

# Appendix J

## Schedule of Environmental Differentials Paid for Exposure to Various Degrees of Hazards, Physical Hardships, and Working Conditions of an Unusual Nature

### PART I. PAYMENT FOR ACTUAL EXPOSURE

Differential rate	Category for which payable	Effective Date *
100%	<p><b>I. Flying.</b> Participating in flights under one or more types of the following conditions:</p> <ul style="list-style-type: none"> <li>a. Test flights of a new or repaired plane or modified plane when the repair or modification may affect the flight characteristics of the plane;</li> <li>b. Flights for test performance of plane under adverse conditions such as in low altitude or severe weather conditions, maximum loads limits, or overload;</li> <li>c. Test missions for the collection of measurement data where two or more aircraft are involved and flight procedures require formation flying and/or rendezvous at various altitudes and aspect angles;</li> <li>d. Flights deliberately undertaken in extreme weather conditions such as flying into a hurricane to secure weather data;</li> <li>e. Flights to deliver aircraft which have been prepared for one-time flight without being test flown prior to delivery flight;</li> <li>f. Flights for pilot proficiency training in aircraft new to the pilot under simulated emergency conditions which parallel conditions encountered in performing flight tests;</li> <li>g. Low-level flights in small aircraft including helicopters at altitudes of 150 meters (500 feet) and under in daylight and 300 meters (1,000 feet ) and under at night when the flights are over mountainous terrain, or in fixed-wing aircraft involving maneuvering at the heights and times specified above, or in helicopters maneuvering and hovering over water at altitudes of less than 150 meters (500 feet);</li> <li>h. Low-level flights in an aircraft flying at altitudes of 60 meters (200 feet) and under while conducting wildlife surveys and law enforcement activities, animal depredation abatement and making agricultural applications, and conducting or facilitating search and rescue operations; flights in helicopters at low levels involving line inspection, maintenance, erection, or</li> </ul>	Nov. 1, 1970

\* Effective date is the beginning of the first applicable pay period beginning on or after the date specified.

Differential rate	Category for which payable	Effective Date *
	salvage operations; i. Flights involving launch or recovery aboard an aircraft carrier; j. Reduced gravity flight testing in an aircraft flying a parabolic flight path and providing a testing environment ranging from weightlessness up through 20 meters per second <sup>5</sup> (2 gravity) conditions.	
25%	<b>2. High work.</b> a. Working on any structure of at least 30 meters (100 feet) above the ground, deck, floor, or roof, or from the bottom of a tank or pit; b. Working at a lesser height; (1) If the footing is unsure or the structure is unstable; or (2) If safe scaffolding, enclosed ladders, or other similar protective facilities are not adequate (for example, working from a swinging stage, boatswain chair, a similar support); or (3) If adverse conditions such as darkness, steady rain, high wind, icing, lightning, or similar environmental factors render working at such height(s) hazardous.	Nov. 1, 1970
15%	<b>3. Floating targets.</b> Servicing equipment on board a target ship or barge in which the employee is required to board or leave the target vessel by small boat or helicopter.	Nov. 1, 1970
4%	<b>4. Dirty work.</b> Performing work which subjects the employee to soil of body or clothing: a. Beyond that normally to be expected in performing the duties of the classification; and b. Where the condition is not adequately alleviated by the mechanical equipment or protective devices being used, or which are readily available, or when such devices are not feasible for use due to health considerations (excessive temperature, asthmatic conditions, etc), or c. When the use of mechanical equipment, or protective devices, or protective clothing results in an unusual degree of discomfort.	Nov. 1, 1970
4%	<b>5. Cold work.</b> a. Working in cold storage or other climate-controlled areas where the employee is subjected to temperatures at or below freezing (0 degrees Celsius (32 degrees Fahrenheit)). b. Working in cold storage or other climate-controlled areas where the employee is subjected to temperatures at or below freezing (0 degrees Celsius (32 degrees Fahrenheit)) where such exposure is not practically eliminated by the mechanical equipment or protective	Nov 1, 1970  Mar. 13, 1977

Differential rate	Category for which payable	Effective Date *
	devices being used.	
4%	<p><b>6. <i>Hot work.</i></b></p> <p>a. Working in confined spaces wherein the employee is subjected to temperatures in excess of 43 degrees Celsius (110 degrees Fahrenheit).</p> <p>b. Working in confined spaces wherein the employee is subjected to temperatures in excess of 43 degrees Celsius (110 degrees Fahrenheit) where such exposure is not practically eliminated by the mechanical equipment or protective devices being used.</p>	<p>Nov. 1, 1970</p> <p>Mar. 13, 1977</p>
4%	<p><b>7. <i>Welding preheated metals.</i></b> Welding various metals or performing an integral part of the welding process when the employee must work in confined spaces in which large sections of metal have been preheated to 66 degrees Celsius (150 degrees Fahrenheit) or more, and the discomfort is not alleviated by protective devices or other means, or discomforting protective equipment must be worn.</p>	Nov. 1, 1970
4%	<p><b>8. <i>Micro-soldering or wire welding and assembly.</i></b> Working with binocular-type microscopes under conditions which severely restrict the movement of the employee and impose a strain on the eyes, in the soldering or wire welding and assembly of miniature electronic components.</p>	Nov. 1, 1970
25%	<p><b>9. <i>Exposure to hazardous weather or terrain.</i></b> Exposure to dangerous conditions of terrain, temperature, and/or wind velocity, while working or traveling when such exposure introduces risk of significant injury or death to employees, such as the following:</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Working on cliffs, narrow ledges, or steep mountainous slopes, with or without mechanical work equipment, where a loss of footing would result in serious injury or death.</li> <li>• Working in areas where there is a danger of rock falls or avalanches. Traveling over secondary or unimproved roads to isolated mountain top installations at night, or under adverse weather conditions (snow, rain, or fog) which limits visibility to less than 30 meters (100 feet) when there is danger of rocks, mud, or snow slides.</li> <li>• Traveling in the wintertime, either on foot or by vehicle, over secondary or unimproved roads or snow trails, in sparsely settled or isolated areas to installations when there is danger of avalanches, or during "white-out" phenomenon which limits visibility to less than 3 meters (10 feet).</li> <li>• Working or traveling in sparsely settled or isolated areas</li> </ul>	July 1, 1972

Differential rate	Category for which payable	Effective Date *
	<p>with exposure to temperature and/or wind velocity shown to be of considerable or very great danger on the windchill chart in this appendix and shelter (other than temporary shelter) or assistance is not readily available.</p> <ul style="list-style-type: none"> <li>• Snowplowing or snow and ice removal on primary, secondary, or other class of roads, when (a) there is danger of avalanche or (b) there is danger of missing the road and falling down steep mountainous slopes, because of lack of snow stakes, "whiteout" conditions, or sloping icepack covering the snow.</li> </ul>	
25%	<p><b>10. Unshored work.</b> Working in excavation areas before the installation of proper shoring or other securing barriers, or in catastrophe areas, where there is a possibility of cave-in, building collapse, or falling debris when such exposures introduce risk of significant injury or death to employees, such as the following:</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Working adjacent to the walls of an unshored excavation at depths greater than 1.8 meters (6 feet), (except when the full depth of the excavation is in stable solid rock, hard slag, or hard shale or the walls have been graded to the angle of repose, that is, where the danger of slides is practically eliminated) when work is performed at a distance from the wall which is less than the height of the wall.</li> <li>• Working within or immediately adjacent to a building or structure which has been severely damaged by earthquake, fire, tornado, or similar cause.</li> <li>• Working underground in the construction and/or inspection of tunnels and shafts before the necessary lining of the passageway has been installed.</li> <li>• Duty underground in abandoned mines where lining of tunnels or shafts is in a deteriorated condition.</li> </ul>	July 1, 1972
15%	<p><b>11. Ground work beneath hovering helicopter.</b> Participating in operations to attach or detach external load to helicopter hovering just overhead.</p>	July 1, 1972
15%	<p><b>12. Hazardous boarding or leaving of surface craft.</b> Boarding or leaving vessels or transferring equipment to or from a surface craft under adverse conditions of foul weather, ice, or night when sea state is high (1 meter (3 feet) and above), and deck conditions and/or wind velocity in relation to the size of the craft introduce unusual risks to employees.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Boarding or leaving vessels at sea.</li> <li>• Boarding or leaving, or transferring equipment between small boats or rafts and steep, rocky, or coral-</li> </ul>	July 1, 1972

Differential rate	Category for which payable	Effective Date *
	<p>surrounded shorelines.</p> <ul style="list-style-type: none"> <li>• Transferring equipment between a small boat and a rudimentary dock by improvised or temporary facility such as an unfastened plank leading from boat to dock.</li> <li>• Boarding or leaving, or transferring equipment from or to ice covered boats, rafts, or similar structures when there is danger of capsizing due to the added weight of the ice.</li> </ul>	
8%	<p><b>13. Cargo handling during lightering operations.</b> Off-loading of cargo and supplies from surface ships to Landing Craft-Medium (LCM) boats when swells or wave action are sufficiently severe as to cause sudden listing or pitching of the deck surface or shifting or falling of equipment, cargo, or supplies which could subject the employee to falls, crushing, ejection into the water, or injury by swinging cargo hooks.</p>	July 1, 1972
15%	<p><b>14. Duty aboard surface craft.</b> Duty aboard a surface craft when the deck conditions or sea state and wind velocity in relation to the size of the craft introduce the risk of significant injury or death to employees, such as the following:</p> <ul style="list-style-type: none"> <li>• Participating as a member of a water search and rescue team in adverse weather conditions when winds are blowing at 56 km/h (35 m.p.h.) (classified as gale winds) or in water search and rescue operations at night.</li> <li>• Participating as a member of a weather projects team when work is performed under adverse weather conditions, when winds are blowing at 56 km/h (35 m.p.h.) and/or when seas are in excess of 4.3 meters (14 feet) or when working on outside decks when decks are slick and icy and/or when swells are in excess of 1 meter (3 feet).</li> <li>• When embarking, disembarking, or traveling in small craft (boat) on Lake Pontchartrain when wind direction is from north, northeast, or northwest, and wind velocity is over 7.7 meters per second (15 knots); or when travel on Lake Pontchartrain is necessary in small craft, without radar equipment, due to emergency or unavailing conditions, and the trip is made in dense fog run procedures.</li> <li>• Participating in deep research vessel sea duty wherein the team member is engaged in handling equipment on or over the side of the vessel when the sea state is high, 6.2 meter-per-second (12-knot) winds and 1 meter (3 foot) waves, and the work is done on relatively unprotected deck areas.</li> <li>• Transferring from a ship to another ship via a chair</li> </ul>	July 30, 1972

Differential rate	Category for which payable	Effective Date *
	<p>harness hanging from a highline between the ships when both vessels are under way.</p> <ul style="list-style-type: none"> <li>• Duty performed on floating platforms, camels, or rafts, using tools, equipment, or materials associated with ship repair or construction activities, where swells or wave action are sufficiently severe to cause sudden listing or pitching of the deck surface or dislodgement of equipment which could subject the employee to falls, crushing, or ejection into the water.</li> </ul>	
50%	<p><b>15. Work at extreme heights.</b> Working at heights 30 meters (100 feet) or more above the ground, deck, floor, or roof, or from the bottom of a tank or pit on such open structures as towers, girders, smokestacks, and similar structures:</p> <ol style="list-style-type: none"> <li>a. If the footing is unsure or the structure is unstable; or</li> <li>b. If safe scaffolding, enclosed ladders, or other similar protective facilities are not adequate (for example, working from a swinging stage, boatswain chair, or a similar support); or</li> <li>c. If adverse conditions such as darkness, steady rain, high winds, icing, lightning, or similar environmental factors render working at such height(s) hazardous.</li> </ol>	Oct. 22, 1972
6%	<p><b>16. Fibrous glass work.</b> Working with or in close proximity to fibrous glass material which results in exposure of the skin, eyes, or respiratory system to irritating fibrous glass particles or slivers where exposure is not practically eliminated by the mechanical equipment or protective devices being used.</p>	Feb. 28, 1975
50%	<p><b>17. High voltage electrical energy.</b> Working on energized electrical lines rated at 4,160 volts or more which are suspended from utility poles or towers, when adverse weather conditions such as steady rain, high winds, icing, lightning, or similar environmental factors make the work unusually hazardous.</p>	Apr. 11, 1972
6%	<p><b>18. Welding, cutting, or burning in confined spaces.</b> Welding, cutting, or burning within a confined space which necessitates working in a horizontal or nearly horizontal position, under conditions requiring egress of at least 4.3 meters (14 feet) over and through obstructions including:</p> <ol style="list-style-type: none"> <li>(1) access openings and baffles having dimensions which greatly restrict movements, and</li> <li>(2) irregular inner surfaces of the structure or structural components.</li> </ol>	Jan. 18, 1978

## PART II. PAYMENT ON BASIS OF HOURS IN PAY STATUS

Differential rate	Category for which payable	Effective Date *
50%	<p><b>1. <i>Duty aboard submerged vessel.</i></b> Duty aboard a submarine or other vessel, such as a deep-research vehicle while submerged.</p>	Nov. 1, 1970
8%	<p><b>2. <i>Explosives and incendiary material—high degree hazard.</i></b> Work with or in close proximity to explosives and incendiary material which involves potential personal injury such as permanent or temporary, partial or complete loss of sight or hearing, partial or complete loss of any or all extremities; other partial or total disabilities of equal severity; and/or loss of life resulting from work situations wherein protective devices and/or safety measures either do not exist or have been developed but have not practically eliminated the potential for such personal injury. Normally, such work situations would result in extensive property damage requiring complete replacement of equipment and rebuilding of the damaged area; and could result in personal injury to adjacent employees.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Working with, or in close proximity to operations involved in research, in testing, manufacturing, inspection, renovation, maintenance, and disposal, such as: <ul style="list-style-type: none"> <li>– Screening, blending, drying, mixing, and pressing of sensitive explosives and pyrotechnic compositions such as lead azide, black powder, and photoflash powder.</li> <li>– Manufacture and distribution of raw nitroglycerine.</li> <li>– Nitration, neutralization, crystallization, purification, screening, and drying of high explosives.</li> <li>– Manufacture of propellants, high explosives, and incendiary materials.</li> <li>– Melting, cast loading, pellet loading, drilling, and thread cleaning of high explosives.</li> <li>– Manufacture of primary or initiating explosives such as lead azide.</li> <li>– Manufacture of primer or detonator mix.</li> <li>– Loading and assembling high-energy output flare pellets.</li> <li>– All dry-house activities involving propellants or explosives.</li> <li>– Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive</li> </ul> </li> </ul>	Nov. 1, 1970

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Differential rate	Category for which payable	Effective Date *
	<p>explosives and incendiary materials.</p> <ul style="list-style-type: none"> <li>– All operations involving fire fighting on an artillery range or at an ammunition manufacturing plant or storage area, including heavy duty equipment operators, truck drivers, etc.</li> <li>– All operations involving regrading and cleaning of artillery ranges.</li> <li>– At-sea shock and vibration tests. Arming explosive charges and/or working with, or in the close proximity to, explosive-armed charges in connection with at-sea shock and vibration tests of naval vessels, machinery, equipment, and supplies.</li> <li>– Handling or engaging in destruction operations on an armed (or potentially armed) warhead.</li> </ul>	
4%	<p><b>3. Explosives and incendiary material—low degree hazard.</b></p> <p>a. Working with or in close proximity to explosives and incendiary material which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation and possible adjacent employees; minor irritation of the skin; minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used.</p> <p>b. Working with or in close proximity to explosives and incendiary material which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation and possible adjacent employees; minor irritation of the skin; minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used and wherein protective device and/or safety measures have not practically eliminated the potential for such injury.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• All operations involving loading, unloading, storage, and hauling of explosive and incendiary ordnance material other than small arms ammunition. (Distribution of raw nitroglycerine is covered under high degree hazard—see category 2 above.)</li> <li>• Duties such as weighing, scooping, consolidating, and crimping operations incident to the manufacture of stab, percussion, and low energy electric detonators (initiators) utilizing sensitive primary explosives compositions where initiation would be kept to a low order of propagation due to the limited amounts permitted to be present or handled during the operations.</li> <li>• Load, assembly, and packing of primers, fuses, propellant charges, lead cups, boosters, and time-train rings.</li> </ul>	<p>Nov. 1, 1970</p> <p>Mar. 13, 1977</p>

Differential rate	Category for which payable	Effective Date *
	<ul style="list-style-type: none"> <li>• Weighing, scooping, loading in bags, and sewing of ignitor charges and propellant zone charges.</li> <li>• Loading, assembly, and packing of hand-held signals, smoke signals, and colored marker signals.</li> <li>• Proof-testing weapons with a known overload of power or charges.</li> <li>• Arming/disarming or the installation/removal of any squib, explosive device, or component thereof, connected to or part of a solid propulsion system, including work situations involving removal, inspection, test, and installation of aerospace vehicle egress and jettison systems and other cartridge-actuated devices and rocket-assisted systems or components thereof, when accidental or inadvertent operation of the system or component might occur.</li> </ul>	
8%	<p><b>4. Poisons (toxic chemicals)—high degree hazard.</b> Working with or in close proximity to poisons (toxic chemicals), other than tear gas or similar irritants, which involves potential serious personal injury such as permanent or temporary, partial or complete loss of faculties and/or loss of life including exposure of an unusual degree to toxic chemicals, dust, or fumes of equal toxicity generated in work situations by processes required to perform work assignments wherein protective devices and/or safety measures have been developed but have not practically eliminated the potential for such personal injury.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Handling and storing toxic chemical agents including monitoring of areas to detect presence of vapor or liquid chemical agents; examining of material for signs of leakage or deteriorated material: decontaminating equipment and work sites; work relating to disposal of deteriorated material (exposure to conjunctivitis, pulmonary edema, blood infection, impairment of the nervous system, possible death).</li> <li>• Renovation, maintenance, and modification of toxic chemicals, guided missiles, and selected munitions.</li> <li>• Operating various types of chemical engineering equipment in a restricted area such as reactors, filters, stripping units, fractioning columns, blenders, mixers, pumps, and the like utilized in the development, manufacturing, and processing of toxic or experimental chemical warfare agents.</li> <li>• Demilitarizing and neutralizing toxic chemical munitions and chemical agents.</li> <li>• Handling or working with toxic chemicals in restricted areas during production operations.</li> <li>• Preparing analytical reagents, carrying out calorimetric</li> </ul>	Nov. 1, 1970

Differential rate	Category for which payable	Effective Date *
	<p>and photometric techniques, injecting laboratory animals with compounds having toxic, incapacitating, or other effects.</p> <ul style="list-style-type: none"> <li>• Recording analytical and biological test results where subject to above types of exposure.</li> <li>• Visually examining chemical agents to determine conditions or detect leaks in storage containers.</li> <li>• Transferring chemical agents between containers.</li> <li>• Salvaging and disposing of chemical agents.</li> </ul>	
4%	<p>5. <b>Poisons (toxic chemicals—low degree hazard.</b></p> <p>a. Working with or in close proximity to poisons (toxic chemicals other than tear gas or similar irritating substances) in situations for which the nature of the work does not require the individual to be in as direct contact with, or exposure to, the more toxic agents as in the case with the work described under high hazard for this class of hazardous agents.</p> <p>b. Working with or in close proximity to poisons (toxic chemicals other than tear gas or similar irritating substances) in situations for which the nature of the work does not require the individual to be in as direct contact with, or exposure to, the more toxic agents as in the case with the work described under high hazard for this class of hazardous agents and wherein protective devices and/or safety measures have not practically eliminated the potential for personal injury.</p> <p><i>Example:</i></p> <ul style="list-style-type: none"> <li>• Handling for shipping, marking, labeling, hauling, and storing loaded containers of toxic chemical agents that have been monitored.</li> </ul>	<p>Nov. 1, 1970</p> <p>Mar. 13, 1977</p>
8%	<p>6. <b>Micro-organisms—high degree hazard.</b> Working with or in close proximity to micro-organisms which involves potential personal injury such as death, or temporary, partial, or complete loss of faculties or ability to work due to acute, prolonged, or chronic disease. These are work situations wherein the use of safety devices and equipment, medical prophylactic procedures such as vaccines and antiserums, and other safety measures do not exist or have been developed but have not practically eliminated the potential for such personal injury.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Direct contact with primary containers of organisms pathogenic for man such as culture flasks, culture test tubes, hypodermic syringes and similar instruments, and biopsy and autopsy material. Operating or maintaining equipment in biological experimentation or production.</li> </ul>	Nov. 1, 1970

Differential rate	Category for which payable	Effective Date *
	<ul style="list-style-type: none"> <li>• Cultivating virulent organisms on artificial media, including embryonated hen's eggs and tissue cultures where inoculation or harvesting of living organisms is involved for production of vaccines, oxides, etc., or for sources of material for research investigations such as antigenic analysis and chemical analysis.</li> </ul>	
4%	<p><b>7. <i>Micro-organisms—low degree hazard.</i></b></p> <p>a. Working with or in close proximity to micro-organisms in situations for which the nature of the work does not require the individual to be in direct contact with primary containers of organisms pathogenic for man, such as culture flasks, culture test tubes, hypodermic syringes and similar instruments, and biopsy and autopsy material.</p> <p>b. Working with or in close proximity to micro-organisms in situations for which the nature of the work does not require the individual to be in direct contact with primary containers of organisms pathogenic for man, such as culture flasks, culture test tubes, hypodermic syringes and similar instruments, and biopsy and autopsy material and wherein protective devices and/or safety measures have not practically eliminated the potential for personal injury.</p>	<p>Nov. 1, 1970</p> <p>Mar. 13, 1977</p>
8%	<p><b>8. <i>Pressure chamber and centrifugal stress.</i></b> Exposure in pressure chambers which subjects employee to physical stresses or where there is potential danger to participants by reason of equipment failure or reaction to the test conditions; or exposure which subjects an employee to a high degree of centrifugal force which causes an unusual degree of discomfort.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Participating as a subject in diving research tests which seek to establish limits for safe pressure profiles by working in a pressure chamber simulating diving or, as an observer to the test or as a technician assembling underwater mock-up components for the test, when the observer or technician is exposed to high pressure gas piping systems, gas cylinders, and pumping devices which are susceptible to explosive ruptures.</li> <li>• Participating in altitude chamber studies ranging from 5,500 to 45,700 meters (18,000 to 150,000 feet) either as subject or as observer exposed to the same conditions as the subject.</li> <li>• Participating as subject in centrifuge studies involving elevated G forces above the level of 49 meters per second<sup>5</sup> (5 G's) whether or not at reduced atmospheric pressure.</li> </ul>	July 1, 1972

Differential rate	Category for which payable	Effective Date *
	<ul style="list-style-type: none"> <li>Participating as a subject in a rotational flight simulator in studies involving continuous rotation in one axis through 360° at rotation rates greater than 15 r.p.m. for periods exceeding 3 minutes.</li> </ul>	
8%	<p><b>9. Work in fuel storage tanks.</b> When inspecting, cleaning, or repairing fuel storage tanks where there is no ready access to an exit, under conditions requiring a breathing apparatus because all or part of the oxygen in the atmosphere has been displaced by toxic vapors or gas, and failure of the breathing apparatus would result in serious injury or death within the time required to leave the tank.</p>	July 1, 1972
25% 8%	<p><b>10. Firefighting.</b> Participating or assisting in firefighting operations on the immediate fire scene and in direct exposure to the hazards inherent in containing or extinguishing fires.</p> <ul style="list-style-type: none"> <li><i>High degree</i> - Fighting forest and range fires on the fireline.</li> <li><i>Low degree</i> - All other firefighting.</li> </ul>	July 1, 1972
8%	<p><b>11. Experimental landing/recovery equipment tests.</b> Participating in tests of experimental or prototype landing and recovery equipment where personnel are required to serve as test subjects in spacecraft being dropped into the sea or laboratory tanks.</p>	July 1, 1972
8%	<p><b>12. Land impact or pad abort of space vehicle.</b> Actual participation in dearming and safing explosive ordnance, toxic propellant, and high pressure vessels on vehicles that have land impacted or on vehicles on the launch pad that have reached a point in the countdown where no remote means are available for returning the vehicle to a safe condition.</p>	July 1, 1972
4%	<p><b>13. Mass explosives and/or incendiary material.</b> Working within a controlled danger area in, on, or around wharves, transfer areas, or temporary holding areas in a transshipment facility where explosives are in the process of being shifted to or from a conveyance. Such an area shall include land and sea areas within which it has been determined that personnel are subject to an unusual degree of exposure or liability to serious injury or death from potential explosive effect. A transshipment facility for this purpose is a port or sea terminal established for the marshaling or temporary assembly of explosives prior to shipment where amounts in excess of 11,340 kilograms (250,000 pounds) net explosive weight (NEW) are present on a regular and recurring basis.</p>	July 1, 1972

Differential rate	Category for which payable	Effective Date *
4%	<p><b>14. <i>Duty aboard aircraft carrier.</i></b> Duty aboard an aircraft carrier when exposed to hazards connected with aircraft launch and recovery.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Participating in carrier suitability trials aboard aircraft carriers when work is performed on the flight deck during launch, recovery, and refueling operations.</li> <li>• Operating or monitoring camera equipment adjacent to flight deck in the area of maximum hazard during landing sequence while conducting photographic surveys aboard aircraft carriers during periods of heavy aircraft operations.</li> </ul>	July 1, 1972
8%	<p><b>15. <i>Participating in missile liquid propulsion or solid propulsion situations.</i></b> Participating in research and development, or preoperational test and evaluation situations involving missile liquid or solid propulsion systems where a mechanical or other equipment malfunction, or accidental combination of certain fuels and/or chemicals, or transient voltage and current buildup on or within the system when the system is in a "go" condition on the test stand, or sled, can result in explosion, fire, premature ignition, or firing.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Test stand or tract tests, when adequate protective devices and/or safety measures either do not exist or have been developed but have not practically eliminated the potential for personal injury, under any of the following conditions: <ul style="list-style-type: none"> <li>a. Tanks are being pressurized above normal servicing pressure.</li> <li>b. Assembling, disassembly, or repair of contaminated plumbing containing inhibited red fuming nitric acid and unsymmetrical dimethylhydrazine or other hypergolic fuels is required.</li> <li>c. Fueling and defueling.</li> </ul> </li> <li>• Hoisting hypergolic liquid fueled systems into, or out of a test stand, where the work area is confined, and external plumbing is present resulting in a situation where the plumbing may be damaged causing a leak.</li> <li>• Tests on foreign missiles where technical data is questionable or not available.</li> <li>• Manned test firings of small, close support missiles for which safety performance data are not yet available.</li> <li>• Removal of a missile, missile propulsion system, or component thereof from a test stand, fixture, or environmental chamber where there is reason to believe that the item may be unusually hazardous due to damage</li> </ul>	Mar. 4, 1974

<b>Differential rate</b>	<b>Category for which payable</b>	<b>Effective Date *</b>
	resulting from the test.	
8%	<b>16. Asbestos.</b> Working in an area where airborne concentrations of asbestos fibers may expose employees to potential illness or injury. This differential will be determined by applying occupational safety and health standards consistent with the permissible exposure limit promulgated by the Secretary of Labor under the Occupational Safety and Health Act of 1970 as published in title 29, Code of Federal Regulations, §§ 1910.1001 or 1926.1101. Regulatory changes in §§ 1910.1001 or 1926.1101 are hereby incorporated in and made a part of this category, effective on the first day of the first pay period beginning on or after the effective date of the changes.	Nov. 24, 2003
8%	<b>17. Working at high altitudes.</b> Performing work at a land-based work site more than 3,900 meters (12,795 feet) in altitude, provided the employee is required to commute to the work site on the same day from a substantially lower altitude under circumstances in which the rapid change in altitude may result in acclimation problems.	April 2, 1999

## WIND CHILL IN METRIC UNITS

The chart below shows wind chill temperatures for given air temperatures and wind speeds. To use the chart, find the approximate temperature on the top of the chart. Read down until you are opposite the appropriate wind speed. The number which appears at the intersection of the temperature and wind speed is the wind chill index.

In using the chart below, wind chill values below -30° C present little danger to properly clothed persons, wind chill values from -31° C to -57° C present considerable danger, and wind chill values over -58° C present a very great danger of frostbite.

Wind Speed (KPH)	Local temperature (EC)										
	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50
Calm	0 C	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50
8	-2	-7	-12	-17	-23	-28	-33	-38	-44	-49	-54
16	-8	-14	-20	-26	-32	-38	-44	-51	-57	-63	-69
24	-11	-18	-25	-32	-38	-45	-51	-58	-65	-72	-78
32	-14	-21	-28	-36	-42	-49	-57	-64	-71	-78	-85
40	-16	-23	-31	-39	-46	-53	-61	-68	-76	-83	-90
48	-17	-24	-33	-41	-48	-56	-63	-72	-78	-86	-94
56	-18	-26	-34	-42	-49	-57	-65	-73	-81	-88	-97
64	-19	-27	-35	-43	-51	-59	-66	-74	-82	-91	-98
72	-19	-28	-36	-43	-52	-59	-67	-76	-83	-91	-99
80	-20	-28	-36	-44	-52	-60	-68	-76	-84	-92	-100
Little danger For properly clothed persons			Considerable danger				Very great danger Danger of freezing of exposed flesh				

## WIND CHILL IN NON-METRIC UNITS

The chart below shows wind chill temperatures for given air temperatures and wind speeds. To use the chart, find the approximate temperature on the top of the chart. Read down until you are opposite the appropriate wind speed. The number which appears at the intersection of the temperature and wind speed is the wind chill index.

In using the chart below, wind chill values below -22° F present little danger to properly clothed persons, wind chill values from -24° F to -71° F present considerable danger, and wind chill values over -73° F present a very great danger of frostbite.

Wind Speed (MPH)	Local temperature (EF)										
	32	23	14	5	-4	-13	-22	-31	-40	-49	-58
Calm	32	23	14	5	-4	-13	-22	-31	-40	-49	-58
5	29	20	10	1	-9	-18	-28	-37	-47	-56	-65
10	18	7	-4	-15	-26	-37	-48	-59	-70	-81	-92
15	13	-1	-13	-25	-37	-49	-61	-73	-85	-97	-109
20	7	-6	-19	-32	-44	-57	-70	-83	-96	-109	-121
25	3	-10	-24	-37	-50	-64	-77	-90	-104	-117	-130
30	1	-13	-27	-41	-54	-68	-82	-97	-109	-123	-137
35	-1	-15	-29	-43	-57	-71	-85	-99	-113	-127	-142
40	-3	-17	-31	-45	-59	-74	-87	-102	-116	-131	-145
45	-3	-18	-32	-46	-61	-75	-89	-104	-118	-132	-147
50	-4	-18	-33	-47	-62	-76	-91	-105	-120	-134	-148
Little danger For properly clothed persons			Considerable danger				Very great danger Danger from freezing of exposed flesh				