

**CALIFORNIA INSTITUTE OF TECHNOLOGY
 JET PROPULSION LABORATORY
 SPECIAL CONDITIONS -
 FIXED-PRICE CONSTRUCTION CONTRACT FOR PERFORMANCE AT
 THE JET PROPULSION LABORATORY**

INDEX OF SPECIAL CONDITIONS

SPECIAL CONDITION NUMBER AND TITLE

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SC-1. SECURITY AND SAFETY

(a) Control of Personnel.

(1) General.

- (A) All construction contractors shall be obliged to wear construction worker badges (orange) on the exterior of their clothing while working on the premises of JPL.
- (B) The JPL Procurement Negotiator will furnish to the JPL Security Office the name of the Contractor and its selected subcontractors who will be performing work in the Laboratory, together with the name of one or more foremen or key Contractor employees who will identify all workmen from that company at the time they enter the Laboratory to perform work.
- (C) Each contractor company will be oriented by the cognizant JPL Procurement Negotiator in these procedures.

- (2) Registration. When the construction worker arrives at the Main Gate, the guard will check the Main Gate record to determine whether the company employing the construction worker has been approved to work within the Laboratory. After the worker has been properly identified by the foreman or key employee listed on the record, he/she will require such person to sign the Contractor Visitor Register, at which time the worker will be issued an orange construction badge which will permit him/her to proceed to this work area without escort.
- (3) Visitor Control Exceptions. Certain construction contractor personnel, such as supervisors, engineers, and other executives, may be cleared through the office of the Security Supervisor and be issued green non-escort badges in that such personnel may have a need to visit other offices such as cognizant engineers and/or procurement representatives at various locations on the Laboratory. Such personnel will not be subject to the same area restrictions as those mentioned in other paragraphs.
- (4) Union Representatives. All contractors and subcontractors working inside the fenced area of the Laboratory who are visited by labor or union representatives are reminded that such person shall be directed to the JPL Security Office. A JPL guard or fireman will be assigned to escort the visitor at all times while he/she is within the Laboratory area.

(b) "Off-Limits" Areas. All buildings and work areas other than those specifically assigned to the Contractor shall be considered "off limits" to construction workers. Contractor personnel mentioned herein may not utilize cafeteria facilities. At any time a construction worker is discovered in an *off-limits' area as defined above, such worker will be immediately expelled from the Laboratory.

(c) Vehicles.

- (1) General. A limited number of Contractor vehicles will be permitted to enter the Laboratory when such vehicles are essential to the contractual work in progress. Such vehicles may be admitted to the Laboratory proper by issuance of a 'Delivery Card*' at the gate of entry. On the Laboratory the maximum speed limit is 20 mph, unless otherwise posted.
- (2) Parking Areas. Contractor's and worker's vehicles must be parked only in areas designated by JPL. All other areas and roadways must be kept clear at all times for normal operations.
- (3) Wheel Blocks for Vehicles. All Contractor vehicles except passenger cars and station wagons shall be provided with wheel blocks to prevent unattended vehicles from rolling. It shall be the Contractor's responsibility to instruct all of its employees and subcontractors of this requirement.
- (4) Mechanical Equipment Back-up Alarms. Haulage equipment, including trucks with body capacities of 2-1/2 cubic yards, or more, used to haul dirt, rock, concrete, or other construction material, and self-propelled construction equipment such as graders, which are operated on the project, whether moving alone or in combination, shall be equipped with an independent signal alarm which will sound automatically when the equipment moves in reverse. The alarm may be continuous or intermittent and shall be audible for a distance of 200 feet, irrespective of the conditions and circumstances under which the equipment is being operated. Alarms will operate upon initial backward movement, and if intermittent, shall sound at intervals not to exceed three seconds during the entire period the equipment is traveling in reverse. Compliance with these provisions by subcontractors shall be the responsibility of the Contractor.

(d) Smoking Areas. Workmen may smoke in any area that is not marked with a "No Smoking*" sign. Smoking is not permitted in or round buildings which are marked with a large "C" or "D".

(e) Fire or Emergency.

- (1) Contractors and subcontractors working on buildings which are under the jurisdiction of JPL will, in the event of fire, call the JPL Fire Department on Extension 3-3333.
- (2) Contractors and subcontractors involved in the construction of buildings which are not yet the responsibility of JPL will, in the event of fire, first call the JPL Fire Department, and then call the Los Angeles County Fire Department by dialing 9-793-7176.

- (3) If it becomes necessary to evacuate workers from an area due to any emergency other than fire, the Laboratory public address system will give directions for partial or total evacuation, depending upon conditions at the time.
 - (4) Contractors and subcontractors will furnish their own fire extinguishers in sufficient quantity and of appropriate type to cover the class of hazard involved, and welding blankets, fire hose, adapters, nozzles, and hydrant wrenches.
 - (5) Contractors, subcontractors, and their employees will keep a clean area. Accumulations of combustible material shall be hauled away. No accumulations of combustible material will be left over weekends or extended holiday periods. Trash and combustible waste material must be removed from JPL-occupied structures at the close of each work day and disposed of in appropriate containers, or completely removed from JPL premises.
 - (6) Contractors, subcontractors, and their employees will be furnished with JPL Fire Department telephone stickers for emergency calls for fire.
 - (7) No tar kettle shall be operated unless it is continually manned, has an operating heat indicator or gauge, and has a fire extinguisher nearby. The tar kettle must be placed at a safe distance from a hazardous area or other combustible materials.
 - (8) All flammable fluids in drums shall be stored in a safe area and all drums must be grounded. This area must be posted with proper signs such as "No Smoking," etc.
 - (9) Open containers of flammable paints, thinners and similar materials may not be stored overnight in any structure. Quantities are not to exceed that amount delineated in the U.F.C. Section 79.201 (e).
 - (10) Gasoline dispensing facilities will be equipped with approved pumping equipment and will be properly grounded. Above ground gravity flow gasoline dispensing tanks will be provided with an approved hose equipped with a self-closing valve at the discharge end. The hose will be of a type that can be padlocked to its hanger to prevent tampering. The Fire Captain must approve installation of flammable liquid tanks. Identify tanks in accordance with Uniform Fire Code.
 - (11) Contractors and subcontractors who in the performance of their contract have a need for welding, cutting torch operation, or burning of any type, shall, prior to starting the operation, notify JPL (Extension 4-3311) of the time and location that this operation will take place, and obtain a fire permit.
 - (12) Contractors and subcontractors shall abide by all Federal, State, and Local Safety and Fire Codes.
- (f) First Aid.
- (1) It is the responsibility of the Contractor to supply the necessary first aid equipment to its employees. JPL maintains on the Laboratory a First Aid Dispensary with a registered nurse on duty. In case of serious injury, the Contractor or the Contractor's employee may contact the Laboratory First Aid Dispensary for advice or help.
 - (2) Before commencing work, contractors shall furnish the JPL Contract Negotiator the name, address, and telephone number of their workman's compensation insurance carrier and the doctors to whom their employees should be referred. All requests for emergency first aid for employees who cannot be delivered to the First Aid Station should be directed to telephone extension 3-3333.
- (g) Warning Signals. The flashing of red lights or the blast of an airhorn (low-pitched and steady) indicates that operations of a hazardous nature are in progress and under no conditions should construction personnel enter those areas. The sounding of an airhorn (high-pitched and pulsating) indicates extreme danger, evacuate local area. As a general rule, all of these areas are 'off limits' to all construction personnel.

SC-2. NIGHT OPERATIONS

- (a) Notification. Unless otherwise provided in the Contract, no jobsite work shall be performed during any night without prior notification to JPL, which notification shall be not less than 24 hours, for Monday through Friday. Normally JPL duty hours are 7:00 a.m. to 4:45 p.m., with construction tending toward the earlier part of the daily period, Monday through Friday.
- (b) Noise. Neither the Contractor nor any of its subcontractors shall operate or allow to be operated, any noise-producing equipment between the hours of 9:00 p.m. and 7:00 a.m. without specific prior written permission of JPL.

SC-3. AS-BUILT DRAWINGS

The Contractor shall, within 15 days after completion of construction, provide JPL with one set of marked-up prints showing clearly and neatly in red ink all changes, corrections, and additions made during the construction period. Such features shall be recorded and kept up to date on a complete as-built record set of drawings which shall be corrected daily and show every change from the contract drawings and specifications and the exact as-built location, size, and kind of every valve, fixture, wire conduit, etc. JPL will supply one set of prints to be maintained continuously on the site by the Contractor. The set of record as-built information shall be subject to inspection by JPL at any time.

SC-4. SHOP DRAWINGS, EQUIPMENT LISTS, AND MATERIAL SAMPLES

(a) General.

- (1) The Contractor shall submit to JPL, or such person or firm as directed by JPL, for approval, all shop drawings, equipment lists, and material samples required under the various headings of the technical specifications. Drawings and lists shall be complete and shall contain all required detailed information. When approved by JPL, each copy of the drawings or lists will be identified as having received such approval by being so stamped and dated. The Contractor shall make any corrections required by JPL. Unless otherwise specified in the specifications, the number of copies to be submitted shall be as stated herein. Each shop drawing, equipment list, and material sample shall be identified with the following information, as applicable:

Contract Number

Project Location

Subcontractors Name

Manufacturers Name

Specification Paragraph

Drawing Series Number

- (2) JPL approval of such submittals shall not be construed as a complete check but will indicate only that the general method of construction and detailing is satisfactory. Approval of such submittals shall not relieve the Contractor of the responsibility for any error or omission which may exist. The Contractor shall be responsible for the dimensions and design of adequate connections, details, and satisfactory construction of all work.
- (b) Shop Drawings. six copies of all shop drawings shall be submitted. Four sets of these shop drawings will be retained by JPL, and two sets will be returned to the Contractor. Shop drawings for submittal shall be either blue-line or black-line print on white background. Blueprints are not acceptable. Shop drawings include fabrication/erection/installation drawings.
- (c) Equipment Lists. Four copies of equipment lists shall be submitted within 10 days after receipt of written Notice to Proceed. With the four copies of the equipment lists, the Contractor shall submit two sets of the brochures and technical data for each piece of equipment to be supplied. Brochures and technical data shall include catalogs, operating instructions, cuts, diagrams and such other descriptive data as will give a complete description of the equipment, including manufacturer's name, trade name, model number, type, size, rating and auxiliary equipment.
- (d) Material Samples. Samples shall be submitted in the quantities delineated in the technical specifications, in a timely manner, for JPL approval.
- (e) Proofs of Compliance. Submit proofs of compliance by providing certification that all material and equipment proposed for use in the project meet or exceed the specifications.

SC-5. OPERATION AND MAINTENANCE MANUALS.

- (a) Bound Manuals. Within 10 calendar days prior to completion of construction, the Contractor shall provide five complete sets of Operation and Maintenance manuals. Each set shall be permanently bound and shall have a hard cover. The following identification shall be inscribed on the covers: the words "OPERATION AND MAINTENANCE MANUALS," the title, number, and site location of the building, the name of the Contractor, and the contract number. The sheets in the manual shall be approximately 8 1/2 x 11 inches, with large sheets of drawings folded in. Each complete bound manual shall be organized to provide the following:
- (1) Table of Contents
 - (2) A page indicating Contractor's name, address, telephone number, and the name of the person to be contacted regarding building and equipment maintenance.
 - (3) Dividers with tab indices indicating the various sections, such as:
 - (A) Heating, ventilation, and air conditioning equipment.
 - (B) Plumbing equipment.
 - (C) Electrical equipment.
 - (D) Special equipment.
 - (4) A sheet at the front of each section, indicating the appropriate Contractor/Subcontractor name, address, telephone number and name of the person to be contacted at the office of the installer and the major suppliers under the Contract.
 - (5) An index listing of quantities and materials at each major sub-section tab divider.

- (b) Manual Requirements. The manual shall describe each system installed and shall be in sufficient detail to permit JPL operating personnel to understand, operate, and maintain all equipment. The manual shall include compilations of instruction manuals furnished by the equipment manufacturers. These instruction manuals shall include complete operation, maintenance, inspection, and repair instructions for each and every item of equipment specified under various headings of the specifications. Each complete manual shall contain the following information:
- (1) Catalog data for each piece of equipment.
 - (2) Operating and maintenance instructions (including lubrication) for each piece of equipment.
 - (3) Manufacturer's bulletins, cuts, and descriptive data.
 - (4) Complete nameplate data.
 - (5) List of all belt and sheave sizes.
 - (6) Performance data (curves, charts, etc.) on all pumps, air handling equipment, and motor ratings and electrical signal lines and wiring diagrams for motor control centers, and major power circuit breaker and disconnect centers.
 - (7) Complete "as-built" air conditioning controls diagram and written operating procedure with catalog literature describing each control instrument.
 - (8) Complete and detailed "as-measured" balance log for the air conditioning system identified by the company doing the balance work, its address and telephone number, and the signature of the air balance engineer who performed the work.
 - (9) Spare parts data for each piece of equipment containing the following information:
 - (A) Recommended quantity of parts required for one year of operation.
 - (B) Complete parts lists of all replaceable items.
 - (C) Drawing number and shop drawings.
 - (D) Part equipment code number.
 - (E) Unit price of each item.
 - (F) Name, address, and phone number of supplier.
 - (G) Such remarks and data as the manufacturer may consider pertinent.
- (c) Framed Instructions. Approved wiring and control diagrams, and valve charts, framed under glass, shall be posted in locations designated by JPL. Proposed diagrams, instructions, and other sheets shall be submitted for approval prior to posting.

SC-6. ADDITIONAL WARRANTIES/GUARANTEES

"Guarantees" delineated in the project specifications are supplemental to the applicable General Provision entitled "Warranty" or "Warranty of Construction." Such "Guarantees" shall be in writing and shall be submitted to JPL by the Contractor within 15 days after completion of construction.

SC-7. SAFETY AND HEALTH/HAZARDOUS MATERIALS

- (a) This specification supplements and implements the Provisions of the General Provision of this Contract entitled "Safety and Health."
- (b) The safety and health plan required to be submitted by the Contractor pursuant to paragraph (a) of the aforesaid General Provision shall implement the requirements of the General Provision and of the standards and specifications of paragraph (c) hereof and shall describe the means to be employed by the Contractor to monitor and enforce said requirements. The plan shall also include the Contractor's standards and criteria for imposing safety and health standards upon its subcontractors of any tier and its plans and procedures for monitoring compliance with such standards. A safety and health plan for similar work performed by the Contractor on a Federal contract may be submitted for review and approval under this Contract.
- (c) The following safety and health standards, specifications, issuances, and reporting requirements are prescribed pursuant to paragraph (c) of the General Provision of this Contract entitled "Safety and Health."
- (1) General Standards and Specifications. The Contractor shall comply with applicable provisions of the Occupational Safety and Health Standards of the Occupational Safety and Health Act of 1970, Rules and Regulations of the Department of Labor issued pursuant thereto and regulations of states provided for under the act which are in effect on the date of this Contract.
 - (2) Environmental Matters. Environmental controls shall be in accordance with applicable NASA and other Federal, State and local regulatory requirements and in accordance with applicable Executive Orders of the President. In addition, the following environmental controls shall apply to asbestos abatement or asbestos work:

- (A) Asbestos Work Experience Documentation. The Contractor or specialty subcontractor for performance of any asbestos abatement work shall be registered as an asbestos abatement Contractor with the California Division of Occupational Safety and Health. The Contractor/subcontractor shall submit documentation as required by JPL to prove the following:
 - (i) Minimum of one year experience as a contractor in this specialized field.
 - (ii) Successful completion of a minimum of three asbestos abatement projects of similar size and scope or larger. This data shall include the following:
 - a. Name of contracting agency or firm.
 - b. Location of work site.
 - c. Name of Contracting Representative.
 - d. Description of work.
 - e. Results of air monitoring before, during and after work.
 - (iii) A record of any citations issued by federal, state, or local regulatory agencies relating to asbestos abatement activity, including projects, dates, and resolutions.
 - (iv) Situations in which an asbestos-related contract has been terminated, including projects, dates and reasons for terminations.
 - (v) A listing of any asbestos-related legal proceedings/claims in which the Contractor or any employee has participated or is currently Involved in, Including descriptions of role, issue, and resolution to date.
- (B) Worker Qualifications. Contractor and subcontractors shall at all times enforce strict discipline and good order among their employees and shall not employ any unfit person or anyone not skilled in work assigned to such person.
 - (i) Worker Training and Medical Qualifications. All asbestos workers shall be trained and medically certified in accordance with the requirements of General Industry Safety Order 5208.
 - (ii) Worker Qualification Form. The Contractor shall be prepared to provide to JPL at least 72 hours prior to beginning of work a list of all qualified asbestos workers to be employed in actual asbestos removal/asbestos work and for each such asbestos worker the Contractor shall have completed form JPL 2887, "Worker Qualification," an attached copy of which forms part of these contract documents.
- (3) JPL Contractor Safety and Health Notification. Contractor has signed and acknowledged receipt of a copy of the "JPL Contractor Safety and Health Notification," form JPL 2885, (identifying applicable required documentation, safety requirements, emergency handling procedures, etc.) which is hereby made a material part of this Contract. The costs associated with compliance with all applicable requirements as identified on form JPL 2885 are included in the contract pricing and therefore, Contractor compliance with such requirements shall not entitle the Contractor to an equitable adjustment under the General Provisions of the Contract entitled "Safety and Health" and "Changes," or under any other provision of this Contract.

(d) Illness, Incident, and Injury Experience Reports.

- (1) Reports required by this specification, or the Safety and Health General Provision of this Contract, shall be furnished in three copies.
- (2) The Contractor shall furnish such other reports as JPL determines to be related to the Contractor's Safety and Health program and its experience thereunder arising out of work performed under this Contract.

(e) Hazardous Materials.

- (1) General.
 - (A) The California Chemical Hazard Communication Regulation is designed to ensure that hazardous substances produced by manufacturers are evaluated and the information concerning these hazards is transmitted to all affected employers and employees.
 - (B) Presented in Section 5194 (e) (1) (c) of the Hazard Communication Standard are specific requirements related to contractor employees. Contractor personnel must be informed by a JPL representative of hazardous substances to which their employees may be exposed while performing their work at JPL and the appropriate protective measures. Contractors are also required to provide a list of chemicals being used on the job site and the complete Material Safety Data Sheet (MSDS) for each chemical. The safe storage, use, application, and complete removal of the products shall be the responsibility of the contractor.
 - (C) Prior to a contractor performing work at JPL, a pre-construction safety meeting is required to discuss all aspects of safety. The Facilities Section personnel are responsible for scheduling and providing written notification to the

Occupational Safety Office prior to the initiation of Contractor activities. A representative of the Safety Office will be responsible for addressing specific safety-related concerns.

- (2) JPL will inform the contractor of:
 - (A) Applicable regulatory requirements which the Contractor will be required to follow while performing work.
 - (B) Any hazardous agents that the contractor and their employees may be exposed to while working at specific job sites at JPL.
 - (C) Specific JPL rules, regulations, policies, and procedures which must be complied with while working at JPL.
- (3) Contractors are:
 - (A) Responsible for providing protective equipment which will be required during the operation.
 - (B) Required to submit a list of all chemicals and complete MSDSs for all products used during the course of work at JPL. The safe storage, use application, and removal of the products shall be the responsibility of the contractor. If special storage is required, notification to the Safety Office prior to the beginning the material to the job site is required.
 - (C) Responsible for discussing Safety and Health Special Conditions and General Provisions with all employees performing work at JPL.
 - (D) Contractor shall immediately notify and promptly report to JPL any accident or incident or exposure resulting in fatality, disabling occupational injury or occupational disease, any chemical release or potential release which threatens or impacts human health or the environment.
- (4) Contractor acknowledges receipt of the attached "Asbestos Notification," form JPL 2895, identifying JPL buildings containing asbestos and agrees to distribute the Notice to all its employees prior to their commencing work in such buildings. Contractor agrees to coordinate with the JPL Occupational Safety Office for special asbestos handling instructions to be given to all Contractor's employees prior to their commencing work, if any, which could disturb asbestos in JPL-controlled buildings.



ASBESTOS NOTIFICATION

The Jet Propulsion Laboratory is committed to providing a safe and healthy work environment for all personnel.

In the past several years, the Laboratory management, working through the JPL Safety Operations Section - Industrial Hygiene and Workers Compensation Group (SOS - IHWC) and the Facilities Division, has had an on-going program of asbestos identification and control. This program has included bulk sampling, air monitoring, and training for members of the Facilities and Maintenance staff.

Through this program, some of the buildings at JPL have been identified to contain friable sprayed-on fireproofing above the ceilings. At the Oak Grove site, these buildings include 167, 168, 169, 179, 180, 183, 186, 230, 238, 264 and 291, and at the Foothill site, buildings 502, 506 and 507. Asbestos may be present in other JPL buildings in other various forms, including, but not limited to: transite, thermal system insulation, roofing products, ceiling tiles, spray-applied acoustical ceiling, wall materials, and floor tiles/linoleum/mastic.

The majority of asbestos at JPL is located in restricted access areas, such as mechanical rooms, boiler rooms and attics. It is in generally good condition and does not pose a hazard during normal operations.

The SOS-IHAWC staff has taken numerous air samples in JPL buildings. Sampling results indicate that airborne asbestos levels in the buildings are well below regulatory limits and are lower than those found in industrial workplaces where adverse health effects have been observed. Fiber levels in JPL buildings are not significantly different than fiber levels found outside.

Asbestos-containing materials do not pose a health hazard, unless the fibers become airborne. Contractor maintenance/construction/renovation activity involving intentional or accidental contact with friable materials can release fibers; therefore, only authorized and properly trained personnel are permitted to perform work that may disturb asbestos materials.

General written procedures and handling restrictions have been provided to JPL and contractor personnel. SOS-IHAWC must be given notification and, if deemed necessary, a written description of any asbestos-related work to be conducted in areas where asbestos may be present prior to the initiation of activities. The work to be performed will determine if these areas must be tested and cleared. SOS-IHAWC will review sampling results and documentation after completion of contractor activities prior to occupancy.

Pursuant to the California Health and Safety Code (Chapter 10.4, Section 25915), each employee has the right to review all reports about surveys, bulk sampling and air sampling. These reports are available for review during normal business hours. Contact SOS-IHAWC at extension 4-1771 to review these documents or if there are any questions.

WORKER QUALIFICATION

This form is to be supplied for each worker classified as an "Asbestos Worker," including "Apprentice Grade," for purposes of prevailing wage laws. It is also necessary for each "Foreman," "Supervisor" or other lead classification. This form need not be supplied for personnel engaged solely in work incidental to the asbestos removal, such as setup, material and equipment moving, and post-removal cleanup.

Employee Name: _____

Residence: _____

Social Security Number: _____

Date of Most Recent Training: _____

Date of Most Recent Physical Under 5208: _____

Date of Most Recent Respirator Fit Test: _____

Experience in Asbestos Abatement: _____

| <u>LOCATION</u> | <u>TYPE OF WORK</u> |
|-----------------|---------------------|
| 1. _____ | _____ |
| 2. _____ | _____ |
| 3. _____ | _____ |

I hereby certify that I have the training and experience as listed above:

 Employee's Signature _____
 Date

I have verified this information and present this employee as "qualified":

 Contractor's Signature _____
 Date

**THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING
 ADDITIONAL COPIES OF THIS FORM**