APPENDIX A TERMS AND DEFINITIONS

TERM	DEFINITION
Abatement (for Part 11 only)	Procedures to control fiber release from any materials containing more than 1% asbestos, such as surfacing materials, thermal insulating materials, and building and miscellaneous materials (roofing, siding, flooring, ceiling tiles, etc.). It includes encapsulation, permanent enclosure, or removal of ACM during renovations and demolitions of facilities containing ACM.
Administrative control	Any procedure that limits hazard exposure (such as noise) by control of work schedules
Affected employee	An employee who operates or directly uses equipment that is serviced or maintained under lockout/tagout
AIHA Accredited Laboratory	A certification given by the AIHA to an analytical laboratory that has been examined for quality control and proficiency and meets AIHA Laboratory Accreditation Program standards of performance and operation.
Air, makeup	Outdoor air supplied to replace exhaust air
Airborne	Pertaining to materials that have been dispersed and are suspended or slowly falling in the air.
Airlock	An opening through an installed barrier system, usually consisting of two polyethylene curtained doorways at least 3 ft. apart, at an asbestos abatement activity that allows ingress and egress of workers and materials and restricts the movement of airborne material from the contaminated area to the clean area. (Ref Part 11)
Air-purifying respirator (APR)	A canister, cartridge, dust mask, or the like, used to remove contamination from an atmosphere that contains a normal oxygen level
Air Sampling/Air Monitoring	The process of measuring the fiber content/concentration of a specific volume of air in a stated time. (Ref Part 11)
Amended Water	Water to which a chemical wetting agent (surfactant) has been added to improve penetration into asbestos-containing material. (Ref Part 11)

Anchorage	A secure point of attachment for lifelines, lanyards, or deceleration devices
Approved Respirator	Respiratory protection equipment tested and listed as satisfactory according to standards established by either NIOSH or the Mine Safety and Health Administration to provide respiratory protection.
Article	A material that meets the following criteria: • It is in a specific shape or design as a result of its manufacture. • It has an end-use function(s) dependent, in whole or in part, upon its shape or design during end use. • It doesn't release, or otherwise result in exposure to, a hazardous chemical under normal conditions of use.
Asbestos	The generic name for a variety of naturally occurring hydrated mineral silicates that possess a unique crystalline structure, are incombustible in air, and are separable into fibers. Six asbestos species were used commercially in large amounts: chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite. For purposes of Part 11, "asbestos" includes PACM, as defined below.
Asbestos abatement	See Abatement above
Asbestos Containing Material (ACM)	Any material that contains 1% or more, by weight, of any type or mixture of types of asbestos (Ref Part 11)
Asbestos-Containing Building Material (ACBM)	ACBM is surfacing ACM, TSI ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a building. A term used by the EPA. (40 CFR 763) (Ref Part 11)
Asbestos Fibers	Fibers longer than 5 microns (length-to-width ratio of 3:1) generated from an ACM (Ref Part 11)
Asbestos Removal	The physical removal of ACM or PACM from an area.
Asbestos worker	A person engaged in the abatement of asbestos or performing a task who is routinely exposed to asbestos fiber concentration levels in excess of the of 0.1 f/cc 8-hour TWA PEL (Ref Part 11)
Attendant	An individual stationed outside one or more permit-required confined spaces who monitors the authorized entrants and who performs the attendant's duties

Audiogram	A chart, graph, or table resulting from an audiometric test; an audiogram shows an individual's hearing threshold level as a function of frequency.
Authorized employee	A person who locks out or tags out machines or equipment to service or maintain that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include servicing or maintenance covered under this section.
Authorized entrant	An employee who is authorized by the employer to enter a permit-required confined space
Authorized Person (User)	Employee required to use fall protection in performance of their work and trained and certified to use fall protection PPE and systems
Barrier	Any surface, warning tape, or sign that separates the asbestos-regulated area to inhibit the movement of fibers or unauthorized personnel (Ref Part 11)
Battery	One or more cells in a single package to provide direct current (DC) power source
Blanking or blinding	The absolute closure of a pipe, line, or duct by fastening a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that can withstand the maximum pressure of the pipe, line, or duct with no leakage beyond the plate
Bloodborne pathogens	Pathogenic microorganisms that are present in human blood and can cause disease in humans; these pathogens include hepatitis B virus (HBV) and human immunodeficiency virus (HIV).
Body Harness	Straps secured about the employee in a manner that shall distribute the fall arrest forces over the thighs, pelvis, waist, chest, and shoulders with means for attaching it to other components of personal fall arrest system
Bonding	Minimizing the potential difference between conductive objects to prevent static discharge
Browncoat	A layer of plaster-like material, usually brown, covering the plaster ceiling to which the ACM coating is applied (Ref Part 11)

"Capable of being locked out"	An energy-isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be attached, or it has a locking mechanism built into it. Other energy-isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild, or replace the energy-isolating device or permanently alter its energy control capability
Cell	Basic unit for conversion of chemical energy to electrical energy and also for the reverse for rechargeable cells
Certification	The process to determine that criteria established by a designated standard have been met and the documentation that records that the criteria were met. The process includes testing and is performed under the supervision of a qualified trainer or entity.
Certified Industrial Hygienist (CIH)	A person having a college or university degree in industrial hygiene, chemistry, engineering, physics, or medicine or related biological sciences who, by virtue of special studies or training, has acquired competence in the practice of industrial hygiene *and* who has successfully completed examinations administered by the American Board of Industrial Hygiene
Certifying officer	The person designated by the cognizant JSC line organization to administer the certification program
Certified Safety Professional (CSP)	A person having a bachelor's or associate's degree in safety, health, or the environment who, by virtue of special studies or training, has acquired competence in the practice of safety *and* who has successfully completed examinations administered by the Board of Certified Safety Professionals
Chemical	Any element, compound, or mixture of elements or compounds
Class I Asbestos Work	Activities involving the removal of TSI, surfacing ACM, and presumed ACM (PACM) (29 CFR 1926.1101) (Ref Part 11)
Class II Asbestos Work	Activities involving the removal of ACM that is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, asbestos concrete or asbestos cement items, transite, roofing and siding shingles, and construction mastics (29 CFR 1926.1101) (Ref Part 11).

Class III Asbestos Work	Means repair and maintenance operations where ACM, including TSI and surfacing ACM and PACM, is likely to be disturbed (29 CFR 1926.1101) (Ref Part 11)
Class IV Asbestos Work	Maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities involving the cleanup of dust, waste, and debris from Class I, II, and III activities (29 CFR 1926.1101) (Ref Part 11)
Classes of fires	• Class A - a fire involving ordinary combustible materials such as paper, wood, cloth, and some rubber and plastic materials • Class B - a fire involving flammable or combustible liquids, flammable gases, greases and similar materials, and some rubber and plastic materials • Class C - a fire involving energized electrical equipment • Class D - a fire involving combustible metals such as magnesium, titanium, zirconium, sodium, lithium, and potassium
Clean Area	See Clean Room. (Ref Part 11)
Clean Change Room	See Clean Room. (Ref Part 11)
Clean Room (for Part 11 only)	A clean room is an uncontaminated room/area having facilities for the storage of asbestos workers' street clothing and uncontaminated materials and equipment. The clean room must be equipped with a locker or appropriate storage container for each employee's use. Following showering, employees change into street clothing in the clean room area
Clearnce	Before release of an area upon completion of asbestos-related activities, visual inspections or clearance air sampling will be performed to ensure that no residual asbestos debris or airborne asbestos fibers remain (Ref Part 11).
Clearance Air Sampling/Air Monitoring	Air sampling, performed to verify that the airborne fiber concentration is less than 0.01 f/cc, done before releasing a regulated asbestos removal area (Ref Part 11)
Close call	An occurrence in which there is no injury, no property or equipment damage, and no significant interruption of productive work, but which possesses a high potential for any of the mishaps as defined in paragraph 106.3; for JSC, this will include

	mishaps resulting in only property damage less than $1,000 in value.
Combustible liquid	Any liquid having a closed cup flash point at or above 100°F (37.8°C), but below 200°F (93.3°C), except any mixture having components with flash points of 200°F (93.3°C) or higher, the total volume of which makes up 99% or more of the total volume of the mixture; combustible liquids are subdivided as follows: • Class II - those having flash points at or above 100°F (37.8°C) and below 140°F (60°C) • Class IIIA - those having flash points at or above 140°F (60°C) and below 200°F (93.4°C) • Class IIIB - those having flash points at or above 200°F (93.4°C)
Compensation	Compensation payable under the Federal Employees Compensation Act; includes lost wage replacements, scheduled awards, medical expenses, money paid on account of death, and payments for approved vocational rehabilitation to employees who are disabled as a result of their employment
Competent Person (OSHA definition)	A competent person is one who is capable of identifying existing and predictable hazards in the work area or unsanitary, hazardous, or dangerous working conditions, and who has authority to take prompt corrective measures
Competent person (for Chapter 7.2 only)	A person who has demonstrated the knowledge and skills necessary to administer certain aspects of JSC's respiratory protection program, such as emergency rescue from confined spaces, hazard assessments, air monitoring, fit-testing, and training
Competent person (for Chapter 8.8 only)	Employee trained and certified in fall protection and who is capable of identifying hazards, has the authority to take corrective actions, is knowledgeable of applicable regulations, standards, equipment, and systems, and understands the mandatory requirements for fall protection equipment and systems
Competent Person (for Part 11 only)	A person who meets the requirements in Chapter 12.7 of this JPR and is designated as such by the employer to oversee asbestos work
Confined space	A space of any size or shape that meets all the following conditions:

	• It is large enough and so configured that an employee can enter and perform assigned work. • It has limited or restricted means for entry or exit (e.g., tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may limit means of entry). • It isn't designed for continuous employee occupancy.
Contaner	Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like, that may contain a hazardous chemical; in Chapter 9.2, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle that aren't considered to be containers
Contaminated	Having the presence, or the reasonably anticipated presence, of blood or other potentially infectious materials on an item or surface
Continuation of pay (COP)	Payment of employee's regular wages by the employing agency for time lost due to job-related, disabling traumatic injuries, with no charge to the employee's sick or annual leave; this period must never exceed 45 calendar days and doesn't need to be consecutive days; in cases where there is no immediate time loss, the first time loss following, due to the injury, is the first day of COP; this time loss must be taken within 90 days from the date of injury to begin using any balance of the 45 COP days.
Contracting Officer	A designated person who performs administrative functions listed in the NASA Procurement Regulations
Contractor	A non-federal employer working under a NASA contract, whether as prime contractor or subcontractor
Controlled Area (for Chapter 6.9 only)	A controlled area is one that: a. An employee can completely enter and work in the area, but is not, by definition, a confined space. b. Periodically contains, or can, after a single point failure, contain a hazardous atmosphere where employees are present that may expose them to the risk of death, or acute illness, injury, incapacitation, and impairment of ability to self-rescue. c. Contains any other condition that is immediately dangerous to life or health.
Cooling tower	A system used to dissipate heat from a building; it removes heat from water-cooled condensers of air-conditioning systems; the

	water in a closed loop is usually cooled by contact with outside air or by spray ponds.
Costs (for Chapter 2.7 only)	Direct costs of repair, retest, program delays, replacement, or recovery of NASA materials, including hours, material, and contract costs, but excluding indirect costs of cleanup, investigation (either by NASA, contractor, or consultant), and injury, and by normal operational shutdown; materials or equipment replaced by another organization at no cost to NASA will be calculated at “book” value, including those mishaps covered by insurance.
Credible failure	A failure that can occur and is reasonably expected to occur; in this JPR, failures of structure, pressure vessels, and pressurized lines and fittings aren’t considered credible failure modes if those elements follow applicable safety factor requirements.
Critical system	Any facility support system or test system the loss of which could result in injury to test personnel, property damage, or failure to detect or shut off a hazardous condition
Cumulative trauma disorder (CTD)	A health disorder from repeated biomechanical stress due to ergonomic hazards; CTDs are a class of musculoskeletal disorder involving damage to the tendons, tendon sheaths, and the related bones, muscles, and nerves of the hands, wrists, elbows, shoulders, neck and back or synovial lubrication of the tendon sheaths.
Custom Containment Bag	See Glovebag. (Ref Part 11)
Decibel (dB)	A unit of measurement of sound pressure level; the decibel level of a sound is the logarithm of the ratio of sound pressure to a reference pressure; dB has meaning only when the reference is known; the internationally accepted reference pressure used in acoustics is 20 micropascals.
Decibels, A-weighted (dBA)	A sound level reading in decibels made on the A-weighted network of a sound pressure level meter (SLM) at slow response
Decontamination	The process of removing contaminants that have accumulated on personnel and equipment to prevent exposure of the people or contamination of otherwise uncontaminated people, areas, or equipment (Ref Part 11)
Decontamination Area	A decontamination area is an enclosed area adjacent and connected to the regulated area consisting of an equipment

	room, a shower area, and a clean room, used to decontaminate workers, materials, and equipment that are contaminated with asbestos. The enclosure for this area is typically constructed of plastic, with curtained doorways between adjacent rooms; however, it may be a portable, prefabricated unit (Ref Part 11).
Demolition	The wrecking or removing of any component, system, finish, or assembly of a facility together with any related handling operations.
Disability	Loss of ability to perform work; such loss may be partial or total and temporary or permanent.
Disinfect	To remove contaminants and inhibit the action of agents that cause infection or disease
Disturb/Disturbance	An activity that disrupts the matrix of ACM or PACM, crumbles or pulverizes ACM or PACM, or generates visible debris from ACM or PACM. A disturbance includes cutting away small amounts of ACM and PACM no greater than the amount that can be contained in one standard-sized glovebag or waste bag to access a building component (29 CFR 1926.1101) (Ref Part 11).
Dive team	Underwater swimmers and support employees involved in an underwater operation, including the designated person in charge
Diver	An employee swimming in water using underwater apparatus that supplies compressed breathing gas at the ambient pressure
Double block and bleed	To close a line, duct, or pipe by: • Closing and locking or tagging two in-line valves • Opening and locking or tagging a drain or vent valve in the line between the two closed valves
Drop line	A vertical line from a fixed anchorage, independent of the work surface, to which a lanyard is affixed
Electro-Explosive Device (EED)	An electrically initiated device containing an explosive or pyrotechnic mixture. The output of the initiation is heat, shock, or mechanical action.
Emergency (for Chapter 6.9 only)	Any occurrence, including any failure of hazard control or monitoring equipment, internal or external to the permit-required confined space, that could endanger entrants
Emergency Preparedness Plan	A written document intended to: mitigate the effects of a hazard; prepare (including preplanning) measures to be taken that will

	preserve life and minimize damage; describe responses to emergencies requiring the use of JSC resources and provide necessary assistance; and establish a recovery system that returns the Center to normal operations after an incident
Emergency rescue services	The personnel designated to rescue employees from permit-required confined spaces
Employee	A JSC civil servant or an individual working for a contractor
Employee representative	Any official of any labor bargaining unit (such as a union) that represents civil service or contractor employees
Employer	Under the JSC safety and health program, an “employer,” as used by OSHA, is the company for contractor employees and the supervisor for civil service employees
Encapsulant (for Part 11 only)	A liquid material that can be applied to ACM that controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (a bridging encapsulant) or by penetrating the material and binding its components together (a penetrating encapsulant). By TCEQ guidance an encapsulant must be advertised and marketed for asbestos work. Using regular paint over ACM does not encompass formal encapsulation under TCEQ rules.
Encapsulation (for Part 11 only)	The treatment of ACM with a material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers; a bridging encapsulant or a penetrating encapsulant. By TCEQ guidance an encapsulant must be advertised and marketed for asbestos work. Using regular paint over ACM does not encompass formal encapsulation under TCEQ rules.
Enclosed environment	A test environment in a closed structure that has no venting, flow-through, or introduction of outside gases
Enclosure (1)	As used in Part 11 and by OSHA, means the construction of an airtight, impermeable, temporary barrier around a regulated area to control the release of asbestos fibers into the air where they could migrate into an adjacent area (Ref Part 11)
Enclosure (2)	As used by the EPA for asbestos response actions, means the construction of an airtight, impermeable, permanent barrier around ACM and ACBM to control the release of asbestos fibers into the air (Ref Part 11)
Energized	Connected to an energy source or containing residual or stored energy; any energy level above the magnitude listed

	below is automatically energized; any lesser magnitude or form of energy not listed must be evaluated on a case-by-case basis to determine whether this procedure is necessary to ensure safety: • Electrical - 50 volts • Thermal - 130°F • Radiation - any regulated source of ionizing or nonionizing radiation • Chemical - explosive, flammable, corrosive, or toxic solids, liquids, or gases • Mechanical - flywheels, springs, suspended weights must be evaluated • Hydraulic or Pneumatic - 150 psi
Energy control	An energy-isolating device placed on a system to isolate that system from operation. This form of energy control is used on various occasions to include long-term shutdown of the system for maintenance, construction, mothball, or demolition of the system. [Note: Energy control will not be accepted as the lockout protection for any employee. Each employee must use his or her own lock and tag to provide personal protection.]
Energy isolating device	A mechanical device that physically prevents the transmission or release of hazardous energy, including, but not limited to: • A manually operated electrical circuit breaker • A disconnect switch • A manually operated switch where the circuit conductors can be disconnected from all ungrounded supply conductors and no pole can be operated independently • A slide gate • A slip blind • A line valve • A block • Any similar device used to block or isolate energy Devices not included: • Pushbuttons • Selector switches • Other control circuit-type devices
Energy source	Any source of electrical, hydraulic, pneumatic, chemical (toxic, flammable, or corrosive material), thermal, or other energy

Engineering controls (for Chapter 7.2 only)	Any method of controlling employee exposures to toxic materials by eliminating or modifying the source or reducing the quantity of contaminants released into the work environment
Engineering controls (for Chapter 7.4 only)	Any method for isolating or removing a hazard from the workplace
Engineering controls (for Chapter 5.5 only)	Engineered CTD risk control measures that include, but aren't limited to, devices such as workstations, tables, chairs, equipment, tools, and physical modifications to workstations, equipment, tools, production processes, or any other aspect of the work environment
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
Entry	The action by which a person passes through an opening into a permit-required confined space; entry includes 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 document JSC Form 1476, which is a checklist that provides a systematic review of operational exposures in confined spaces
Entry procedure	The written document that details the required procedures and equipment required for safe entry into a specific confined space
Entry supervisor	The person who is responsible for determining whether acceptable entry conditions are present at a permit-required confined space where entry is planned, for authorizing entry, and overseeing entry operations, and for terminating entry as required by this program. (Note: An entry supervisor may also serve as an attendant or authorized entrant, as long as that person is trained and equipped as required by this program for each role that he or she fills. Also, the duties of an entry supervisor may be passed from one individual to another during the course of an entry operation.)
Environmental Office (Mail Code: JE)	The office at JSC that is responsible for ensuring compliance with federal, state, and local environmental regulations

Equipment	Per NPR 4200.1, a tangible durable, nonexpendable asset that is functionally complete for its intended purpose. Equipment is not intended for sale and does not ordinarily lose its identity or become a component part of another article when put into use. Equipment includes all items of NASA personal property that are configured as mechanical, electrical, or electronic machines, tools, devices, and apparatuses that have a useful life of two years or more and are not consumed or expended in an experiment. Equipment does not include supplies, material, real property, and software.
Equipment Room	A contaminated room located within the asbestos decontamination area that is supplied with impermeable bags or containers for the disposal of asbestos-contaminated protective clothing and equipment (Ref Part 11)
Ergonomic hazard	Any workplace condition that poses a biomechanical stress to the worker; such hazardous workplace conditions include faulty workstation layout, improper work methods, improper tools, excessive tool vibration, and job design problems that include aspects of workflow, line speed, posture and force required, work/rest regimens, and repetition rate
Ergonomics	A multidisciplinary activity dealing with the interactions between a person and his or her total working environment, plus such traditional environmental elements as atmosphere, heat, light, and sound as well as all tools and equipment of the workplace
Explosive	A chemical compound, mixture, or device that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature; the term includes, but isn't limited to, dynamite, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord, and igniters, any material determined to be within the scope of Title 18, United States Code, Chapter 40, "Importation, Manufacture, Distribution, and Storage of Explosive Materials," and also includes any material classified as an explosive by the Hazardous Materials Regulations of the U.S. Department of Transportation (NFPA 495, "Explosive Materials Code").
Explosives Handler	Certified personnel authorized to physically handle explosives or pyrotechnic devices (outside of transportation or packing configuration) during storage, installation, inspection, or other use identified in an approved procedure.

Exposure or Exposed	Means that an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.), and includes potential (e.g., accidental, or possible) exposure
Explosives Handler	Certified personnel authorized to physically handle explosives or pyrotechnic devices (outside of transportation or packing configuration) during storage, installation, inspection, or other use identified in an approved procedure.
Explosives Safety Officer	An individual appointed by the JSC Center Director to perform duties as required ensuring compliance with applicable NASA and JSC requirements, rules and regulations.
Facility organization (for Chapter 6.8 only)	An organization that is responsible for operating and maintaining a test facility and that conducts tests for test-requesting organizations
Fall Arrest System	A system designed to stop one or more persons from striking a lower level or obstructions if a fall occurs. Fall Arrest Systems require the use of a Full Body Harness, a Connecting Means, a suitable Anchorage, planned rescue procedures, and proper training of all users.
Fall Protection	Any equipment, device, or system that prevents an accidental fall from elevation or mitigates the effect of such a fall
Fall Restraint System	A fall protection system that prevents a person from reaching an unprotected edge. The system is comprised of a body harness along with an anchorage, connectors, and other necessary equipment. The other components typically include a lanyard and may include a lifeline and other devices
Fiber Count	A total number of fibers, of specified diameter and length, obtained by microscopic examination of a filter through which air has been drawn (Ref Part 11)
Fire area	An area of a building separated from the rest of the building by construction with a fire resistance of at least 1 hour and having all communicating openings properly protected by an assembly having a fire resistance rating of at least 1 hour
Fire extinguisher	A portable device containing powder, liquid, or gases that are expelled under pressure to suppress a fire

First aid	Any one-time treatment, and any follow-up visit for the purpose of observation, for minor scratches, cuts, burns, splinters, etc., that don't ordinarily require medical care; such one-time treatment, and follow-up visit for the purpose of observation, is considered first aid even when it is provided by a physician or registered professional personnel.
Fit factor	A quantitative measure of the fit or sealing performance of a particular respirator to a particular individual; usually expressed as the ratio of challenge concentration outside the respirator to the concentration inside the respirator
Fit test	A test that usually exposes a person wearing a respiratory protection device to a gaseous or aerosol test mixture in a test environment to determine the fit or integrity of the facepiece-to-face seal of the respirator. The test may be qualitative, where the person tested determines by smell or taste whether the mask is leaking. The test may be quantitative, where the concentration of the test mixture inside and outside the mask is determined by instrumentation or where the pressure differential between the inside and the outside is measured. . The outcome determines whether the required fit factor was achieved under a given set of physical conditions
Fixed anchorage	A secure point of attachment, not part of the work surface, for attaching drop lines, lifelines, or lanyards
Flammable	A chemical that falls into one of the following categories: • Aerosol, flammable - an aerosol that, when tested by the method described in 16 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 • Gas, flammable - (1) a gas that ignites at ambient temperature and pressure when in a mixture of 13% by volume or less of air; or (2) a gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than 12% by volume, regardless of the lower limit • Liquid, flammable - any liquid with a flash point below 100°F (37.8°C), except any mixture of components with flash points of 100°F (37.8°C) or higher, the total of which make up 99% or more of the total volume of the mixture (see classes below) • Solid, flammable - a solid, other than a blasting agent or explosive, as defined in 29 CFR 1910.109(a), that could

	cause a fire through friction, absorbing moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or that can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard; a chemical must be considered to be 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.
Flammable liquid	A liquid having a closed cup flash point below 100°F (37.8°C) and having a vapor pressure not exceeding 40 psia (2068 mmHg) at 100°F (37.8°C) must be known as a Class I liquid with subdivisions as follows: • Class IA - those having flash points below 73°F (22.8°C) and having a boiling point below 100°F (37.8°C) • Class IB - those having flash points below 73°F (22.8°C) and having a boiling point at or above 100°F (37.8°C) • Class IC - those having flash points at or above 73°F (22.8°C) and below 100°F (37.8°C)
Flash point	The temperature at which a liquid gives off vapor sufficient to form an ignitable mixture with the air near the surface of the liquid or within the vessel used (as determined by appropriate test procedure and apparatus specified in NFPA 30) but insufficient to sustain a flame. It is also the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested as follows: • Tagliabue Closed Tester (see “American National Standard Method of Test for Flash Point by Tag Closed Tester,” Z11.24-1979 [ASTM D 56-79]) for liquids with a viscosity of less than 45 Saybolt University Seconds (SUS) at 100°F (37.8°C), that don’t contain suspended solids and don’t have a tendency to form a surface film under test • Pensky-Martens Closed Tester (see “American National Standard Method of Test for Flash Point by Pensky-Martens Closed Tester,” Z11.7-1979 [ASTM D 93-79]) for liquids with a viscosity equal to or greater than 45 SUS at 100°F (37.8°C), or that contain suspended solids, or that have a tendency to form a surface film under test • Setaflash Closed Tester (see “American National Standard Method of Test for Flash Point by Setaflash Closed Tester” [ASTM D 3278-78]); organic peroxides, which undergo auto-

	accelerating thermal decomposition, are excluded from any of the flash point determination methods specified above.
Flight hardware	Hardware designed and fabricated for ultimate use in a vehicle intended to fly
Food	Any raw, cooked, or processed edible substance, ice, beverage, or ingredient used or intended for use or for sale in whole or in part for human consumption
Food contact surface	Those surfaces of equipment and utensils with which food normally comes in contact, and those surfaces from which food may drain, drip, or splash back onto surfaces normally in contact with food
Food service employee	An individual having supervisory or management duties and any other person working in a food service establishment
Food service establishment	Any place where food is prepared and intended for individual portion service, and includes the site at which individual portions are provided
Free Fall	The act of falling before a personal fall arrest system begins to apply force to arrest the fall
Free Fall Distance	The vertical displacement of the fall arrest attachment point on the employee's body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.
Friable	A material that crumbles, pulverizes, or reduces to powder from hand pressure.
Globally Harmonized System (GHS)	United Nations (UN) Globally Harmonized System of Classification and Labeling of Chemicals
Glovebag	A sack, typically constructed of 6-mil transparent polyethylene or polyvinyl chloride plastic, with two inward-projecting long sleeve gloves, that is designed to enclose an object from which an ACM is to be removed.
Government vehicle	Per 41 CFR, "Government motor vehicle" means any motor vehicle that the Government owns or leases. This includes

	motor vehicles obtained through purchase, excess, forfeiture, commercial lease, or GSA Fleet lease.
Grade D Air	Breathing air that contains 19.5% to 23.5% oxygen (the balance is predominantly nitrogen), no more than 5 milligrams per cubic meter (mg/M3) of condensed oil, no more than 10 ppm of carbon monoxide, no pronounced odor, and a maximum of 1000 ppm carbon dioxide. The Compressed Gas Association, Specification G-7.1, is the consensus standard for Grade D breathing air criteria.
Grounding	Minimizes potential difference between object and ground to prevent static discharge
Ground-level ambient atmosphere	The normal pressure and gas composition of the air surrounding the test facility or any other building
Group lockout/tagout (LO/TO)	When one individual, the group task representative, has placed red LO/TO tags and red LO/TO locks at all necessary points of energy isolation. All energy-isolation lock keys are placed in a group lockbox. The group task representative then places a red LO/TO tag and red LO/TO lock on the lockbox and maintains control of the lockbox for the duration of the maintenance or service task. All authorized personnel will install their individual red LO/TO locks and tags on the lockbox to maintain their control during work. The task group representative is responsible for control of the lock box and key. The control responsibility of the task group representative can be transferred between shift changes and job reassignments
Guardrail System	A barrier to prevent employees from falling to lower levels
Hazard assessment	An evaluation by the Occupational Health and Human Test Support Office of the potential health hazards posed by a specific task or operation
Hazardous activity	One that involves credible risks or dangers to personnel or facilities and equipment of JSC; includes, but isn't limited to, activities associated with human-tended hypobaric chambers, zero-g testing, and the Energy Systems Test Area
Hazardous atmosphere (for Chapter 6.9 only)	An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to escape unaided from a permit-required confined 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 explosive limit (LEL)

	• Airborne combustible dust at a concentration that meets or exceeds its LEL • Atmospheric oxygen concentration below 19.5% or above 23.5% • Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in 29 CFR 1910 Subpart G, "Occupational Health and Environmental Control," or in 29 CFR 1910 Subpart Z, "Toxic and Hazardous Substances," and that could result in employee exposure in excess of its dose or permissible exposure Note: An atmospheric concentration of any substance that isn't capable of causing death, incapacitation, impairment of ability to escape unaided, injury, or acute illness due to its health effects isn't covered by this provision. • Any other atmospheric condition that is immediately dangerous to life or health Note: For air contaminants for which OSHA hasn't determined a dose or permissible exposure limit, other sources of information, such as Material Safety Data Sheets (MSDS)/Safety Data Sheets (SDS), can provide guidance in establishing acceptable atmospheric conditions
Hazardous chemical	Any chemical that is a physical danger or a health danger
Hazardous material	Any element, chemical compound, or mixture of elements or compounds that poses a physical or health threat to personnel, the environment, or the general public through planned or unplanned events; included in this definition are articles that fail any of the three tests under the definition of "Article" above.
Hazardous material (for Chapter 9.1 only)	A substance that poses a danger to human health, safety, or the environment, or that meets the definition of a "hazardous chemical" under the hazard communication program (see OSHA 29 CFR 1910.1200 and Chapter 9.2)
Hazardous noise	A danger from noise exists whenever an operation, process, or procedure generates noise of sufficient duration and intensity to be capable of producing a permanent loss of hearing in an unprotected person.
Hazardous operation	An operation that involves materials, conditions, or equipment that could result in personnel or property damage if special precautions aren't followed

Hazardous test	A test where any test subject, test team member, observer, or member of the public is exposed to or has the potential to be exposed to a hazardous condition
Health hazard	A material “for which there is statistically significant evidence based on at least one study conducted per established scientific principles that acute or chronic health effects may occur in exposed employees; includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatoxins, nephrotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes” (29 CFR 1910.1200, Nov. 1983)
HEPA Filter	A filter that is capable of trapping and retaining 99.97% of particulates greater than 0.3 micron in size (Ref Part 11)
HEPA Filtered Vacuum	A vacuum cleaner with an HEPA filter that is capable of trapping and retaining 99.97% of all particulates larger than 0.3 microns (Ref Part 11)
Holding Area	Airlock between the shower room and the clean room in an asbestos worker decontamination system (Ref Part 11)
Hot-tap	A procedure that involves welding a piece of equipment while under pressure to install connections or appurtenances
Hot work permit	JSC Form 1475, “Hot Work, Welding, Cutting Permit” (Appendix 3B), which provides written authorization to perform operations (such as welding, riveting, cutting, burning, and heating) that could provide an ignition source
Human test facility	A facility testing hardware or procedures involving a human test subject
Hygiene Facility	The incorporation into an asbestos-removal enclosure of clean rooms, equipment rooms, shower rooms, and decontamination rooms (Ref Part 11)
Hyperbaric environment	Any atmosphere at an absolute pressure greater than ground-level ambient pressure by more than 0.1 psia
Hypobaric environment	See “Vacuum environment”
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-required confined space. Note: Some materials—e.g., hydrogen fluoride gas and cadmium vapor—may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possible fatal collapse 12 to 72 hours after exposure. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.
Imminent danger	Conditions or practices in any NASA/JSC or contractor workplace where a risk exists that could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such risk can be eliminated through normal procedures; these will be identified by Risk Assessment Code (RAC) 1 (see Chapter 3.2).
Impulse or impact noise	Variations in noise levels that involve peaks of intensity that occur at intervals of greater than 1 second; if the noise peaks occur at intervals of 1 second or less, the noise is considered continuous.
Infeasible	It is impossible to perform the work using a conventional fall protection system, (i.e., guardrail system or fall arrest/restraint system) or it is technologically impossible to use any one of these systems to provide fall protection.
Infectious waste	Blood and blood products, contaminated sharps, pathological refuse, and microbiological refuse
Inspection	A comprehensive survey of all or part of a workplace by qualified employees to detect safety or health hazards; inspections are normally performed during the regular work hours of the agency, except as special circumstances may require.
Institutional program	A distinct institutional activity or task conducted on JSC or contractor property and that requires the use of government or contractor ground-based resources; examples include facility design, construction, modification, demolition, repair, facility operations, test operations, manufacturing (fabrication) operations, service operations, and maintenance operations; space flight program operations conducted on orbit are excluded from this definition.
Isolation	The process by which a permit-required confined space is removed from service and completely protected against the release of energy and material into the space by such means as blanking or blinding; misaligning, or removing sections of line,

	pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages
Johnson Space Center (JSC)	As used in this JPR, the term Johnson Space Center is inclusive of the facilities, employees, and activities at JSC, Sonny Carter Training Facility (SCTF), and Ellington Field (EF); and JSC field sites unless otherwise noted.
JSC “safe occupancy” level (for Part 11 only)	An asbestos air concentration of 0.01 f/cc. This is the acceptable concentration of asbestos fibers in the public areas of a building, where ACMs are present, occupied by employees who are not asbestos workers. This is based on the EPA “clearance” level to return areas of a building back to unrestricted use after an asbestos abatement.
JSC Team Member	A JSC civil service or contractor employee.
Label	Any written, printed, or graphic material that is displayed on or affixed to containers of hazardous chemicals
Label (for Chapter 9.3)	The written, printed, or graphic matter on or attached to a pesticide or device or any of its containers or wrappers
Labeling	A paper or written, printed, or graphic matter prepared by a registrant: • Accompanying the pesticides or device at any time; or • To which reference is made on a printed paper or tag or in literature accompanying or referring to a pesticide or device, except accurate, non-misleading references made to a current official publication of a federal or state institution or agency authorized by law to conduct research in the field of pesticides
Laboratory	A facility concerned with the analysis of or experimentation with materials, substances, and equipment; also included are certain equipment, repair, and calibration operations and the processing of materials.
Laboratory (for Chapter 6.7 only)	A facility in which individually operated, small-scale chemical operations are conducted or performed
Lagging	Strips of insulating materials with which boilers, cylinders, or pipes are covered. Sometimes it also refers to insulating mud and final overlays (cloth or metal) (Ref Part 11).

Lanyard	A flexible line of rope, wire rope, or strap which has a connector at each end for connecting a body harness to a deceleration device, lifeline, or anchorage
Large Enclosure (for Part 11 only)	An enclosure providing an airtight, impermeable barrier around a job involving the removal of more than 260 lf, 160 ft^2, or 35 ft^3 of ACM. Large enclosures will most likely incorporate airlocks, negative air-filtering systems, hygiene facilities, contaminated equipment rooms, and waste load out rooms.
Lead	A heavy, soft, malleable, bluish-gray metal that may be in its metallic state, in inorganic compounds, and in organic soaps; excluded are all other organic compounds (e.g., the standard isn't designed to protect you from exposure to leaded gasoline).
Licensed Explosives Locations	Locations intended to provide short term storage or operational capabilities for small quantities of explosives material and devices which are normally outside of the Center's primary explosives storage area(s).
Lifeline	A component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage
Line Manager	A general term for a manager (civil service or contractor) within a line organization or contract at any level.
Line Organization	A functional organization outside of S&MA.
Lockout	Placing a lockout device on an energy isolating device under established procedures and ensuring that the energy-isolating device and the equipment being controlled cannot be operated until the lockout device is removed.
Lockout device	A device that uses a positive means such as a lock, either key or combination type, to hold an energy-isolating device in the safe position and prevent the energizing of a machine or equipment; included are blank flanges and bolted slip blinds.
Lockout/Tagout (LO/TO)	The process of ensuring that an item of equipment is secured, isolated, or shut down and to prevent its being energized. If such equipment were energized, it would present a safety hazard to workers. Building systems most often affected by LO/TO

	procedures at JSC are water distribution, electrical, HVAC, and fire alarm systems.
Lockout/tagout lock (red LO/TO lock)	Red-colored lock that is individually keyed and numbered. Used by an authorized employee to provide for securing energy isolation devices and isolating energy from their active work area; also used by the task group representative for group LO/TO
Lockout/tagout tag	Red-colored form JF1291, specifically used for energy isolation. Wording: “DANGER, LOCKOUT TAGOUT”
Lost time case	A nonfatal traumatic injury that causes any loss of time from work beyond the day or shift on which it occurred; or a nonfatal non-traumatic illness or disease that causes disability at any time; for civil service employees, the time lost may be less than a full, 8-hour workday; for all other employees, only a full workday lost is counted.
Lost workday cases	Injuries and illnesses that involve days away from work or days of restricted work activity; this classification applies to contractor or private sector employees, not to civil service employees.
Lost workday cases	Away from work - the number of workdays (consecutive or not) during which the employee would have worked but couldn’t because of an occupational injury or illness
Lost workday cases	Restricted work activity - the number of workdays (consecutive or not) during which, because of injury or illness: • The employee was assigned to another job on a temporary basis. • The employee worked at a permanently assigned job less than full time. • The employee worked at a permanently assigned job but couldn’t perform all duties normally connected with the job.
Low Slope Roof	A roof having a slope less than or equal to 4 in 12 (vertical to horizontal)
Lower explosive limit (LEL)	The minimum concentration of a combustible or flammable gas or vapor that will ignite if an ignition source is present; the terms “lower explosive limit” and “lower flammable limit” have the same meaning.

Major Fiber Release	The falling or dislodging of more than 3 ft^2 or 3 lf of friable ACM/ACBM (40 CFR 763.91(f)) (Ref Part 11)
Material Safety Data Sheet (MSDS)	Written or printed material about a hazardous chemical that describes the characteristics, properties, associated hazards, and other relevant material. This term has been replaced by "Safety Data Sheet" (SDS) under GHS.
Medical care	For civil service employees, if an injury is accepted as compensable under FECA, the injured employee is entitled to all medical care that is required to cure, give relief, or reduce the degree or period of disability; it will be provided as long as the evidence indicates that it is needed for the effects of the job-related injury.
Medical examination	An evaluation of a person's health status conducted by a medical doctor
Medical history	A person's past health record, including all of the hazardous materials to which he or she has been exposed and any injuries or illnesses that might dictate future health status or work abilities
Medical treatment	Treatment administered by a physician, or by licensed or registered professional personnel under the standing orders of a physician, for an occupational injury or illness that doesn't result in days away from work or days of restricted work activity; doesn't include first-aid treatment, even though provided by a physician or licensed or registered professional personnel; this definition applies to all employees, both civil servant and private sector.
Method 7400	This is an NIOSH sampling and analytical method for evaluating airborne fiber concentrations using phase-contrast microscopy (Ref Part 11).
Method 7402	This is an NIOSH sampling and analytical method for evaluating airborne fiber concentrations using transmission electron microscopy. Asbestos fibers are counted using the same fiber definitions as Method 7400 (Ref Part 11).
Micron	A measurement of length equal to one millionth of a meter
Minor Fiber Release	The falling or dislodging of 3 ft^2 or 3 lf or less of friable ACM/ACBM (40 CFR 763.91(f)) (Ref Part 11)
Mishap	Any unplanned occurrence, event, or anomaly that meets one of the definitions below; injury to a member of the public while on JSC facilities is also defined as a NASA mishap:

	• Type A mishap - Occupational injury and/or illness that resulted in: a fatality, *or* a permanent total disability, *or* the hospitalization for inpatient care of 3 or more people within 30 workdays of the mishap. Total direct cost of mission failure and property damage is $2,000,000 or more, *or* crewed aircraft hull loss has occurred, *or* occurrence of an unexpected crewed aircraft departure from controlled flight (except high performance jet/test aircraft, such as F-15, F-16, F/A-18, T-38, OV-10, and T-34, when engaged in flight test activities). • Type B mishap - Occupational injury and/or illness has resulted in permanent partial disability. *or* the hospitalization for inpatient care of 1-2 people within 30 workdays of the mishap. Total direct cost of mission failure and property damage of at least $500,000 but less than $2,000,000. • Type C mishap - Nonfatal occupational injury or illness that caused any workdays away from work, restricted duty, or transfer to another job, beyond the workday or shift on which it occurred. Total direct cost of mission failure and property damage of at least $50,000 but less than $500,000. • Type D mishap - Any nonfatal OSHA recordable occupational injury and/or illness that does not meet the definition of a Type C mishap. Total direct cost of mission failure and property damage of at least $1,000 but less than $50,000. • Close Call (NASA Headquarters)- An event in which there is no injury or only minor injury requiring first aid, but which possesses a potential to cause a mishap. An event in which there is no equipment/property damage or minor equipment/property damage (less than $1000), but which possesses a potential to cause a mishap.
Mist	Finely divided liquid suspended in air, usually generated by condensation or by dispersion of a liquid (e.g., by splashing, foaming, or atomizing)
Mixture	Any combination of two or more chemicals if the combination isn't, in whole or in part, the result of a chemical reaction
Modification	A basic or functional change made to an equipment item to give it a new orientation or allow it to serve a new purpose
Motor vehicle	A motor-propelled conveyance of a commercial design that provides transportation (personnel and cargo) and is capable of

	being licensed by the state or local authority having jurisdiction (e.g., automobiles, pickup trucks, buses, stake-bed trucks, and vans)
NASA employee	Any person other than detailed members of the Armed Forces and contractor employees required to work by NASA
Negative Pressure Enclosure (NPE) (for Part 11 only)	A NPE is one where one or more machines provide at least 4 air changes per hour and maintain a pressure differential of at least -0.02 column inches of water inside the NPE relative to outside pressure (Ref OSHA 29 CFR 1926.1101(g)(5)(i)(A)).
Negative Air Filtration Unit	A piece of equipment consisting of an air mover, usually electrically powered, and an HEPA filter. The unit maintains a negative pressure inside the regulated work area, a constant airflow from adjacent areas into the regulated work area, and exhausts that air to the outside (Ref Part 11).
Negative Pressure Respirator	A respirator in which the air pressure inside the respirator-inlet covering is positive during exhalation (in relation to the air pressure of the outside atmosphere) and negative during inhalation (in relation to the air pressure of the outside air)
Negative Pressure System	A local exhaust system that is capable of maintaining a constant, low-velocity air flow into the decontamination enclosure systems and work area from adjacent unsealed areas (Ref Part 11)
Neutral Buoyancy Facility	Test facility designed for simulating weightless conditions underwater involving personnel either in a pressure suit or wearing scuba gear
Noise hazard area	Any work area with a noise level of 85 dBA or greater
Nominal	The root mean square (RMS) of the voltage; the RMS is a value assigned to represent the effective voltage and current levels of a power system.
Non-Engineered Anchorage	An anchor point for which no engineering calculations have been performed
Non-open water operations	Underwater operations conducted in controlled environments under carefully prescribed laboratory or test conditions (such as swimming pools) that don't exceed depths beyond the no-

	decompression limit and that meet the exemption criteria of OSHA 29 CFR 1910.401(a)(2), Subpart T
Non-permit-required confined space	A confined space that doesn't contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm
Non-roof Work	Preventive maintenance (PM), repair of equipment on roofs, such as heating, ventilation, and air conditioning (HVAC), lightning protection systems, rigging of fall protection systems, etc.
Occupancy	Any of the following: • Assembly - includes, but isn't limited to, all buildings or portions of buildings used for gathering together 50 or more persons for such purposes as deliberation, entertainment, amusement, or awaiting transportation • Business - facilities used for the transaction of business, for the keeping of accounts and records, and for similar purposes • Industrial - facilities devoted to operations, such as processing, assembling, mixing, packaging, finishing or decorating, and repairing, including, among others, laboratories, power plants, pumping stations, and hangars (for servicing or maintenance) • Storage - all buildings or structures used primarily for the stocking or sheltering of goods, merchandise, products, or vehicles; included, among others, are warehouses, freight terminals, and hangars (for storage only).
Occupational illness	An abnormal condition produced by systemic infection, continued, or repeated stress or strain, exposure to toxins, radiation, high noise levels, etc., or other continued and repeated exposure to conditions of the work environment over a period of time longer than 1 day or work shift
Occupational Safety and Health Administration(OSHA) recordable mishaps	An occupational death, injury, or illness that must be recorded subject to OSHA requirements in 29 CFR 1960 and 29 CFR 1904 on OSHA Form 300, the "Log of Occupational Injuries and Illnesses;" these are occupational deaths, nonfatal occupational illnesses, and those nonfatal occupational injuries that involve one or more of the following: loss of workdays – loss of consciousness; restriction of work or motion; transfer to another job; or medical treatment other than first aid; by OSHA definition, hospitalization of an employee for observation purposes only, without subsequent injury determination, isn't a recordable injury
Open water operations	Operations conducted under any of the following conditions:

	• In uncontrolled environments, such as the open sea, in waterways, in lakes, and in rivers, which are strongly influenced by changes in the local environment • At depths beyond the no-decompression limit • Not otherwise exempt by OSHA 29 CFR 1910.401(a)(2), Subpart T, "Commercial Diving Operations" (see paragraph 220.4.2)
Opening	A gap or void 30 inches (76 centimeters) or more high and 18 inches (46 centimeters) or more wide, in a wall or partition, through which employees can fall to a lower level
Ordnance	Explosives, chemicals, pyrotechnics, and similar stores (e.g., bombs, guns and ammunition, flares, smoke devices, or napalm). The term is sometimes used interchangeably with "explosives".
Other employee	An employee whose duties are routinely performed in an area or a facility where energy or material control procedures are used, but neither service nor operate the equipment requiring energy or material controls
Other potentially infectious materials	Includes: • Semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and any body fluid that is visibly contaminated with blood • Any unfixed tissue or organ (other than dead skin) from a human (living or dead) • HIV- or HBV-containing cells or tissue cultures, organ cultures, and culture medium; and blood, organs, or other tissues from experimental animals infected with HIV or HBV
Oxygen-enriched environment	From ASTM G 63-99 1999, a fluid (gas or liquid) that contains more than 25 mol % oxygen (oxygen greater than 25% by volume)
Permissible Exposure Limit (PEL)	The maximum time-weighted average (TWA) concentration of a substance generally considered or recognized as having no adverse long- or short-term effects.
Permissible Exposure Limit (PEL) for Part 11 only	As established by OSHA, the PEL for asbestos exposures is 0.1 f/cc, expressed as an 8-hour TWA concentration, as stated in 29 CFR 1910.1001 and 29 CFR 1926.1101
Permit-required confined space	A confined space that has one or more of the following characteristics:

	• Contains, or has the potential to contain, a hazardous atmosphere • Contains a material that has the potential for engulfing an entrant • Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section • Contains any other recognized serious safety or health hazard
Personal Air Sampling/Air Monitoring	The sampling of a substance (e.g., chemicals, asbestos fibers) to determine the concentration within the breathing zone of a worker
Personal Fall Arrest System	A system (Type I) used to arrest a person in a fall from a working level. It consists of an anchorage, connectors, body harness, and may include a lanyard deceleration device, lifeline, or suitable combinations of these.
Personal Protective Equipment (PPE)	Clothes, padding, gloves, devices, equipment, or other items worn on or attached to the body that are used for the purpose of protecting a worker from injury (lumbar supports aren't PPE)
Pesticide	A substance or mixture of substances intended to prevent, destroy, or mitigate any pest, or any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant
Phase Contrast Microscopy (PCM)	A technique that uses a light microscope adapted with phase contrast optical elements to provide enhanced contrast between the fibers and the background, to count fibers on filters through which a volume of air has been pulled. The technique does not distinguish fiber types. This is the standard technique recognized by OSHA (Ref Part 11).
Physical hazard	A chemical for which there is scientifically valid evidence that it is a combustible liquid, a gas, an explosive, a flammable, an organic peroxide, an oxidizer, a pyrophoric, unstable (reactive), or water-reactive
Physiological training	Training to familiarize personnel who are exposed to a lowered or increased barometric pressure with the physiological stresses encountered and the means for overcoming these stresses
Plenum	An air compartment connected to one or more ducts as part of an air distribution system. In many buildings, the space between

	the building structure and a false ceiling is used as a return air plenum in the building HVAC system.
Polarized Light Microscopy (PLM)	A technique that uses polarized light to interact strongly with the sample and so generates contrast with the background. Polarized light microscopy is capable of providing information on absorption color and optical path boundaries between minerals of differing refractive indices, in a manner similar to bright field illumination, PLM is commonly used when analyzing bulk materials for asbestos content (Ref Part 11).
Positive Fall Protection	Fall protection by the use of a guardrail system or personal fall protection to include harness with a fall arrest/restraint system or the use of other means, such as vehicle mounted platforms and/or scaffolding
Powered air-purifying respirator (PAPR)	An air-purifying respirator that supplies cartridge-filtered breathing air to the facepiece by means of a battery-operated pump
Presumed Asbestos-Containing Material (PACM)	Material presumed to be ACM. PACM most often is TSI and surfacing material found in buildings constructed no later than 1980 (Ref Part 11).
Primary	Cell or battery that isn't to be recharged
Primary cause	The major anomalous event immediately preceding a mishap in the absence of which the mishap wouldn't have occurred
Probability	The likelihood that an identified hazard will result in a mishap based on an assessment of such factors as location, exposure in terms of cycles or hours of operation, and affected population
Produce	To manufacture, process, formulate, or repackage
Program Administrator (fall protection)	A person designated in writing to manage the Fall Protection Program
Prohibited conditions	Any condition in a permit-required confined space that isn't allowed during the period when entry is authorized
Prohibited material	A hazardous material that is extremely hazardous to human health, safety, or the environment and must never be purchased or used for any purpose without a waiver from the Hazardous Review Subcommittee

Propellants	A solid, liquid, or hybrid chemical substance used in the production of energy or pressurized gas that is subsequently used to create movement of a fluid or to generate propulsion of a vehicle, projectile, or other object.
Protection Factor	The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of protection provided by a respirator to the wearer.
Protective clothing	An article of clothing worn essentially for personal safety and protection while performing work assignments in hazardous areas, under hazardous conditions, or under controlled environmental conditions of clean rooms, laboratories, etc. Typical items of protective clothing are steel-toe shoes, hardhats, fire-retardant and acid-resistant clothing, cryogenic handler suits, gloves, aprons, etc.
Protective equipment	A device or item that is worn or used for the safety and protection of personnel or the public when entering or working in hazardous areas or under hazardous conditions; devices or items include, but aren't limited to, respirators and gas masks, welding helmets and shields, safety goggles and spectacles, safety belts and lifelines.
Pyrophoric	A chemical that will ignite spontaneously in air at a temperature of 130°F (54.4°C) or below
Pyrotechnics/Pyrotechnic Devices	All devices and assemblies containing or actuated by propellants or explosives.
Qualified person (for Chapter 8.2 only)	For purposes of verifying isolation, this is an employee that an employer has specifically identified as having sufficient training to verify previously energized parts are free of energy.
Qualified person (for Chapter 8.8 only)	A person in possession of a recognized engineering degree and a formal training certificate from an industry recognized trainer, training center, or an equivalent OSHA training program, who has successfully demonstrated their extensive knowledge and experience to perform structural engineering for design, evaluation, and approval of fall protection systems
Reactive	A chemical that, in the pure state or as produced or transported, will vigorously polymerize, decompose, condense, or become self-reactive under conditions of shock, pressure, or temperature

Regulated Area (for Part 11 only)	An established area that identifies where airborne concentrations of asbestos fibers exceed, or may be expected to exceed, the PEL. Specific controls are required by OSHA regulation in conducting activities in these areas.
Removal (for Part 11 only)	Taking out or stripping substantially all ACM/ACBM from a damaged area, a functional space, or a homogeneous area in a building (40 CFR 763)
Repair (for Part 11 only)	Returning damaged ACM/ACBM to an undamaged condition or intact state so as to prevent fiber release (40 CFR 763)
Reprisal	Any act of restraint, interference, coercion, or discrimination against any employee for exercising his or her rights under Executive Order 12196, 29 CFR 1960, or for participating in JSC's safety and health programs
Resilient Floor Covering Institute (RFCI)	OSHA has accepted that certain RFCI procedures for removing floor coverings will not cause exposures above the OSHA PEL. For a copy of these procedures, see the RFCI Web site at URL: http://www.rfci.com/index.php. (Ref Part 11)
Respirator	A respiratory protection device consisting of a facepiece connected either to an air source or to an air-purifying device
Respirator users	Personnel who use any type of respirator for any purpose, regardless of frequency (includes routine, emergency, and escape-only users)
Response Action (for Part 11 only)	A term from EPA that means a method, including removal, encapsulation, permanent enclosure, repair, operations and maintenance, that protects human health and the environment from friable ACBM (40 CFR 763)
Restricted material	A hazardous material that is identified as posing a significant risk to human health and safety or the environment, therefore requiring the special attention of management
Retrieval equipment	The equipment (including rescue line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit-required confined spaces

Roof Work	The hoisting, storage, application, and removal of roofing materials and equipment, including related insulation, sheet metal, vapor barrier work, and leading-edge work
Safety and Health Inspector	A safety or occupational health specialist or other trained person authorized to carry out inspections and who has the equipment and competence to recognize safety or health hazards in the workplace
Safety and health training	Imparting safety and health knowledge or skills to an individual or group of individuals; this may be done by various methods, such as classroom instruction, safety meetings, videotape or multimedia programs, etc.
Safety belt or harness	A device for the specific purpose of securing, suspending, or retrieving a worker in or from a hazardous work area; examples include the following: • Body belt - a simple or compound strap with means for securing it about the waist and attaching a lanyard to it • Body harness - a design of simple or compound straps that may be secured about the wearer in such a manner as to distribute the stopping forces over the thighs, buttocks, chest, and shoulders, or any combination thereof, and with provisions for attaching a lanyard in the back between chest and shoulder level • Chest harness - a design of simple or compound straps with means for securing it about the rib cage, with shoulder straps to ensure proper chest strap positioning, and with provisions for attaching a lanyard in the back between chest and shoulder level • Suspension belt - a design of simple or compound straps that may be secured about the wearer's body as an independent work support; these are commonly referred to as saddle belts, boson's chairs, or tree trimmers' belts
Safety Data Sheet (SDS)	Written or printed material about a hazardous chemical that describes the characteristics, properties, associated hazards, and other relevant material. Under GHS, this term replaces "Material Safety Data Sheet" (MSDS).
Spray-applied insulation (SAI) (for Part 11 only)	Spray-applied insulation, insulating materials containing one or more types of asbestos sprayed on, generally to the interior surfaces of buildings.
Scanning Electron Microscopy (SEM)	A method of microscopic analysis that uses an electron beam directed at a sample and then collects the beams that are

	reflected to produce an image from which fibers can be identified and counted
SCUBA diving	A diving mode independent of surface supply in which the diver uses open-circuit, self-contained underwater breathing apparatus
Sealant	A chemical agent applied to ACM to fix the material and reduce the potential for fiber release into the ambient environment (see encapsulant) (Ref Part 11)
Sealed	Free of cracks or other openings that allow moisture to enter or leave
Secondary	Cell or battery that is rechargeable
Self-Contained Breathing Apparatus	A respiratory protection device usually consisting of a facepiece connected by a hose and a regulator to an air source (compressed air, compressed oxygen, or an oxygen-generating chemical) carried by the wearer
Self-contained underwater breathing apparatus (SCUBA)	A respirator that supplies breathing air from a compressed air cylinder carried by the user when the user is working below the surface of water
Self-Retracting Lifeline/Lanyard	A deceleration device containing a drum-wound line that can be slowly extracted 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
Serious	As used in “serious hazard,” “serious violation,” or “serious condition;” means a hazard, a violation, or conditions such that there is a substantial probability that death or life-threatening or long-term or permanent disabling physical harm could result, should a mishap occur while the hazard, violation, or conditions exist
Servicing or maintenance	Constructing, installing, setting up, adjusting, inspecting, modifying, maintaining, or servicing equipment or machines. These activities include lubrication, cleaning, un-jamming, making adjustments to machines or equipment, or tool changes where an employee is exposed to unexpected energizing or startup of the equipment or release of hazardous energy
Shift change (Chapter 8.2)	The period during which one group of workers is replaced by another group of workers. This can also be when an individual no longer remains in the work area, leaving to work

	elsewhere, or leaves the site or facility for the day. At these times, the individual must remove the individual red LO/TO tags and locks. Tags may be put in place or may already be in place through group LO/TO and controlled by the group task representative. Note: Other organizations may define shift change differently in their health and safety plan policies and procedures.
Should	Indicates that the rule is a recommendation, the advisability of which depends on the facts in each situation; implementation of a “should” statement is at the discretion of the local officials.
Small Enclosure (for Part 11 only)	An enclosure providing a control around an asbestos job larger than what a glovebag will accommodate, or that is needed to provide more protection than a barrier system. The small enclosure is generally limited in size and used for small-scale, short-duration activities. A small enclosure may not involve the use of negative-pressure systems, but will have an entrance chamber or multiple entry flaps. Small enclosures rely on HEPA-filtered vacuums and wet methods to control fiber concentrations.
Sound level meter (SLM)	An electronic instrument for measuring sound levels that conforms to the requirements for a Type II sound level meter as specified in ANSI S1.4, “Specifications for Sound Level Meters”
Steep Roof	A roof having a slope greater than 4 in 12 (vertical to horizontal)
Surfacing Material	Includes ACM that is sprayed, troweled on, or otherwise applied to surfaces of ceilings, structural members, and other surfaces for fireproofing, acoustical, and other purposes
Surfactant	A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.
Supervisor	A manager who directly oversees employee work.
Supplied air respirator (SAR)	A respirator that supplies breathing air under positive pressure from a clean source to the face piece
Survey Report	A report of administrative action taken to investigate and review the loss, damage, destruction, or theft of government property and to assemble pertinent facts and determine the extent of such loss, damage, destruction, or theft

Survivor benefits	Survivors of employees who die as a result of job-related injuries or illnesses are entitled to income continuation and reimbursement for medical and burial expenses; the portion of the employee's salary that is awarded to survivors depends on the survivor number and dependency status; annual cost of living adjustments are provided.
System (for Chapter 8.2 only)	Equipment such as piping, wiring, or ducting designed to store, process, or deliver utilities or commodities. Some examples of hazards associated with systems are fluid pressure, temperature, hazardous liquids and gases, and electricity.
Tagout	Placing a tagout device on an energy-isolating device according to procedure to indicate that the energy-isolating device and equipment being controlled may not be operated until the tagout device is removed
Tagout device	A prominent warning device such as a tag and means of attachment that can be securely fastened to an energy-isolating device under an established procedure to indicate that the energy-isolating device and the equipment being controlled may not be operated until the tagout device is removed
Test	An activity conducted to accomplish any of the following where persons or hardware are subjected to one or more test environments: • Acquire data • Evaluate, qualify, or certify hardware • Train space flight crews • Demonstrate capabilities Laboratory analysis, research, and experimentation that doesn't involve human subjects, flight hardware, prototype hardware, explosives, and oxygen-enriched atmospheres isn't considered testing.
Test chamber	Altitude chambers, vacuum chambers, and hyperbaric chambers, together with their ancillary systems and equipment, that provide an atmosphere deviating from ground-level ambient pressure or oxygen content or that involve a closed-loop life support system
Test environment	A condition to which a test system or test subject is subjected; a test environment may involve deviation from normal ground-level ambient atmosphere, the application of higher forces or

	energy levels (i.e., acoustic, potential, thermal, etc.) than normally experienced, or exposure to hazardous materials.
Test equipment	Portable hardware that is unique to a specific test or training exercise, does not require integration into the test facility (i.e., plug-in versus hard-wired), and is removed immediately after the test
Test facility	Structures in which testing operations are conducted; the test facility includes the housing structure, and all permanently installed systems specifically for test support; not included are generic utilities servicing other parts of the building or other facilities.
Test facility support systems	Permanently installed equipment that support testing operations
Testing	The process by which the hazards that may confront entrants of permit-required space are identified and evaluated, including specifying the tests that are to be performed in the space
Test subject	A human being who is subjected to a test environment, often with little or no control over the test process
Texas Department of State Health Services (TDSHS) (Ref Part 11)	The TDSHS mission is to protect and promote the physical and environmental health of the people of Texas from asbestos. The TDSHS Asbestos Programs Branch has two programs to meet these concerns. The Licensing Program issues licenses to persons qualified for asbestos-related work in public buildings. The Enforcement Program has regional inspectors available to monitor asbestos removal in buildings, and to respond to community concerns to ensure that public exposure is minimized. The TDSHS has established rules and regulations for asbestos in the Texas Administrative Code, Title 25, Health Services, Part I, Texas Department of Health, Chapter 295, Occupational Health (25 TAC 295). These regulations and other information can be found at the TDSHS Web site for asbestos programs at URL: https://www.dshs.texas.gov/asbestos-program. The TDSHS has also been designated as the Texas regulatory agency to ensure compliance with the Clean Air Act, NESHAP, and associated EPA standards and regulations. Asbestos emissions from abatement activities and building demolitions are regulated under NESHAP.
Threshold Limit Value (TLV)	An exposure guideline developed by the ACGIH to assist in the control of health hazards. The TLV refers to airborne

	concentrations of substances and represents conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse health effects.
Time Weighted Average (TWA)	The average concentration of a contaminant in air during a specific time interval.
Time-weighted-average (TWA) sound level	The sound level that, if constant over an 8-hour workday exposure, would result in the same noise dose as the varying sound levels continuously measured with a noise dosimeter or sound level meter.
Transmission Electron Microscopy (TEM)	A method of microscopic analysis that focuses an electron beam onto a thin sample. As the beam penetrates (transmits) through the sample, the difference in densities produces an image on a fluorescent screen from which asbestos fibers can be identified and counted.
Unprotected edge	Any side or edge (except at entrances to points of access) of walking/working surface (e.g., floor, roof, ramp, or runway) where there is no wall or guardrail system at least 39 inches high. Mid-rails shall be installed at a height approximately midway between the top edge of the guardrail system and the platform surface.
Users of hazardous material	Personnel who open the incremental hazardous material shipping container and thereby expose the material for the purpose of mixing, transferring, burning, freezing, pouring, venting, reacting, disposing of, or otherwise using or altering the material
Unserviceable Explosives	An explosive material or device which is not currently qualified for its original intended purpose, but may be inspected and returned to service for its original intended purpose or may with proper analysis be used for another purpose, such as for demonstrations, research, testing, training, etc. Unserviceable materials and devices are not considered or managed as hazardous waste until the material(s) or device(s) are declared to be waste and are earmarked for disposal.
Vacuum environment	Any atmosphere at an absolute pressure less than ground-level ambient pressure by 0.5 psia; also known as hypobaric environment
Vapor	A gaseous form of a substance that is normally in the solid or liquid state at standard temperature and pressure

Waiver	Documented and approved permission to perform some act contrary to established requirements
Walking/Working Surface	Any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, ramps, bridges, runways, formwork, and concrete reinforcing steel. Does not include ladders, vehicles, or trailers on which employees are located to perform their work duties
Warning Line	A barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which roofing work may take place without the use of a guardrail or personal fall protection system to protect employees in the area
Wet Cleaning (for Part 11 only)	The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, and other cleaning tools that have been dampened with amended water and of disposing of these cleaning tools as asbestos-contaminated waste
Work Area	A room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present
Work Area (for Part 11 only)	The room or space where asbestos-related work or removal operations are performed that is defined and/or isolated to prevent the spread of asbestos dust, fibers, or debris and to prevent entry by unauthorized personnel (see regulated area)
Worker (for Part 11 only)	A person engaged in the abatement of asbestos or performing a task in which asbestos exposure is likely; distinguished from an asbestos worker, who is routinely exposed to asbestos fiber concentration levels in excess of the action level of 0.1 f/cc on an 8-hour TWA
Workplace	A physical location where NASA's work or operations are done
Workplace (for Chapter 9.2 only)	An establishment, job site, or project, at one geographical location, containing one or more work areas