



Ames Procedural Requirements

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COMPLIANCE IS MANDATORY

Ames Safety and Health Manual

Chapter 2 - Safety & Health Policy

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2.1. Overview

This chapter assigns safety and health responsibilities to Ames personnel, contractors, and center-wide safety and health committees.

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2.2 References

1. NPR 8715.1 NASA Safety and Health Handbook Occupational Safety and Health Programs
2. NPR 1800.2 NASA Occupational Health Program
3. NPD 1820.1 NASA Environmental Health Program
4. NPD 8621.1 NASA Mishap and Close-Call Reporting, Investigating, and Recordkeeping Policy

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2.3 Safety and Health Responsibilities

2.3.1 Center Director

[REDACTED]

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2.3.2 Designated Safety and Health Official

The Director of Code Q is the designated Safety and Health Official. Various other health and safety personnel and officers have been delegated specific program authority under the direction of the Safety and Health Official as lineated within the chapters of this manual.

The designated Safety and Health Official has the following responsibilities:

1. Provide resources, guidance, and direction for implementing ARC's safety and health program.
2. Ensure that ARC has an organization to carry out its safety and health program. This organization must include the following:
 - a. Safety and health officials at appropriate levels.
 - b. Adequate personnel to carry out ARC's safety and health program.
 - c. Specialized expertise from other sources such as other agencies, professional groups, consultants, universities, labor organizations, and safety and health committees.
3. Ensure that ARC has requirements, policies, and procedures to carry out ARC's safety and health program.
4. Ensure that ARC has goals and objectives to reduce occupational mishaps.
5. Ensure that ARC has methods to evaluate the effectiveness of its safety and health program.
6. Ensure that priorities for correcting workplace hazards are established.
7. Ensure that the safety and health program is reviewed.
8. Serve as the Authority Having Jurisdiction (AHJ), and thereby implement safety provisions with the authority for "approving/concurring" safety-related installations, procedures and equipment. The only exception involves the Fire Marshall who shall serve as the Authority Having Jurisdiction for fire prevention and protection activities.

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2.3.3 Supervisors

Each supervisor, regardless of level, has the following safety and health responsibilities:

1. Participate in the Ames Safety Accountability Program.
2. Exemplify safe and healthful work practices.
3. Put into practice the five "Ames Safety Principles"

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| <ol style="list-style-type: none">1. Safety is Everyone's Responsibility2. Safety is Vital to NASA Missions3. Risks Can and Will be Managed4. Injuries Can be Prevented with Training, Preparation, and Awareness5. Management is Accountable for Ensuring a Safe Work Environment |
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4. Ensure that employees are informed of NASA safety and health programs and protection afforded to employees through these programs.
5. Inform employees of the location of the nearest medical facility, procedures for obtaining

- treatment, and methods for reporting occupational injuries or illnesses.
6. Instruct employees to report hazardous conditions immediately to their supervisors.
 7. Take immediate action to protect and/or evacuate employees in imminent-danger situations.
 8. Furnish a safe and healthful place of employment and ensure that identified hazards are eliminated or controlled.
 9. Inform employees of specific hazards associated with their workplace and duties.
 10. Ensure the use of appropriate personal protection equipment.
 11. Train employees in a manner that will ensure their safety and health.
 12. Ensure that employees are informed of their specific responsibilities and rights under the OSHA Act, Executive Order 12196, and 29 CFR Part 1960 and the way they may participate in the program.
 13. Cooperate with and assist safety and health personnel while they are performing their duties.
 14. Maintain the Building Emergency Action Plan.
 15. Meet with the Fire Department or Emergency Services Representative during fire drills and actual emergencies.
 16. Be familiar with all known facility hazards.
 17. Ensure that all hazards that are listed in the Ames Hazard Tracking System for your work area are posted near the hazard.
 18. Ensure that any employees on leave 5 working days for an occupational or non-occupational injury or illness report to the Ames Health Unit for a fitness-for-duty review before returning to work.
 19. Ensure that your Directorate complies with safety requirements, policies, and procedures, conducts a safety review of your Directorate at least annually, and submit the review to the Office of the Director of Safety, Environmental and Mission Assurance.
 20. Ensure that occupational safety and health as well as system safety are appropriately considered during the initial establishment of each project, and that adequate safety and health resources have been included in all project, facility, or operational/research area budgets.
 21. Ensure that all contractors within your directorate do the following:
 - a. Follow and use all applicable chapters of the Ames Safety and Health Manual, as required by their contract.
 - b. Meet all safety requirements delineated in their contracts with NASA.
 - c. Have the ability and means to recognize, evaluate and control recognized hazards in their work with NASA.
 - d. Comply with all applicable Safety and Health regulations.
 - e. Provide training that meets NASA and/or Federal/State requirements.
 - f. Provide personal protective equipment to their employees when required.
 22. Ensure all required occupational medical exams are completed.

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2.3.4 Safety, Environmental, and Mission Assurance, Code Q

Code Q's responsibilities involve doing the following:

1. Provide guidance, consultation and direction for implementing NASA and Ames Safety, Environmental and Mission Assurance policies and standards.
2. Keep Center management apprised of the risks associated with the day-to-day Center activities.
3. Perform surveys to determine the degree of compliance of Ames organizations with established SEMA policies, regulations, and procedures.
4. Serve as the regulatory agency liaison for inspections by Federal, State, and local agencies with jurisdiction over industrial safety, health and environmental compliance.
5. Maintain exposure monitoring records.

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2.3.5 Civil Service Personnel (including Ames Associates and NASA Exchange employees)

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2.3.6 Contractors while Working at Ames Facilities

Each company or organization providing services under contract to NASA is required to do the following:

1. Ensure the safety and health of their employees regardless of where they work (i.e., Ames-owned or -leased facilities, with government equipment, or together with government employees).
2. Provide a safety and health plan, as required by its contract with NASA (see Appendix A. Sample Safety and Health Plan Outline)

3. Notify the Contracting Officer if NASA facilities or NASA operations are not complying with 29 CFR 1910, "General Industry Standards" or 29 CFR 1926, "Safety and Health Regulations for Construction".
4. Ensure that employees are informed of NASA safety and health requirements.
5. Inform employees of methods for obtaining Emergency Medical Care and learning the procedures for reporting occupational injuries and illnesses.
6. Instruct employees to report hazardous conditions immediately to their supervisors.
7. Take immediate action to prevent and/or evacuate employees in imminent-danger situations.
8. Furnish a safe and healthful place of employment and ensure that identified hazards are eliminated or controlled.
9. Inform employees of specific hazards associated with their workplace and duties.
10. Ensure the use of appropriate personal protective equipment.
11. Train employees in a manner that will ensure their safety and health.
12. Exemplify safe and healthful work practices.
13. Cooperate with and assist safety and health personnel while they are performing their duties.
14. Train employees on Building Emergency Action Plans.
15. Meet with the Fire Department or Emergency Services Representative during fire drills and actual emergencies.
16. Follow all applicable safety and health regulations as well as all chapters of the Safety and Health Manual as required by your contract.

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2.4 Responsibilities of Safety Committees

2.4.1 Ames Safety Committee

The Ames Safety Committee was established to provide employees and NASA contractors with a forum in order to recommend and implement improvements in ARC safety and health.

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2.4.2 Aircraft and Ground Safety Committee

1. The Aircraft and Ground Safety Committee is responsible for reviewing ground operations of all aircraft in order to detect and reduce safety hazards to persons, aircraft, and ground support. This committee reviews aircraft support incidents of a hazardous nature, making recommendations for corrective action; and resolves problems. This committee reviews aircraft support incidents of a hazardous nature making recommendations for corrective action; resolves problems with the interpretation and compliance of applicable codes; and reviews as well as approves critical system designs.
2. The Aviation Safety Officer serves as the chairperson.

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2.4.3 Airworthiness and Flight Safety Review Board (AFSRB)

This committee establishes airworthiness and flight safety review requirements that are commensurate with the degree of risk involved as applied to acceptance or modification of Center aircraft, changes in flight envelopes or operations procedures, and the performance of missions.

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2.4.4 Diving Safety Committee

The Diving Control Board shall, at a minimum, have the authority to approve and monitor diving projects, review and revise the diving safety manual, ensure compliance with the manual, certify diver training, and take disciplinary action for unsafe practices. They shall sit as a board of investigation to inquire into the nature and cause of diving accidents or violations of NASA Ames diving manual.

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2.4.5 Electrical Safety Board

The Electrical Safety Board ensures the existence of policies and procedures that support the safety of the electric power systems at NASA Ames.

The responsibilities of this board include, but are not limited to the following:

- a. Point of contact for electrical safety issues.
- b. Determine the best course of action for solving any electrical safety issues brought to its attention
- c. Establish electrical systems policies and procedures
- d. Participating in electrical safety-related mishap and near miss reviews
- e. Providing guidance to center management as needed on electrical safety issues.

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2.4.6 Ergonomics Solutions Team

The Ergonomics Solutions Team works to reduce the number of Repetitive Stress Injuries (RSI's) caused by exposure to risk factors in the workplace. The committee also educates employees on signs and symptoms of RSI's and proper ergonomics. Committee members inform employees on the way to purchase ergonomics accessories and encourage supervisor support/involvement.

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2.4.7 Explosives Safety Committee

The Explosives Safety Committee assures that Ames personnel comply with regulations addressing the procurement, storage, handling, uses, and safe disposal of explosives.

The Committee, with the help of the Explosives Safety Officer, shall audit facilities that house explosives, provide written direction to supervisors, and interpret the guidelines specified in

applicable NASA, NFPA, DOD, and any other federal, state or local requirements.

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2.4.8 Executive Safety Committee (ESC)

The ESC reports to the Center Director.

1. The Deputy Director chairs the ESC. Members include Organizational Directors from each code, as well as the Chief of the Safety, Health and Medical Services Division, QH.
2. The ESC meets at the request of the Chairperson, but no less frequently than six times a year. The Safety, Health and Medical Services Division acts as the recorder for the meeting.
3. The ESC provides leadership and direction for safety and health at Ames, and provides unified policy decisions, approves safety initiatives and strategies to reduce injuries, and assures the overall performance of the Center's safety and health program.
4. Annually the ESC requests that Center Safety Committees (Electrical, Radiation, Explosives, Non-ionizing Radiation, etc) present information on key topics or report on actions or progress and re-charters as appropriate.
5. Periodically the ESC requests that Directors present Safety and Health progress reports, actions or initiatives.

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2.4.9 Human Occupancy Review Board

The Human Occupancy Review Board is tasked with reviewing documentation and conducting an initial operational readiness review of new human occupied facilities in order to ensure the safe operation of these facilities that expose their human occupants to non-ambient environmental conditions.

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2.4.10 Ionizing Radiation Safety Committee

The Ionizing Radiation Safety Committee is responsible for reviewing and approving all activities that involve ionizing materials. Sources of ionizing radiation are radioactive isotopes, X-ray tubes and machines.

Authority of this committee to manage the ionizing radiation safety programs is established by the Center's radioactive materials license with the Nuclear Regulatory Commission.

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2.4.11 Nanomaterials Safety Committee

The Nanomaterials Safety Committee provides safety and health guidelines for the use of manufactured nanoparticles in research laboratories. These guidelines address recommended safety precautions applicable when these materials are used at Ames Research Center.

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2.4.12 Non-Ionizing Radiation Safety Committee (Laser, RF, ULF, and Microwave)

The Non-Ionizing Radiation Safety Committee (NRSC) is responsible for the following:

1. Advising the Center Executive Safety Committee on matters concerning non-ionizing radiation safety.
2. Establishing and maintaining adequate policies and regulations for the control of non-ionizing radiation hazards that conform to applicable regulations and reliable technical guidelines
3. Approving and authorizing all projects (as defined in Chapter 8) involving the use of non-ionizing radiation devices.
4. Approving the construction and operation procedures for fixed, non-ionizing radiation facilities and activities.

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2.4.13 Pressure Systems Safety Committee

The Pressure Systems Safety Committee (PSSC) makes policy and recommends design guidelines concerning pressure systems. At the request of the Pressure System Safety Engineer (PSSE), project engineers, and system designers or users, the committee conducts reviews and provides approval for deviations from the requirements stated in Chapter 10: Pressure Systems Safety. The committee also considers appeals of waivers rejected by the PSSE and/or the chairperson.

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2.4.14 Toxic Gas Safety Committee

The goals of the Toxic Gas Safety Committee are to ensure that researchers and their designees use toxic gas safely. The committee will evaluate purchases, agreeing that all engineering and administrative controls prescribed by state and local regulatory requirements are implemented prior to commencement of activities. Approval of all vessels containing toxic gases prior to being purchased, and ensure researchers and their designees are trained.

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2.4.15 Traffic Safety Committee

The Traffic Safety Committee promotes and enhances pedestrian, bicycle, and vehicular safety on the Center's roadways. The committee will identify problem areas that require special attention and provide recommended corrective actions. The committee will serve as the focal point for comments, suggestions and concerns from the Ames community regarding traffic signs, markings, and roadway configuration issues.

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2.4.16 VPP Directorate Leaders Committee

The purpose of the VPP Directorate Leaders Committee is to work collaboratively together to anticipate issues and address them in a constructive manner that supports the needs of each

Directorate. Members of the VPP Directorate Leaders Committee make safety and health decisions for their Directorate, support the Center's goal of maintaining VPP STAR level status and work together to conduct annual assessments. The committee will serve three roles including VPP Leadership, safety/health awards, and recognition for safety suggestions.

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2.5 Union/Management Safety Committee

The Center and the Union have agreed to work together to improve the Ames Safety Program. The Ames Union/Management Safety Committee serves as the primary vehicle for the exchange of information under the VPP and supports the Center's and Union's commitment to safety. This committee functions as a subcommittee of the Ames Research Center Partnership Council and reports its progress on VPP and other safety matters to the Council.

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2.6 APPENDIX A: Safety and Health Plan Outline Rev. 6/07

SAMPLE Safety and Health Plan for Service or Operations Contracts

The offeror shall submit a detailed safety and health plan, as part of its proposal, showing how the contractor intends to protect the life, health, and well-being of NASA and contractor employees as well as property and equipment. The plan must include a detailed discussion of the policies, procedures, and techniques that will be used to ensure the safety and health of contractor employees and to ensure the safety of all working conditions throughout the performance of the contract. The plan must similarly address safety and health for subcontractor employees for any proposed subcontract. The plan must address the policies, procedures, and techniques that will be used to ensure the safety and health of NASA employees and the public. This plan, as approved by the contracting officer, will be included in any resulting contract. In addition, if a contractor is to work or be located on-site at a NASA facility or Center, the contractor will ensure the protection of personnel, property, equipment, and the environment in the production of contractor products and or the pursuit of any of its activities. In order for NASA to understand the contractor's method for compliance with pertinent NASA policies and requirements and Federal, State, and local regulations for safety, health, environmental protection, and fire protection, the contractor shall develop and subsequently implement a safety and health program in accordance with a safety and health plan generated by the contractor and approved by NASA. The plan will also assure the proper integration of the on-site contractor as a full participant in the Center's Safety and Health Program. This plan shall contain the information requested in the outline of contractor safety.

Contents of the Contractor Safety and Health Plan

1.0 MANAGEMENT LEADERSHIP AND EMPLOYEE PARTICIPATION.

1.1 Policy. Provide the contractor's corporate safety policy statement with the plan. Compare the contractor's policy statement with those of NASA and OSHA and note any differences.

1.2 Goals and Objectives. Describe specific goals and objectives to be met. Discuss status of safety program using the Performance Evaluation Profile (PEP) as safety performance criteria. Describe the contractor's approach (including milestone schedule) to achieve and maintain level 5 of the PEP in all areas (see contents of PEP).

1.3 Management Leadership. Describe management's procedures for implementing its commitment to safety and health through visible management activities and initiatives including a commitment to the exercise of management control to ensure workplace safety and health. Describe processes and procedures for making this visible in all contract and subcontract activities and products. Include a statement from the project manager or designated safety official indicating that the plan will be implemented as approved and that the project manager will take personal responsibility for its implementation.

1.4 Employee Involvement. Describe procedures to promote and implement employee (e.g., non-supervisory) involvement in safety and health program development, implementation, and decision making. Describe the scope and breadth of employee participation to be achieved so that safety and health risk areas of the contract are equitably represented.

1.5 Assignment of Responsibility. Describe line and staff responsibilities for safety and health program implementation. Identify any other personnel or organization that provides safety services or exercises any form of control or assurance in these areas. State the means of communication and interface concerning related issues used by line, staff, and others (such as documentation, concurrence requirements, committee structure, sharing of the work site with NASA and other contractors, or other special responsibilities and support). As a minimum, the contractor will identify the following:

- a. Identify by title the individual who will be responsible for the contractor's adherence to Center-wide safety, health, environmental, and fire protection concerns and goals, and who will participate in meetings and other activities related to the Center's Safety and Health program.
- b. Company Physician. Provide the identification of a company physician to facilitate communication of medical data to the head of the NASA clinic. The contractor shall identify a point of contact (such as the company physician) by name, address, and telephone number to the NASA Center Clinic, mail code. Any changes that occur in the identity of the point of contact will be promptly conveyed to the NASA Clinic.
- c. Building FSM. Each building occupied by the contractor shall assign an individual to facilitate the Center's fire safety program including coordination of related issues with NASA facility managers and emergency planning and response officials and their representatives.
- d. Designated Safety Official. Identify by title the official(s) responsible for implementation of this plan and all formal contacts with regulatory agencies and with NASA.

1.6 Provision of Authority. Describe consistency of the plan with applicable NASA requirements and contractual direction as well as applicable Federal, State, and local regulations and how this will be maintained throughout the life of the contract.

1.7 Accountability. Describe procedures for ensuring that management and employees will be held accountable for implementing their tasks in a safe and healthful manner. The use of traditional and/or innovative personnel management methods (including discipline, motivational techniques, or any other technique that ensures accountability) will be referenced as a minimum and described as appropriate.

1.8 Program Evaluation. Describe the method for internal program evaluation. The program evaluation may consist of either (1) participation in a PEP survey at the request of the Government or (2) a written report which documents the contractor's procedures for determining the existence and criticality of the contractor's hazardous operations in a manner that proper risk management techniques can be applied and notable safety risk documented. The report will also include but is not limited to the following: identification of the contractor's hazardous operations and products; ranking the risk in a severity classification; approach to identifying and implementing specific risk evaluation tasks, managing the risks, and documenting the results; and responsibilities and methods for internal

audits and evaluations of the overall safety and health program including personnel who conduct the audit and evaluation, to whom the report is made, and the frequency (at least annually) with which it is performed. These evaluations shall include subcontracted tasks. Correlation of the program evaluation to the applicable criteria of the PEP will be clearly described.

When a written program evaluation is requested, it will be delivered to the Government no later than 30 days after the end of each contract year or at the end of the contract, whichever is applicable. Distribution of these program evaluations will be the same as that for the safety and health plan. The PEP survey will be scheduled and administered at the discretion of the Government.

1.9 The Contractor will describe its approach to document its safety and health program performance to provide the Government with the necessary visibility and insight. This includes the identification, acquisition, and processing of safety and health data; development of procedures; recordkeeping; statistical analyses including metrics; and the furnishing of data and reports to the Government. Electronic access by the Government to this data is preferred as long as Privacy Act requirements are met and Government safety and health professionals and their representatives have full and unimpeded access for review and audit purposes. For contractor activities conducted on NASA property, the contractor will identify what records it will make available to the Government in accordance with the Voluntary Protection Program criteria of OSHA as implemented in [local Center's] Requirements Handbook for Safety, Health, and Environmental Protection, as revised. For the purpose of this plan, safety and health documentation includes but is not limited to logs, records, minutes, procedures, checklists, statistics, reports, analyses, notes, or other written or electronic document which contains in whole or in part any subject matter pertinent to safety, health, environmental protection, or emergency preparedness. The contractor will acknowledge the following as standing requests of the Government to be handled as described below.

- a. **Material Safety Data.** Describe the procedure by which the contractor shall prepare and/or deliver to NASA, Material Safety Data for hazardous materials brought onto Government property or included in products delivered to the Government. These data are required by the Occupational Safety and Health Administration (OSHA) regulation, 29 CFR 1910.1200, "Hazard Communication," and Federal Standard 313 (or FED-STD-313), "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities," as revised.
- b. **Hazardous Materials Inventory.** The contractor shall compile an annual inventory report of all hazardous materials it has located on Government property and which is within the scope of 29 CFR 1910.1200, "Hazard Communication," and Federal Standard 313 (or FED-STD-313), "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities," as revised. The call for this annual inventory is issued by the [responsible NASA official]. This information shall provide the following:
 1. the identity of the material.
 2. the location of the material by building and room.
 3. the quantity of each material normally kept at each location.

1.10 Government Access to Safety and Health Program Documentation. The contractor shall recognize in its plan that it will be expected to make all safety and health documentation (including relevant personnel records) available for inspection or audit at the Government's request.

1.11 The contractor may be requested to participate in the review and modification of safety requirements that are to be implemented by the Government including any referenced documents therein. This review activity will be implemented at the direction of the NASA Contracting Officer's Technical Representative in accordance with established NASA directives and procedures.

1.12 Procurement. Identify procedures used to assure that the contractor's procurements are reviewed for safety considerations and that specifications contain appropriate safety criteria and instructions. Set forth authority and responsibility to assure that safety tasks are clearly stated in subcontracts.

2.0 WORKPLACE ANALYSIS

Describe the method by which hazards within the contractor's workplace shall be systematically identified during the duration of the contract. The identified method should explain the information collection process for assembling, through a combination of surveys, analyses, and inspections of the workplace, investigations of mishaps and close calls, and the collection and trend analysis of safety and health data such as: records of occupational injuries and illnesses; findings and observations from preventive maintenance activities; reports of spills and inadvertent releases to the environment; facilities related incidents related to partial or full loss of systems functions; employee reports of hazard; etc. Every hazard identified by any of the techniques identified below shall be ranked and processed in accordance with Center procedure. All hazards on NASA property, which are immediately dangerous to life or health, shall be reported immediately to the NASA safety office. All safety engineering products, which address operations, equipment, etc., on NASA property will be subject to the review and concurrence of the NASA Safety Office unless otherwise specified in the approved safety and health plan. The contractor is expected to have processes to address similar instances in contractor facilities utilizing contractor resources to manage such instances.

2.1 Hazard Identification. Describe the procedures and techniques to be used to compile an inventory of hazards associated with the work to be performed on this contract. This inventory of hazards shall address the work specified in this contract as well as operations and work environments which are performed in the vicinity or in close proximity to contract operations. The results will be reported to the Government in a manner suitable for inclusion in facilities baseline documentation as a permanent record of the facility. Specific techniques to be considered include:

- a. Comprehensive Survey. A "wall to wall" engineering assessment of the work site including facilities, equipment, processes, and materials (including waste).
- b. Change Analysis. Typically addresses modifications in facilities, equipment, processes, and materials (including waste); and related procedures for operations and maintenance. Change analyses periodically will be driven by new or modified regulatory and NASA requirements.
- c. Hazard Analysis. May address facilities, systems/subsystems, operations, processes, materials (including waste), and specific tasks or jobs.

2.2 Inspections. This paragraph includes requirements for assignments, procedures, and frequency for regular inspection and evaluation of work areas for hazards and accountability for implementation of corrective measures. The contractor will describe administrative requirements and procedures for control of and regularly scheduled inspections for fire and explosion hazards. The contractor has the option, in lieu of this detail, to identify policies and procedures with the stipulation that the results (including findings) of inspections conducted on NASA property or involving Government furnished property will be documented in safety program evaluations or the monthly Accident/Incident Summary reports. Inspections will identify the following:

1. Discrepancies between observed conditions and current requirements.
2. New (not previously identified) or modified hazards.

2.3 Employee Reports of Hazards. Identification of methods to encourage employee reports of hazardous conditions (e.g., close calls) and analyze/abate hazards. The contractor will describe steps it will take to create reprisal-free employee reporting with emphasis on management support for

employees and describe methods to be used to incorporate employee insights into hazard abatement and motivation/awareness activities.

3.0 MISHAP INVESTIGATION AND RECORD ANALYSIS.

3.1 Mishap Investigation. Identification of methods to assure the reporting and investigation of mishaps including corrective actions implemented to prevent recurrence. The contractor will describe the methods to be used to report and investigate mishaps on NASA property and on contractor or third party property. The contractor shall describe its procedures for implementing use of NASA mishap reporting and investigation forms and alternate forms used by the contractor with emphasis on timely notification of NASA; investigation procedures; exercise of jurisdiction over a mishap investigation involving NASA and other contractor personnel; follow up of corrective actions; communication of lessons learned to NASA; and solutions to minimize duplications in reporting and documentation including use of alternate forms, etc. The contractor will discuss its procedures for immediate notification requirements for fires, hazardous materials releases, and other emergencies. The contractor will include appropriate details to address the use of NASA Form 1627, "Mishap Report" (or equivalent), including 24-hour and ten-day mishap reports to the Safety and Health, and Medical Services Division, [REDACTED]

3.2 Trend Analysis. Describe approach to performing trend analysis of data (occupational injuries and illnesses; facilities, systems, and equipment performance; maintenance findings; etc.) Discuss methods to identify and abate common causes indicated by trend analysis. In support of site-wide trend analysis to be performed by the Government, the contractor will discuss method of providing data as follows:

1. Accident/Incident Summary Report. The contractor shall describe how it shall prepare and deliver Accident/Incident Summary Reports as specified on [specify locally used format]. All new and open mishaps, including vehicle accidents, incidents, injuries, fires, and any close calls shall be described in summary form along with current status. Negative reports are to be required monthly. Report frequency is monthly; date due is the 10th day of the month following each month reported. Report to be delivered to the Center Safety Office, mail code.
2. Log of Occupational Injuries and Illnesses. For each establishment on and off NASA property that performs work on this contract, the contractor shall deliver to the Government (under separate contractor's cover letter), a copy of its annual summary of occupational injuries and illnesses (or equivalent) as described in Title 29, Code of Federal Regulations, Subpart 1904.5. If contractor is exempt by regulation from maintaining and publishing such logs, equivalent data in contractor's format is acceptable (such as loss runs from insurance carrier) which contains the data required. Data shall be compiled and reported by calendar year and provided to the Government within 45 days after the end of the year to be reported (e.g., not later than February 15 of the year following).

4.0 HAZARD PREVENTION AND CONTROL.

Identified hazards must be eliminated or controlled. In the multiple employer environment of the Center, it is required that hazards including discrepancies and corrective actions be collected in the Center's information data system (provide name of system here) for risk management purposes. Describe your approach to implementing this requirement.

4.1 Appropriate Controls. Discuss approach to consideration and selection of controls. Discuss use of hazard reduction precedence sequence. Discuss approach to identifying and accepting any residual risk. Discuss implementation of controls including verifying effectiveness. Discuss scope of coverage (hazardous chemicals, equipment, discharges, waste, energies, etc.). Discuss need for coordination with safety, health, environmental services, and emergency authorities at NASA.

4.1.1 Hazardous Operations. Establish methods for notification of personnel when hazardous operations are to be performed in their facilities or when hazardous conditions are found to exist during the course of this contract. NASA policy will serve as a guide for defining, classifying, and prioritizing hazardous operations. Develop and maintain a list of hazardous operations to be performed during the life of this contract. The list of hazardous operations will be provided to the contracting officer as part of the safety plan for review and approval. The contracting officer (CO) and the contractor will decide jointly which operations are to be considered hazardous, with the CO as the final authority. Before hazardous operations commence, the contractor will develop a schedule to develop written hazardous operations procedures with particular emphasis on identifying the job safety steps required. The contractor may implement this requirement as follows:

1. Identify contractor policies and procedures for management and implementation of hazardous operations procedures together with a statement that NASA will have access on request to any contractor data necessary to verify implementation; or
2. In lieu of contractor management and development of such procedures, identify the method whereby the contractor will identify and submit such procedures to the NASA Occupational Safety Office for review and approval.

4.1.2 Written Procedures. Identification of methods to assure that the relevant hazardous situations, and proper controls are identified in documentation, such as, inspection procedures, test procedures, etc., and other related information. Describe methods to assure that written procedures are developed for all hazardous operations, including testing, maintenance, repairs, and handling of hazardous materials and hazardous waste. Procedures will be developed in a format suitable for use as safety documentation (such as a safety manual) and be readily available to personnel as required to correctly perform their duties.

4.1.3 Protective Equipment. Set forth procedures for obtaining, inspecting, and maintaining protective equipment, as required, or reference written procedure pertaining to this subject. Set forth methods for keeping records of such inspections and maintenance programs.

4.1.4 Hazardous Operations Permits. Identify facilities, operations, and/or tasks where hazardous operations permits will be required as specified in the Center's local requirement. Set forth guidance to adhere to established NASA Center procedures. Clearly state the role of the safety group or function to control such permits.

1. Operations Involving Potential Asbestos Exposures. Set forth method by which compliance is assured with the Center's Asbestos Control Program as established in local policy.
2. Operations Involving Exposures to Toxic or Unhealthful Materials. Such operations must be evaluated by the NASA Occupational Health Office and must be properly controlled as advised by same. The NASA Occupational Health Office must be notified prior to initiation of any new or modified operation potentially hazardous to health.
3. Operations Involving Hazardous Waste. Identify procedures used to manage hazardous waste from point of generation through disposal. Clearly identify divisions of responsibility between contractor and NASA for hazardous waste generated throughout the life of the contract. Operations which occur on site must also be evaluated by the Center environmental services office and must be properly controlled as advised by same. The Center environmental services office must be notified prior to initiation of any new or modified hazardous waste operation on site.
4. Operations Involving New or Modified Emissions/Discharges to the Environment. Set forth methods for identifying new or modified emissions/discharges and coordinating results with the Center environmental services office. Set forth procedures to minimize or eliminate environmental pollution. Address management of hazardous materials; substitution of non-

hazardous or less hazardous materials for hazardous materials; proper segregation of hazardous wastes from non-hazardous wastes; and other methods described by NASA. Emphasis shall be placed on providing for sufficient lead-time for processing permits through the appropriate State agency and/or the Environmental Protection Agency.

4.2 Discuss your responsibilities for maintaining facilities baseline documentation in accordance with Center requirements. The contractor will implement any facilities baseline documentation tasks (including safety engineering) as provided in the contractor's safety and health plan approved by NASA or as required by Government direction.

4.3 Preventive Maintenance. Discuss approach to preventive maintenance. Describe scope, frequency, and supporting rationale for your preventive maintenance program including facilities and/or equipment to be emphasized or de-emphasized. Discuss methods to promote awareness in the NASA community (such as alerts, safety flashes, etc.) when preventive maintenance reveals design or operational concerns in facilities and equipment (and related processes where applicable).

4.4 Medical Program. Discuss your medical surveillance program to evaluate personnel and workplace conditions to identify specific health issues and prevent degradation of personnel health as a result of occupational exposures. Discuss approach to cardiopulmonary resuscitation (CPR), first aid, and emergency response.

5.0 EMERGENCY RESPONSE.

Discuss approach to emergency preparedness and contingency planning which addresses fire, explosion, inclement weather, environmental releases, etc. Discuss compliance with 29 CFR 1910.120 (HAZWOPER) and the role the contractor will play in the local Incident Command System. Discuss methods to be used for notification of Center emergency forces including emergency dispatcher, safety hotline, director's safety hotline, etc. Discuss establishment of pre-planning strategies through procedures, training, drills, etc. Discuss methods to verify emergency readiness.

6.0 SAFETY AND HEALTH TRAINING.

Describe the contractor's training program including identification of responsibility for training employees to assure understanding of safe work practices, hazard recognition, and appropriate responses including protective and/or emergency countermeasures. Address management techniques used to identify and utilize any Center training resources (such as asbestos worker training/certification, hazard communication, confined space entry, lockout/tagout, etc.) as appropriate with particular emphasis on programs designed for the multiple employer work environment on NASA property. Describe approach to training personnel in the proper use and care of protective equipment. Discuss tailoring of training towards specific audiences (management, supervisors, and employees) and topics (safety orientation for new hires, specific training for certain tasks or operations). Discuss approach to ensure that training is retained and practiced. Discuss personnel certification programs. Certifications should include documentation that training requirements have been satisfied and learning validated by one or more of the following: physical examination, testing, on-the-job performance, etc. All training materials and training records will be provided for NASA review on request.

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END OF DOCUMENT

THIS DOCUMENT IS UNCONTROLLED WHEN PRINTED
