



IHA SAFETY INFORMATION & REQUIREMENTS

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1. GENERAL INFORMATION

This document is a summary of safety information, requirements, and regulations that subcontractors must follow whenever conducting work for InoMedic Health Applications (IHA), on the Medical and Environmental Support Contract (MESC). Information provided is for reference only and is not intended to cover all safety requirements in the subcontract. Subcontractors are expected to know and comply with all applicable sections of OSHA or any other applicable local, State or Federal laws and regulations. It is the responsibility of each subcontractor to share this information with their employees and employees of sub-tier companies.

All work under any subcontract shall be performed safely, orderly, and so as not to create a hazard to health or property. All work shall be conducted in accordance with the established safety regulations of NASA, USAF, and the Occupational Safety and Health Act (OSHA) of 1970.

The implementation of safe working practices and the furnishing of equipment to assure a safe working environment is the subcontractor's responsibility. The safety adequacy of work practices, equipment, and facilities are subject to the approval of the MESC Program Support Office, however, such approval does not constitute a direction of, nor relieve the subcontractor from, the responsibility for safety. Failure of the subcontractor to comply with safety regulations and/or conduct considered unsafe by MESC Safety shall constitute cause for stoppage of work.

The MESC Safety/QA Manager shall be assigned to the project to monitor and evaluate the safety of the subcontractor's operations and to direct the subcontractor on matters of industrial safety and health. Any evaluation given shall be deemed advisory only and shall not relieve the subcontractor from any responsibility for safety. Further, the job site is subject to inspection by MESC Safety regarding all safety and health requirements. Non-compliances shall be cited.

2. VOLUNTARY PROTECTION PROGRAM (VPP) POLICY

Welcome to a VPP site. While working at a VPP site, the requirements for safety and health are more stringent. There are ZERO acceptable reasons to cut safety corners. The safe accomplishment of the job is the first priority. Performing work in a safe manner is a requirement of your contract.

We need to inform you of the IHA VPP policy on MESC. IHA has empowered all of our employees with the responsibility and right to report or stop unsafe acts and conditions. Other KSC permanent full-time subcontractors (USA, Boeing, etc.) and government employees endorse a similar philosophy.

We currently train our employees that if they see an eminent safety hazard that could affect life or limb, they should advise the subcontractor of their concerns and then call for assistance. They are also taught that if the subcontractor is endangering IHA employees and won't stop what they are doing, IHA employees shall be removed from the area of danger.

Whenever any person tells you that you or your employees are doing something unsafe or creating a hazard for other personnel, you must contact the designated authority personnel on your contract for guidance. However, this does not constitute an authority to stop work.

3. ACCIDENT REPORTING

All accidents, mishaps, and significant incidents which result in serious personnel injuries, death, or damage to resources, equipment, or facilities must be reported immediately as follows:

Emergency	Using a Government Phone	911
	Using a cell phone on KSC	867-7911
	Using a cell phone on CCAFS	853-0911
Contact	Authorized personnel as outlined in this contract	
	IHA Safety/QA Manager	289-7472 (24/7 cell)

In the event of a serious accident or mishap, the subcontractor shall take immediate action to secure potentially dangerous conditions (e.g. disconnect electrical power, secure machinery) in order to protect personnel. The scene of an accident or mishap shall be secured and remain intact until released by.

4. ADVERSE WEATHER POLICY

Adverse Weather is defined as: Winds in excess of 35 knots, heavy rain/hail, or the potential for lightning within 5 nautical miles that could affect the area within 30 minutes.

4.1 Wind Policy

The subcontractor shall establish wind restrictions based upon a safety engineering assessment of the following criteria:

1. Personnel exposure
2. Sail Area
3. Mass
4. Wind Speed

4.3 Lightning Restrictions

Phase One Lightning Advisory: Announced when conditions are present or within 5 nautical miles of the announced location which may produce cloud to ground lightning strikes within the next thirty (30) minutes.

Phase Two Lightning Warning: Announced when lightning has been observed within 5 nautical miles or conditions exist which are predicted to produce lightning within 5 nautical miles. This advisory is a warning that employees shall take immediate cover. Personnel access to roofs or top levels of structures are prohibited. Electrical systems maintenance and any other operation requiring personnel risk of lightning exposure are prohibited.

4.4 Tornado Notification

Tornado Watch: Conditions exist for a tornado. Prepare for a tornado warning.

Tornado Warning: Tornado has been sighted. Personnel shall take cover immediately in approved structures.

4.5 Hurricane Policy

During the Atlantic Hurricane Season (June 1 through November 30), this area is subject to extreme destruction associated with hurricanes. MES-C Program Support Office representatives will notify Subcontractors of the following conditions:

	Time Until Landfall	Requirements
Condition IV	72 hrs	Prepare site by securing structures and loose objects, housecleaning, etc. Get ready to evacuate. All trailers/temporary structures not tied down must be evacuated, if required.
Condition III	48 hrs	Evacuate site.

5. BADGING

- 5.1. Appropriate badging will be issued by IHA or NASA to allow necessary access to work sites.
- 5.2. Badges are Government property and are to be used for official business only. Upon termination of contract and/or vendor, badges shall be returned to the MES-C Contract Manager or delegated Badging Official.

6. BREATHING AIR SAFETY CLAUSE (KSC / CCAFS ONLY)

- 6.1 The subcontractor shall take precautions to assure that connectors used in subcontractor supplied breathing air systems are incompatible with connectors present on either KSC gas systems or on subcontractor supplied systems that are used to supply non-respirable gases. KSC-STD-Z0008, "Standard for Design of Ground Life Support Systems and Equipment", established requirements for connectors to be used in KSC facility breathing air and non-respirable gas systems.
- 6.2 Breathing air system quick-disconnect couplings used at KSC or Cape Canaveral Air Station shall be a 9.5-millimeter (mm) (3/8-inch) Hansen or equal (except systems that interface with astronaut suit or rescue equipment). These systems shall comply with the following: KSC facility non-respirable gas systems shall use 1/4 inch quick disconnects for gas distribution interfaces. Although most facility systems were designed in accordance with this standard, there are nonconforming locations at KSC/CCAFS. All air-line couplings shall be incompatible with facility outlets of other gas systems to prevent inadvertent connection of airline respirators with non-respirable gases or oxygen. The subcontractor shall perform a pre-work site inspection to identify coupling types in use at the work location before mobilizing or using any breathing air equipment. The subcontractor shall also submit a written certification to show the subcontractor's breathing air system has been recently inspected and meets Grade D breathing air standards. Alternately, the subcontractor may arrange for on-site testing of Subcontractor supplied breathing air by the Government at least five days prior to start of work. In addition, the subcontractor shall also provide a work site evaluation for the IHA Safety/QA Manager to review before using any breathing air system.
- 6.3 The subcontractor shall tag or label connector ends of all lines and flexible hoses of subcontractor provided breathing air or non-respirable gas distribution systems. The tags or labels shall clearly identify the contents of the lines or hoses.

7. CLOTHING

Subcontractor employees conducting work for IHA shall wear appropriate clothing. Appropriate clothing for construction and maintenance workers shall be long pants, sleeved shirt (no tank tops) and a style of shoe determined by the type of work being performed. If there is a hazard to feet determined by the employee's supervisor or IHA Safety, then hard-toe shoes shall be required.

8. CONFINED SPACE ENTRY

Use proper precautions for confined space entry (e.g. liquid storage tanks, manholes, and tunnels). Entry permit (KSC Form 16-287) provided by IHA Safety shall be required prior to entry and shall remain on site. A confined space entry plan shall be developed by the subcontractor describing entry procedures. The plan shall be reviewed and approved by IHA Safety prior to commencement of work. In lieu of preparing a separate plan, the subcontractor may request a copy of the IHA Confined Space procedure.

9. CONTROLLED AREAS

Posted or controlled areas shall not be entered, nor will the integrity of any installed safety system (e.g. guardrails, safety signs, warning lights, etc.) be invalidated without proper approval.

10. CONSTRUCTION AND SERVICES SITE SAFETY

- 10.1 If you encounter other construction projects during a visit, obey the posted signs and use common sense to avoid any injuries. Be alert to the conditions of the walking surface. If you see a hazard, inform IHA Safety.
- 10.2 On KSC, CCAFS and PAFB, use of hands free cell phones while operating a vehicle is required.
- 10.3 All personnel performing work, inspections, testing, system walk downs or surveying on assigned construction sites shall restrict the use of their cell phones during these activities. The efforts necessary for these activities demand our full, undivided attention. Construction safeguards afford only temporary protection or warnings. Necessary business calls or return of pages or calls shall be accomplished only after reaching a safe zone at the site.
- 10.4 Subcontractor employees are encouraged to submit suggestions regarding site safety and health directly to IHA Safety/QA Manager.

11. CRANE OPERATIONS

Cranes of any height shall be lowered during the hours of darkness. If this is not possible, the crane shall be lit in accordance with FAA regulations. A current crane certification/inspection document shall be kept on site. Operators of cranes shall be certified. Lifting equipment used shall have a proper load test accomplished with documentation kept on site. Working under a suspended load is not permitted at any time.

12. DRINKING WATER

Subcontractors shall be given access to drinking water whenever possible in the performance of the job. Otherwise, the subcontractor shall be responsible for providing drinking water at the job site. The supply of drinking water shall be adequate and clean. Drinking water shall be dispensed either from a stationary bubbler with guarded orifice installed on an approved water line, or from a fully enclosed sanitary water container with individual paper drinking cups. Common drinking cups, dipping water by individual drinking cups, dippers, canteens, etc. are prohibited. A receptacle for disposing of the used cups shall be provided.

13. ELECTRICAL SAFETY

All electrical work shall be performed in accordance with National Electric Code (NEC), OSHA and contract referenced documents. All electrical equipment and circuits shall be de-energized before any work is started. Ground Fault Circuit Interrupters (GFCI's) shall be utilized on all temporary power. All extension cords shall be used in conjunction with GFCI's. Flexible cords shall be connected to devices and fittings so that strain relief is provided which will prevent pull from being directly transmitted to joints or terminal screws.

14. EQUIPMENT

A list of all specialty or heavy equipment proposed for use on the Subcontract, as well as operator training/experience certification, shall be submitted and maintained on site.

15. EVACUATION

If working inside a facility, the assigned safety specialist shall provide and ensure the subcontractor employees are briefed on the evacuation procedures for the facility. Should evacuation of any area be necessary for reasons other than tornadoes, follow the facility evacuation procedures and go to the designated marshalling area or at least 200 feet from the hazard and account for all your employees. If all employees are not accounted for, notify the On Scene Commander. Do not return to the work area until the On Scene Commander has given the "ALL CLEAR".

16. EXCAVATION

- 16.1 Any excavation requires an approved Dig Permit (KSC Form 28-812NS) provided by the KSC Institutional Support Contractor (ISC) prior to performing any subsurface work. This permit shall remain on site for review. Any deviations from the approved excavation routing shall be approved in advance. Adherence to excavation permit conditions is mandatory.
- 16.2 The subcontractor shall hand excavate a pilot trench when called for on the Dig Permit for all underground utility work along the centerline of new trenches and down to the elevation of the bottom of the new utility. The pilot trench shall be carefully opened to determine the existence and location, if any, of existing active underground utilities which shall be protected and kept in service by the Subcontractor as approved by the Institutional Support Contract (ISC). Machine excavation shall proceed only after IHA is assured that the pilot trench has satisfactorily located and protected all such existing utilities.
- 16.3 Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavated face. Material and equipment shall be kept at least two (2) feet (.61 meter) from the edge of excavations.
- 16.4 Daily inspections of excavations, the adjacent areas, and protective systems shall be made by the designated competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmosphere, or other hazardous conditions. A record of this inspection shall be maintained at the job site.
- 16.5 A stairway, ladder or ramp or other safe means of egress shall be located in trench excavations that are four (4) feet (1.22m) or more in depth, so as to require no more than 25 feet (7.62m) of lateral travel. All excavations five (5) feet (1.52m) or greater in depth shall have adequate shoring or be sloped at an angle not steeper than 1.5 to 1 vertical.
- 16.6 If any obstructions, interferences or unforeseen conditions are encountered (i.e. concrete thrust blocks, direct buried cable below grade, unidentified utilities, etc.) cease excavation and notify the IHA Safety/QA Manager.

17. FALL PROTECTION

- 17.1 Fall protection is required at all times where a fall hazard of four (4) feet or more exists. A double action or safety snap lanyard and a full body harness (ANSI Class III) shall be required for all identified fall hazards. Lanyards shall be attached to approved attach points (5400 pound test) above waist level. Handrails shall NOT be used as attach points. Lanyards shall not be attached together.
- 17.2 Anyone working at unprotected heights shall have received training in the proper use of fall protection equipment, and this training shall be documented. Fall protection equipment shall be OSHA and ANSI approved for use and properly stored when not in use.

18. FIRE PROTECTION

- 18.1 NASA policy is that employees do not fight fires. Some activities, such as welding, do require a fire coverage and a fire extinguisher. In those cases, the employee must be trained on the type of fire extinguisher to be used. If they are working in a facility performing work that does not require fire coverage, then they need not provide a fire extinguisher and employee fire extinguisher training is not required. However, if they are doing any work that requires fire coverage, then they shall provide their own fire extinguisher and the employees shall be trained on the use of those extinguishers. The safety specialist assigned to the project shall make the determination as to whether a fire extinguisher is required based on the details of the project

- 18.2 The following operations require Fire Department approved permits: Open flame and heat producing

devices (tar kettles, soldering, heat sealing), welding, cutting or any spark producing operations, and flammable materials storage.

- 18.3 Welding/burn permits shall be required and posted at all times on the job site prior to welding, burning or spark producing operations. All combustible material shall be cleared. Fire resistant guards, curtains or shields shall be used where appropriate. Welders and helpers shall be provided with proper PPE.
- 18.4 A trained and equipped Fire Watch shall be posted whenever any hot work (open flame) is accomplished. Subcontractors shall be responsible for providing their own fire extinguisher. All personnel shall be trained in the classes of fires and the operation of fire extinguishers.

19. HAND TOOLS, EXTENSION CORDS, ETC.

All tools (employee owned or employer furnished) are expected to be in compliance with regulatory standards. Power actuated tools shall only be used by qualified trained personnel. Tools shall not be left unattended.

20. HAZARD COMMUNICATIONS

- 20.1 A written hazard communications program for the site shall be submitted as part of the safety plan. A Material Safety Data Sheet (MSDS) shall be maintained at the work site and accessible to all employees on any shift for all chemicals on site, and a list of chemicals being brought on site shall be maintained on site. All hazardous chemicals shall be properly labeled in accordance with appropriate regulations. All employees shall be trained in the use and hazards of the chemicals used on the site.
- 20.2 Methylene chloride shall not be allowed at any job site.

21. HAZARDOUS MATERIALS

21.1 Asbestos

When requirements call for an asbestos plan in the Statement of Work, the Subcontractor shall provide a plan that has been developed by a certified, licensed person. Plans shall be reviewed and approved by IHA Safety prior to commencement of work.

21.2 Hazardous Metals (Lead, Cadmium, Chromium, Zinc)

When working with heavy metals, a plan for controlling exposures to such metals shall be developed. The plan shall be submitted and approved by IHA Safety prior to the commencement of work.

21.3 Silica

When work requirements have a potential for producing silica dust from drilling, grinding or mechanically abrading concrete, a plan for controlling airborne dust shall be a part of the Safety Plan submittal. Plans shall be reviewed and approved by IHA Safety prior to commencement of work.

22. HOUSEKEEPING

Good housekeeping practices shall be observed at all times. Use only approved marked containers for disposal of wastes in accordance with appropriate regulations. The work area shall be maintained clean and safe as possible. Routine clean up of the area shall be done at the end of each shift.

23. LOCKOUT/TAGOUT

- 23.1 IHA Safety/QA Manager shall issue DANGER Do Not Operate (Lockout/Tagout (KSC Form 20-195) tags to subcontractors on an as needed basis.
- 23.2 Each subcontractor that uses tags shall be responsible for tracking the disposition of their assigned tags. Tags shall be used only once then destroyed. At the end of the contract work, the Subcontractor shall return any unused tags to the IHA Safety/QA Manager or Safety representative who was assigned to their subcontract. The IHA Safety/QA shall annotate destroyed tags in their Lockout/Tagout and Danger Tag Control Log.
- 23.3 KSC Form 20-195 is the only tag authorized on IHA sites. Subcontractors shall ensure employees are trained in and aware of Lockout/Tagout requirements as set forth in applicable OSHA Standards.

24. MOVEMENT OF OVERSIZED LOADS

- 24.1 All vehicles that exceed the Florida Department of Transportation (FDOT) standards for dimensions or gross weight must apply for a permit to utilize KSC infrastructure. Coordinate this with IHA.
- 24.2 Drivers must meet all FDOT requirements and have a permit prior to arrival, and must inspect cargo, cargo secure devices, and system per DFOT Federal Motor Carrier Safety Administration part 392.9.
- 24.3 Drivers must contact the ISC Duty Office (861-5050) to inform KSC that they have an over-dimensional load for delivery. Do not proceed beyond parking areas at Gates 2 or 3 without a permit. ISC will instruct driver on permission to proceed to the Pass and ID Building with appropriate escort or to await NASA security escort.
- 24.4 For outbound shipments, the driver and the onsite foreman, or an ISC inspector, shall oversee the loading and securing of the load. All drivers must adhere to NASA KNPRD 6000.2, Commercial Contract Corridors.

25. OCCUPATIONAL HEALTH FACILITY (OHF) SERVICES

Medical services for work related injuries will be provided to the subcontractor by the Government to the extent that there will not be any restriction of the employees' rights under applicable Worker Compensation statutory provisions. Information from records generated by the rendering of such services may be referred to the non-NASA individual's employer. (Privacy Act of 1974 regulations: 14 CFR 1212.)

26. PAINTING & ABRASIVE BLASTING

Prior to the commencement of any spray painting or abrasive blasting operations, obtain concurrence from IHA Safety. Abrasive blasting and painting requires the establishment of control zones. The MSDS shall be reviewed prior to commencing work on site and prior to using paint or abrasive blasting. All MSDS's for chemicals/ products being used shall be maintained on site. Subcontractor shall obtain and use the proper Personal Protection Equipment (PPE) per the MSDS and/or job hazard analysis.

27. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Hard hats, eye protection, safety shoes, respiratory protection, etc., shall be used as requirements dictate (See Table 1 at the end of this section for guidance). The subcontractor shall take all necessary precautions to protect employees and shall provide personnel protective devices and safety equipment where and when required at its own expense.

28. RADIATION PROTECTION

- 28.1 This is applicable if the subcontract involves the use of ionizing or non-ionizing radiation producing equipment, devices, materials, or operations such as radiographic projectors, lasers, radiofrequency (RF)/microwave transmitters, or radioactive materials.

- 28.2 The subcontractor shall comply with the requirements of:
- a. KNPR 1860.1, "KSC Ionizing Radiation Protection Program"; KNPR 1860.2, "KSC Non-ionizing Radiation Protection Program" and applicable Federal, state, and local regulations for these types of activities performed, and
 - b. 45th Space Wing Instruction (SWI), 40-201; "Radiation Protection Program, in addition to those in the above for activities performed at the 45th Space Wing.
- 28.3 A copy of the approved Radiation Use Request/Authorization (RUR/A) provided by the Health Physics Office will be maintained onsite at all times.

29. RESPIRATORY PROTECTION

If employees are required to wear respiratory protection, the subcontractor shall provide a respiratory protection plan applicable to their operations as part of the Safety Plan submittal. Included in the plan shall be proof of medical certifications for respirator use, respirator training, and fit testing. Plans shall be reviewed and approved by the IHA Safety/QA Manager prior to commencement of work.

30. ROLLOVER PROTECTION REQUIREMENTS FOR MOBILE EQUIPMENT

- 30.1 Rollover protection devices and seatbelts shall be installed on all mobile (self-propelled) equipment at all times. Equipment includes crawler and rubber-tired tractors, with or without attachments, such as, but not limited to, winches, front-end loaders, blades, self-propelled earth movers, including pan scrapers, bottom dumps, side dumps, rollers, graders and water tank trucks.
- 30.2 Canopy and supporting attachment shall be designed, fabricated, and attached to the frame in a manner to support no less than two (2) times the weight of the prime mover, based on the ultimate strength of the metal and integrated loading of supporting members with the resultant load applied at the point of impact. There shall be a vertical clearance of 52 inches from the deck to the canopy where the operator enters or leaves the seat.

31. SAFETY PLANS

Based on the scope and hazards associated with the work, the contractor may be required to submit a safety and health plan which covers how the contractor will mitigate or control the safety and health hazards and aspects of the job. Applicable portions of this attachment may be used to develop the required safety and health plan. Review and acceptance of the safety plan by the IHA Safety/QA Manager shall occur prior to commencement of work. Any specialized safety requirements (Confined Space, Management of Traffic, Radiation Safety Control Zones, etc) shall be included in the Safety Plan as attachments.

32. SAFETY SYSTEMS – (PERMANENTLY INSTALLED)

The subcontractor shall protect and in no way invalidate the integrity of any installed safety systems or personnel safety devices such as firefighting equipment and sensing devices, fire alarm centers, fire water supply, guard rails, safety chains, warning lights, and safety signs. If the subcontractor requires entrance into systems serving safety devices, prior approval shall be obtained from the IHA Safety/QA Manager. In the event the subcontractor determines that it is necessary to temporarily remove or invalidate any personnel safety devices in order to accomplish a task, alternate means of protection prior to removing or invalidating any permanently installed safety devices or equipment shall be in place and approved.

33. SANITARY CONDITIONS AND FACILITIES

Subcontractors shall be given access to sanitary facilities whenever possible in the performance of the job. Otherwise, the subcontractor shall be responsible for providing temporary restroom facilities at the job site. One

chemical toilet, adequately serviced, for every thirty (30) employees or less is required. If showers are needed, a shower facility shall be provided for each ten (10) employees of each sex.

34. SCAFFOLDING

- 34.1 Scaffolding shall be coordinated with IHA prior to erection. No scaffolding shall be erected, moved, dismantled or altered except under the supervision of the designated Competent Person. Guardrails and toe boards shall be installed on all open sides and ends of platforms more than ten (10) feet above the ground or floor. Scaffolds four (4) feet to ten (10) feet in height, having a minimum horizontal dimension in either direction of less than 45 inches shall have standard guardrails installed on all open sides and ends of platform. All planking shall be SCAFFOLD GRADES, or equivalent.
- 34.2 Any scaffold including accessories such as braces, brackets, trusses, screw legs, ladders, etc., damaged or weakened from any cause shall be immediately repaired or replaced.

35. TEMPORARY STRUCTURES, OFFICES, TRAILERS AND WORK AREAS

- 35.1 All temporary structures (trailers) shall be clearly marked with the subcontractor's name and emergency telephone number. A site plan shall be submitted to Fire Services if four or more temporary structures are placed on site. Trailers shall be pre-approved for parking locations and tied down if stationary for a period of two (2) or more weeks. An excavation permit shall be requested and approved prior to tying down trailer/temporary structure.
- 35.2 Structures shall remain the property of the subcontractor and unless otherwise authorized by IHA, shall be removed from the site of the work at the subcontractor's expense upon completion of the construction or when directed by IHA. After such removal, the sites thereof shall be cleaned to the satisfaction of IHA.

36. THRUST BLOCKS

A configured piece of concrete located underground at water and sewer utility piping to prevent movement from line pressure fluctuations. When excavating soil at locations known to contain buried water or sewer lines, DO NOT remove any buried concrete without prior approval.

37. TRAFFIC SAFETY

- 37.1. While conducting business at KSC/CCAFS, all Vendors/Subcontractors shall adhere to NASA and USAF rules regarding Safety and Driving. Rules and speed limits may vary depending on location.
- 37.2. KSC Security issues traffic citations and uses a point system. Driving privileges may be suspended based on excessive accumulation of points. NASA reports vendor/subcontractor traffic infractions to the MES-C Program and Safety Offices.

38. TRAINING CERTIFICATIONS

The subcontractor shall certify that all employee (including sub-tier employees) training required by OSHA standards has been completed and is current. See Table 2 at the end of this section for specific requirements. The certification shall be signed by an official of the company. The certification should be included in any requested Safety Plan and shall be kept on site and available for review.

39. TRANSPORTING PERSONNEL TO DISPENSARIES AND HOSPITALS

Ambulances are on call 24 hrs/day; 7 days/week. On KSC and CCAFS the ambulance service is free of charge. Brevard County covers PAFB. See ACCIDENT REPORTING for emergency calling.

40. VEHICLE OPERATIONS

Operators of vehicles shall have valid driver's licenses and appropriate insurance coverage. Do not park in NO PARKING ZONES. Seat belts are required at all times for all passengers (No riding in beds of trucks). Never park within 15 feet of a building or structure. Keys must be left in vehicles when on the launch pad surface. All posted speed limits and other traffic safety requirements are strictly enforced. All unattended vehicles shall be turned off. Use of hands free cell phones while operating a vehicle is required.

41. WORKING OVER OR NEAR WATER

- 41.1 If an employee is working within six (6) feet of an unprotected edge that is over or near water and there is a danger of drowning if an employee were to fall, a serviceable United States Coast Guard (USCG) approved life vest or buoyant work vest shall be worn. These work vests or life preservers shall be inspected for defects that might alter their strength or buoyancy prior to and after each use. Defective ones shall be discarded immediately.
- 41.2 If life vests are required, a throwable ring buoy with 90 feet of rope attached for emergency rescue shall be maintained within 100 feet of the work site. A skiff shall be immediately available at the location or adjacent to the work area to assist in emergency rescue.

42. WORK ZONE TRAFFIC SAFETY

- 42.1 Employees working within 15 feet of a roadway or street shall wear reflective vests or clothing at all times. Where work is accomplished on the roadway or within 15 feet of the roadway, a work zone safety Management of Traffic (MOT) plan shall be developed and implemented in accordance with Florida Department of Transportation standards.
- 42.2 Employees performing traffic control set up shall be trained to the intermediate or advanced MOT level. The MOT plan shall be submitted as an attachment to the Safety Plan.

TELEPHONE NUMBERS OF IMPORTANCE

Emergencies:	Using a Government phone	911
	Using a cell phone on KSC	867-7911
	Using a cell phone on CCAFS	853-0911
IHA Safety/QA Manager	OHF Room 1110	861-8645
	After hours / weekends (Cell)	289-7472
Dispensaries:		
Kennedy Space Center Industrial Area	Occupational Health Facility (OHF) 2 nd and C Avenue	867-3347
	Hours: 7:00 AM to 5:00 PM / Monday-Friday	
KSC Visitors Center	South of I-MAX Theater	867-2776
	Hours: 9:00 AM to 5:00 PM / Monday-Friday	
Adverse Weather Information:		
KSC / CCAFS		867-4910
PAFB		853-8485

REFERENCE SAFETY WEB SITES:

OSHA – <http://www.osha.gov/comp-links.html>
NASA – <http://kscsafety.ksc.nasa.gov/>

Table 1

MINIMUM PPE REQUIREMENTS

TASK INVOLVED	HARD HAT	SAFETY SHOES	EYE PROTECTION	GLOVES	HEARING PROTECTION	APRON	SPECIAL CLOTHING	RESPIRATOR	OTHER
Abrasive Blasting and Needle Gunning Operations	Abrasive Blasting Hood for blast operator	ANSI approved safety toe leather boots or shoes	Goggles for anyone subject to blast media (not required for blast operator)	Gloves of sufficient strength to offer protection for blast operator	Plugs & Muffs for blast and needle gun operator, plugs or muffs for anyone else in vicinity		Approved blasting suits for blast operators	Approved supplied air hood as part of blasting hood	
ATV / UTV Use	Helmet	ASTM approved safety toe leather boots or shoes	Safety glasses or goggles	Cloth or leather gloves	Ear plugs or muffs above 85dBA		Long sleeves, long pants on roadways		
Battery Servicing or Handling		ANSI approved safety toe leather boots or shoes	Face shield during battery servicing or when potential exists for acid contact	Rubber gloves during battery servicing or when potential exists for acid contact		Rubber apron during battery servicing or when potential exists for acid contact			Rubber boots during battery servicing or when potential exists for acid contact
Brake replacement or repairs		ANSI approved safety toe leather boots or shoes	Goggles for working overhead, safety glasses with side shields or goggles permissible during other work	Cloth or leather gloves when manually handling material				Approved air purifying respirator if brakes involve asbestos	
Chemical handling		ANSI approved safety toe leather boots or shoes	Face shield, in addition to goggles or safety glasses with side shields, when potential exists for eye contact	Chemical resistant gloves when potential exists for skin contact with hazard		Chemical resistant apron when potential exists for chemical contact in the body		Approved air purifying respirator if potential exists for breathing hazards	Chemical resistant boots when potential exists for skin contact in the foot area

MINIMUM PPE REQUIREMENTS

TASK INVOLVED	HARD HAT	SAFETY SHOES	EYE PROTECTION	GLOVES	HEARING PROTECTION	APRON	SPECIAL CLOTHING	RESPIRATOR	OTHER
Confined Space Entry	TYPE II, CLASS G and E hardhat in all hard hat areas or where overhead projections are a hazard	ASTM approved safety toe leather boots or shoes	Goggles, safety glasses with side shields, and/or a face shield may be required depending upon nature of work	Special gloves may be required depending upon nature of work	Ear plugs or muffs above 85dBA until above 100dBA where both muffs and plugs are required		Special clothing may be required depending upon nature of work	Approved respirator may be required depending upon nature of work	Personal retrieval system such as a safety harness for all entrants during vertical entries over 5 feet deep
Crane Operations (All Types)	Class B Hardhat within operating area of crane	ANSI approved safety toe leather boots or shoes		Cloth or leather gloves for individuals handling the load	Ear plugs or muffs above 85dB until above 100dB where both muffs and plugs are required				
Emergency Spill Response	Class B Hardhat	ANSI approved safety toe leather boots or shoes	Chemical goggles (non-ventilated) when contact with hazardous material may exist	Special chemical gloves when contact with hazardous material may exist		Chemical resistant apron when potential exists for chemical contact on the body	Emergency response personnel must wear Level A, Level B, or Level C protection as dictated by hazard	Emergency response personnel must wear Level A, Level B, or Level C protection as dictated by hazard	Emergency response personnel must wear reflective vests between sunset and sunrise
Emergency Medical Treatment			Face shield in addition to safety glasses with side shields or goggles when potential contact with body fluids exists	Latex surgical examination gloves when potential contact with body fluids exists		Chemical resistant apron when potential exists for skin contact with body fluids			CPR barrier device if CPR is necessary
Firefighting Operations	Firefighter helmet that meets or exceeds NFPA standards	Firefighting turnout gear that meets or exceeds NFPA standards		Firefighting turnout gear that meets or exceeds NFPA standards			Firefighting turnout gear that meets or exceeds NFPA standards	Self-Contained breathing apparatus (SCBA's or OBA's)	

MINIMUM PPE REQUIREMENTS

TASK INVOLVED	HARD HAT	SAFETY SHOES	EYE PROTECTION	GLOVES	HEARING PROTECTION	APRON	SPECIAL CLOTHING	RESPIRATOR	OTHER
Firing Range Operations			Safety glasses with side shields or goggles		Ear plugs and ear muffs				Range personnel should wear both ear plugs and ear muffs
Forklift Operations	Class B hardhat in all hard hat areas (when not in the seat)	ANSI approved safety toe leather boots or shoes		Cloth or leather gloves when manually handling material	Ear plugs or muffs above 85dB until above 100dBA where both muffs and plugs are required				
Grinding		ANSI approved safety toe leather boots or shoes	Face shield in addition to safety glasses with side shields or goggles	Cloth or leather gloves	Ear plugs or ear muffs when subjected to noise levels at or above 85dB			Approved air purifying respirator if working on any painted surface unless paint contains no hazards such as lead or zinc	
Hazardous Waste Operations		ANSI approved safety toe leather boots or shoes	Safety glasses with side shields or goggles when potential for eye contact with body fluids exists	Special chemical gloves when contact with hazardous material may exist		Chemical resistant apron when potential exists for chemical contact on the body	At least Level D protection is required	Approved air purifying respirator is required	
HAZMAT Handling Operations		ANSI approved safety toe leather boots or shoes	Face shield in addition to safety glasses with side shields or goggles unless container is sealed and remains sealed	Special chemical gloves when contact with hazardous material may exist				Approved air purifying respirator is required unless container is sealed and remains sealed	
Heavy Equipment Operations	Class B hardhat in all hard hat areas or where overhead projections are a hazard	ANSI approved safety toe leather boots or shoes		Cloth or leather gloves	Ear plugs or muffs above 85dB until above 100dBA where both muffs and plugs are required				

MINIMUM PPE REQUIREMENTS

TASK INVOLVED	HARD HAT	SAFETY SHOES	EYE PROTECTION	GLOVES	HEARING PROTECTION	APRON	SPECIAL CLOTHING	RESPIRATOR	OTHER
Machining (Including Operation of Metal Working Machines except for grinders which are covered separately)		ANSI approved safety toe leather boots or shoes	Safety glasses with side shields or goggles		Ear plugs or muffs above 85dB until above 100dBA where both muffs and plugs are required			Respirator may be required if machining involves galvanized products, or metals such as lead or zinc	
Material or Cargo Handling	TYPE II, CLASS G and E hardhat in all hard hat areas or where overhead projections are a hazard	ASTM approved safety toe leather boots or shoes		Cloth or leather gloves. Impact Resistant gloves for heavy items and moving drums.					
Materials Handling		ASTM approved safety toe leather boots or shoes		Cloth or leather gloves. Impact Resistant gloves for heavy items and moving drums.					
Painting with Epoxy Paints		ANSI approved safety toe leather boots or shoes	Safety glasses with side shields or goggles	Cloth or leather gloves when contact with hazardous material may exist	Ear plugs or ear muffs when subjected to noise levels at or above 85dB		Coveralls or disposable paper-type or "Tyvek"	Approved supplied-air respirator required	
Painting		ANSI approved safety toe leather boots or shoes	Safety glasses with side shields or goggles	Cloth or leather gloves when contact with hazardous material may exist	Ear plugs or ear muffs when subjected to noise levels at or above 85dB		Coveralls or disposable paper-type or "Tyvek"	An approved supplied-air or air purifying respirator may be required depending upon nature of hazard	

MINIMUM PPE REQUIREMENTS

TASK INVOLVED	HARD HAT	SAFETY SHOES	EYE PROTECTION	GLOVES	HEARING PROTECTION	APRON	SPECIAL CLOTHING	RESPIRATOR	OTHER
Soldering/De-soldering		ANSI approved safety toe leather boots or shoes	Safety glasses with side shields or goggles					An approved air purifying respirator may be required depending upon nature of hazard	If a splash hazard exists a face shield must be worn in addition to safety glasses with side shields or goggles
Surface Preparation (Including Sanding, Filing, and Scraping and use of Hilti Hammer for Paint Sampling)		ASTM approved safety toe leather boots or shoes	Goggles for working overhead, safety glasses with side shields or goggles permissible during other work	Cloth or leather gloves when contact with hazardous material may exist	Ear plugs or ear muffs when subjected to noise levels at or above 85dBA. Double Hearing protection when using Hilti Hammer.		Coveralls or disposable paper-type or "Tyvek" when potential exists for contact with hazardous materials	An approved air purifying respirator may be required depending upon nature of hazard	
Welding or Hot Work (Including Melting Material or using a Propane Torch)	Class B hardhat in all hard hat areas or where overhead projections are a hazard	ANSI approved safety toe leather boots or shoes	Approved welding shield is required	Cloth or leather gloves during welding operation	Ear plugs or special welding helmets that contain ear muffs	Cloth or leather apron while welding		An approved supplied-air or air purifying respirator may be required depending upon nature of hazard	Fire watch personnel must exercise caution to not look at arc
Wood Working (Including operation of wood working machines except for grinders which are covered separately, portable power tools and hammering)		ANSI approved safety toe leather boots or shoes	Goggles for working overhead, safety glasses with side shields or goggles permissible during other work	Cloth or leather gloves when handling materials	Ear plugs or ear muffs when subjected to noise levels at or above 85dB			A minimum of an approved dust mask must be worn when working with pressure treated lumber (must be clean shaven to wear dust mask)	Face shield may be used to replace goggles or safety glasses with side shields
Work When Fall Hazard Exists	TYPE II, CLASS G and E in all hard hat areas or where overhead projections are a hazard	ASTM approved safety toe leather boots or shoes	Goggles for working overhead, safety glasses with side shields or goggles permissible during other work	Cloth or leather gloves when handling materials	Ear plugs or ear muffs when subjected to noise levels at or above 85dBA				A personal fall-arrest, positioning, or suspension, system must be used

MINIMUM PPE REQUIREMENTS

TASK INVOLVED	HARD HAT	SAFETY SHOES	EYE PROTECTION	GLOVES	HEARING PROTECTION	APRON	SPECIAL CLOTHING	RESPIRATOR	OTHER
Work in High Noise Areas		ASTM approved safety toe leather boots or shoes			Ear plugs and ear muffs required when subject to noise levels at or above 100dBA				
Work On or Over Water	TYPE II, CLASS G and E hardhat in all hard hat areas or where overhead projections are a hazard	ASTM approved safety toe leather boots or shoes		Cloth or leather gloves when handling materials	Double hearing protection when operating/riding in an airboat.				Coast Guard approved personal flotation device
Work On or Near High Voltage (above 600 volts)	Class B hardhat in all hard hat areas or where overhead projections are a hazard	ANSI approved electrical hazard safety toe leather boots or shoes	Goggles or safety glasses with side shields required when working on or near high voltage equipment (face shield also required during switching)	Approved insulating gloves			Approved outer garments that do not contain acetate, rayon, nylon or polyester		Approved insulating equipment
Work on or near low voltage (50 volts through 600 volts)	Class B hardhat in all hard hat areas or where overhead projections are a hazard	ANSI approved electrical hazard safety toe leather boots or shoes	Goggles or safety glasses with side shields required when a potential for an electric arc exists	Approved insulating gloves when working on or near hot circuits					Approved insulating equipment when working on or near hot circuits

General Requirements

- Class B Hardhats shall always be worn in a designated hard hat area or within operating area of a crane.
- Eye protection (in the form of goggles or safety glasses with side shields) is always required when eye hazards exist.
- A face shield, in addition to goggles or safety glasses with side shields, is always required when grinding.
- Safety toe shoes are always required when handling material (must be electrical hazard shoes if electrical work is involved).
- Gloves shall always be worn when handling material which presents an injury potential.
- Employees must always be clean shaven when wearing respirators (even dust masks).
- Chin straps shall always be worn on hardhats when working aloft.
- Prescription glasses worn as safety glasses shall have side shields and meet ANSI Z87.1 requirements.

ANSI Requirements

- All eye and face protection shall meet the requirements contained in ANSI Standard Z87.1
- All safety toe footwear shall meet the requirements contained in ANSI Standard Z41.1
- All respiratory protection shall meet the requirements contained in ANSI Standard Z88.1
- All protective head wear shall meet the requirements contained in ANSI Standard Z89.1

Table 2
Training Requirements

1. The contractor shall certify employee training for the following topics by letter to include the employee name, date of training, and the name of the individual providing the training.

1910.66	Powered Work Platforms
1910.134	Respiratory Protection
1910.146	Confined Space
1910.147	Lockout Tagout
1910.178	Powered Industrial Trucks
1926.503	Fall Protection

NASA requires all crane operators to be trained and certified by a recognized certification organization. Riggers shall be certified in their discipline and observers and flagmen shall be trained.

2. The contractor shall certify by letter that all employees working on the site have received the following site specific training.

1910.1200	Hazard Communication - employees shall be trained on the hazards of the chemicals to which they may be exposed.
1926.454	Scaffolds - employees using scaffolding shall be trained on the type of scaffold being used. (if applicable)
1926.1101	Asbestos - specific training based on the class of asbestos operation being performed. (if applicable)

3. For all other applicable topics, the contractor shall certify by letter that all employees working on the site have been trained. Examples include:

1910.67	Vehicle Mounted and Rotating Work Platforms
1910.68	Man lifts
1910.132	Personal Protective Equipment
1910.157	Portable Fire Extinguishers
1910.252	Welding, Cutting and Brazing
1910.332	Electrical
1910.1025	Lead
1910.1027	Cadmium
1926.20	General Safety and Health Provisions
1926.62	Lead
1926.302	Power Operated Hand Tools
1926.1060	Ladders

FDOT Maintenance of Traffic