ed. Used for § 211 of CAA.] A

**adequate evidence**

More than mere accusation but less than substantial evidence. Consideration must be given to the amount of credible information available, reasonableness in view of surrounding circumstances, corroboration, and other inferences which may be drawn from the existence or absence of affirmative facts. A

**adequate SO<sub>2</sub> emission limitation**

An SIP stack emission limitation which was approved or promulgated by EPA as adequate to attain and maintain the NAAQS in the areas affected by the stack emissions without the use of any unauthorized dispersion technique. A

**adequately wetted**

Sufficiently mixed or coated with water or an aqueous solution to prevent dust emissions. A

**adhesion**

Molecular attraction which holds the surfaces of two substances in contact, such as water and rock particles. M

**adjusted configuration**

[New Automobile] test configuration, after adjustment of engine calibrations to retrofit specifications, but excluding retrofit hardware installation. A [ed. Used for vehicle certification on test procedures under CAA.]

**administering agency**

Any department, agency, and establishment in the Executive Branch of the Government, including any wholly owned Government corporation, which administers a program, including Federally assisted construction contracts. A

**administrative amendment**

An amendment to a [Federal] grant that does not involve additional costs to the government: e.g., rebudgeting of funds, extension of time without additional funds, changes in key personnel.

**administrative function**

A nontechnical function individual in a Federal contract, sometimes referred to as a "business/fiscal" function. The clear separation of this from the technical area is often impossible.

**Administrative Law Judge**

An Administrative Law Judge appointed pursuant to 5 U.S.C. 3105 (see also 5 CFR Part 930, as amended by 37 FR 16787). Such term is synonymous with the term "Hearing Examiner" as used in the Act or in Title 5 of the United States Code. A [ed. Administrative Law Judges are given responsibility for conducting many adversary proceedings pursuant to environmental statutes. They may be directed to make a final decision on the issue or make a recommendation to the head of the agency or department.]

**Administrator**

The Administrator of the United States Environmental Protection Agency, or any employee of the Agency to whom the Administrator may either herein or by order delegate his authority to carry out his functions, or any person who shall by operation of law be authorized to carry out such functions. A, C, K, I, L

**adsorption**

The attachment of the molecules of a liquid or gaseous substance to the surface of a solid. M

**adulterants**

Chemical impurities or substances that by law do not belong in a food, plant, animal, or pesticide formulation. M

**adulterated**

The term "adulterated" applies to any pesticide if: (1) its strength or purity falls below the professed standard of quality as expressed on its labeling under which it is sold; (2) any substance has been substituted wholly or in part for the pesticide; or (3) any valuable constituent of the pesticide has been wholly or in part abstracted. C

**advanced air emission control devices**

Air pollution control equipment, such as electrostatic precipitators and high energy scrubbers, that are used to treat an air discharge which has been treated initially by equipment including knockout chambers and low energy scrubbers.

**advanced waste treatment**

Any biological, chemical, or physical treatment process used during any stage of treatment that employs unconventional techniques.

**advanced waste water treatment**

The tertiary stage of sewage treatment. M

**adversary adjudication**

An adjudication required by statute to be held pursuant to 5 U.S.C. 554 in which the position of the United States is represented by counsel or otherwise, but excludes an adjudication for the purpose of granting or renewing a license. A

**advertised engine displacement**

The rounded off volumetric engine capacity used for marketing

purposes by the motorcycle manufacturer. A

**AEC**

U.S. Atomic Energy Commission. In 1975, the Atomic Energy Commission was divided into two new agencies. The regulatory portion became the Nuclear Regulatory Commission, and the reactor development portion became part of the Energy Research and Development Administration which in turn was absorbed into the U.S. Department of Energy.

**AECD**

Auxiliary emission control device. A

**aerated pond or lagoon**

A natural or artificial wastewater treatment pond or basin in which mechanical or diffused air aeration is used to supplement oxygen supply.

**aeration**

To circulate oxygen through a substance, as in waste water treatment where it aids in purification. M

**aerobic**

Life or processes that depend on the presence of oxygen. L

**aerobic bacteria**

Those bacteria that require free oxygen to live and grow. Used in certain types of waste water treatment processes.

**aerosol**

A particle of solid or liquid matter that can remain suspended in the air because of its small size. Particulates under 1 micron in

diameter are generally called aerosols.

**aerosol propellant**

A liquefied or compressed gas in a container where the purpose of the liquefied or compressed gas is to expel liquid or solid material from the container different from the aerosol propellant. A

**affected facility**

With reference to a stationary source, any apparatus to which a [air pollutant emission] standard is applicable. A

**affiliate**

Any person whose governing instruments require it to be bound by the decision of another person or whose governing board includes enough voting representatives of the other person to cause or prevent action, whether or not the power is exercised. It may also include persons doing business under a variety of names, or where there is a parent/subsidiary relationship between persons. A

**affiliated entity**

A person who directly, or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with the owner or operator of a source. A

**afterburner (A/B)**

An exhaust gas incinerator used to control emissions of particulate matter. A

**aftermarket part**

Any part offered for sale for installation in or on a motor vehicle after such vehicle has left



the vehicle manufacturer's production line. A

**aftermarket part manufacturer**

(1) A manufacturer of an aftermarket part or (2) A party that markets aftermarket parts under its own brand name, or (3) A rebuilder of original equipment or aftermarket parts, or (4) A party that licenses others to sell its parts. A

**AGA**

American Gas Association.

**agency**

An Executive Department, as defined in 5 U.S.C. 101, or any employing unit or authority of the Executive Branch of the Government. O

**Agency**

The Environmental Protection Agency. J

**aggregate**

Crushed rock or gravel screened to sizes for use in road surfaces, concrete, or bituminous mixes.

**agreement states**

Those states which, pursuant to Section 274 of the Atomic Energy Act of 1954, as amended, have entered into an agreement with the NRC for assumption of regulatory control of byproduct, source, and small quantities of special nuclear materials. Before approving an agreement state, NRC must determine that the state's radiation control program is compatible with NRC's regulatory program and is adequate to protect public health and safety.

**agricultural commodity**

Any plant, or part thereof, or animal, or animal product, produced by a person (including farmers, ranchers, vineyardists, plant propagators, Christmas tree growers, aquaculturists, floriculturists, orchardists, foresters, or other comparable persons) primarily for sale, consumption, propagation, or other use by man or animals. A

**agricultural pollution**

The liquid and solid wastes from farming, including: runoff from pesticides, fertilizers, and feedlots; erosion and dust from plowing; animal manure and carcasses; crop residues and debris. M

**agricultural solid waste**

The solid waste that is generated by the rearing of animals, and the producing and harvesting of crops or trees. A

**air**

So-called pure air is a mixture of gases containing about 78 percent nitrogen; 21 percent oxygen; less than 1 percent of carbon dioxide, argon, and other inert gases; and varying amounts of water vapor.

**Air Act**

The Clean Air Act, as amended (42 U.S.C. 7401 et seq.). A

**air bleed control device**

A system or device (such as a modification to the engine's carburetor) that results in engine operation at an increased air-fuel ratio to achieve reduction in exhaust emissions of hydrocarbon and carbon monoxide from 1967 and earlier light-duty vehicles of