Term	Definition
Absolute:	A chemical substance that is not mixed; pure. An example is absolute alcohol, which is ethyl alcohol containing not more than one percent by weight of water.
ABSOLUTE PRESSURE:	The total pressure within a vessel, pipe, etc., not offset by external atmospheric pressure.
Absorption:	Penetration of a substance into the body of another.
Acceptable Entry Conditions:	The conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space entry can safely enter into and work within the space.
Accident:	An incident or occurrence which cause or have the potential to cause personal injury, illness or property damage.
Accident Analysis Report (AAR):	A report identifying the three stages of any accident: work environment, people, and safety system.
Accident/Incident Investigation Report (AIR):	Documented investigation of all accidents resulting in personal injury, illness, property damage, and no-loss incidents.
Accident Investigation Team (AIT):	A team made up of members of the Environmental, Health and Safety Committee (E,H&SC) and/or personnel trained in accident investigation and root cause analysis.
Accountable Person:	Person designated to site management as capable (by education and/or specialized training) to anticipate, recognize, and evaluate employee exposure to hazardous substances or other unsafe conditions in a confined space and having the authority to specify all necessary control measures, establish preplans, terminate entry, and summon rescue operations.
ACGIH:	American Conference of Governmental Industrial Hygienists; an organization of professional personnel in governmental agencies or educational institutions engaged in occupational safety and health programs. ACGIH develops and publishes recommended occupational exposure limit for hundred of chemical substances and physical agents. See TLV.
Acid:	Any chemical that undergoes dissociation in water with the formation of hydrogen ions. Acids have a sour taste and may cause severe skin burns. Acids turn litmus paper red and have pH value of 0 to 6.
ACIDOSIS:	Condition of decreased alkalinity of the blood and tissues marked by sickly sweet breath, headache, nausea, vomiting, and visual disturbances; usually the result of excessive acid production.
ACM:	Asbestos Containing Materials
ACRID:	Irritating and bitter.
Action Level:	A concentration calculated on an eight (8) hour Time Weighted Average which initiates activities such as exposure monitoring and medical surveillance.

Term	Definition
ACTIVE INGREDIENT:	Ingredient of a product that actually does what the product is designed to do. The remaining ingredients may be inert.
Acute Effect:	Adverse effect on a human or animal that has severe symptoms developing rapidly into a crisis.
ACUTE LETHALITY:	Death of animals immediately or within 14 days after a single dose of or exposure to a toxic substance.
Acute Toxicity:	Acute effects resulting from a single dose of, or exposure to a substance. Ordinarily used to denote effects in experimental animals.
Administrative Controls:	Methods used (procedures, Work Instructions or disciplinary action) to control hazards which expose employees to potential injuries or to ensure compliance to regulatory requirements.
ADENOCARCINOMA:	A tumor with glandular (secreting) elements.
ADSORB:	Collect gas or liquid molecules on the surface of another material.
ADENOSIS:	Any disease of a gland.
ADHESION:	A union of two surfaces that is normally separate.
Adsorption:	The condensation of gases, liquids or dissolved substances on the surface of solids.
Aerosol:	A gaseous suspension of fine solid or liquid particles.
Affected Employee (Fall Hazards): **Affected Employee (Electrical):** **Affected Employee (Confined Space):** **Affected Employee (Lockout/Tagout):**	Employee who, during the course of their job, could be exposed to a potential fall hazard and would be expected to use any fall hazard control system in any capacity. Employee who operates or uses equipment on which servicing or maintenance is performed under lockout conditions by an authorized employee. An affected employee may also be one whose job requires work in the immediate area of servicing or maintenance under lockout conditions. An employee who performs tasks or works in an area that provides exposure to harmful contaminates, such as confined space operations and emergency use. An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.
AGENT:	Any substance, force, radiation, organism, or influence that affects the body. Effects may be beneficial or injurious.

Term	Definition
AHM:	Acutely Hazardous Material
AIHA:	American Industrial Hygiene Association
Air Line:	A respirator that is connected to a compressed breathing air source such as a compressor or cylinder by a hose line.
AIR-LINE RESPIRATOR:	A respirator that is connected to a compressed breathable air source by a hose of small diameter. The air is delivered continuously or intermittently in a sufficient volume to meet the wearer's breathing requirements.
Air Purifying:	A respirator that uses chemicals to remove specific gases and vapors from the air or that uses a mechanical filter to remove particulate matter. An air purifying respirator must only be used when there is sufficient oxygen to sustain life and the chemical has adequate warning properties.
Air-Purifying Respirator:	A respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.
ALARA:	As low as reasonably achievable.
Alkali:	Any chemical substances that forms soluble soaps with fatty acids. Alkalis are also referred to as bases and can cause severe burns to the skin. Alkalis turn litmus paper blue and have pH value of 8 to 14.
Allergic Reaction:	An abnormal physiological response to chemical or physical stimuli.
ALLERGIC RESPIRATORY REACTION:	Labored breathing, coughing, or gasping caused by inhaling a particular substance.
ALLERGIC SKIN REACTION:	Reddening, swelling and/or itching of the skin following contact with a substance to which a person has become sensitized due to previous skin contact or natural body conditions.
ALOPECIA:	Loss of hair.
AMBIENT:	Usual or surrounding conditions.
AMENORRHEA:	Absence of menstruation.
American Conference of Governmental Industrial Hygienists (ACGIH):	An organization of professional personnel in governmental agencies or educational institutions engaged in occupational safety and health programs. ACGIH establishes recommended occupational exposure limits for chemical substances and physical agents. See TLV.
American National Standard Institute (ANSI):	A private, non-profit organization that administers and coordinates the U.S. voluntary standardization and conformity assessment system.
AMES TEST:	Short term test commonly used for preliminary screening of chemicals to see if they cause mutations in a special type of bacterial cell.
ANALGESIA:	Loss of sensitivity to pain.
Anchorage Points:	Secure point of attachment for lifelines, lanyards, or deceleration devices independent of the means of supporting or suspending the employee.

Term	Definition
Anesthetic:	A chemical that causes a total or partial loss of sensation. Overexposure to anesthetics can cause impaired judgment, dizziness, drowsiness, headache, unconsciousness, and even death. Examples include alcohol, paint remover, and degreasers.
Analysis Using Records:	Any compilation of data, research, statistical analysis, or studies based at least in part on information contained in medical and/or exposure records.
ANHYDRIDE:	Compound derived from other compound by removing elements composing water (hydrogen and oxygen).
ANHYDROUS:	No water. Substance in which no water molecules are present as hydrate or as water crystallization.
ANOREXIA:	Loss of appetite.
ANOSMIA:	Loss of the sense of smell.
ANOXIA:	Lack of oxygen from inspired air.
ANSI:	American National Standards Institute; a privately funded, voluntary membership organization that identifies industrial and public needs for national consensus standards and coordinates development of such standards. Many ANSI standards relate to safe design/performance of equipment, such as safety shoes, eyeglasses, smoke detectors, fire pumps and household appliances; and safe practices or procedures, such as noise measurement, testing of fire extinguishers and flame arrestors, industrial lighting practices, and the use of abrasive wheels.
Antidote:	A remedy to relieve, prevent, or counteract the effects of a poison.
ANURIA:	Absence or defective excretion of urine.
API:	American Petroleum Institute is an organization of the petroleum industry.
APNEA:	Breathing temporarily stopped.
Appearances:	A description of a substance at normal room temperature and normal atmospheric conditions. Appearance includes the color, size, and consistency of a material.
Approved Equipment:	Equipment that is tested, listed, and accepted as satisfactory by a duly constituted administration or regulatory authority, e.g., National Institute for Occupational Safety and Health (NIOSH), American National Standards Institute (ANSI), or Underwriters Laboratories (UL).
Approved Transport Container (ATC):	A commercially available bottle carrier made of rubber, or plastic with carrying handle(s) that is large enough to hold the contents of the container if broken in transit.
Approved Walking, Working Surface or Platform:	Elevated surfaces meeting all OSHA regulations regarding access, guardrails, and other structural design requirements.
Aquatic Toxicity:	The adverse effects to marine life that result from being exposed to a toxic

Term	Definition
	substance.
AQUEOUS:	Water-based solution or suspension. Frequently, a gaseous compound dissolved in water.
ARGYRIA:	Local or generalized gray/blue-colored impregnation of the body tissue with silver.
Article:	A manufactured item that: 1. Is formed to a specific shape or design during manufacture. 2. Has functionality dependent in whole or in part upon its shape. 3. Does not release, or otherwise result, in exposure to a hazardous chemical, under normal conditions of use.
ASBESTOSIS:	Chronic lung disease caused by inhaling airborne asbestos fibers.
Assigned Protection Factor (APF):	The minimum anticipated protection provided by a properly functioning respirator or class of respirators to a given percentage of properly fitted and trained users.
ASPHYXIA:	Lack of oxygen and interference with the oxygenation of the blood. Can lead to unconsciousness.
Asphyxiant:	A vapor or gas which can cause unconsciousness or death by suffocation (lack of oxygen). Asphyxiation is one of the principal potential hazards of working in confined spaces.
ASPIRATION HAZARD:	Danger of drawing material into the lungs leading to an inflammatory response.
Assembly Point (AP):	A location pre-designated and marked outside of the building for personnel to report to after an evacuation.
Assembly Point (AP) Primary Zone:	A location pre-designated and marked outside of the building for personnel to report to after an evacuation.
Assembly Point (AP-II) Secondary Zone:	A location designated by the E,H&S to respond to when the primary zone must be evacuated.
Assembly Point Leader (AP Leader):	Security Officer at each AP.
Assessment:	Process of judging the severity of a hazard and probability of an event occurring Related to that hazard.
Assistant Secretary:	The Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.
ASTHMA:	Disease characterized by recurrent attacks of dyspnea, wheezing, and perhaps coughing caused by spasmodic contraction of the bronchiole in the lungs.
ASTM:	American Society for Testing and Materials; voluntary membership organization with members from broad spectrum of individuals, agencies, and industries concerned with materials. As the world's largest source of voluntary consensus standards for methods, health and safety aspects of materials, safe performance

Term	Definition
	guidelines, and effects of physical and biological agents and chemicals.
ASYMPTOMATIC:	Neither causing nor exhibiting symptoms.
ATAXIA:	Loss of muscular coordination.
Atmosphere:	Gases, vapors, mists, fumes, and dusts within a confined space.
ATSDF:	Agency for Toxic Substances and Disease Registry
Atmosphere-Supplying Respirator:	A respirator that supplies the user with breathing air from a source independent of the ambient atmosphere; this includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.
ATROPHY:	Wasting or diminution in the size of tissue, organs, or the entire body caused by lack of use.
Attendant:	An individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit space program
Auto-Ignition Temperature:	The temperature to which a closed, or nearly closed container must be heated in order for a flammable liquid, when introduced into the container, to ignite spontaneously or burn.
Authorized Employee:	Trained personnel who implements lockout and tagout on equipment to perform servicing or maintenance.
Authorized Entrant:	An employee who is authorized by the employer to enter a permit space.
Automated Training and Tracking System (ATTS):	A data system used to track all required training, medical and accident investigation records, and historical safety data.
BAL:	British Anti-Lewisite. A name for the drug dimecaprol--a treatment for toxic inhalations.
BAAQMD:	Bay Area Air Quality Management District.
Base:	See Alkali.
BAUME:	Arbitrary scale of specific gravities; used to determine specific gravities and in graduation of hydrometers.
BCM:	Blood-clotting mechanism effects.
BEI:	Biological Exposure Indices. Numerical values based on procedures to determine the amount of a material absorbed into the human body by measuring it or its metabolic products in tissue, fluid or exhaled air.
BENIGN:	Not recurrent or not tending to progress. Not cancerous.
Biodegradable:	Capable of being broken down into innocuous products by the action of living things.
BIOLOGICAL MONITORING:	Periodic examination of body substances, such as blood or urine, to determine the extent of hazardous material absorption as opposed to mere exposure.
BIOPSY:	Removal and examination of tissue from the living body.

Term	Definition
Blanking/Blinding:	Absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.
BLEVE:	Boiling Liquid Expanding Vapor Explosion. Condition in which liquids are excessively heated, which may result in the violent rupture of a container, and the rapid vaporization of the material. The possibility of a BLEVE increases with the volatility of the material.
BOD:	Biochemical (Biological) Oxygen Demand
BODY BURDEN:	Total amount of a toxic material that a person has ingested or inhaled from all sources over time.
Body Harness:	A combination of straps that may be secured on the employee to distribute the fall arrest forces over the entire body with a means for attachment to a fall arrest system.
Boiling Point:	The temperature at which a liquid changes to a vapor state. ➢ Propane -44 degrees Fahrenheit ➢ Anhydrous Ammonia -28 degrees Fahrenheit ➢ Gasoline 100 degrees Fahrenheit ➢ Allyl Chloride 113 degrees Fahrenheit ➢ Ethylene Glycol 387 degrees Fahrenheit
BOM, or BuMINES:	Bureau of Mines, U.S. Department of Interior.
BRADYCARDIA:	A slow heartbeat with pulse rate below 60/minute.
Breakthrough:	The penetration of material(s) through a gas or a vapor air-purifying element. The quantity or extent of breakthrough during service life testing is often referred to as the percentage of the input concentration.
Bonding:	The interconnecting of two objects by means of a clamp and bare wire. Bonding equalizes the electrical potential between the objects to prevent a static discharge when transferring a flammable liquid from one container to another. The conductive path is provided by clamps which make contact with the charged object and a low resistance flexible cable which allows the charge to equalize. See Grounding.
BRONCHITIS:	Inflammation of the bronchial tubes in the lungs.
BTU:	British Thermal Unit. Quantity of heat required to raise the temperature of 1 pound of water 1 degree F at 39.2F, its temperature of maximum density.
BUFFER:	Substance that reduces the change in hydrogen ion concentration (pH) that otherwise would be produced by adding acids or bases to a solution.
Bulk:	Density Mass of powdered or granulated solid material per unit of volume.

Term	Definition
BULK DENSITY:	The mass (weight) per unit volume of a solid particulate material as it is normally packed, with voids between particulates containing air. Usually expressed as lb/ft3 or g/cm3.
BUNA:	Trademark for synthetic rubber and rubberlike materials such as Buna-N (Nitrile) or Buna-S (Styrene).
C:	Centigrade, a unit of temperature.
CAC:	California Administrative Code.
CALORIE:	Standard unit of heat. A calorie is the amount of heat required to raise 1 gram of water 1 degree C.
CAL-OSHA:	California Division of Occupational Safety and Health.
Canister or Cartridge:	A container with a filter, sorbent, or catalyst, or combination of these items, which removes specific contaminants from the air passed through it.
Capable of Being Locked Out:	Energy isolating device which is readily accessible and designed with a hasp, other attachment or integral part to which (or through which) a lock can be affixed, or a locking mechanism built into it. If lockout can be achieved without the need to dismantle, rebuild, or replace the energy-isolating device or permanently alter its energy control capability, it is capable of being locked out.
Carabineer:	Oblong ring snap hook with a locking latch used for attaching a harness or a lanyard.
Carbon Dioxide (CO2):	Carbon dioxide is a heavy, colorless gas that is produced by the combustion and decomposition of organic substances and is a byproduct of many chemical processes. CO2 will not burn and is relatively nontoxic (although high concentrations, especially in confined spaces, can create hazardous oxygen-deficient environments).
Carbon Monoxide (CO):	A colorless, odorless, flammable, and very toxic gas produced by the incomplete combustion of carbon; it is also a byproduct of many chemical processes. A chemical asphyxiate; it reduces the blood's ability to carry oxygen. Hemoglobin absorbs CO two hundred times more readily than it does oxygen.

Term	Definition
Carcinogen:	A substance or agent capable of causing or producing cancer in mammals, including humans. A chemical is considered to be a carcinogen if: 1. It has been evaluated by the International Agency for Research on Cancer (IARC) and found to be a carcinogen or potential carcinogen -or- 2. It is listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP) (latest edition) -or- 3. It is regulated by OSHA as a carcinogen.
CARCINOMA:	Malignant tumor or cancer; a new growth made up of epithelial cells tending to grow rapidly, infiltrate other cells, and give rise to metastasis (spreading).
CASRN:	Chemical Abstract Service Registry Number.
cc:	Cubic centimeter; a volume measurement in the metric system, equal in capacity to one millimeter (ml) - approximately twenty (20) drops. There are 16.4 cc in one cubic inch.
cu ft, ft3:	Cubic foot. Cu ft is more usual.
cc, cm3	Cubic centimeter.
CCR:	T22 California Code of Regulations, Title 22, which contains all the hazardous waste regulations. Similar to Title 40 of the Code of Federal Regulations.
CATALYST:	Substance that modifies a chemical reaction (makes it faster or slower) without being consumed.
CATARACT:	Loss of transparency of the crystalline lens of the eye or its capsule.
Caustic:	See Alkali.
CDFA:	California Department of Food and Agriculture
Ceiling Level:	Maximum airborne concentration of a toxic agent which is not to be exceeded.
"C" or Ceiling Limit (PEL OR TLV):	The maximum allowable exposure limit for an airborne substance—not to be exceeded even momentarily. Also see PEL and TLV.
CENTIMETER, cm:	1/100 meter. A cm = approximately 0.4 in.
CENTIPOISE:	cgs unit of the measure of viscosity equal to 1/100 poise. Viscosity of water at 20C is approximately 1 centipose.
Central Accumulation Point (CAP):	Central location inside the facility where all hazardous waste is placed prior to off-site shipment. This area cannot contain over 2,200 LBS. per month or 13,200 Lbs. within the 180-day disposal period, or 2.2 Lbs. of acutely HW.
Central Nervous System:	The brain and spinal cord. These organs supervise and coordinate the activity of the entire nervous system. Sensory impulses are transmitted into the central

Term	Definition
	nervous system, and motor impulses are transmitted out. Also referred to as CNS.
CEQA:	California Environmental Quality Act.
CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act of 1980. The Act requires that the National Response Center be notified in the event of a hazardous substance release in excess of its Reportable Quantity (RQ). The Act also provides for a fund (the Superfund) to be used for the cleanup of abandoned hazardous waste sites.
CFC:	Chloro Fluoro Carbon (Freon).
CFR:	Code of Federal Regulations. A collection of the regulations that have been promulgated under U.S. law.
CFS:	Cubic Feet per Second.
CGA:	Compressed Gas Association.
cgs:	Metric units of measure based upon centimeter, gram, and second.
CHELATIING AGENT:	Chemical compound capable of forming multiple chemical bonds to a metal ion. Used to treat metal poisoning.
Chemical:	Any element, compound, or mixture of elements and/or compounds. A substance that 1) possesses hazardous properties (including, but not limited to, flammables, carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizes, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic systems, and agents which can damage the lungs, skin, eyes, or mucous membranes); 2) is included on any federal, state, or local regulatory agency list of regulated chemicals; or 3) is associated with a Material Safety Data Sheet (MSDS).
Chemical Abstracts Service (CAS):	An organization under the American Chemical Society. CAS abstracts and indexes chemical literature from all over the world into "Chemical Abstracts." "CAS Numbers" are used to identify specific chemicals or mixtures.
Chemical Cartridge Respirator:	A respirator that uses various chemical substances to purify inhaled air of certain gases and vapors.
Chemical Family:	A group of single elements of compounds with a common general name. Example: acetone, methyl ethyl Ketone (MEK), and methyl Isobutyl Ketone (MIBK) are of the "Ketone" family; Acrolein, furfural, and acetaldehyde are of the "aldehyde" family.
CHEMICAL FORMULA:	Gives the number and kinds of atoms that comprise a molecule of a material.
Chemical Hygiene Officer (CHO):	An employee who is designated by CTI, and who is qualified by training or experience, to provide technical guidance in development and implementation or the provisions of the Chemical Hygiene Plan (CHP).
Chemical Hygiene Plan (CHP):	A written program developed and implemented by CTI which sets forth

Term	Definition
	procedures, Equipment, Personal Protective Equipment and work practices that are capable of protecting Personnel from the health hazards presented by hazardous Chemicals used in that particular workplace.
Chemical Inventory System (CIS™ Pro):	A Chemical tracking software program from ChemSW that allows for a unique identifier label to be affixed to each chemical container for tracking purposes. Material Safety Data Sheets are also available through this system.
Chemical Manufacturer:	An employer with a workplace where chemical(s) are produced for use or distribution.
Chemical Name:	The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation.
CHEMICAL PNEUMONITIS:	Inflammation of the lungs caused by accumulation of fluids due to chemical irritation.
CHEMICAL REACTIVITY:	Ability of a material to chemically change. Undesirable and dangerous effects such as heat, explosions, or the production of noxious substances can result.
Chemical Safety Data Card (CSDC):	An information card that provides safety and health information for a particular chemical when the chemical is used as indicated.
Chemical Structure:	The arrangement within the molecule of atoms and their chemical bonds.
Chemical Transportation Emergency Center (Chemtrec):	A national center established by the Chemical Manufactures Association (CMA) to relay pertinent emergency information concerning specific chemicals on requests from individuals. CHEMTREC has a 24-hour toll-free telephone number (800-424-9300) to help respond to chemical transportation emergencies.
CHEMILUMINESCENCE:	Emission of light during a non-combustible chemical reaction.
CHLORACNE:	Acne-like eruption caused by excessive contact with certain compounds.
CHRIS:	Chemical Hazards Response Information System.
Chronic Effect:	An adverse effect on a human or animal body that can take months or years to develop after exposure.
Chronic Exposure:	Long-term contact with a substance.
Chronic Toxicity:	Adverse (chronic) effects resulting from repeated doses of or exposure to a substance over a relatively prolonged period of time. Ordinarily used to denote effects in experimental animals.
Ci:	Curie (Radiation measurement unit).
CIH:	Certified Industrial Hygienist. Obtained after passing a very comprehensive and difficult exam. Recognized nationally.
Class 1 Low Power - Exempt	The accessible radiation is at a level below that at which biological damage is

Term	Definition
Lasers and Laser Systems:	produced. No special warning labels or control measures are required.
Class 2 Low Power Visible Lasers and Laser Systems:	The accessible radiation is at a level at which biological damage from chronic exposure is possible. The power output is sufficiently low to prevent injury (acute exposures), but may produce retinal injury when stared at for a long period.
Class 3A Medium Power Visible Lasers and Laser Systems:	The accessible radiation for a visible laser is at a level at which biological damage will not result when viewed with the unaided eye. However, injury may result when the energy is collected and put into the eye, as with optical components.
Class 3B Medium Power Lasers and Laser Systems:	The accessible radiation is at a level at which biological damage is possible from acute direct or secularly reflected exposure.
Class 4 High Power Lasers and Laser Systems:	The accessible radiation is at a level at which biological damage is possible from acute direct, diffuse, or secularly reflected exposure
Clean Water Act:	Federal law enacted to regulate/reduce water pollution. Administered by EPA.
CMA:	Manufacturers Association. See CHEMTREC.
CNS:	Central Nervous System, the brain and spinal cord.
COC:	Cleveland Open Cup; a flash point test method.
COD:	Chemical Oxygen Demand.
Code of Federal Regulations:	See CFR.
COEFFICIENT OF WATER/OIL DISTRIBUTION	Also called the partition coefficient, it is the ratio of the solubility of a chemical in water to its solubility in oil. Used to indicate how easily human or other organisms can absorb or store a material. Sometimes abbreviated Ko/w; may also be expressed as its logarithm, log Ko/w.
Collecting Optics:	All collecting optics (such as lenses, telescopes, microscopes, endoscopes, etc.) intended for viewing use with a laser shall incorporate suitable means (such as interlocks, filters, or attenuators) to maintain the laser radiation transmitted through the collecting optics to levels at or below the appropriate MPE, under all conditions of operation and maintenance.
Combustible:	A term used by NFPA, DOT, and others to classify certain liquids that will burn, on the basis of flash points. Both NFPA and DOT generally define "combustible liquid" as having a flash point of 100F (37.8 C) or higher but below 200F (93.3C). Also see "flammable." Non-liquid substances such as wood and paper are classified as "ordinary combustibles" by NFPA.
Combustible Dust:	Dust capable of undergoing combustion or of burning when subjected to a source of ignition.
Combustible Liquid:	Those liquids having a flash point at or above 100°F.
Common Name:	Any designated or identification such as code name, code number, trade name, brand name, or generic name used to identify a chemical other than by its

Term	Definition
	chemical name.
Competent Person:	Employee who is capable by education or experience of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as in their application and use of equipment. This person must be knowledgeable of manufacturer's instructions and equipment limitations.
Compressed Gas:	1. A gas or mixture having, in a container, an absolute pressure exceeding 40 pounds per square inch (psi) at 70F (21.1C). -or- 2. A gas mixture of gases having, in a container, an absolute pressure exceeding 104psi at 130F (54.4C) regardless of the pressure at 70F (21.1C). -or- 3. A liquid having a vapor pressure exceeding 40 psi at 100F (37.8C) as determined by ASTM D-323-72.
Concentration:	The relative amount of a substance when combined or mixed with other substances. Examples: 2 ppm hydrogen sulfide in air, or a 50 percent caustic solution.
Conditions to Avoid:	Conditions encountered during handling or storage which could cause a substance to become unstable.
Confined Space:	Any space that is large enough and so configured that an employee can bodily enter and perform assigned work; and has limited or restricted means for entry or exit; and is not designed for continuous employee occupancy.
Conjunctivitis:	Inflammation of the conjunctiva, the delicate membrane that lines the eyelids and covers the eyeballs.
Connector:	Device that is used to couple the system components together, e.g., D-ring or carabineer.
Container:	Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or other similar item that contains hazardous chemical. For purposes of MSDS of HCS, pipes or piping systems are not considered to be containers.
Contract Administrator:	CTI employee directly responsible for a contractor’s work, service, or products.
Contract Research Organization (CRO):	A person or an organization (commercial, academic, or other) contracted by CTI to perform one or more GLP Nonclinical Laboratory or Clinical Studies.
Contractor/Sub-Contractor:	Person, persons, company, business, or corporate entity contracting to provide materials or services to CTI. Includes sub-contractors hired by general contractors.

Term	Definition
Controlled Access Zone:	The area between a warning line and an exposed edge (to include all leading edge work).
Controlled Substance Supervisor (CSS):	The individual responsible for inventory, access, control, disposal, and reporting of all Controlled Substances at CTI. The Analytical Chemistry Project Leader is the Controlled Substance Supervisor, and the Standard Testing & Quality Control Manager and the Project Leader of Formulation are the alternates to the Controlled Substance Supervisor in the absence or unavailability of the Controlled Substance Supervisor.
CORNEA:	Transparent structure of the external layer of the eyeball.
Corrective Action Matrix (CAM):	Chart to prioritize several projects requiring corrective action based on eight criteria which are evaluated and assigned points from 1 to 5 in order to calculate a Corrective Action Value (CAV).
Corrective Action Value (CAV):	A number from 8 to 40 with 8 indicating the best corrective action.
Corrosive:	Substance which causes visible destruction or permanent changes in human skin tissue at the site of contact.
CORROSION RATE:	Expressed in inches per year; accompanied by temperature.
Couprous:	(cuprous) Is the +3 ionized state now known as Copper III.
CPE:	Chemical Protective Equipment
CPM:	Counts Per Minute (radioactivity).
CRITICAL PRESSURE/TEMPERATURE:	Temperature above which a gas cannot be liquefied by pressure. The critical pressure is that pressure required to liquefy a gas at its critical temperature.
CPR:	Cardio Pulmonary Resuscitation.
CRYOGENIC:	Relating to extremely low temperature as for refrigerated gases.
Cupric:	An ionized state of copper (+2) now known as Copper II.
Cutaneous:	Toxicity See Dermal Toxicity.
CYANOSIS:	Dark purplish coloration of skin and mucous membrane caused by deficient oxygenation of the blood.
D38:	Depleted Uranium 238.
Dangerous When Wet:	See Water-Reactive.
DANGEROUSLY REACTIVE MATERIAL:	Material that can react by itself or with water/air producing hazardous condition.
DCA:	Dichloroethane.
DCE:	1,1 dichloroethylene
D-Ring:	An attachment on the body harness for a device or lanyard to be secured.
Deceleration Device:	Mechanism that serves to dissipate a substantial amount of energy during a fall arrest, e.g., rip-stitch lanyards or self-retracting lifelines.

Term	Definition
Deceleration Distance:	The vertical distance between the harness attachment point at the activation of the fall arrest equipment and the attachment point once the employee comes to a complete stop.
Decomposition:	Breakdown of a material or substance (by heat, chemical reaction, electrolysis, decay, or other processes) into parts of elements or simpler compounds.
DEFATTING:	Removal of natural oils from the skin by fat-dissolving solvents or other chemicals.
DELIQUESCENT:	Water soluble salts (usually powdered) absorb moisture from air and to soften or dissolve as a result.
Demand Respirator:	An atmosphere-supplying respirator that admits breathing air to the facepiece only when negative pressure is created inside the facepiece by inhalation.
DEMULCENT:	Material capable of soothing or protecting inflamed, irritated mucous membranes.
Density:	The mass (weight) per unit volume of a substance.
[Virginia] Department of Labor and Industry (DOLI):	State agency responsible for promoting and enforcing safe and healthful regulatory compliance standards within Virginia.
Department of Transportation (DOT):	Department and its regulations pertaining to hazardous materials and the shipping requirements.
Depressant:	A substance that reduces a bodily functional activity or an instinctive desire, such as appetite.
Designated Representative:	Any individual or organization to which an employee gives written authorization to exercise a right of access.
Dermal:	Used on or applied to the skin.
Dermal Toxicity:	Adverse effects resulting from skin exposure to a substance. Often used to denote effects in experimental animals. Ratings corresponding to the following definitions are derived from data obtained from the test methods as described in 16 CFR 1500.40 and categories of toxicity as described in 16 CFR 1500.3. **NON-TOXIC:** The probable lethal dose of undiluted product to 50% of the test animals determined from dermal toxicity studies (LD50) is greater than 2 grams per kilogram of body weight. **TOXIC:** The probable lethal dose of undiluted product to 50% of the test animals determined from dermal toxicity studies (LD50) is greater than 200 milligrams and less than or equal to 2 grams per kilogram of body weight. **HIGHLY TOXIC:** The probable lethal dose of undiluted product to 50% of the test animals

Term	Definition
	determined from dermal toxicity studies (LD50) is less than or equal to 200 milligrams per kilogram of body weight.
Dermatitis:	Inflammation of the skin.
DESIGNATED AREA:	An area of (or device within) a lab to be used for work with "select carcinogens", reproductive toxins, and other materials which have a high degree of acute toxicity. An administrative control intended to minimize the potential for employee exposure to hazardous chemicals.
DESIGNATED REPRESENTATIVE:	Any individual or organization to whom an employee gives written authorization to exercise such employee's rights under the Hazard Communication Standard.
DFA:	California Department of Food and Agriculture (See CDFA).
DFG:	California Department of Fish and Game.
DFW:	U. S. Department of Fish and Wildlife
DHS:	Department of Health Services (California).
DHHS:	U. S. Department of Health and Human Services; created in 1980 to replace the Department of Health, Education, and Welfare (DHEW) as "parent" for NIOSH, Public Health Service, and other agencies related to health and safety.
DIAPHORESIS:	Perspiration, especially profuse.
Dike:	A barrier constructed to control or confine hazardous substances and prevent them from entering sewers, ditches, streams, or other flowing waters.
Dilution Ventilation:	Airflow designed to dilute contaminants to acceptable levels (also see ”General Ventilation” or ”Exhaust”).
Disposable Respirators:	A respirator that is discarded after the end of its recommended period of use, after excessive resistance or physical damage, or when odor breakthrough or other warning indicators render the respirator unsuitable for further use.
Distributor:	A business, other than a chemical manufacturer or importer, which supplies hazardous chemicals to other companies.
DOHS:	DHS Department of Health Services (California).
DOL:	U. S. Department of Labor; includes the Occupational Safety and Health Administration (OSHA).
DOT:	U. S. Department of Transportation; regulates transportation of chemical and other substances, to aid in the protection of the public as well as fire, law enforcement, and other emergency response personnel, particularly when transportation incidents occur involving hazardous materials.
DOT Hazard Class:	DOT requires that hazardous materials offered for shipment be labeled with the proper DOT hazard class. These classes include corrosive, flammable liquid, organic peroxide, ORM-E, poison B, etc. The DOT hazard class may not adequately describe all the hazard properties of the material.

Term	Definition
Double Block and Bleed:	The closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.
DOT Hazard Class:	A Department of Transportation labeling system used for hazardous materials that are being transported. These classes include corrosive, flammable liquid, organic peroxide poison, etc.
DPM:	Disintegrations Per Minute (radioactivity).
Dry Chemical:	A powdered fire extinguisher agent usually composed of sodium bicarbonate, potassium bicarbonate, etc.
Dry Trip Test:	A sprinkler valve test that is conducted with the control valve almost closed.
DTSC:	Department of Toxic Substance Control. Currently, within Cal-EPA. Responsible for enforcing Title 22 hazardous waste regulations.
Dust:	A solid, mechanically produced particle with a size ranging from submicroscopic to macroscopic.
DYSPLASIA:	An abnormality of development.
DYSPNEA:	Sense of difficulty in breathing; shortness of breath.
DYSURIA:	Difficult or painful urination.
Edema:	An abnormal accumulation of clear watery fluid in the tissues.
EFFECTIVE CONCENTRATION (EC50):	Concentration of a material in water, a single dose which is expected to cause a biological effect on 50% of a group of test animals.
EHS:	Environmental Health & Safety. Common name given to safety departments.
EHS:	Extremely Hazardous Substances.
ELAP:	Environmental Laboratory Accreditation Program (DOHS).
ELECTROLYTE:	Non-metallic substance that conducts electric current in solution by moving ions rather than electrons.
Elevated Walking/Working Surface:	Any surface, machine, or equipment that is used by personnel for standing or supporting themselves at elevations of four (4) feet or greater. This does not include approved ladders used for ascending or descending.
Elimination:	Remove the hazard entirely.
EMBOLISM:	Obstruction of a blood vessel by a transported clot, a mass of bacteria, etc.
EMBRYO:	Organism in the early stages of development before birth.
EMBRYOTOXIN:	Material harmful to a developing embryo at a concentration that has no adverse effect on the pregnant female.
Emergency	Any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.
EMS:	Emergency Medical Services.
Emergency Operations Team	Team designed to assist with all disasters and emergencies.

Term	Definition
(EOT):	
EMT:	Emergency Medical Technician.
Emergency Response Team (ERT):	Emergency medical team trained to provide assistance in the event of illness or injury.
Emergency Safety Coordinator (ESC):	A person chosen and trained by E,H&S who assists with safe evacuation of personnel and identifying hazards associated with safe egress.
Emergency Situation:	**Changed to "Emergency"**
EMETIC:	Agent that induces vomiting.
Emission Delay:	A sufficient time prior to emission of laser radiation which allows appropriate action to be taken to avoid exposure to the laser radiation.
EMPHYSEMA:	Irreversibly diseased lung condition in which the alveolar walls have lost their resiliency, resulting in an excessive reduction in the lungs' capacity.
Employee	An employee of an employer who is employed in the business of that employer which affects interstate commerce.
Employee Exposure:	Exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.
Employee Exposure Record:	A record containing any information relating to an employee's exposure to a toxic substance or harmful physical agent.
Employee Medical File System (EMFS) :	CTI's complete system (electronic, microfilmed, and paper records) for employee occupational medical records
Employee Serious Accident:	An accident resulting in a fatality, machine entrapment requiring the extrication by an external agency, amputation of a major body part, or the inpatient hospitalization of any employee(s) involved in the same incident.
Employer	A person engaged in a business affecting commerce, who has employees, this definition does not include the United States government or any state or political subdivision of a state.
End-of-Service-Life Indicator (ESLI):	A system that warns the respirator user of the approach of the end of adequate respiratory protection (for example, that the sorbent is approaching saturation or is no longer effective).
Energized:	Connected to an energy source or containing residual or stored energy.
Energy Isolating Device:	Physical device which prevents the transmission or release of energy. For example, manually operated electrical circuit breaker, disconnect switch, manually operated switch, slide gate, slip blind, line valve, blocks, or similar devices with visible indication of the position of the device. (Push buttons, selector switches, and similar control circuit type devices are not energy isolating devices.)
Energy Source:	Electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy

Term	Definition
	source that could cause injury to personnel.
Engineered Fall Arresting System:	System designed by a professional engineer in accordance with established engineering principles; the system is determined capable of withstanding the forces for which it is being designed (minimum 2:1 safety factor).
Engineering Controls:	The redesign of equipment or a process to eliminate or control a hazard.
Engulfment:	The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.
Entrant:	Person who is properly trained (according to CTI requirements) and authorized by the "Qualified Person" to enter a permit space.
Entry:	The action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.
Entry Permit:	The written or printed document that is provided by the employer to allow and control entry into a permitted confined space.
Entry Preplan:	A written outline of work to be completed prior to entering a confined or restricted work space, which includes specific steps taken for employee safety, health, and rescue during confined space entry.
Entry Supervisor:	The person (such as the employer) responsible for determining if acceptable entry conditions are present at a permitted confined space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating such entry.
Environmental, Health & Safety (E,H&S):	Generic term for the Environmental, Health and Safety function, its safety/health programs, and systems for all operations and the management thereof.
Environmental, Health and Safety Committee (E,H&SC):	A dedicated group of personnel drawn from all disciplines within the organization, created to evaluate, recommend, monitor and communicate safe work practices to help ensure the health and safety of all personnel and visitors at CTI.
Environmental Protection Agency (EPA):	Agency responsible for enforcement and training to protect human health and to safeguard the natural environment (air, water, and land) upon which life depends.
Epidemiology:	The science which deals with the study of disease in a general population. Determination of the incidence (rate of occurrence) and distribution of a particular disease (as by age, sex or occupation) may provide information about the causes of the disease.
EPIPHORA:	Excessive flow of tears.
EPISTAXIS:	Nosebleed.
Equipment:	Those apparatus, including mechanical, automated, or electronic instruments,

Term	Definition
	monitors, and tools, used for Inspection, measuring, or testing.
ERGONOMICS:	Study of human characteristics for the appropriate design of living and work environments.
ERT:	Emergency Response Team.
ERYTHEMA:	Abnormally red skin from capillary congestion.
ES&H:	Environmental Safety and Health.
Escape-Only Respirator:	A respirator intended to be used only for emergency exit.
ETIOLOGY:	All of the factors that contribute to the cause of a disease or an abnormal condition.
Evaporation Rate:	The rate at which a material is converted to vapor at a given temperature and pressure.
FAST:	evaporating if greater than 3.0. Examples: Methyl Ethyl Ketone (MEK) = 3.8, Acetone = 5.6, Hexane = 8.3.
MEDIUM:	evaporating if 0.8 to 3.0 Examples: 190 proof (95%) Ethyl Ketone = 1.4, VM&P Naphta = 1.4, MIBK = 1.6.
SLOW:	Evaporating if less than 0.8. Examples: Xylene = 0.6, Isobutyl Alcohol = 0.6, Normal Butyl Alcohol = 0.4, Water = 0.3, Mineral Spirits = 0.1.
Exception Report:	Document listing employees who have not received scheduled training.
Exothermic Polymerization:	A polymerization reaction that involves the production of heat.
Explosive:	A chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.
Exposed:	Subjected to a hazardous chemical in the course of employment, in any manner, including possible accidental exposure.
Exposure:	Being actually subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact, or absorption, etc.). The Federal Hazard Communication Standard also includes both accidental and possible exposures in its definition of exposure.
EXPOSURE LIMITS:	Concentration in air of a chemical that is thought to be acceptable.
Extinguishing Media:	The fire fighting substance used to control a material in the event of a fire; is usually identified by its generic name, such as fog, foam, water, etc.
EYE IRRITATION:	Ratings corresponding to the following definitions are derived from data obtained from test methods described in the 16 CFR 1500.42 graded pursuant to the Draize Scale for scoring ocular lesions and temporal reversibility criteria as set forth in NAS Publication 1138. 1. **PRACTICALLY NON-IRRITATING:** The undiluted product, when instilled into the eyes of rabbits

Term	Definition
	produces no noticeable irritation, or slight transient conjunctiva irritation. (Average Draize score 0.00-15.0). 2. **SLIGHTLY IRRITATING:** The undiluted product, when instilled into the eyes of rabbits, produces slight to moderate conjunctiva irritation, slight corneal involvement, and/or slight iritis. (Average Draize score 15.1-25.0). 3. **MODERATELY IRRITATING:** The undiluted product, when instilled into the eyes of rabbits, produces moderate corneal involvement with or without severe iritis. (Average Draize score range 25.1-50.0). The effects clear within 21 days. 4. **SEVERELY IRRITATING (OR CORROSIVE):** The undiluted product, when instilled into the eyes of rabbits, produces severe corneal involvement with or without severe iritis. (Average Draize score range 50.1-110.0). The effects persist for 21 days or more.
Eye Protection:	Recommended safety glasses, chemical splash goggles, face shields, etc. to be utilized when handling a hazardous material.
F:	Fahrenheit; a scale for measuring temperature. On the Fahrenheit scale water boils at 212o and freezes at 32o
f/cc:	Fibers per cubic centimeter of air. The concentration of asbestos in air is reported as fibers of asbestos per cubic centimeter of air.
Facility Engineer (FE):	Individual responsible for the maintenance of the facility and its equipment.
Facility Management Team (FMT):	The administrative group responsible for managing office infrastructure, facility maintenance, facility security, and the environmental, health, and safety functions.
Factory Mutual (FM):	Comprised of insurance companies, specializing in property coverage and loss prevention services for large industrial and institutional properties worldwide.
Fall Arrest System (FAS):	A system specifically designed to secure, suspend, or assist in retrieving a worker in or from a hazardous work area. The basic components of a fall arrest system include anchorage, anchorage connector, lanyard, shock absorber, harness and self-locking snap hook.
Fall Hazard Assessment Survey:	Guide to assist in defining and assessing the elements of a fall hazard.
Fall Hazard Control Systems (FHCS):	Components of the fall arrest system that function together to arrest a free fall in such a way as to minimize the potential for compounding injury. This includes body harnesses, lanyards, lifelines, anchorage points, or any other system

Term	Definition
	component.
Fall Hazard Control Preplans:	Written plans (safety instruction) that provide details on utilization and application of the FHCS, to include self-recovery or rescue techniques.
Fall Protection Plan:	Written plan developed by a qualified person specific to the job site anytime the Safety Monitoring System is used.
Federal Register:	See FR
FDA:	The U. S. Food and Drug Administration; under the provisions of the Federal Food, Drug and Cosmetic Act, the FDA establishes requirements for the labeling of foods and drugs to protect consumers from misbranded, unwholesome, ineffective, and hazardous products. FDA also regulates materials for food contact service and the conditions under which such materials are approved.
FEMA:	U. S. Federal Emergency Management Agency.
FIBER:	Basic form of matter, usually crystalline, with a high ratio of length to diameter.
Fibrosis:	An abnormal thickening of fibrosis connective tissue, usually in the lungs.
FID:	Flame Ionization Detector. A portable monitoring equipment that burns hydrogen to detect the presence or organic matter.
Field Checked:	Method of checking an instrument for proper response prior to each use. It is a check of the instrument's functionality and is a pass/fail or go/no-go test.
FIFRA:	Federal Insecticide, Fungicide, and Rodenticide Act; regulations administered by EPA under this Act require that certain useful poisons, such as chemical pesticides, sold to the public contain labels that carry health hazard warnings to protect users.
Filter or Air Purifying Element:	A component used in respirators to remove solid or liquid aerosols from the inspired air.
Filtering Facepiece (Dust Mask):	A negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.
FINES:	Finely crushed or powdered material or fibers; especially those smaller than the average in a mix of various sizes.
FIRE DIAMOND:	Symbol designed by the NFPA to give a quick number rating for the particular material's degree of health (blue), flammability (red), reactivity (yellow), and specific (white) hazard.

Term	Definition
FIRE POINT:	Lowest temperature at which liquid will produce sufficient vapor to flash near its surface and continue to burn.
Fire Protection Equipment:	Any equipment that suppresses a fire or explosion or prevents the advance of a fire. This includes extinguishers, fire doors and dampers, sprinklers, hoses, boilers, or gas-fired oven programming, etc.
First Aid:	Emergency measures to be taken when a person is suffering from illness or injury (such as overexposure to a hazardous material) before regular medical help can be obtained.
Fit Factor:	A quantitative estimate of the fit of a particular respirator to a specific individual; typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.
Fit Test:	The use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual. (See also Qualitative fit test QLFT and Quantitative fit test QNFT.)
Flame Ionization Detector:	See FID.
Flammable:	A chemical that includes one of the following categories: 1. "Aerosol, flammable:" An aerosol that, when tested by the method described in16 CFR 1500.45, yields a flame projection exceeding 18 inches at full valve opening or a flashback (a flame extending back to the valve) at any degree of valve opening. 2. "Gas, flammable:" (1) A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of 13 percent by volume or less; or (2) A gas that, at ambient temperature and pressure, forms a flammable mixtures with air wider than 12 percent by volume, regardless of the lower limit. 3. "Liquid, flammable:" Any liquid having a flashpoint below 100°F (37.8°C), except any mixture having components with flashpoints of 100°F (37.8°C) or higher, the total of which makes up 99 percent or more of the total volume of mixture. 4. "Solid, flammable:" A solid, other than a blasting agent or explosive as defined in 1910.109(a), that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A solid is a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second along its major axis.

Term	Definition
Flashback:	Occurs when flame from a torch burns back into the tip, the torch, or the hose. It is often accompanied by a hissing or squealing sound and a smoky or sharp-pointed flame.
Flashpoint:	The temperature at which a liquid will give off enough flammable vapors to ignite if an ignition source is present. There are several flash point test methods. The flash point may vary for the same material depending on the method used; therefore, the flash point test method is prescribed by the flash point temperature.
FOAM:	Fire fighting material consisting of small bubbles of air, water, and concentrating agents. Foam will put out a fire by blanketing it, excluding air and blocking the escape of volatile vapor.
FOG:	Visible suspension of fine droplets in a gas.
Foreseeable Emergency:	Any potential occurrences such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment, which could result in an uncontrolled release of a hazardous chemical into the workplace.
Formula:	The conventional scientific designation for a material (water is H2O, sulfuric acid is H2SO4, sulfur dioxide is SO2, etc.).
FR:	Federal Register. A daily publication of Federal department regulations that are promulgated under a particular law.
Free Fall Distance:	The distance from the elevated surface to the point at which the fall arrest equipment activates.
FREEZING POINT:	Temperature at which a material changes its physical state from liquid to solid. This information is important because a frozen material may burst its container or the hazards could change.
FROSTBITE:	Damage to tissue from exposure to extreme cold or contact with extremely cold liquids or solids.
FUGITIVE EMISSION:	Gas, liquid, solid, vapor, fume, mist, fog, or dust that escapes from process equipment or a product.
FULL PROTECTIVE CLOTHING:	Fully protective gear that keeps gases, vapor, liquid, and solids from any contact with skin and prevents them from being inhaled or ingested.
Fume:	A solid condensation particulate, usually of a vaporized metal.
Functional Leader:	A person, including a Project Leader, responsible for leading a functional area of CTI.
g Gram:	a metric unit of mass weight. One ounce U. S. is about 28 grams and one pound is 454 grams. One teaspoon of sugar weighs about 8 grams.
GANGRENE:	Death of tissue combined with putrefaction.
Gas:	An aeriform fluid that is in a gaseous state at standard temperature and pressure.
Gastric Lavage:	Washing out of the stomach, used to empty stomach when contents are irritating.

Term	Definition
	Also to clean a cavity before an operation is performed upon it.
GASTRITIS:	Irritation of lining of stomach which may be evident as stomach pains, vomiting, or diarrhea, etc.
GASTROENTERITIS:	Inflammation of the stomach and intestine.
GASTROINTESTINAL TRACT:	Stomach and intestine as a functional unit.
GAVAGE:	Feeding by means of a stomach tube.
g/kg Grams per kilogram:	an expression of dose used in oral and dermal toxicology testing to indicate the grams of substance dosed per kilogram of animal body weight. Also see kg.
General Exhaust:	A system for exhausting air-containing contaminants from a general work area.
General Inspection:	Walk-through of facility and property to identify conditions which do not meet company or compliance standards.
GENERAL VENTILATION:	Removal of contaminated air and its replacement with clean air from general workplace area as opposed to local ventilation, which is specific air changing in immediate air of a contamination source.
Generic Name:	A non-proprietary name for a material.
GENETIC:	Pertaining to or carried by genes. Hereditary.
Generator:	An employee whose act or process produces hazardous waste identified or listed in 40 CFR Part 261 or whose act first causes a hazardous waste to become subject to the regulation or this policy.
GINGIVITIS:	Inflammation of the gums.
GISO:	General Industry Safety Order.
Gram:	See g.
Grounding:	The procedure used to carry an electrical charge to ground through a conductive path. A typical ground may be connected directly to a conductive water pipe or to a grounding bus and ground rod (see BONDING).
Hand Protection:	Specific type of gloves or other hand protection required to prevent harmful exposure to hazardous materials.
Hazard:	Anything with the potential to harm people, property or the environment. May be discovered in materials, equipment, processes or work methods.
Hazardous:	Anything with the potential to harm people, property, or the environment. May be discovered in materials, equipment, processes, or work methods.
Hazardous Atmosphere:	An atmosphere that my expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided form a permit space), injury, or acute illness from one or more of the following causes: ⇒ Flammable gas, vapor or mist in excess of 10% of its lower flammable limit (LFL).

Term	Definition
	⇒ Airborne combustible dust at a concentration that meets or exceeds its LFL (Note: this concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52) or less. ⇒ Atmospheric oxygen concentration below 19.5% or above 23.5%. ⇒ Atmospheric concentration of any substances for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental control, or in Subpart Z, Toxic and Hazardous Substances, and which could result in employee exposure in excess of its dose or permissible exposure limit (Note: An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision). ⇒ Any other atmospheric condition that is immediately dangerous to life or health (Note: For air containments for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as MDSD's that comply with the Hazard Communication Standard, section 1910.1200, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.).
HAZARDOUS CHEMICAL:	Any chemical whose presence or use is a physical hazard or a health hazard.
Hazardous Decomposition Products:	Any hazardous material that may be produced in dangerous amounts of the material that reacts with other agents, burns, or is exposed to other processes such as welding.
Hazardous Ingredients:	The hazardous substances that make up a mixture.
Hazardous Materials/Chemicals/ Substances (HMC):	Any chemical which may result in a physical or health hazard. Physical: combustible liquids, compressed gases, explosives, flammables, and water-reactive materials. Health: carcinogens, toxic or highly toxic agents, corrosives, irritants, and agents which damage lung, skin, eye or mucous membranes to include controlled substances.
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS):	Developed by the NPCA to provide information on health, flammability, and reactivity hazards that are encountered in the workplace. A number is assigned to a material indicating the degree of hazard, from 0 for the least up to 4 for the most severe. Letters are used to designate personal protective equipment.
Hazardous Material Technician (HMT):	Any person who has been designated by E,H&S and has received training in Hazard Communication, CTI HW Work Instruction, and HM 126 Training and has demonstrated the ability to handle hazardous containers from the SAA to the CAA.
Hazardous Polymerization:	A chemical reaction in which one or more small molecules combine to form larger

Term	Definition
	molecules. The reaction occurs at a rate that realizes large amounts of energy.
Hazardous Warning:	Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form or warning to convey the hazard of the chemical(s) in the container(s).
Hazardous Waste (HW):	A waste, or a combination of wastes, which because of its quantity, concentration, or physical or infectious characteristics may cause or scientifically contribute to an increase in serious irreversible or incapacitating reversible illness or pose a substantial present or potential hazard to human health, safety, welfare, or to the environment when improperly treated, stored, transported, used or disposed of, or otherwise managed. This does not include solid or dissolved materials in irrigation return flows or industrial discharges, which are point sources subject to permits under section 402 of the Federal Water Pollution and Control Act of 1967 as amended, or source, special nuclear, or by product as defined by the Atomic Energy Act of 1954.
Hazardous Waste Contractor (HWC):	A contractor approved by federal and state authorities having jurisdiction for Hazardous Waste storage, handling, and disposal within guidelines of an approved permit and license.
HAZARDOUS WASTE NUMBER:	Identification number assigned by the EPA, per RCRA law, to identify and track hazardous wastes.
HAZMAT:	Hazardous Materials.
HCS:	Hazards Communication Standard (OSHA).
HDPE:	High-Density Polyethylene.
HE:	High Explosive.
Health Hazard:	A chemical for which there is statistically significant evidence based on at least one scientific study that acute or chronic health effects may occur in exposed employees.
Hematopoietic System:	The blood forming mechanism of the human body.
HEMATURIA:	Presence of blood in the urine.
HEMOLYSIS:	Separation of the hemoglobin from red blood corpuscles.
HEPA:	High-Efficiency Particulate Air (filters).
HEPATIC:	Pertaining to the liver.
Hepatotoxin:	A substance that causes injury to the liver.
High Efficiency Particulate Air Filter (HEPA):	A filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.
Highly Toxic:	A chemical with a median lethal dose (LD50) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing

Term	Definition
	between 200 and 300 grams each.
HMBP:	Hazardous Materials Business Plan.
HMMP:	Hazardous Materials Management Plan.
HMIR:	Hazardous Materials Incident Report.
HMTA:	Hazardous Materials Transportation Act.
HR:	Human Resources.
HVAC:	Heating/Ventilation/Air Conditioning (system).
HWCL:	Hazardous Waste Control Law (California).
Hood:	A respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.
Hot Work:	Any temporary operation involving open flames or producing heat and/or sparks. This includes but is not limited to brazing, cutting, grinding, soldering, thawing pipes, torch applied roofing, and welding.
Hot Work Permit (HWP):	The employer's written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.
HYDROCARBON:	Organic compound composed only of carbon and hydrogen. Petroleum, natural gas, and coal are the main sources of hydrocarbons for industry.
HYDROPHILIC:	Materials having large molecules that absorb and retain water, causing them to swell and frequently to gel.
HYGROSCOPIC:	Readily adsorbing available moisture in any form.
HYPEREMIA:	Congestion of blood in a body part.
HYPERGOLIC:	Self-igniting upon contact of its components without a spark or external aid.
HYPOCALCEMIA:	Calcium deficiency of the blood.
HYPOXIA:	Insufficient oxygen, especially applied to body cells.
IAEA:	International Atomic Energy Agency
IARC:	International Agency for Research on Cancer. IARC publishes Monographs, a listing of potential carcinogens.
IATA:	International Air Transport Association.
ICAO:	International Civil Aviation Organization.
IC:	Incident Commander.
ICC:	Interstate Commerce Commission.
ICRP:	International Commission on Radiological Protection.
IDLH:	see Immediately Dangerous to Life and Health.
Incidental Personnel:	Individuals whose work makes it possible (but unlikely) that they will be exposed to laser energy sufficient to damage their eyes or skin, e.g., custodial, clerical and supervisory personnel not working directly with laser devices.
Ignitable:	Capable of being set afire.

Term	Definition
Ignition Switch:	A material or energy source that will cause, create, or initiate the minimum temperature at which a substance will continue to burn without the application of external heat.
IGNITION TEMP:	ERATURE: Lowest temperature at which a combustible material will catch fire in air and will continue to burn independently of the source of heat when heated.
IIPP:	Injury & Illness Prevention Program
IM:	Intermodal.
Immediately Dangerous to Life or Health (IDLH):	Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.
Immediate Transient Health Affects:	Acute clinical sign or serious, exposure-related reaction which is manifested within 72 hours of exposure.
IMMEDIATE USE:	The hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.
IMO:	International Maritime Organization.
Impervious:	A material that does not allow another substance to pass through or penetrate it.
Importer:	The first business with employees within the Customs Territory of the United States to receive hazardous chemicals produced in other countries for the purpose of supplying them to distributors or employees within the United States.
Incidental Personnel:	Individuals whose work makes it possible (but unlikely) that they will be exposed to laser energy sufficient to damage their eyes or skin, e.g., custodial, clerical, and supervisory personnel not working directly with laser devices.
Incompatible:	Materials which could cause dangerous reactions from direct contact with one another are described as incompatible.
INERT INGREDIENTS:	Anything other than the active ingredient in a product; not having active properties.
Inerting:	The displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible (Note: This procedure produces an IDLH oxygen-deficient atmosphere).
INFLAMMABLE:	Capable of being easily set on fire and continuing to burn, especially violently.
INFLAMMATION:	Series of reactions produced in tissue by an irritant, injury, or infection. Characterized by swelling and redness caused by an influx of blood and fluids.
Ingestion:	The taking in of a substance through the mouth.
Inhalation:	The breathing in of a substance in the form of a gas, vapor, or particulate.

Term	Definition
INHALATION TOXICITY:	Ratings corresponding to the following definitions are derived from the test methods and categories of toxicity described in 16 CFR 1500.3. 1. NON-TOXIC: The probable lethal concentration of the undiluted product to 50% of the test animals (LC50) is greater than 200 milligrams per liter by volume when inhaled continuously for one hour or less. 2. TOXIC: The probable lethal concentration of the undiluted product to 50% of the test animals (LC50) is greater than 2 milligrams and less than or equal to 200 milligrams per liter by volume when inhaled continuously for one hour or less. 3. HIGHLY TOXIC: The probable lethal concentration of the undiluted product to 50% of the test animals (LC50) is less than or equal to 2 milligrams per liter by volume when inhaled continuously for one hour or less.
Inhibitor:	A chemical which is added to another substance to prevent an unwanted chemical change from occurring.
INORGANIC MATERIALS:	Compounds derived from other than vegetable or animal sources; generally do not contain carbon atoms.
IRIDAL:	Pertaining to the iris of the eye.
IRIDOCYCLITIS:	Inflammation of both the iris and the ciliary body of the eye.
Irritant:	A substance that produces an irritating effect when it contacts the skin, eyes, nose, or respiratory system.
Irritating:	An irritating material, as defined by DOT, is a liquid or solid substance which, upon contact with fire or when exposed to air, gives off dangerous or intensely irritating fumes (not including poisonous materials). See Poison, Class A and Poison, Class B.
Insoluble:	Incapable of being dissolved in a liquid.
Isolation (Energy Lockout):	Process whereby stored energy is removed from the equipment.
Isolation (Confined Space):	The process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or binding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.
ISOMERS:	Compounds that have same molecular weight and atomic composition but differ in

Term	Definition
	molecular structure.
INTERSTITIAL FIBROSIS:	Scarring of the lungs.
International Air Transport Association (IATA):	Agency that regulates international transport of hazardous materials.
JAUNDICE:	Yellowish discoloration of tissue, whites of the eyes, and bodily fluids with bile pigment caused by any of several pathological conditions that interrupt the liver's normal production and discharge of bile.
kg Kilogram:	a metric unit of weight, about 2.2 U. S. pounds. Also see g/kg, g, and mg.
KETOSIS:	Condition marked by excessive production or accumulation of ketone bodies in the body caused by disturbed carbohydrate metabolism.
L Liter:	a metric unit of capacity. A liter is about the same as one (1) quart.
LABEL:	Any written, printed, or graphic sign or symbol displayed on or affixed to containers of hazardous chemicals. Should contain identity of the material, appropriate hazard warnings, and name and address of the chemical manufacturer, importer, or other responsible party.
Lacrimation:	Secretion and discharge of tears.
LABORATORY SCALE (ACTIVITY):	The work involves containers of substances used for reactions and transfers that are designed for easy and safe handling by one person. Workplaces that produce commercial quantities of materials are excluded from the definition of "Laboratory."
Laboratory Use:	Handling or use of such chemicals in which: 1. Chemical manipulation is carried out on a laboratory scale. 2. Multiple chemical procedures are used. 3. The chemical is not part of a production process or does not simulate a production process. 4. Protective laboratory practices and equipment are available and in common use to minimize the potential for employee exposure to hazardous chemicals.
LACRIMATION:	Secretion and discharge of tears.
LACRIMATOR:	Material that produces tears.
Ladder Safety Device (climbing device):	Device designed to prevent or limit the length of falls from a ladder. Normally consist of a carrier, safety sleeve, and body harness.
Land Disposal Restriction (LDR):	A waste or other type product that is not permitted to be placed in a land disposal site, except those exempted or permitted in accordance with such regulatory guidelines.
LANDFILL:	Disposal of trash and waste products at controlled location that is sealed and buried under earth.
Lanyard:	A flexible line used to secure a body harness to a lifeline or an anchorage point,

Term	Definition
	normally 2 to 6 feet in length.
Laser:	A device which produces an intense, coherent, directional beam of light by stimulating electronic or molecular transitions to lower energy levels. An acronym for Light Amplification by Stimulated Emission of Radiation.
Laser Activation Warning Systems:	An alarm, a warning light ,or a verbal "countdown" command used during activation or start-up of the laser.
Laser Controlled Areas:	An area designated and used by employees subject to laser use and its inherent hazards.
Laser Personnel:	Individuals who work routinely in laser environments. These individuals are ordinarily fully protected by engineering controls, administrative procedures, or both.
Laser System:	An assembly of electrical, mechanical, and optical components, including a laser.
Laser Safety Officer (LSO):	One who by training has the authority to monitor and enforce procedures to control laser hazards within the work environment.
LATENCY PERIOD:	Time that elapses between exposure and the first manifestations of disease or illness.
LAVAGE:	Washing of a hollow organ, such as the stomach, using a tube and fluids.
(Median) Lethal Concentration 50 (Lc50):	The concentration of an air contaminant that will kill 50 percent of the test animals in a group during a single exposure.
(Median) Lethal Dose 50 (Ld50):	The dose of a substance or chemical that will kill 50 percent of the test animals in a group within the first 30 days following exposure.
LD Lethal dose:	a concentration of a substance being tested which will kill a test animal.
LD100:	Lethal Dose (oral or contact) which kills 100% of test animals.
LCLO:	Lethal concentration low. The lowest concentration of a substance in air reported to have caused death in humans or animals. The reported concentrations may be entered for periods of exposure that are less than 24 hr (acute) or greater than 24 hr (subacute and chronic).
LDLO:	Lethal dose low. The lowest dose of a substance introduced by any route, other than inhalation, reported to have caused death in humans or animals.
LEL:	Lower explosive limit or lower flammable limit of a vapor or gas; the lowest concentration (lowest percentage of the substance in air) that will produce a flash of fire when an ignition source (heat, arc, or flame) is present. At concentrations lower than the LEL, the mixture is too "lean" to burn. Also see UEL.
LESION:	Abnormal change, injury, or damage to tissue or to an organ.
LEUKEMIA:	Progressive, malignant disease of the blood-forming organs.

Term	Definition
LFL:	Lower Flammable Limit. See LEL.
Lifeline:	Vertical line attached to an anchorage point or between two horizontal anchorages and independent of walking/working surfaces, to which a lanyard or device is secured.
Line Breaking:	The intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.
LIPID GRANULOMA:	Mass of chronically inflamed tissue that is usually infective.
LIPID PNEUMONIA:	Chronic condition caused by the aspiration of oily substances into the lungs.
Liter:	See L.
LNG:	Liquefied Natural Gas.
LOCAL EFFECTS:	Toxic or irritation effects which occur at the site of contact with a chemical or substance.
Local Exhaust:	A system for capturing and exhausting contaminants from the air at the point where the contaminants are produced (welding, grinding, sanding, other processes or operations) (also see ”General Exhaust”).
Local Exhaust Ventilation:	A ventilation system that removes contaminants from the air at the point where contaminants are generated.
LOCAL VENTILATION:	Drawing off and replacement of contaminated air directly from its source.
Lockout:	Placement of a lock and tag on an energy-isolating device according to established facility procedure indicating that the energy-isolating device shall not be operated until removal of the lockout device.
Lockout Device:	A keyed lock used as a positive means to hold an energy isolation device in the safe position to prevent the unexpected start-up or energization of equipment.
Lockout and Tagout (LOTO):	Placement of a lock and tag on an energy-isolating device according to established facility procedure indicating that the energy-isolating device shall not be operated until removal of the lockout device.
Loose-Fitting Facepiece:	A respiratory inlet covering that is designed to form a partial seal with the face.
Lower Explosive Limit (LEL) or Lower Flammable Limit (LFL):	The lowest concentration (lowest % of the substances in air) that will produce a flash of fire when an ignition sources (heat, arc, or flame) is present. At concentrations lower than LEL, the mixture is “too” lean to burn (also see UEL).
LPG:	Liquefied Petroleum Gas.
M Meter:	a unit of length in the metric system. One meter is about 39 inches.
m3 Cubic meter:	a metric measure of volume, about 35.3 cubic feet or 1.3 cubic yards.
Malaise:	A feeling of general discomfort, distress, or uneasiness, an out-of-sorts "feeling ".

Term	Definition
Master Switch:	A key or coded access (such as a computer code) required to operate the laser.
Material Safety Data Sheet (MSDS):	A document listing known hazards of a chemical substance. A MSDS is designed to provide both workers and emergency personnel with the proper procedures for handling or working with a particular substance. MSDSs include information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill/leak procedures.
Material Substitution:	The use of lesser or even nontoxic materials.
Mechanical Exhaust:	A mechanical device, like a motor-driven fan, that removes contaminants from a work area.
Mechanical Filter Respirator:	A respirator used to protect against airborne particulate matter like dusts, mists, metal fume, and smoke. Mechanical filter respirators do not provide protection against gases, vapors, or oxygen deficient atmospheres.
Mechanical Ventilation:	A powered device, such a motor-driven fan or vacuum hose attachment, for exhausting contaminants from a workplace, vessel, or enclosure.
Medical Review Officer (MRO):	The designated medical physician that CTI has chosen to provide medical examinations for its employees.
MEK:	Methyl Ethyl Ketone.
Melting Point:	The temperature at which a solid changes to a liquid.
MESA:	Mining Enforcement and Safety Administration.
METABOLISM:	Chemical and physical processes whereby the body functions.
METASTASIS:	Transmission of a disease from one part of the body to another.
Meter:	See M.
mg Milligram:	a metric unit of weight. There are 1,000 milligrams in one gram (g) of a substance. One gram is equivalent to almost 4/100th of an ounce.
mg/kg Milligrams per kilogram:	an expression of toxicological dose. See g/kg.
mg/m3 Milligrams per cubic meter:	a unit used to express concentrations of dusts, gases, fumes, or mists in air.
Micrometer (um):	One-millionth (10-6) of a meter; often referred to as a micron.
Millimeter (mm):	1/1000 of a meter.
Micron:	Micrometer a unit of length equal to one millionth of a meter. A micron is approximately 1/25,000 of an inch.
Minimum Clearance Requirements:	Total fall distance to include a person's body height and safety factor.
MISCIBLE:	Extent to which liquids or gases can be mixed or blended.
Mist:	A liquid condensation particulate.

Term	Definition
Mixture:	Any combination of two or more chemicals if the combination is not, in whole or in part, the result of a chemical reaction.
mL Milliliter:	a metric unit of capacity, equal in volume to one cubic centimeter (cc), or about 1/16 of a cubic inch. There are 1,000 milliliters in one liter (L).
MLD:	Lethal Dose (LD50).
mmHg Millimeters (mm) of mercury (Hg):	a unit of measurement for low pressures or partial vacuums.
MOA:	Memorandum of Agreement.
MOD:	Memorandum of Decision.
MOLE:	Quantity of a chemical substance that has a weight in a unit numerically equal to the molecular weight.
Molecular Weight:	Weight (mass) of molecule based on the sum of the atomic weights of the atoms that make up the molecule.
MOU:	Memorandum of Understanding.
MPC:	Maximum Permissible Concentration.
mppcf:	Million particles per cubic foot; a unit for measuring particles of a substance suspended in air. Exposure limits for mineral dusts (silica, graphite, Portland cement, nuisance dusts, and others), formerly expressed as mppcf, are now more commonly quoted in mg/m3.
MSDS:	Material Safety Data Sheet.
MSHA:	The Mining Safety and Health Administration of the U. S. Department of the Interior; Federal agency with safety and health regulatory and enforcement authorities for the mining industry.
MUCOUS MEMBRANE:	The mucous-secreting lining that lines the hollow organs of the body.
Mutagen:	Anything that can alter the genetic make-up of a sperm or egg cell.
Narcosis	A state of stupor, unconsciousness, or arrested activity produced by the influence of narcotics or other chemicals.
National Fire Protection Association (NFPA):	An international membership organization which promotes/improves fire protection and prevention and establishes safeguards against loss of life and property by fire.
National Institute for Occupational Safety and Health (NIOSH):	Responsible for the consensus standards for OSHA in Health requirements.
National Research Council:	Private, nonprofit institutions that provide science, technology and health policy advise under a congressional charter to associate the broad community of science and technology.
Natural Ventilation:	Air movement caused by wind, temperature difference, or other non-mechanical

Term	Definition
	factors.
Nausea:	Tendency to vomit, feeling of sickness at the stomach.
NCI:	National Cancer Institute. A component of the National Institutes of Health which studies cancer causes and prevention as well as diagnosis, treatment, and rehabilitation of cancer patients.
NECROSIS:	Localized death of tissue.
Negative Pressure Respirator (tight fitting):	A respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.
NEOPLASM:	New or abnormal tissue growth that is uncontrollable and progressive.
NEPA:	National Environmental Policy Act of 1969.
NEURITIS:	Inflammation of the nerves.
Nephrotoxin:	A substance that causes injury to the kidneys.
NESHAP:	National Emission Standards for Hazardous Air Pollutants.
Neutralize:	To eliminate potential hazards by deactivating strong acids, caustics, and oxidizers. For example, adding an appropriate amount of caustic substance to a spill can neutralize acids.
NFPA:	National Fire Protection Association; an international voluntary membership organization to promote/improve fire protection and prevention and establish safeguards against loss of life and property by fire. Best known on the industrial scene for the National Fire Codes - 16 volumes of codes, standards, recommended practices, and manuals developed (and periodically updated by NFPA technical committees. Among these is NFPA 704M, the code for showing hazards of materials using the familiar diamond-shaped label or placard with appropriate numbers or symbols. The brief explanation on the next page illustrates the NFPA principle of using scales of 0 to 4 (low to high) to classify material hazard.
NHTSA:	National Highway Traffic Safety Administration (DOT) (formerly NHSB).
NIMBY:	Not In My Back Yard.
NOAA:	National Oceanic and Atmospheric Administration.
Nonflammable:	Not easily ignited, or if ignited, not burning rapidly.
Non-Permit Confined Space:	Under CTI policy, known as “Restricted Access Space”; refer to definition of Restricted Access Space.
Non Sparking Tools:	Tools made from beryllium - copper or aluminum - bronze greatly reduce the possibility of igniting dusts, gases, or flammable vapors. Although these tools may emit some sparks when striking metal, the sparks have a low heat content and are not likely to ignite most flammable liquids.
NOS:	Not Otherwise Specified.

Term	Definition
NOx:	Nitrogen Oxides.
NPDES:	National Pollutant Discharge Elimination System.
NPL:	National Priorities List.
(US) Nuclear Regulatory Commission (NRC):	An independent agency established by the Energy Reorganization Act of 1974 to regulate civilian use of nuclear materials.
NRC:	Nuclear Regulatory Commission.
NTP:	National Toxicology Program. The NTP publishes an Annual Report on Carcinogens, a listing of potential carcinogens.
NUISANCE PARTICULATES:	Dusts that do not produce significant organic disease or toxic effect from "reasonable" concentrations and exposures.
NYSTAGMUS:	Spastic, involuntary motion of the eyeballs.
Occupational Exposure Limits (OEL's):	A limit on the amount or concentration of a chemical to which workers may be exposed.
Occupational Medical Record (OMR):	An occupation-related, chronological, cumulative record, regardless of the form or process by which it is maintained (e.g., paper document, microfilm, or electronic data processing media), of information about an employee's health status, including personal and occupational health histories and the opinions and written evaluations generated in the course of diagnosis and/or employment-related treatment/ examination by medical health care professionals and technicians. This includes the definition of medical records in 29 CFR 1910.1020(c)(6); when the term ``Occupational Medical Record'' is used in these regulations, it includes ``Employee Exposure Records'' and occupational illness, accident, and injury records.
Occupational Medical Services (OMS):	Provides the responsibilities, requirements, and procedures for obtaining medical examinations for those individuals who require medical surveillance.
Occupational Safety & Health Act or Administration (OSHA):	Federal and state agencies that ensure safe and healthful working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the States in their efforts to assure safe and healthful working conditions; by providing for research, information, education, and training in the field of occupational safety and health; and for other purposes.
Odor:	A description of the smell of the substance.
Odor Threshold:	The lowest concentration of a substance's vapor, in air, that can be smelled.
OES:	Office of Emergency Services (California).
Off-Site Treatment, Storage and Disposal (TSD):	A facility that has received a permit from the EPA to treat, store or dispose of hazardous waste at a site designated and approved by the EPA as required under

Term	Definition
	40 CFR Parts 264 and 265.
Olfactory:	Relating to the sense of smell. The olfactory organ in the nasal cavity is the sensing element that detects odors and transmits information to the brain through the olfactory nerves.
OLIGURIA:	Scanty or low volume of urine.
OMB:	Office of Management and Budget.
OPAQUE:	Impervious to light rays.
OPEN TRANSFER:	Any transfer that at any time involves contact of a moving fluid with the atmosphere, air, or oxygen. Open transfer of flammable liquids, especially Class IA liquids, is dangerous due to the release of flammable vapors into the work area. Since there is a risk of fire or explosion if an ignition source is present, do these transfers only in a hood.
Operations:	Includes processes, equipment, materials, work methods or tasks.
OPIM:	Other Potentially Infectious Material. Bloodborne pathogen module.
Oral:	Used in or taken into the body through the mouth.
Oral Toxicity:	Adverse effects resulting from taking a substance into the body via the mouth. Ordinarily used to denote effects in experimental animals. 1. NON TOXIC: The probable lethal dose of undiluted product to 50% of the test animals determined from ingestion studies (LD50) is greater than 5 grams per kilogram of body weight. 2. TOXIC: The probable lethal dose of undiluted product to 50% of the test animals determined from ingestion studies (LD50) is greater than 50 milligrams and less than or equal to 5 grams per kilogram of body weight. 3. HIGHLY TOXIC: The probable lethal dose of undiluted product to 50% of the test animals determined from ingestion studies (LD50) is less than or equal to 50 milligrams per kilogram of body weight.
ORGANIC MATERIALS:	Compounds composed of carbon, hydrogen, and other elements with chain or ring structures.
Organic Peroxide:	An organic compound that contains the bivalent -O-O- structure and may be considered a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

<table>
<tr><th>Term</th><th>Definition</th></tr>
<tr><td>ORM:</td><td>Other Regulated Material.</td></tr>
<tr><td>OSHA:</td><td>Occupational Safety and Health Administration of the U. S. Department of Labor; Federal agency with safety and health regulatory and enforcement authorities for most U. S. industry and business.</td></tr>
<tr><td>OSHA Regulated Materials:</td><td>Materials for which a specific standard has been written (29 CFR 1910.100.1050 subpart Z).</td></tr>
<tr><td>OVA:</td><td>Organic Vapor Analyzer. Usually refers to a Flame Ionization Detector used as a portable monitor to detect the presence of hazardous waste. The OVA is made by Foxboro.</td></tr>
<tr><td>OVM:</td><td>Organic Vapor Monitor. Refers to a Photo Ionization Detector made by Environmental Instruments.</td></tr>
<tr><td>Overexposure:</td><td>Exposure to a hazardous material beyond the allowable exposure limit.</td></tr>
<tr><td>Oxidizer:</td><td>A substance that yields oxygen easily to stimulate combustion of organic material.</td></tr>
<tr><td>OXIDATION:</td><td>Reaction in which a substance combines with oxygen provided by an oxidizer or oxidizing agent. An oxidation reaction is always accompanied by an offsetting reduction reaction in which (1) oxygen is removed from a compound; or (2) atoms, molecules, or ions gain electrons.</td></tr>
<tr><td>OXIDE POX:</td><td>Dermatitis caused by contact with oxides under poor personal hygienic conditions.</td></tr>
<tr><td>OXIDIZING AGENT:</td><td>Chemical or substance that brings about an oxidation reaction.</td></tr>
<tr><td>Oxygen Deficient Atmosphere:</td><td>An atmosphere with an oxygen content below 19.5% by volume.</td></tr>
<tr><td>Oxygen Enriched Atmosphere:</td><td>An atmosphere containing more than 23.5 percent oxygen by volume.</td></tr>
<tr><td>PALPITATION:</td><td>Irregular, rapid heartbeat.</td></tr>
<tr><td>PARATHESIA:</td><td>Sensation of pricking, tinkling, or creeping on the skin that has no objective cause.</td></tr>
<tr><td>PARTICULATE:</td><td>Small, separate pieces of an airborne material. Generally, anything that is not a fiber and has an aspect ratio of 3 to 1.</td></tr>
<tr><td>Particulate Filter Series N-R-P:</td><td>New criteria eliminates classification of particulate filters according to hazard such as “dust, mist, fume” and provides for three levels of filter efficiency (95%, 99%, 99.97%). Each efficiency is available in a series of filter types known as N, R, and P. The N, R, and P designation corresponds to how resistant a filter is to oil. A single use, double strapped “dust mask” is now called a N95 single use filtering face piece. Any HEPA cartridge is referred to as a P100 filter.
<table>
<tr><th>Efficiency</th><th>NA CI Aerosol Test (N-Not Oil Tested)</th><th>DOP Aerosol Test (R-Resistant to Oil)</th><th>DOP Aerosol Test (P-Oil Proof)</th></tr>
<tr><td>95%</td><td>N95</td><td>R95</td><td>P95</td></tr>
<tr><td>99%</td><td>N99</td><td>R99</td><td>P99</td></tr>
<tr><td>100 (99.97)%</td><td>N100</td><td>R100</td><td>P100</td></tr>
</table>
</td></tr>
</table>

Term	Definition
Particularly Hazardous Substances (PHS):	The OSHA Laboratory Standard requires that certain chemicals be identified as "particularly hazardous substances" and handled using special additional procedures. Particularly hazardous substances include chemicals that are "select" carcinogens (those strongly implicated as a potential cause of cancer in humans), reproductive toxins, and compounds with a high degree of acute toxicity.
Parts Per Million (PPM):	The concentration of a gas or vapor in air – parts (by volume) of the gas or vapor in million parts of air; also the concentration of a particulate in a liquid or solid.
PCB:	Poly Chlorinated Biphenyl.
PCE:	Perchloroethylene (tetrachloroethylene).
PCP:	Pentachlorophenol.
PEL:	Permissible exposure limit; the legally enforced exposure limit for a substance established by OSHA regulatory authority. The PEL indicates the permissible concentration of air contaminants to which nearly all workers may be repeatedly exposed eight (8) hours a day, forty (40) hours a week, over a working lifetime (30 years) without adverse health effects.
PEP:	People, Environment, Property. This order should always be followed during response activities. For example, people concerns are first, environmental concerns are second and property concerns are third in order of priority.
% Volatile:	Percent volatile by volume; the percentage of a liquid or solid (by volume) that will evaporate at an ambient temperature of 700F (unless some other temperature is stated). Examples: butane, gasoline, and paint thinner (mineral spirits) are 100% volatile; their individual evaporation rates vary, but over a period of time each will evaporate completely.
Permissible Exposure Limit (PEL):	An occupational exposure limit established by OSHA's regulatory authority. It may be a time-weighted average (TWA) limit or a maximum concentration exposure limit.
Permit-Required Confined Space (Permit Space):	A confined space that has one or more of the following characteristics: 1. Contains or has a potential to contain a hazardous atmosphere; 2. Contains a material that has the potential for engulfing an entrant; 3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or 4. Contains any other recognized serious safety or health hazard.
Permit-Required Confined Space Program (Permit Space Program):	The employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.
Permit System:	The employer's written procedure for preparing and issuing permits for entry and

Term	Definition
	for returning the permit space to service following termination of entry.
PERSONAL HYGIENE:	Precautionary measures taken to maintain good health when exposed to harmful materials.
Personal Protective Equipment (PPE):	Any devices or clothing worn by an employee to protect against hazards in the workplace or the environment.
PETROLEUM DISTILLATE:	Complex mixture of hydrocarbons, liquid at normal ambient conditions, separated from crude oil and other refinery process streams by distillation.
PH:	The symbol relating the hydrogen ion (H+) concentration to that of a given standard solution. A pH of 7 is neutral. Numbers increasing from 7 to 14 indicate greater alkalinity. Number decreasing from 7 to 0 indicates greater acidity.
PHLEGM:	Thick mucous from the respiratory passage.
Photo Ionization Detector:	See PID.
PHOTOPHOBIA:	Intolerance to light.
Physical Hazard:	A HMC for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water reactive.
PHYSICAL STATE:	Condition of a material (solid, liquid, or gas) at room temperature.
Physician or Other Licensed Health Care Professional (PLHCP):	An individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by the respiratory protection standard.
PID Photo Ionization Detector:	Usually refers to a portable monitoring equipment used to detect the presence of hazardous waste. It cannot differentiate between contaminants just their presence. The ionization potential (IP) of a chemical determines if the lamp within the PID can detect the contaminant or not.
PMCC:	Pensky-Martens Closed Cup; a flash point test method.
Pneumoconiosis:	A condition of the lung in which there is permanent deposition of particulate matter and the tissue reaction to its presence. It may range from relatively harmless forms of iron oxide deposition to destructive forms of silicosis.
Positive Pressure Respirator:	A respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.
POISON:	Any substance that is injurious to health and may lead to death when relatively small amounts are taken either internally or externally.
Poison Class A:	A DOT term for extremely dangerous poisons, poisonous gases, or liquids that, in very small amounts and as either a gas or vapor of the liquid, is dangerous to life when mixed with air. Examples: phosgene, cyanogens, hydrocyanic acid, and nitrogen peroxide.

Term	Definition
Poison Class B:	A DOT term for liquid, solid, paste, or semisolid substances – other than Class A poisons or irritating materials - that are known (or presumed on the basis of animal tests) to be so toxic to humans that they are a hazard to health during transportation.
POLYCHLORINATED BIPHENYL (PCB):	Pathogenic and teratogenic compound used as a heat transfer medium. It accumulates in tissue.
Polymerization:	A chemical reaction in which one or more small molecules combine to form larger molecules. A hazardous polymerization is a reaction that takes place at a rate that releases large amount of energy.
Pounds per Square inch (PSI)	(For MSDS purposes, this is the pressure a material exerts on the walls of a confirming vessel or enclosure. For technical accuracy, pressure must be expressed as psig (pounds per square inch gauge) or psia (pounds per square inch absolute); that is, gauge pressure plus seal level atmospheric pressure, or psig plus approximately 14.7 per pounds per square inch. (Also see mmHg.)
POUR POINT:	Temperature at which a liquid ceases or begins to flow or at which it congeals.
Powered Air-Purifying Respirator (PAPR):	An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.
POx:	A general term for the several oxides of phosphorus.
PRECORDIAL:	In front of the heart, stomach.
Pressure Demand Respirator:	A positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.
Pressure Relieving Devices:	Automatic pressure-actuated relief mechanisms referred to as a safety valve, relief valve, rupture disk, fusible plug, etc. A device that automatically opens at a predetermined level of pressure, to relieve the pressure build-up in a vessel.
Pressure Vessel:	Vessel in which the pressure is obtained from (a) an external source, or (b) the application of heat from an indirect or direct source.
PRIMARY SKIN IRRITANT:	A non-corrosive substance which produces severe skin irritation.
PRP:	Potentially Responsible Party.
Process:	A documented series of actions or operations directed toward a particular result.
PRODUCE:	To manufacture, process, formulate, or repackage.
PRODUCT IDENTIFICATION NUMBER:	Four-digit number, prefaced by UN or NA, used in Canada under the Transportation of Dangerous Goods Regulation for use by emergency personnel to identify a material in the event of an accident.

Term	Definition
Prohibited Condition:	Any condition in a permit space that is not allowed by the permit during the period when entry is authorized.
PROSTRATION:	Physical exhaustion, incapacitation.
PROTEINURIA:	Presence of protein in the urine.
psia:	Pounds per square inch absolute.
psig:	Pounds per square inch gauge (i.e., above atmospheric pressure).
PSYCHOTROPIC:	Acting on the mind.
Pulmonary:	Relating to, or associated with, the lungs.
Pulmonary Edema:	Fluid in the lungs.
Purging:	Method by which gases, vapors, or other airborne impurities are removed from a confined space.
PVC:	Polyvinyl Chloride.
PYOLYSIS:	Chemical decomposition or breaking apart of molecules produced by heating.
Pyrophoric:	A chemical that is capable of self-ignition when it is exposed to the air.
QA:	Quality Assurance.
QC:	Quality Control.
Qualified:	Individual who has a specialized expertise verified by training, certification, or experience.
Qualified Person:	Individual with a recognized degree or professional certificate and extensive knowledge and experience in the field, who is capable of design, analysis, evaluation and specifications in the subject work, project, or product.
Qualitative Fit Test (QLFT):	A pass/fail test to assess the adequacy of respirator fit; the test relies on the individual's response to the test agent.
Quantitative Fit Test (QNFT):	An assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into a respirator.
RAD:	Radiation Absorbed Dose.
Radiation Safety Officer (RSO):	The CTI employee responsible for radiation safety for a license, facility, or organization.
Radioactive Material:	A material that spontaneously produces ionizing radiation. The type and strength of radiation depend upon the type, amount, and age of the radioactive material.
RCRA:	Resource Conservation and Recovery Act (1976); Federal environmental legislation, administered by EPA, aimed at controlling the generation, treating, storage, transportation, and disposal of hazardous wastes.
Reaction:	A chemical transformation or change; the interaction of two or more substances to form new substances.
Reactive:	See Unstable.

Term	Definition
REACTIVE MATERIAL:	Chemical substance or mixture that will vigorously polymerize, decompose, condense, or become self-reactive due to shock, pressure, or temperature. Includes explosive materials, organic peroxides, pressure-generating materials, and water-reactive materials.
Reactivity:	A substances susceptibility to undergo a chemical reaction or change that may result in dangerous side effects.
REAGENT:	Substance used in a chemical reaction to produce another substance or to detect its composition.
Reclassification:	The determination that a confined space can be designated as a restricted access space or vice versa due to a change in conditions.
Recommended Exposure Limit (REL):	The highest allowable airborne concentration of a chemical that is not expected to injure a person. It may be expressed as a ceiling limit or as a time-weighted average (TWA).
Reducing Agent:	In a reduction reaction (which always occurs simultaneously with an oxidation reaction) the reducing agent is the chemical or substance which (1) combines with oxygen or (2) loses electrons to the reaction.
REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES:	Published by NIOSH. Presents basic toxicity data on thousands of materials. Objective is to identify "all known toxic substances" and to reference original studies.
Relief Valve:	Automatic pressure relief device actuated by the static pressure upstream of the valve which opens further with the increase in pressure over the opening pressure. It is used primarily for liquid service.
REM:	Radiation (or Roentgen) Equivalent Man.
Remote Firing and Monitoring:	Console that allows the laser to be operated from a remote location.
Remote Interlock Connectors:	Devices that reduce the accessible radiation below the MPE on entry to the protected area.
RENAL:	Pertaining to the kidney.
REPORTABLE QUANTITY (RQ):	Amount of material that when spilled must be reported to the Federal, State, and local authorities under CERCLA, EPCRA, and the CWA.
REPRODUCTIVE HEALTH HAZARD:	Any agent that has a harmful effect on the adult male or female reproductive system or the developing fetus or child.
Reproductive Toxin:	Substances that affect either male or female reproductive systems and may impair the ability to have children.
Rescue Service:	The personnel designated to rescue employees from permit spaces.
Resource Conservation and Recovery Act (RCRA):	Management of Hazardous Waste Regulation, regulated by EPA.
Respiratory Inlet Covering:	That portion of a respirator that forms a protective barrier between the user’s

Term	Definition
	respiratory tract and an air-purifying device, breathing air sources, or both. It may be a facepiece, helmet, hood, suit, or a mouthpiece respirator with nose clamp.
Respiratory Protection:	Consists of air cleaning or air supplying devices that protect an individual's breathing system from contaminants or supply fresh air in toxic/oxygen deficient atmospheres.
Respiratory Protection Devices:	that will protect the users respiratory system from overexposure by inhalation to airborne contaminants. Respiratory protection is used when a worker must work in an area where he/she might be exposed to concentrations in excess of the permissible exposure limit.
Respiratory System:	The breathing system; includes the lungs and air passages (trachea or "windpipe", larynx, mouth, and nose) to the air outside the body, plus the associated nervous and circulatory supply.
RESPONSIBLE PARTY:	Someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.
Restricted Access Space:	A space which is not classified a "confined space" but requires special precautions (proper lockout procedures) for employee safety. These restricted spaces do not present an actual or potential hazardous atmospheric and employee protection is provided by specific procedures which isolate the hazards without entry into the space. Examples may include, but are not limited to, HVAC, steam cylinders, and feeders.
Retrieval System:	The equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit spaces.
Risk:	Probable rate of occurrence of a Hazard causing Harm and the degree of Severity of the Harm (IEC 601-1-4, 1996). For the purpose of this Risk Analysis, the risk is expressed as a quantitative value based on the degree of Severity, Probability, and Detectability. The risk factor is calculated as follows: Risk Factor = Severity X Probability X Detectability.
Risk Assessment (RA):	Process of identifying risks and the actions needed to eliminate or control risks.
Risk Management Matrix (RMM):	A chart that identifies the risk of an activity or process. With the chart a Risk Value (RV) is determined to classify the activity according to its risk potential.
RMPP:	Risk Management and Protection Program.
Risk Value (RV):	A number from 1-10 with 10 indicating the highest risk.
Routes Of Entry:	The means by which material may gain access to the body; for example, inhalation, ingestion, and skin contact.
RQ :	Reportable Quantity as defined in CERCLA and SARA. Ranges from 1 to 10,000 pounds.

Term	Definition
RTECS:	Registry of Toxic Effects of Chemical Substances.
RWQCB:	Regional Water Quality Control Board.
SAE:	Society of Automotive Engineers.
Safety Can:	An approved container of not more than 19L (5 gal) capacity, having a spring closing lid and spout cover, and so designed that it will safely relieve internal pressure when subjected to fire exposure.
SAINT ANDREW'S CROSS (X):	Used in packaging for transport; It means harmful--stow away from foodstuffs.
Safety Monitoring System (SMS):	Method of fall protection for when people are working along the exposed edge of a working surface or roof. This does not include leading edge work and conventional fall protection.
Safety Training Master Plan (STMP):	Plan developed by E,H&S for "Best Practice Work Practice" for indoctrination of employee safety.
Safety Valve:	Automatic re-closing pressure relief device actuated by the static pressure upstream of the valve and characterized by full opening "pop" action. It is used primarily for steam, gas, or vapor service.
Satellite Accumulation Point (SAP):	A site designated by the generator to store a maximum amount of HW of 10 gallons or 2.2 Lbs of Acute HW.
SARA:	Superfund Amendments (to CERCLA) and Reauthorization Act of 1986. Superfund Amendments and Reauthorization Act. Signed into law October 17, 1986. Title III of SARA is known as the Emergency Planning and Community Right-to-Know Act of 1986. A revision and extension of CERCLA, SARA is intended to encourage and support local and state emergency planning efforts. It provides citizens and local governments with information about potential chemical hazards in their communities. SARA calls for facilities that store hazardous materials to provide officials and citizens with data on the types (flammables, corrosives, etc.); amounts on hand (daily, yearly); and their specific locations. Facilities are to prepare and submit inventory lists, MSDSs, and tier 1 and 2 inventory forms. The disaster in Bhopal, India in 1987 added impetus to the passage of this law.
SARCOMA:	A tumor that is often malignant.
SCLERAE:	Tough, white, fibrous covering of the eyeball.
SCUBA:	Self-Contained Underwater Breathing Apparatus.
Self-Contained Breathing Apparatus (SCBA):	An atmosphere supplying respirator for which the breathing air source is designed to be carried by the user.
SCUBA:	Self-Contained Underwater Breathing Apparatus.
Self-Ignition:	See Auto-Ignition Temperature.
Self-Retracting Lifeline/Lanyard:	Deceleration device that contains a drum-wound line that may be slowly extracted

Term	Definition
	from, or retracted onto, the drum under slight tension during normal employee movement, and which after onset of a fall, automatically locks the drum and arrests the fall.
SENSITIZATION:	State of immune-response reaction in which further exposure elicits an immune or allergic response. A person previously exposed to a certain material is more sensitive when he experiences further contact with it.
Sensitizer:	A substance that may cause no reaction in a person during initial exposure, but further exposures will cause an allergic response to the substance.
Service Access Panels:	Portions of protective housing that permit direct access to laser radiation and are intended to be removed only by service personnel. They must either 1) be interlocked (fail-safe interlock not required) or 2) require a tool for removal and shall have an appropriate warning label.
Service Life:	The period of time that a respirator, filter or sorbent, or other respiratory equipment provides adequate protection to the wearer.
Servicing and/or Maintenance:	Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, maintaining, and/or servicing equipment. These activities include lubrication, cleaning, or unjamming of equipment and making adjustments or tool changes where the employee may be exposed to unexpected energizing or start-up of the equipment or release of hazardous energy.
SETA:	Setaflash Closed Tester; a flash point test method.
Short Term Exposure Limit (STEL):	A 15-minute TWA exposure which should not be exceeded at any time during a workday, even if the 8-hour TWA is within the TLV-TWA.
SI:	The International System of Units.
SIC:	Standard Industrial Classification (or Code).
SIDEROSIS:	Pneumoconiosis caused by the inhalation of iron particles. Also, tissue pigmentation caused by contact with iron.
SIGN:	Abnormality in the body indicating poisoning or disease which is observable by another person.
SIGNAL WORDS:	Distinctive words on a MSDS which serves to alert the reader to the existence and relative degree of a hazard. Signal words are limited to: • Danger: Materials that are: highly toxic; corrosive to living tissue; extremely flammable; or are suspected human carcinogens. • Warning: Materials that are: moderately toxic; have severe skin irritation potential; cause allergic skin reactions; or are flammable.

Term	Definition
	• Caution: Materials that: have a low order of toxicity; produce only slight to moderate skin irritation; or are combustible.
Silicosis:	A disease of the lungs caused by the inhalation of silica dust.
Single-Use Dust Respirators:	Respirators approved for use against dusts which may cause pneumoconiosis and fibrosis.
"**Skin**":	a notation, sometimes used with PEL or TLV exposure data; indicates that the stated substance may be absorbed by the skin, mucous membranes, and eyes - either airborne or by direct contact - and that this additional exposure should be considered part of the total exposure.
Skin Absorption:	The ability of some hazardous chemicals to pass directly through the skin and enter the bloodstream.
SKIN IRRITATION:	Ratings corresponding to the following definitions are derived from data obtained from the test methods as described in the CFR 16 1500.41 and or NAS publication 1138 and categories of toxicity as described in 16 CFR 1500.3. • PRACTICALLY NON-IRRITATING: The undiluted product causes no noticeable irritation or causes slight inflammation (edema and erythema skin reaction values of 0 to 1) of intact or abraded skin of rabbits during the study period. Primary irritation index of 0 - 1.9. • MODERATELY IRRITATING: The undiluted product causes well-defined inflammation (edema and erythema skin reaction values of 2) during the study period. Primary irritation index of 2 - 4.9. • PRIMARY SKIN IRRITANT: The undiluted product cause moderate to severe inflammation (edema and erythema skin reaction values of 3 or 4) of the intact or abraded skin of rabbits during the study period. Primary irritation index of 5 or more. • CORROSIVE: The undiluted product causes visible destruction or irreversible alterations of the tissue structure at the site of contact on intact or abraded skin of rabbits during the study period.

Term	Definition
Skin Sensitizer:	See Sensitizer.
Skin Toxicity:	See Dermal Toxicity.
SLURRY:	Pourable mixture of solid and liquid.
Small Quantity Generator (SQG):	A generator who produces less than 2,200 Lbs of HW or 2.2 lbs. of acutely HW per month.
SMOKE:	Dry particles and droplets generated by incomplete combustion of an organic material combined with and suspended in the gases from combustion.
Solder:	A material used for joining metal surfaces together by filling a joint or covering a junction.
Solvent:	A substance that dissolves another substance. Usually refers to organic solvents.
Solubility In Water:	Indicates how much of a substance will dissolve in water. A term expressing the percentage of a material (by weight) that will dissolve in water at ambient temperature. Solubility information can be useful in determining spill cleanup methods and fire-extinguishing agents and methods for a material. Terms used to express solubility are: negligible-Less than 0.1 percent slight-0.1 to 1.0 percent moderate-1 to 10 percent appreciable-more than 10 percent complete-soluble in all proportions
SOLUTION:	Uniformly dispersed mixture. Composed of a solvent and a dissolved substance, called the solute.
SOLVENT:	Substance, usually liquid, in which other substances are dissolved. Water is the most common solvent.
SOOT:	Fine particles, usually black, formed by combustion consisting chiefly of carbon. Gives smoke color.
Sorbents:	Non-reactive materials used to clean up chemical spills. Examples: clay and vermiculite.
SOx:	Sulfur Oxides.
SPASM:	Involuntary, convulsive muscular contraction.
SPCC:	Spill Prevention, Control, and Countermeasure Plan.
SPECIFIC CHEMICAL	Chemical name, CAS number, or other information that reveals the precise

Term	Definition
IDENTITY:	chemical designation of the substance
Special Fire Fighting Procedures:	Special procedures and/or personal protective equipment that is necessary when a particular substance is involved in a fire.
Species:	A biological type; on MSDSs, species refers to the test animals - usually rats, mice, or rabbits - which were used to obtain the toxicity test data reported.
Specific Gravity:	The weight of a material compared to the weight of an equal volume of water; and expression of density (or heaviness) of the material. Example: if a volume of a material weighs 8 pounds, and an equal volume of water weighs 10 pounds, the material is said to have specific gravity of 0.8. 8 lbs/10 lbs = 0.8 Insoluble materials with specific gravity of less than 1.0 will float in (or on) water. Insoluble materials with specific gravity greater that 1.0 will sink (or go to the bottom) in water. Most (but not all) flammable liquids have specific gravity less than 1.0 and, if not soluble, will float on water - an important consideration for fire suppression and spill clean-up.
Spill or Leak Procedures:	The methods, equipment, and precautions that should be used to control or clean up a leak or spill.
Splash-Proof Goggles:	Eye protection made of a non-corrosive material that fits snugly against the face and has indirect ventilation ports.
Specific Gravity:	The weight of a material compared to the weight of an equal volume of water, and expression of the density of the material.
Spontaneously Combustible:	A material that ignites as a result of have retained heat from processing that will oxidize to generate heat and ignite, or that absorbs moisture to generate heat and ignite.
Stability:	An expression of the ability of a material to remain unchanged. For MSDS purposes, a material is stable if it remains in the some form under expected and reasonable conditions of storage or use. Conditions which may cause instability (dangerous change) are stated - examples, temperatures above 150oF, shock from dropping.
Standard Operating Configuration (SOC):	The location at which the hood position should be placed when the hood is actually in use as a containment device.
Standard Operating Procedure (SOP):	A procedure, typically general in scope that identifies systems, processes, and responsibilities.
STEL:	Short term exposure limit; ACGIH terminology. Amount you can be exposed to for a maximum of 15 minutes, up to 4 times per day with at least one hour between each 15 minute exposure. Always at a higher level than the TLV. See TLV.

Term	Definition
STEV:	Short-term exposure value.
STLC:	Soluble Threshold Limit Concentration.
STOMATITIS:	Inflammation of the mucous membrane of the mouth.
Stored Energy:	All potentially hazardous residual energy still present in the equipment. This energy must be relieved, disconnected, restrained, and otherwise rendered safe before any work is done. Potential stored energy would include electrical, mechanical, pneumatic, hydraulic, gravity, etc. Examples are such things as springs, static eliminators, capacitors, elevated movable machine parts, pressurized liquid, or gas systems, etc.
STUPOR:	Partial or nearly complete unconsciousness.
SUBCUTANEOUS:	Beneath the skin.
SUBLIME:	Change from the solid to the vapor phase without passing through the liquid phase.
Substances Of High Toxicity:	Those chemicals having an acute toxicity of either (1) Median Lethal Dose, single oral dose, rate, less than or equal to 50 mg/kg, or (2) Median Lethal Concentration, four-hour inhalation exposure, rat, less than or equal to 100 ppm, or (3) Median Lethal Dose, dermal exposure, rabbits, less than or equal to 100 mg/kg.
Substances Of Low Toxicity:	Those substances that have been shown to produce low toxicity or irritation, or those chemicals having an acute toxicity of either (1) Median Lethal Dose, single oral dose, rat, greater than 500 mg/kg but less than 5 g/kg, or (2) Median Lethal Concentration, four-hour inhalation exposure, rat, greater than 1,000 ppm but less than 10,000 ppm, or (3) Median Lethal Dose, dermal exposure, rabbits, greater than 500 mg/kg but less than 3,000 mg/kg.
Substances Of Moderate Toxicity:	Those substances that have been shown to produce moderate toxicity following exposure; have been demonstrated to produce carcinogenic, mutagenic, or teratogenic action in a single animal species with little or no human evidence of carcinogenic, mutagenic, or teratogenic action; or those chemicals having an acute toxicity of either (1) Median Lethal Dose, single oral dose, rat, greater than 50 mg/kg but less than 500 mg/kg, or (2) Median Lethal Concentration, four-hour inhalation exposure, rat, greater than 100 ppm but less than 1,000 ppm, or (3) Median Lethal Dose, dermal exposure, rabbits, greater than 100 mg/kg but less than 500 mg/kg.
Substitution:	The use of different materials, equipment, and processes to lower inherent risk.
Superfund:	See CERCLA.
Supplied-Air Respirator (SAR) or Airline Respirator:	An atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

Term	Definition
Suspect Human Carcinogen:	A substance suspected of inducing cancer based on human evidence or demonstration by appropriate methods; carcinogenesis in two or more animal species or strains.
SYNERGY:	Interaction of materials to give a combined result different from either material alone.
Synonym:	Another name or names by which a material is known. Methyl alcohol, for example, is also known as methanol, or wood alcohol.
SYSTEMIC EFFECTS:	Acute or chronic adverse health effects which occur in parts of the body removed from the site of exposure to the material.
Systemic Poison:	A poison that spreads throughout the body, affecting all body systems and organs. Its adverse effect is not localized in one spot or area.
Systemic Toxicity:	Adverse effects caused by a substance which affects the body in a general rather than local manner.
TACHYCARDIA:	Excessively rapid heartbeat, with a pulse rate above 100.
TACHYPNEA:	Increased rate of respiration.
Tag:	A prominent warning device capable of being securely attached, which for the purpose of personnel protection identifies the person who has control of the equipment in accordance with established procedure.
Target Organ Toxin:	A toxic substance that attacks a specific organ of the body.
TCA:	Trichloroethane.
TCC Tag (tagliabue) Closed Cup:	a flash point test method
TCE:	Trichlorethylene.
Temporary Personnel:	Personnel assigned to CTI through a contracting agency for a limited period of time or a particular project.
Teratogen:	A substance that can cause birth defects in the fetus of a pregnant female.
Testing:	The process by which the hazards that may confront entrants of permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space (Note: Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.).
TLD:	Thermo Luminescent Dosimeter.
Threshold Limit Value (TLV):	The airborne concentration of material to which nearly all persons can be exposed day after day without adverse effects. ACGIH expresses TLVs in three ways: 1. TLV-TWA: The allowable Time-Weighted Average concentration for a

Term	Definition
	normal 8-hour workday or 80-hour workweek. 2. TLV-STEL: The Short-Term Exposure Limit, or maximum concentration for a continuous 15-minute exposure period (maximum of four such periods per day, with at least 60 minutes between exposure periods, and provided the daily TLV -TWA is not exceeded). 3. TLV-C: The ceiling exposure limit - the concentration that should not be exceeded even instantaneously.
TLV-C:	the Ceiling limit - the concentration that should not be exceeded even instantaneously. Also see "Skin".
TLV-STEL:	the Short-Term Exposure Limit, or maximum concentration for a continuous 15-minute exposure period (maximum of four such periods per day, with at least 60 minutes between exposure periods, and provided that the daily TLV-TWA is not exceeded).
THRESHOLD PLANNING QUANTITY (TPQ):	Per 40 CFR 302. The amount of material at a facility that requires emergency planning and notification per CERCLA.
Tight-Fitting Facepiece:	A respiratory inlet covering that forms a complete seal with the face.
Time Weighted Average (TWA):	The average time, over a give work period (e.g., 8 hours workday) of a person's exposure to a chemical or an agent.
TINNITUS:	Ringing sound in the ears.
TNT:	Tri Nitro Toluene.
TOC TAG Open Cup:	flash point test method.
Total Fall Distance:	Free fall distance plus deceleration distance and any elongation (stretch) of the system.
Toxic Chemical:	Substances that cause either permanent or reversible injury to the health of a living thing on contact or absorption.
Toxic Substance:	Any substance that can cause acute or chronic injury to the human body or which is suspected of being able to cause disease or injury under some conditions.
Toxic Substances Control Act (TSCA):	Federal Environmental Legislation administered by EPA regulating the manufacture, handling, and use of materials classified as "toxic substances".
Toxicity:	The sum of adverse effects resulting from exposure to a material.
TOXICOLOGY:	Study of the nature, effects, and detection of poisons in living organisms. Also, substances that are otherwise harmless but prove toxic under particular conditions.
TPQ:	Threshold Planning Quality per SARA regulations.
Trade Name:	The trademark name or commercial trade name for a material.
Trade Secret:	Any confidential formula, pattern, process, device, information, or compilation of information that is used in an employer's business and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.

Term	Definition
Trainer:	CTI employees, vendors, or consultants with the level of expertise required to conduct training for a particular topic.
Training Module:	Specific training course that includes an outline and all required information and resources necessary for presentation.
Train-the-Trainer:	Course that trains an instructor on how to present a specific training module.
TSD:	Treatment, Storage, and/or Disposal.
TSDF:	Treatment, Storage and Disposal Facility.
TSP Tri Sodium Phosphate:	Common industrial detergent. Solid powder when mixed with water makes a good decontamination solution. Many cities do not allow its use due to the phosphate.
TTLC:	Total Threshold Limit Concentration.
TWA:	Time weighted average exposure; ACGIH terminology. See TLV.
UEL UPPER EXPLOSIVE (FLAMMABLE) LIMIT:	Upper explosive limit or upper flammable limit of a vapor or gas; the highest concentration (highest percentage of the substance in air) that will produce a flash of fire when an ignition source (heat, arc, or flame) is present. At higher concentrations, the mixture is too "rich" to burn. Also see LEL.
UFC:	Uniform Fire Code.
UN/NA:	United Nations/North America.
UN #:	A number required in shipping documentation and on packaging as a part of the DOT regulations for shipping hazardous materials.
Unstable (Reactive):	A chemical which, in the pure state or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure, or temperature.
Unusual Fire and Explosion Hazards:	Hazards that might occur as a result of overheating or burning a specific material. These include chemical reactions or changes in chemical composition or any special hazards involved in extinguishing the burning material.
USDA U. S. Department of Agriculture:	prior to 1971, USDA performed tests and issued approvals on respirators for use with pesticides. In 1971, the Bureau of Mines took over the pesticide respirator testing/approval functions - procedures later delegated to the Testing and Certification Branch (TCB) of NIOSH.
USGS:	U. S. Geological Survey
Upper Explosive Limit (UEL) or Upper Flammable Limit (UFL):	The highest concentration (highest percentage of the substance in air) that will produce a flash of fire when an ignition source (heat, arc, or flam) is present. At higher concentrations, the mixture is too “rich” to burn. Also see LEL.
USE:	To package, handle, react, or transfer.
User Seal Check:	An action conducted by the respirator user to determine if the respirator is properly seated to the face.

Term	Definition
UTRICARIA:	Nettle rash; hives; elevated, itching white patches.
Vapor:	The gaseous state of a substance that is solid or liquid at temperatures and pressures normally encountered.
Vapor Density:	The weight of a vapor or gas compared to the weight of an equal volume of air; an expression of the density of the vapor or gas. Materials lighter than air have vapor densities less than 1.0 (examples: acetylene, methane and hydrogen). Materials heavier than air have vapor densities greater than 1.0 (examples: propane, hydrogen sulfide, ethane, butane, chlorine, sulfur dioxide). All vapors and gases will mix with air, but the lighter materials will tend to rise and dissipate (unless confined). Heavier vapors and gases are likely to concentrate in low places along or under floors, in sumps, sewers, and manholes, in trenches and ditches, where they may create fire or health hazards.
Vapor Pressure:	The pressure exerted by a saturated vapor above its own liquid in a closed container. When quality control tests are performed on products the test temperature is usually 100 degree F and the vapor pressure is expressed as pounds per square inch (psi or psia) - but vapor pressures reported on MSDSs are in millimeters of mercury (mmHg) at 68 degree F (unless stated otherwise. Three facts are important to remember: Vapor pressure of a substance at 100 degrees F will always be higher than the vapor pressure of the substance at 68 degrees F. Vapor pressures reported on MSDSs in mmHg are usually very low pressures; 760 mmHg is equivalent to 14.7 pounds per square inch. The lower the boiling point of a substance, the higher its vapor pressure.
Velometer:	A device for measuring air velocity.
Ventilation:	One of the principal methods to control health hazards may be defined as "causing fresh air to circulate to replace foul air simultaneously removed."
Verification:	Specific method for testing equipment to ensure that isolation and de-energization of the equipment have been accomplished.
Vermiculite:	An expanded mica (hydrated magnesium - aluminum - iron silicate) used as sorbent for spill control and clean-up.
VERTIGO:	Feeling of revolving in space; dizziness, giddiness.
Virginia Department of Environmental Quality (DEQ):	Dedicated to protecting VA's environment and promoting the health and well-being of the citizens, by planning and implementing environmental programs, and by resolving issues efficiently, openly, fairly and consistently.
Virginia Occupational Safety and Health Administration (VOSH):	State agency charged with protecting and promoting the safety and health of VA's workers in their workplaces. VOSH operates within the VA Department of Labor and Industry (DOLI).

Term	Definition
Viscosity:	The tendency of a fluid to resist internal flow without regard to its density.
VOC:	Volatile Organic Compound.
VOLATILE ORGANIC COMPOUNDS (VOC):	Used in coatings and paint because they evaporate very rapidly.
Volatility:	The tendency or ability of a liquid to vaporize.
Walking/Working Surface:	Any horizontal or vertical surface on which an employee walks or works, including floors, roofs, or machinery (but does not include ladders or vehicles).
Warning Label:	Any written, printed, or graphic materials displayed on or affixed to containers of hazardous materials, that provides safety information.
Warning Line Systems:	Barrier erected around the exposed (leading) edge to warn employees of the fall hazard.
Waste Disposal Methods:	Proper disposal methods for contaminated material, recovered liquids or solids, and their containers.
Water-Reactive:	A chemical that reacts with water to release a gas that is either flammable or presents a health hazard.
WET:	Wet Extraction Test
Wet Trip Test:	A test conducted with the water control valve (OS&Y or PIV) open. Water is allowed to travel throughout the entire system and discharge out of the inspector's test connection.
Work Area:	A room or defined space in a workplace where hazardous chemicals are produced or used and where employees are present.
Work Instruction (WI):	A procedure, typically narrow in scope, for performing a task.
WORKPLACE:	An establishment at one geographical location containing one or more work areas.
XRFA:	X-ray Fluorescence Analysis.
Zero Mechanical State (ZMS):	Mechanical potential energy of all portions of the machine or equipment is set so that the opening of the pipe(s), tube(s), hose(s), or actuation of any valve, lever or button, will not produce a movement which could cause injury.
ZINC FUME FEVER:	Caused by inhalation of zinc oxide fume characterized by flu-like symptoms, a metallic taste in the mouth, coughing, weakness, fatigue, muscular pain, and nausea, followed by fever and chills.
Z LIST:	OSHA's Toxic and Hazardous Substances Tables Z-1, Z-2, and Z-3 of air contaminants, found in 29 CFR 1910.1000. These tables record PEL's, TWA's, and ceiling concentrations for the materials listed. Any material found on these tables is considered to be hazardous.
ZRL:	Zero Risk Level.