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Glossary of Acronyms and Terms

Acronyms

AEC	—Atomic Energy Commission	ICRP	—International Commission on Radiation Protection
ACGIH	—American Conference of Governmental Industrial Hygienists	ITC	—Interagency Testing Committee (EPA)
ALARA	—as-low-as-reasonably achievable (see Terms)	ITSDC	—Interagency Toxic Substance Data Committee (EPA)
ANSI	—American National Standards Institute	LH	—luteinizing hormone
BATF	—Bureau of Alcohol, Tobacco and Firearms	LHRH	—luteinizing hormone-releasing hormone
BDMP	—Birth Defects Monitoring Program	MSDS	—Material Safety Data Sheet
BFOQ	—bona fide occupational qualification	MSH Act	—Mine Safety and Health Act
BNA	—Bureau of National Affairs (publisher)	MRP	—Medical Removal Protection
BLS	—Bureau of Labor Statistics (DOL)	NACOSH	—National Advisory Committee on Occupational Safety and Health
CDC	—Centers for Disease Control (PHS, DHHS)	NAS	—National Academy of Sciences
CNS	—central nervous system	NSF	—National Science Foundation
C.F.R.	—Code of Federal Regulations	NCRP	—National Council on Radiation Protection and Measurements
CEQ	—Council on Environmental Quality	NIEHS	—National Institute of Environmental Health Sciences (NIH)
CPSC	—Consumer Product Safety Commission	NIH	—National Institutes of Health
CSIN	—Chemical Substances Information Network	NIOSH	—National Institute for Occupational Safety and Health (CDC)
DBCP	—dibromochloropropane	NOEL	—no observed effect level
DDT	—2,2-bis[p-chloro -phenyl] ,1,1)-trichloroethane)	NTP	—National Toxicology Program
DES	—diethylstilbestrol	NRC	—Nuclear Regulatory Commission
DHHS	—Department of Health and Human Services	OERC	—occupational Exposure Review Committee
DNA	—deoxyribonucleic acid	OFCCP	—Office of Federal Contract Compliance Programs
DOL	—Department of Labor	OMB	—Office of Management and Budget
EDB	—ethylene dibromide	OSH Act	—Occupational Safety and Health Act
EEOC	—Equal Employment Opportunity Commission	OSHA	—Occupational Safety and Health Administration (DOL)
EPA	—U.S. Environmental Protection Agency	OSHRC	—Occupational Safety and Health Review Commission
EtO	—ethylene oxide	PBB	—polybrominated biphenyls
ETS	—Emergency Temporary Standard	PCB	—polychlorinated biphenyls
FACOSH	—Federal Advisory Council on Occupational Safety and Health	PDA	—Pregnancy Discrimination Act
FDA	—Food and Drug Administration	PEL	—permissible exposure limits
FIFRA	—Federal Insecticide, Fungicide, and Rodenticide Act	PHS	—Public Health Service
FPP	—fetal protection policy	PMA	—Petition for Modification of Abatement
FRC	—Federal Radiation Council	PMN	—premanufacture notification
FSH	—follicle-stimulating hormone	Pvc	—polyvinyl chloride
FTCA	—Federal Tort Claims Act	REAG	—Reproductive Effects Assessment Group
HANES	—National Health and Nutrition Survey (NCHS)	RPAR	—Rebuttable Presumption Against Registration
hCG	—human chorionic gonadotropin	RR	—rate retention
		SIC	—Standard Industrial Classification
		SNUR	—Significant New Use Rule (EPA)

STEL	—Short-term Exposure Limit
TCDD	—2,3,7,8-tetrachlorodibenzo-p-dioxin
TCP	—2,4,5 trichlorophenol
TLV	—threshold limit value
TSCA	—Toxic Substances Control Act
USDA	—U.S. Department of Agriculture
VDT	—video display terminal

Terms

Administrative controls: Methods of reducing worker exposures to occupational hazards through management arrangements; e.g., rotating workers from high- to low-exposure areas to reduce average exposure level, scheduling jobs or processes that generate hazards during times when few workers are present.

Agent Orange: A 50/50 mixture of 2,4,-D and 2,4,5-T widely used as a defoliant during the Vietnam war.

ALARA (assumption): “As-low-as-reasonably achievable.” A public health principle which holds that exposures to hazards be kept at or below levels permitted by established standards.

Amenorrhea: The absence or abnormal cessation of menstruation; normal before puberty, after the menopause, during pregnancy and lactation.

Amniocentesis: The extraction of amniotic fluid for diagnostic purposes.

Anencephaly: A congenital deformity in which the brain is absent.

Apgar score: Numerical expression of an infant’s condition 60 seconds after birth, based on heart rate, respiration, muscle tone, color, response to stimuli.

Azoospermia: The complete absence of sperm.

Basal body temperature: Body temperature during rest or inactivity; commonly obtained upon awakening.

Beneficence: Moral principle that requires avoiding harms to others and maximizing the balance of benefits over harms.

Blastocyst: See **embryo/fetus**.

BFOQ exception: An exception to Title VII’s prohibition against employment policies that intentionally discriminate against one sex. Intentional discrimination is permitted if sex is a bona fide occupational qualification (e.g., a male actor to portray a male character).

Birth defect: Any structural, functional, or biochemical abnormality, whether genetically determined or induced during gestation, that is not due to injuries suffered during birth.

Breach of warranty: As used in the common law of contracts, breach of warranty is the failure or falsehood of an affirmative promise or statement. Unlike fraud, it does not involve guilty knowledge. Under the Uniform Commercial Code, a violation of either an express or implied warranty for which an action in contract will lie. U.S.C. § 2-312 et seq.

Business necessity exception: An exception to Title VII’s prohibition against sex-neutral employment policies that have a disparate impact on one sex. A policy with a disparate impact on one sex is permissible if the policy is necessary to achieve a business purpose. Similar to the BFOQ exception, but used in cases where discriminatory effect rather than discriminatory intent is at issue. (See also **disparate impact**.)

Carbaryl: 1-Naphthyl methyl carbamate, a broad-spectrum insecticide.

Causation: The act by which an effect is produced. An important doctrine in fields of negligence and product liability law.

Carcinogen/carcinogenesis: A substance or physical agent that causes cancer.

Childbearing years: The reproductive age span of women, assumed for statistical purposes to be 15 to 44.

Chlordecone: See **Kepona**.

Chorionic villus biopsy: A prenatal diagnostic technique that permits early identification of various disorders, particularly genetically based diseases.

Confounding factor: A variable that is related to both the exposure and the outcome being studied.

Congenital: Present at birth.

Corpus luteum: Remnant of ovulated follicle within ovary; secretes progesterone.

DDT (2,2-bis (pwhloro-phenyl) 1,1,1-trichloroethane): A pesticide in common use around the world that mimics the effects of estrogen. U.S. use was halted in 1972.

Developmental abnormality: Structural or functional defect occurring during gestation.

Developmental toxinhoxicity: An agent that impedes proper anatomical or physiological development of offspring. May act at any point between conception and puberty.

Dibromochloropropane (DBCP): A chemical used as a pesticide. Most uses of DBCP are now prohibited by law.

Dioxin: 2,3,7,8) -tetrachlorodibenzo-pdioxin, or TCDD. An unwanted contaminant of the synthesis leading to 2,4,5,-T and other chemicals.

Discriminatory effects, discriminatory impact: See **disparate impact**.

Discriminatory treatment: See **facial discrimination**.

Disparate impact: Used to describe employment policies that are not intended to be discriminatory but nevertheless are disproportionately burdensome on members of one sex. Such policies violate Title VII unless considered a “business necessity.”

Dominant lethal: A gene, either a new mutation or inherited from one parent, that causes death of the organism.

Dose-response assessment: In the risk assessment process, determines the relationship between the magnitude of human exposure and the probability of human health effects.

Dual capacity exception: Exception to the exclusivity of remedy doctrine in the workers' compensation laws of some States that permits employee suits against employers for personal injuries if the employer can be viewed as causing the injury in a capacity other than employment (e.g., if the employer also acted as a product manufacturer or provider of medical services). (See also *exclusivity of remedy doctrine*.)

EDB: See *ethylene dibromide*.

Embryo/fetus: The embryonic stage begins at about 3 weeks and extends to about 8 or 9 weeks; the fetal stage extends from 8 weeks until birth. The first or blastocyst stage is often subsumed within the embryonic stage to simplify terminology.

Embryotoxin/embryotoxicity: A agent that adversely affects the embryo. (See *toxin/toxicity*.)

Emergency temporary standard (ETS): A standard issued under § 6(c) of the Occupational Safety and Health Act which may be issued when OSHA determines that workers are exposed to a "grave danger" from an occupational hazard and that an emergency standard is necessary to protect them from that danger.

Endometrium: The mucous membrane of the uterus, which varies in thickness and structure with each phase of the menstrual cycle.

Endpoint: The particular biological response being measured.

Engineering controls: Methods of controlling worker exposure by modifying the source or reducing the amount of contaminants released into the workplace. Engineering controls include process design and modification, equipment design, enclosure and isolation, and ventilation.

Epidemiology: The study of the distribution of diseases and their precursors in human populations.

Estrogen: Any natural or artificial substance that induces estrogenic activity; more specifically the estrogenic hormones estradiol and estrone produced by the ovary; the female sex hormones.

Ethylene dibromide (EDB): A chemical used chiefly as a gasoline additive and as a pesticide from 1948 to 1984, when it was banned for pesticidal use.

Ethylene oxide (EtO): A clear, colorless gas used primarily as a chemical intermediate in the production of pesticides and as a sterilant and fumigant for hospital equipment.

Etiology: The study of the causes of disease.

Exclusivity of remedy doctrine: A provision of all State workers' compensation laws that prohibits employee tort suits against employers for injuries or diseases that occur on the job.

Exclusivity rule: See *exclusivity of remedy doctrine*.

Exposure: The length of time and dose of chemical, biological, or physical agent to which a worker is subjected.

Exposure assessment: In risk assessment, identifies the population segments potentially exposed to the agent.

Facial discrimination: Employment discrimination of an overt and intentional nature, such that the employment policy is considered to be discriminatory on its face. Facial sex discrimination violates Title VII unless sex is a "bona fide occupational qualification." Compare with *disparate impact*.

Fetal protection policy (FFP): An occupational health policy intended to provide for the protection of the future offspring of employees. Such policies frequently place limitations on the jobs available to fertile and/or pregnant women.

Fetoscopy: A procedure using an optical instrument that allows direct observation of the fetus.

Fetotoxin/fetotoxicity: An agent that adversely affects the fetus. (See *toxin/toxicity*.)

Fetus: See *embryo/fetus*.

Follicle-stimulating hormone (FSH): A protein secreted by the anterior pituitary that promotes spermatogenesis and stimulates ovulation.

Gamete: A mature male or female germ cell (spermatozoon or ovum).

General duty clause: Section 5(a)(1) of the Occupational Safety and Health Act. This section provides that "each employer shall furnish . . . employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees." OSHA has used this clause to cite employers for workplace conditions that present serious occupational hazards that are not covered by OSHA's more detailed health and safety standards.

Genome: The total genetic information carried by an individual.

Germ cell: The male and female reproductive cells; egg and sperm.

Gestation: Period of intrauterine development from conception to birth.

Gonad: A generic term that refers to both female ovaries and male testes.

Gonadotropin: A substance having affinity for or a stimulating effect on the gonads. There are three varieties: anterior pituitary, chorionic from human pregnancy urine, and chorionic from the serum of pregnant mares.

Hazard identification: In risk assessment, the qualitative analysis of all available experimental animal and human data to determine whether and at what dose an agent is likely to cause toxic effects.

Human chorionic gonadotropin (hCG): A hormone produced by the placenta that stimulates production of progesterone.

Hydrocephaly: Abnormal accumulation of fluid in the cranium, associated with mental retardation.

Hysterosalpingogram: Imaging of the uterus and fal-

- lopian tubes by injecting dye into the cervix and filming its spread through the peritoneal cavity.
- Iatrogenic: Treatment- or drug-induced.
- Implantation: Process whereby a fertilized ovum burrows into the lining of the uterus on its arrival there, and attaches itself firmly. Successful implantation is essential to the future development of the embryo/fetus and is sometimes considered as the true moment of conception.
- Infant mortality rate: The number of deaths to infants under 1 year of age in a given year per 1,000 live births in that year.
- Infertility: Inability to produce liveborn children.
- Intentional tort exception: Exception to the exclusivity of remedy doctrine in some States that permits an employee lawsuit against an employer if the employer's conduct manifested a deliberate attempt to injure the worker.
- In vitro: Outside the living organism and in an artificial environment.
- In vivo: Within the living organism.
- Ionizing radiation: Energy that is transmitted in wave or particle form that is capable of causing ionization (ejecting orbital electrons) of atoms or molecules in radiated tissue; e.g., X-rays.
- Job-relatedness (causation): A criterion for receiving worker's compensation benefits that requires the worker's disability, injury, or disease be caused by a workplace factor.
- Justice: As a principle of ethics, fair and equal treatment of others,
- Karyotyping: A technique by which chromosomes are prepared for microscopic observation; a standard part of amniocentesis.
- Kepone (chlordecone): A chlorinated hydrocarbon insecticide, used commonly against fire ants and cockroaches; U.S. use was banned in 1977.
- Laparoscopic ovarian biopsy: Use of a laparoscope to remove a portion of ovarian tissue for microscopic observation.
- Laparoscope: An instrument used for direct observation of ovaries and other internal organs.
- Loss of consortium: Loss of the conjugal fellowship of husband or wife, and the right of each to the company, society, cooperation, affection, and aid of the other in every conjugal relation. Damages for loss of consortium are commonly sought in wrongful death actions, or when spouse has been seriously injured through negligence of another, or by spouse against third person alleging that he or she has caused breaking up of marriage.
- Luteal phase: The portion of the menstrual cycle that occurs between ovulation and menses.
- Luteinizing hormone (LH): A pituitary hormone that stimulates hormone production by gonads.
- Luteinizing hormone-releasing hormone (LHRH): A hormone released by the hypothalamus that regulates reproductive function in men and women.
- Medical removal protection (MRP): An employment policy requiring or permitting employees to transfer permanently or temporarily from jobs involving a potential health risk to jobs with less risk.
- Menarche: The beginning of menstruation; i.e., the first menstrual period. This occurs during puberty but does not signify the beginning of full adult fecundity as ovulation may be irregular or absent for some time.
- Menopause: Natural physiologic cessation of menstruation normally occurring in the last half of the fifth decade.
- Microcephaly: Abnormal smallness of the head.
- Morbidity: The frequency of disease and illness in a population.
- Mutagen/mutagenesis: A substance that induces mutation; the induction of mutation in the genetic material.
- Neonate: A newborn infant.
- Neural tube defects: Birth defects of the central nervous system such as spina bifida and anencephaly.
- Nonionizing radiation: Refers to the region of the electromagnetic spectrum where the energy of the emitted photon is incapable of ionizing atoms or molecules in the irradiated tissue; e.g., radio and television transmission signals.
- No observed effect level (NOEL): Level of exposure that produces no observed deleterious health effects.
- Oligospermia: Extremely low levels of sperm production.
- Oocyte: Female germ cell.
- Organogenesis: The formation and development of body organs from embryonic tissues.
- Ovulation: The release of an ovum from the ovary during the female menstrual cycle.
- Parturition: Labor, giving birth.
- Parity: The number of pregnancies a woman has carried to at least 20 weeks gestation (or 500-gram fetal weight).
- Permissible exposure limit (PEL): The maximum airborne concentration of a toxic substance permitted by OSHA standards.
- Personal protective equipment: Equipment and clothing designed to control exposure to hazards; e.g., hard hats, safety shoes, protective eyewear, protective clothing and gloves, hearing protectors, and various types of respirators, such as dust and gas masks.
- "Personal" injury or disease: A criterion for receiving workers' compensation benefits that prohibits claims by the worker's spouse or offspring. The injury or disease must be "personal" to the worker.
- Pharmacokinetics: The study of the action of a chemical in the body over a period of time. It includes the processes of absorption, distribution, localization in tissues, transformation into other chemicals with biological activity, and excretion.

- Polybrominated biphenyl (PBB): A chemical used as a flame retardant in thermoplastic products until banned in 1979.
- Polychlorinated biphenyl (PCB): A chemical used in coolant fluid in electrical transformers, hydraulic fluids, lubricants, and as a pesticide extender until banned in 1979.
- ppm: Parts per million.
- Preconception tort: A wrongful act committed prior to the conception of the offspring injured as a consequence of the act.
- Premanufacture notification (PMN): Requirement under TSCA that companies must notify EPA before commencing manufacture of toxic substances.
- Prenatal tort: A wrongful act committed after conception but prior to the birth of the offspring injured as a consequence of the act.
- Preponderance of evidence: Evidence that is of greater weight or more convincing than the evidence that is offered in opposition to it, that is, evidence which as a whole shows that the fact sought to be proved is more probable than not. With respect to burden of proof in civil actions, means greater weight of evidence, or evidence that is more credible and convincing to the mind.
- Product liability theory: The legal liability of manufacturers and sellers to compensate buyers, users, and even bystanders for damages and injuries suffered because of defects in the goods purchased. A tort which makes a manufacturer liable if his product has a defective condition that makes it unreasonably dangerous to the user or consumer.
- Progesterone: A steroid hormone obtained from the corpus luteum, adrenals, or placenta. It is responsible for changes in uterine endometrium in the second half of the menstrual cycle that prepare for implantation of the blastocyst, development of maternal placenta after implantation, and development of mammary glands.
- Rads: The units used to quantify the energy deposited in matter by ionizing radiation, defined as 0.01 joules per kilogram of irradiated material.
- Rate retention (RR): Maintaining the removed employee's wages and benefits during the period of medical removal. (See also **medical removal protection**.)
- Rational basis test: The legal test applied by a court that is reviewing the constitutionality of a decision of a legislative or administrative body. A court will not second-guess the legislature as to the wisdom or rationality of a particular statute if there is a rational basis for its enactment when the strict scrutiny test does not apply.
- Reasonable personal standard: The standard that one must observe to avoid liability or negligence is the standard of the reasonable person under all the circumstances, including the foreseeability of harm to one such as the plaintiff.
- Rem: Abbreviation for roentgen equivalent measure, a unit that quantifies the degree of biological damage from ionizing radiation.
- Reproductive age: See **childbearing years**.
- Reproductive health hazard: A chemical, physical, or biological agent that causes reproductive impairment in adults and developmental impairment or death in the embryo/fetus or child.
- Reproductive toxin: An agent that interferes with reproductive or procreative functioning of the adult from puberty through adulthood.
- Respect for persons: A moral principle that requires that individuals be treated as the focus of concern in their own right and not merely as the means to the achievement of other goals.
- Risk assessment: The use of scientific evidence to estimate the likelihood of adverse effects on the health of individuals or populations from exposure to hazardous materials and conditions.
- Risk characterization: In risk assessment, the final step, which summarizes information about the agent and evaluates it in order to estimate the risk.
- Risk management: Determination of the possible actions that can or should be taken in response to an assessment that a substance or condition poses a significant risk.
- Semen: A mixture of sperm and fluids.
- Sex ratio: The ratio of males to females in a population, usually expressed as the number of males for every 100 females.
- Somatic cell: All cells of the body except the germ cells.
- Sonographic imaging: See **ultrasonography**.
- Sovereign immunity: Doctrine that precludes a litigant from asserting an otherwise meritorious cause of action against a sovereign (government) or a party with sovereign attributes unless sovereign consents to suit. Historically, the Federal and State governments, and derivatively cities and towns, were immune from tort liability arising from activities that were governmental in nature. More jurisdictions, however, have abandoned this doctrine in favor of permitting tort actions with certain limitations and restrictions.
- Spermatogenesis: The transformations that result in formation of spermatozoa.
- Spermatogonia: Precursor sperm cells.
- Spermatozoa: Sperm cell.
- Spina bifida: A neural tube defect characterized by incomplete closure of the spinal column.
- Steroid hormones: See **estrogen, progesterone**.
- Survival statute: Statutory provision for the survival, after death of the injured person, of certain causes of action for injury to the person, whether death results from the injury or from some other cause.
- TCDD: See **dioxin**.
- Threshold limit value (TLV): Maximum airborne concentrations of toxic substances set as guidelines by the ACGIH.
- Teratogen/teratogenesis: An agent that interferes

- with embryonic or fetal development. A chemical or physical agent that causes physical defects in offspring.
- Testosterone:** The hormone secreted by the testes that stimulates the development of masculine characteristics.
- Tort:** A wrongful act for which the law imposes liability.
- Toxicant:** See toxin.
- Toxin/toxicity:** A chemical, physical, or biological agent that interrupts the normal function of a cell, tissue, organ, or organism.
- 2,4,-D:** 2,4dichlorophenoxyacetic acid; an herbicide commonly used in agriculture and forestry.
- 2,4,6,-T:** 2,4,5, -trichlorophenoxyacetic acid, a chlorinated herbicide in wide U.S. use from 1948 to 1970, Banned in 1979 for all use except on rangeland and rice fields.
- Ultrasonography:** Imaging of the ovaries or developing embryo/fetus using sonic waves.
- Viability:** A concept used to distinguish between the early stages of gestation, when the embryo or fetus is incapable of survival outside the uterus, and the later stages, when the fetus can live outside the womb. Given current neonatal technologies, a fetus achieves viability after approximately 6 months of gestation.
- Workers' compensation:** State-required insurance programs that pay for an employee's medical costs and other economic costs due to work-related injury and illness.
- Wrongful death:** A death resulting from a tort. Some States have enacted special statutes, known as wrongful death acts, to address liability in such cases. These statutes generally do not apply to fetal deaths.
- Wrongful birth wrongful life:** A life resulting from a tort, usually the birth of an infant with birth defects as a result of a health care provider's negligent failure to either inform the parents of the risk of birth defects or to perform procedures with due care to prevent conception or birth. Wrongful birth refers to the parent's claim for damages, while wrongful life refers to the child's claim for damages. The courts are divided as to whether relief can be granted for such claims.
- Zygote:** Fertilized egg; the result of the union of sperm and ovum.